GEOMETRY SYLLABUS

1st Marking Period

Chapter 1: Basics of Geometry (Test 1.1-1.6)

Section	Title	2023 NJSLS for Mathematics	Suggested Problems *Teachers must assign mixed review problems as part of homework assignments.*
1.1	Points, Lines, and Planes	G-CO.A.1	Big Ideas Text pg. 8, # 3-10, 11-15 odd, 27-33 odd, 55,
2.3	Postulates and Diagrams	G-CO.A.1; G-CO.C.9	Big Ideas Text pg. 87 # 13-20, 23
1.2	Measuring and Constructing Segments *Note: No Constructions of Segments*	G-CO.A.1, G-CO.B.7, A-CED.A.1	Big Ideas Text pg. 16, # 15-21 odd, 28, 29 Supplement Factoring Problem
1.3	Use Midpoint and Distance Formulas	N-RN.A.3, G-GPE.B.7	Big Ideas Text pg. 24 # 1-9 odd, 15-33 odd, 37
1.4	Perimeter and Area in the Coordinate Plane	G-CO.A.1, G-GPE.B.7, G-MG.A.1	Big Ideas Text pg. 34 # 3 -15 odd, 27, 31
1.5	Measuring and Constructing Angles	G-CO.A.1; G-CO.B.7; G-CO.D.12	Big Ideas Text pg. 43 # 2, 5-13 odd, 21-29 odd, 44, Supplement Factoring Problem
1.6	Describing Pairs of Angles	G-CO.A.1, G-MG.A.1	Big Ideas Text pg. 52 # 7, 9, 11-14, 15-19 odd, 27, 31, 46,

Chapter 2: Reasoning and Proof (Test 2.1, 2.4-2.6)

Section	Title	2023 NJSLS for Mathematics	Suggested Problems *Teachers must assign mixed review problems as part of homework assignments.*
2.1	Conditional Statements *Note: Only do Conditional, Converse and Biconditional statements.*	G-CO.C.9; G-CO.C.10; G-CO.C.11	Big Ideas Text pg. 71 #3-23 odd, 33, 35, 44
2.4	Algebraic Reasoning	A-REI.A.1; G-CO.C.9; G-CO.C.10; G-CO.C.11	Big Ideas Text pg. 96 #5, 9, 13, 15, 19-25 odd, 40, 41
2.5	Proving Statements about Segments and Angles	G-CO.A.1; G-CO.C.9; G-CO.C.10; G-CO.C.11	Big Ideas Text pg. 103 # 3 - 10
2.6	Proving Geometric Relationships	G-CO.C.9	Big Ideas Text pg. 111 # 5, 11, 18, 20 and pg. 120 #2

Chapter 3: Parallel and Perpendicular Lines (Test 3.1-3.4)

Section	Title	2023 NJSLS for Mathematics	Suggested Problems *Teachers must assign mixed review problems as part of homework assignments.*
3.1	Pairs of Lines and Angles	G-CO.A.1, G-CO.C.9; G-CO.D.12	Big Ideas Text pg. 129 #1-6, 11-14, 29
3.2	Parallel Lines and Transversals	A-CED.A.1, G-CO.C.9	Big Ideas Text pg. 135 # 2-12, 17 and Supplement Factoring Problem
3.3	Proofs with Parallel Lines	A-CED.A.1, G-CO.C.9	Big Ideas Text pg. 142 #3, 5, 7, 15, 17, 21, 23, 25, 33-35
3.4	Proofs with Perpendicular Lines	G-CO.C.9	Big Ideas Text pg. 152 #15, 16, 23, 26

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Section 3.5: Formative Assessment

3.5	Write and Graph Equations of Lines	A-CED.A.2, F-LE.A.2 F-IF.B.6, G-GPE.B.5, G-GPE.B.6	Big Ideas Text pg. 160 #7, 12, 13-19 odd, 34

Chapter 5: Congruent Triangles (Test 5.1-5.7)

Section	Title	2023 NJSLS for Mathematics	Suggested Problems *Teachers must assign mixed review problems as part of homework assignments.*
5.1	Angles of Triangles	A-CED.A.1, G-CO.C.10, G-MG.A.1	Big Ideas Text pg. 236 #3-6, 7-25 odd, 38
5.2	Congruent Polygons	A-CED.A.1, G-CO.B.7	Big Ideas Text pg. 243 #3, 5-10, 13
5.3	Prove Triangles Congruent by SAS	G-CO.B.8, G-MG.A.1	Big Ideas Text pg. 249 #3-13 odd, 15-18, 25, 26
5.4	Equilateral and Isosceles Triangles	A-CED.A.1, G-CO.C.10, G-CO.D.13, G-MG.A.1	Big Ideas Text pg. 256 #7-11, 13-16, 19, 22, 23
5.5	Prove Triangles Congruent by SSS	G-CO.B.8, G-MG.A.1, G-MG.A.3	Big Ideas Text pg. 266 #2-7, 9, 14, 15
5.6	Proving Triangles Congruent by ASA and AAS	G-CO.B.8	Big Ideas Text pg. 274 #3-7, 9, 11, 15, 16
5.7	Using Congruent Triangles	G-CO.B.8, G-SRT.B.5, G.MG.A.1	Big Ideas Text pg. 281 #1, 3, 4, 5

Chapter 4: Transformations (Test 4.1-4.4, 4.5)

Section	Title	2023 NJSLS for Mathematics	Suggested Problems *Teachers must assign mixed review problems as part of homework assignments.*
4.1	Translations	G-CO.A.2, G-CO.A.4, G-CO.A.5, G-CO.B.6	Big Ideas Text pg. 178 #3-25 odd
4.2	Reflections	G-CO.A.2, G-CO.A.3 G-CO.A.4, G-CO.A.5 G-CO.B.6, G-MG.A.3	Big Ideas Text pg. 186 #2-6, 7-19 odd, 20-25
4.3	Rotations	G-CO.A.2, G-CO.A.3 G-CO.A.4, G-CO.A.5, G-CO.B.6	Big Ideas Text pg.194 #7-23 odd, 28
4.4	Congruence and Transformations	G-CO.A.5, G-CO.B.6	Big Ideas Text pg.204 #3-6, 25-28 **The topics in this section should be incorporated throughout the chapter, a separate lesson is not needed.
4.5	Dilations	G-CO.A.2, G-SRT.A.1a, G-SRT.A.1b	Big Ideas Text pg. 212 #3, 5, 15-21 odd, 25, 29

Chapter 8: Similarity (Test 8.1-8.4)

Section	Title	2023 NJSLS for Mathematics	Suggested Problems *Teachers must assign mixed review problems as part of homework assignments.*
Ratios Supplement	Ratios and Proportions: Mc. Dougal Littel Geometry Section 6.1	N-Q.A.1, A-CED.A.1	McDougal Little Geometry pg.360 #2-36, 42-46, 49-51, 57
8.1	Similar Polygons	A-CED.A.1, G-SRT.A.2, G-SRT.B.5, G-MG.A.3	Big Ideas Text P. 423-426, # 1-23 odd, 28-34, 36-38, 49, 50, 57-60
8.2	Proving Triangle Similarity by AA	A-CED.A.1, G-SRT.A.3, G-SRT.B.5	Big Ideas Text p. 431-432, # 1-23 odd, 28, 34-36
8.3	Proving Triangle Similarity by SSS and SAS	A-CED.A.1, G-SRT.B.4, G-SRT.B.5, G-GPE.B.5, G-MG.A.1	Big Ideas Text p. 441-444 # 1-27 odd, 36, 43-45
8.4	Proportionality Theorems	A-CED.A.1, G-SRT.B.4, G-SRT.B.5, G-GPE.B.6	Big Ideas Text p. 450-452 # 1-25 odd, 41-45

Chapter 9: Right Triangles and Trigonometry (Test 9.1-9.7)

Section	Title	2023 NJSLS for Mathematics	Suggested Problems *Teachers must assign mixed review problems as part of homework assignments.*
9.1	The Pythagorean Theorem	N-RN.A.3, G-SRT.B.4, G-SRT.C.8	Big Ideas Text pg. 236 #3-6, 7-25 odd, 38
9.3	Similar Right Triangles	N-RN.A.3, G-SRT.B.5	Big Ideas Text pg. 249 #3-13 odd, 15-18, 25, 26
9.4	The Tangent Ratio	G-SRT.C.6, G-SRT.C.8	Big Ideas Text pg. 256 #7-11, 13-16, 19, 22, 23
9.5	The Sine and Cosine Ratios	G-SRT.C.6, G-SRT.C.7, G-SRT.C.8	Big Ideas Text pg. 266 #2-7, 9, 14, 15
9.6	Solving Right Triangles	G-SRT.C.8, G-MG.A.1, G-MG.A.3	Big Ideas Text pg. 274 #3-7, 9, 11, 15, 16

Chapter 7: Quadrilaterals and Other Polygons (Test 7.1-7.5)

Section	Title	2023 NJSLS for Mathematics	Suggested Problems *Teachers must assign mixed review problems as part of homework assignments.*
7.1	Angles of Polygons	A- CED.A.1, G-CO.C.11	Big Ideas Text P. 364-366, # 1-33 odd, 37-40, 50, 53-56
7.2	Properties and Parallelograms	A-CED.A.1, G-CO.C.11, G-SRT.B.5	Big Ideas Text p. 372-374, # 1-21 odd, 33, 34, 39, 43, 48-50
7.3	Proving That a Quadrilateral is a Parallelogram	A-CED.A.1, G-CO.C.11, G-SRT.B.5, G-MG.A.1, G-MG.A.3	Big Ideas Text p. 381-384 #1-23 odd, 30, 33, 34, 51-54
7.4	Properties of Special Parallelograms	A-CED.A.1, G-CO.C.11, G-SRT.B.5, G-MG.A.1, G-MG.A.3	Big Ideas Text p. 393-396 # 1-63 odd, 65-70, 75, 76, 84, 89-91
7.5	Properties of Trapezoids and Kites	A-CED.A.1, G-SRT.B.5, G-MG.A.1	Big Ideas Text p. 403-406 # 1-29 odd, 31-34, 41, 53, 54

Chapter 10: Properties of Circles (Test 10.1-10.4)

Section	Title	2023 NJSLS for Mathematics	Suggested Problems *Teachers must assign mixed review problems as part of homework assignments.*
10.1	Lines and Segments that Intersect Circles	G-C.A.2, G-C.A.4, G-CO.A.1	Big Ideas Text p. 534-536 #1-35 odd, 39, 45, 49, 50
10.2	Finding Arc Measures	G-C.A.1, G-C.A.2	Big Ideas Text p. 542-544 #1-29 odd, 31, 39-42
10.3	Using Chords	A-CED.A.1, G-C.A.2, G-MG.A.3	Big Ideas Text p. 549-550 #1-17 odd, 26-28
10.4	Inscribed Angles and Polygons	A-CED.A.1, G-C.A.2, G-C.A.3, G-CO.D.13	Big Ideas Text p. 558-560 #1-17 odd, 19-21, 34, 43-46

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Chapter 10: Properties of Circles (Test 10.5-10.7)

Section	Title	2023 NJSLS for Mathematics	Suggested Problems *Teachers must assign mixed review problems as part of homework assignments.*
10.5	Angle Relationships in Circles	A-CED.A.1, G-C.A.2	Big Ideas Text p. 566-568 #1-23 odd, 34, 41-43
10.6	Segment Relationships in Circles	G-C.A.2, G-MG.A.1	Big Ideas Text p. 573-574 #1-15 odd, 27-30
10.7	Circles in the Coordinate Plane	G-GPE.A.1, G-GPE.B.4	Big Ideas Text p. 579-580 #1-21 odd, 25, 26, 35-40

Chapter 11: Measuring Length and Area (Test 11.1-11.3)

Section	Title	2023 NJSLS for Mathematics	Suggested Problems *Teachers must assign mixed review problems as part of homework assignments.*
11.1	Circumference and Arc Length	G-C.B.5, G-CO.A.1, G-GMD.A.1,	Big Ideas Text p. 598-600 #1-13 odd, 23, 24, 43, 44
11.2	Areas of Circles and Sectors	G-C.B.5, G-GMD.A.1, G-MG.A.2,	Big Ideas Text p. 606-608 #1-23 odd, 26, 30-32, 42-45
11.3	Areas of Polygons	G-GMD.A.3	Big Ideas Text p. 614-616 #1-29 odd, 33-35, 39, 40, 44, 53-56

Chapter 11: Measuring Length and Area (Project: 11.4-11.8)

Section	Title	2023 NJSLS for Mathematics	Suggested Problems *Teachers must assign mixed review problems as part of homework assignments.*
11.4	Three-Dimensional Figures	G-GMD.B.4	Big Ideas Text p. 621-622 #1-27 odd, 37-39, project
11.5	Volumes of Prisms and Cylinders	G-GMD.A.1, G-GMD.A.2, G-GMD.A.3, G-MG.A.1, G-MG.A.2, G-MG.A.3 (Formulas Given)	Big Ideas Text p. 631-634 #1-33 odd, 44 , 51, 55-57, project
11.6	Volumes of Pyramids	G-GMD.A.1, G-GMD.A.3, G-MG.A.1 (Formulas Given)	Big Ideas Text p. 639-640 #1-19 odd, 23, 26-29, project
11.7	Surface Area and Volumes of Cones	G-GMD.A.1, G-GMD.A.3 (Formulas Given)	Big Ideas Text p. 645-646 #1-21 odd, 25, 27-30, project
11.8	Surface Area and Volumes of Spheres	G-GMD.A.2, G-GMD.A.3, G-MG.A.1 (Formulas Given)	Big Ideas Text p. 652-654 #1-35 odd, 39, 42, 48-51, project

Course Expectations and Skills

- Students are required to have proficiency in all topics for Algebra 1. Those who do not demonstrate proficiency will be required to seek additional help after school to close their achievement gap in order to be successful in this course.
- Students are required to take notes in Cornell Notes format and maintain those notes in a neat and organized notebook.
- Students are required to have a scientific calculator.
- Students are required to participate in both small and large group discussions and activities, as directed.
- Students are required to complete a project each marking period, including those which require the use of technology.

Text Book: *Geometry,* Big Ideas Math

Supplemental Materials: Geometry Practice Workbook
                              Dynamic Geometry Software
                              Geometer's Sketchpad
                              Kuta Infinite Geometry
                              McDougal Littell Geometry Resources

Assessment Information

Department of Mathematics – Geometry

Marking Periods 1 - 4	
Category	Percentage
Major	40%
Minor	30%
Project (MP 1 & 3) Benchmark (MP 2 & 4)	10%
Class Participation	5%
Homework	15%