

Geometry Curriculum Map

Chapter 1: Introduction to Geometry- 12 days

Section	Learning Targets	Resources
1.1	Students will be able to identify and use basic geometric terms including points, lines, rays, angles, and triangles	1.1
1.2	Students will be able to measure and classify different angles	1.2
1.3	Students will be able to correctly interpret geometric diagrams	1.3
1.4	Students will be able to write simple two column proofs	1.4
1.5	Students will be able to solve problems using division properties of segments and angles	1.5
1.6	Students will be able to write paragraph proofs	1.6
1.7	Students will be able to interpret and use deductive structures	1.7
1.8	Students will be able to write conditional statements and their negations.	1.8
1.9	Students will be able to find probability of events	1.9

Chapter 2: Basic Concepts and Proofs-12 days

Section	Learning Targets	Resources
2.1	Students will be able to understand the concept of perpendicularity	2.1
2.2	Students will be able to find angle complements and supplements	2.2
2.3	Students will be able to draw logical conclusions from given information	2.3
2.4	Students will be able to write simple two column proofs	2.4
2.5	Students will be able to solve problems using the division properties of segments and angles	2.5
2.6	Students will be able to write paragraph proofs	2.6
2.7	Students will be able to interpret and use deductive structures	2.7
2.8	Students will be able to write conditional statements and their negations.	2.8
2.9	Students will be able to find probability of compound events	2.9

Chapter 3: Congruent Triangles- 15 days

Section	Learning Targets	Resources
3.1	Students will understand concept of congruent figures	3.1
3.2	Students will prove congruent triangles	3.2
3.3	Students will apply properties of congruent triangles	3.3
3.4	Students will understand and use properties of medians and altitudes	3.4
3.5	Students will use overlapping triangles in proofs	3.5
3.6	Students will name types of triangles and their parts	3.6
3.7	Students will apply the angle-side theorems	3.7
3.8	Students will apply hypotenuse-leg theorem for congruent triangles	3.8

Chapter 4: Lines in the Plane- 12 days

Section	Learning Targets	Resources
4.1	Students will use detours in proofs	4.1
4.2	Students will organize information from word problems	4.2
4.3	Students will prove right angles	4.3
4.4	Students will recognize relationship between equidistance and perpendicular bisection	4.4
4.5	Students will understand the properties of parallel lines and their transversals	4.5
4.6	Students will calculate slope	4.6

Chapter 5: Parallel Lines and Related Figures- 14 days

Section	Learning Targets	Resources
5.1	Students will write indirect proofs	5.1
5.2	Students will prove lines parallel	5.2
5.3	Students will identify angles formed by transversals	5.3
5.4	Students will identify different types of quadrilaterals	5.4
5.5	Students will apply properties of quadrilaterals	5.5
5.6	Students will prove shapes are parallelograms	5.6
5.7	Students will prove that shapes are special quadrilaterals	5.7

Chapter 6: Lines and Planes in Space-8 days

Section	Learning Targets	Resources
6.1	Students will understand the properties of a plane.	6.1
6.2	Students will apply perpendicularity of planes	6.2
6.3	Students will use the properties of parallel planes	6.3

Chapter 7: Polygons-11 days

Section	Learning Targets	Resources
7.1	Students will use triangle application theorems	7.1
7.2	Students will apply the No-Choice Theorem	7.2
7.3	Students will use applicable polygon formulas	7.3
7.4	Students will understand and use properties regular polygons	7.4

Chapter 8: Similar Polygons-10 days

Section	Learning Targets	Resources
8.1	Students will apply product and ratio theorems	8.1
8.2	Students will identify the characteristics of similar figures	8.2
8.3	Students will prove similar triangles	8.3
8.4	Students will use similarity to find corresponding figures	8.4
8.5	Students will apply proportionality theorems	8.4

Chapter 9: Pythagorean Theorem-20 days

Section	Learning Targets	Resources
9.1	Students will simplify radical expressions and solve quadratic equations	9.1
9.2	Students will begin solving problems involving circles	9.2
9.3	Students will apply the altitude-on-hypotenuse theorems	9.3
9.4	Students will use the Pythagorean Theorem	9.4
9.5	Students will apply the distance formula	9.5
9.6	Students will identify the families of Pythagorean triples	9.6
9.7	Students will identify the ratios for 30-60-90 and 45-45-90 right triangles	9.7
9.8	Students will apply the Pythagorean theorem to solid figures	9.8
9.9	Students will solve using trigonometric ratios	9.9
9.10	Students will solve word problems using trigonometric ratios	9.10

Chapter 10: Circles-17 days

Section	Learning Targets	Resources
10.1	Students will identify the characteristics of a circle	10.1
10.2	Students will apply the relationship between the congruent chords of a circle	10.2
10.3	Students will determine the measure of an arc	10.3
10.4	Students will solve circles using secants and tangents	10.4
10.5	Students will find the measures of secant tangent angles	10.5
10.6	Students will apply secant tangent angles	10.6
10.7	Students will solve inscribed and circumscribed polygons	10.7
10.8	Students will apply the circle power theorems	10.8
10.9	Students will find circumference and arc lengths of a circle	10.9

Chapter 11: Area-14 days

Section	Learning Targets	Resources
11.1	Students will find the area of rectangles and squares	11.1
11.2	Students will find the area of parallelograms and triangles	11.2
11.3	Students will find the area of a trapezoid	11.3
11.4	Students will find the area of a kite	11.4
11.5	Students will find the area of regular polygons	11.5
11.6	Students will find the area of circles and circle sectors	11.6
11.7	Students will find the ratio of the areas using similar figures	11.7
11.8	Students will use Hero and Brahmagupta's Theorems	11.8

Chapter 12: Surface area and Volume-9 days

Section	Learning Targets	Resources
12.1	Students will find the surface area of prisms	12.1
12.2	Students will find the surface area of pyramids	12.2
12.3	Students will find the surface area of circular solids	12.3
12.4	Students will find the volume of prisms and cylinders	12.4
12.5	Students will find the volume of pyramids and cones	12.5
12.6	Students will find the volume spheres	12.6