Unit 1

Geometry Foundations

goal #1

I can describe the undefined terms: POINT, LINE, and PLANE (G-CO.1)

goal #2

I can identify and define: Angle, Perpendicular and Parallel lines, and line segment. (G-CO.1)

goal #3

I can identify & use properties of Vertical Angles, Linear Pairs, Complementary & Supplementary Angles (G.CO.9)

goal #4

I can identify, use, and prove properties of parallel lines with Transversals, Corresponding, Alternate Interior, Alternate Exterior, & Same Side Interior Angles. (G.CO.9)

goal #5

I can use the Pythagorean Theorem to solve parts of a Right Triangle. (G.SRT.8)

Unit 2

Constructions

goal #1

I can perform geometric constructions:

- Copying a segment
- Copying an Angle
- Bisecting a Segment
- Bisecting an Angle
- Construct Perpendicular lines
- Construct a Parallel line thru a Point not on a line

goal #2

I can construct triangles using ASA, SAS, and SSS. (G.CO.8)

goal #3

I can construct regular polygons (inscribed in a circle). (G.CO.13)

goal #4

I can construct a tangent line from a point outside a given circle to a circle.

Unit #3

Coordinate Geometry

goal #1

I can recall and use previous understandings of coordinate geometry including:

- Distance formula
- Midpoint Formula
- Slope Formula
- Equations of Lines (slope-intercept & Point-slope form)

goal #2

I can recognize that slopes of parallel lines are equal and perpendicular lines are opposite reciprocals. (G.GPE.5)

goal #3

I can find the equation of Parallel or Perpendicular lines to a given line through a given point. (G.GPE.5)

Unit 4

Triangles: Congruence and Similarity

goal #1

I can identify the hypothesis & conclusion of each:

- Triangle Sum theorem
- Base Angles of Isosceles Triangles
- Point of Concurrency (G.CO.10)

goal #2

I can prove triangles congruent by ASA, AAS, SSS, SAS, and HL to solve problems. (G.CO.8) (G.SRT.5)

goal #3

I can prove triangles similar by AA, SSS, & SAS to solve problems. (G.SRT.3)

Unit 5

Polygons

goal #1

I can find Perimeters & Areas:

- Composite Figures
- w/ Coordinates
- Regular Polygons

goal #2

I can apply similarity to solve for parts of polygons with proportions. (G.SRT.5)

- Proportionality Theorems
- Area Ratios of Similar Figures

Unit 6

Quadrilaterals

goal #1

I can classify types of quadrilaterals. (G.CO.11)

goal #2

I can apply properties of quadrilaterals to solve problems, including (G.CO.11):

- Parallelograms
- Rectangles
- Rhombi
- Squares
- Trapezoids
- Kites

- goal #3

. **I can prove a quadrilateral is a parallelogram. If it is a parallelogram, I can distinguish what kind of parallelogram. (G.CO.11)**

Unit 7

Right Triangles and Trigonometry

goal #1

. I can apply the Pythagorean to solve for sides of a right triangle and use its converse to tell if it is a right triangle. (G.SRT.8)

. goal #2

. I can use the geometric mean to solve for missing sides of a right triangle when the altitude is dropped from the right angle.

. goal #3

I can solve for missing sides in Special Right Triangles

(45-45-90 & 30,60,90)

goal #4

. I can use trigonometric ratios (sine, cosine, tangent) to solve right triangles in applied problems. (G.SRT.8)

goal #5

I can use the Law of Sines and Cosines to solve problems. (G.SRT.10+)

Unit 8

Circles

goal #1

I can identify & describe relationships of circles including: (G.C.2)

- Radii & Diameters
- Central angles
- Chords
- Secants
- Tangents
- Inscribed Angles
- Circumference

. goal #2

. I can find Arc Length and Areas of Sectors of Circles. (G.C.5)

. goal #3

. I can find the measures of Central & Inscribed angles and their corresponding arcs.

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goal #4

I can find angles associated with the interior & exterior of the circle including:

- Two cords intersecting
- A chord and tangent intersecting at the point of tangency
- Two tangents intersecting
- Two Secants intersecting
- A secant & tangent intersecting

goal #5

I can find the length of segments associated with the interior and exterior of a circle, including:

- Two chords intersecting
- Two tangents intersecting
- Two secants intersecting
- Secant & Tangent intersecting

Unit 9

Solids

- goal #1
- I can find the Surface Area & Volume of the following solids (G.GMD.3):
  - Prisms
  - Cylinders
  - Pyramids
  - Cones
  - Spheres

Unit 10

Transformations

goal #1

I can perform transformations like Rotations, Reflections, or Translations of figures using graph paper, tracing paper, and geometry software. (G.CO.5)

. goal #2

. I can perform Dilations of figures given center and Scale Factor. (G.SRT.1)