Geometry Course Syllabus – Semester One (Yellow Book)

Unit 1: Introduction to Geometry

Chapter 1, Section 1 – Points, lines, and planes
Chapter 1, Section 2 – Segment Addition & Angle Addition ONLY
Chapter 1, Section 3 – Distance and midpoints
Chapter 3, Sections 3 & 4 - Slope and Graphing Lines review
Chapter 1, Section 4 – Angle measure
Chapter 1, Section 5 – Angle relationships
Chapter 1, Section 6 – Two-Dimensional Figures
Chapter 1 – Constructions

> Pg. 25 construct a midpoint
> Pg 35 bisect an angle
> Pg 48 Construct perpendiculars
> Pg 172 Parallel line

Spiraled: Chapter 8- Pythagorean Theorem and Special Right Triangles
Chapter 8, Section 6 – Algebraic proof of Pythagorean Theorem
Simplifying Radicals Alg 1 review

Unit 2: Transformations

Chapter 9, Section 1 – Reflections
Chapter 9, Section 2 – Translations
Chapter 9, Section 3 – Rotations
Chapter 3, Section 3- Slope
Chapter 3, Section 4 – Equations of Lines
Chapter 3, Section 5 – Proving lines Parallel (using equations, slopes, and graphs)

Unit 3: Angle Relationships *** are not lessons, but content is taught within the other sections in the unit.

Chapter 2, Section 3 – Conditional Statements ***
Chapter 2, Section 5 – Postulates *** MME uses vocabulary as Axioms so make sure to cover and use postulates and axioms as synonymous.
Chapter 2, Section 6 – Algebraic proof***
Chapter 1, Section 5 – Angle relationships (Advanced problem solving and spiraled
                algebra skills applied with justifications to prove)
Chapter 2, Section 7 – Proving segment relationships
Chapter 2, Section 8 – Proving angle relationships
Chapter 3, Section 1 – Parallel lines and transversals
Chapter 3, Section 2 – Angles and parallel lines
Chapter 3, Section 5 – Proving Lines Parallel

Unit 4: Polygons

Chapter 6, Section 1 – Angles of polygons
Chapter 4, Section 1 – Classifying triangles
Chapter 4, Section 2 - Angles of triangles
Chapter 4, Section 6 – Isosceles triangles
Chapter 6, Section 2 – Parallelograms
Chapter 6, Section 3 – Tests for parallelograms
Chapter 6, Section 4 – Rectangles
Chapter 6, Section 5 – Rhombi and squares
Chapter 6, Section 6 – Trapezoids
Chapter 6, Section 7 – Coordinate Proofs and Quadrilaterals
Chapter 1, Section 1 – Points, lines, and planes is revisited and spiraled so to include intersections of planes and lines in this context.

> *Basic Area is spiraled into the polygon unit:*

Chapter 11, Section 1 – Areas of parallelograms

Chapter 11, Section 2 – Areas of triangles, trapezoids, and rhombi

Unit 5: Triangle Basics

Chapter 4, Section 1 – Classifying triangles
Chapter 4, Section 2 - Angles of triangles
Chapter 4, Section 6 – Isosceles triangles
Chapter 4, Section 7 – Triangles and coordinate proofs
Chapter 5, Section 1 - Bisectors, medians, and altitudes- *Constructions of all 3, proofs and detailed to cover medians only based on CCSS, MME would like to cover all 3.*
Chapter 5, Section 2 – Inequalities and Triangles- MME
Chapter 5, Section 4 - The Triangle Inequality- MME
Chapter 11, Section 2 – Areas of triangles

Unit 6: Congruent Triangles

Chapter 4, Section 3: Congruent Triangles
Chapter 4, Section 4: Proving Congruence – SSS, SAS
        (Prove Isosceles Triangle Theorem)
Chapter 4, Section 5 - Proving Congruence ASA, AAS
Chapter 4, Section 5 Extend: Proving Congruence HL

Geometry Course Syllabus – Semester Two (Yellow Book)

Unit 7: Mini Unit (to be placed in Semester ONE if time permits)

Chapter 4, Section 4: Proving Congruence – SSS, SAS
        (Prove Isosceles Triangle Theorem)
Chapter 4, Section 5 - Proving Congruence ASA, AAS
Chapter 4, Section 5 Extend: Proving Congruence HL

Unit 8: Similarity

Chapter 7, Section 1 – Proportions (Optional but needed for regular geometry students)
Chapter 7, Section 2 – Similar Polygons
Chapter 9, Section 5 – Dilations
Chapter 7, Section 3 - Similar triangles
Chapter 7, Section 5 – Parts of similar triangles
Chapter 13, Section 4 – Congruent and Similar Solids

Unit 9 : Right Triangles and Trigonometry

Chapter 8, Section 1 – Geometric mean
Chapter 8, Section 4 – Trigonometry (30, 45, 60, 90 exact values)
        Include Geometry Lab Pg. 457
Chapter 8, Section 5 – Angle of elevation and depression
Chapter 9, Section 6 - Vectors
Chapter 8, Section 6 – The Law of Sines (including the proof Pg. 471)
Chapter 8, Section 7 – The Law of Cosines (including the proof Pg. 484 #37)
Review from semester one:
Chapter 8, Section 2 – The Pythagorean Theorem and its converse (proof pg. 440 Proving Pythagorean Theorem by Similar Triangles)
Chapter 8, Section 3 – Special right triangles

Unit 10: Circles

Chapter 10, Section 1 – Circles and circumference
Chapter 10, Section 2 – Angles and arcs

Chapter 10, Section 3 – Arcs and chords
Chapter 10, Section 4 – Inscribed angles (w/ constructions Pg. 592)
Chapter 10, Section 5 – Tangents (w/ extend 10.5)
Chapter 10, Section 6 – Secants, Tangents, and Angle Measure
Chapter 10, Section 7 – Special segments in Circles
Chapter 10, Section 8 – Equations of Circles w/ Enrichment 10.8
Cover basics of area of circles, and area of sectors.
Chapter 11, Section 3 – Areas of regular polygons and circles (prove all circles are similar)
Chapter 11, Section 5 – Geometric Probability

Unit 11: Area

Chapter 11, Section 1 – Areas of parallelograms
Chapter 11, Section 2 – Areas of triangles, trapezoids, and rhombi (for SAS use A = ½ abSinθ)
Chapter 11, Section 3 – Areas of regular polygons and circles (prove all circles are similar) (for SAS use A = ½ abSinθ and A=1/2aP)
Chapter 11, Section 4 – Areas of irregular figures
Chapter 11, Section 5 – Geometric Probability

Unit 12: Surface Area and Volume

Chapter 1, Section 6 – Two-Dimensional Figures
Chapter 12, Section 1 – Three Dimensional Figures (include rotating 2D figures to create 3D figures)
Chapter 12, Section 2 – Surface areas of prisms
Chapter 12, Section 3 – Surface areas of cylinders
Chapter 12, Section 4 – Surface areas of pyramids
Chapter 12, Section 5 – Surface area of cones
Chapter 12, Section 6 – Surface area of spheres
Chapter 13, Section 1 – Volumes of prisms and cylinders
Chapter 13, Section 2 – Volumes of pyramids and cones
Chapter 13, Section 3 –Volumes of Spheres
Chapter 13, Section 4 – Congruent and Similar Solids