Topic A:

Basic Constructions

G-CO.A.1, G-CO.D.12, G-CO.D.13

Focus Standard:	G-CO.A.1	Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.
	G-CO.D.12	Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). *Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.*
	G-CO.D.13	Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.
Instructional Days:	5	
Lessons 1–2:	Construct an Equilateral Triangle (M, E)[1]	
Lesson 3:	Copy and Bisect an Angle (M)	
Lesson 4:	Construct a Perpendicular Bisector (M)	
Lesson 5:	Points of Concurrencies (E)	

The first module of Geometry incorporates and formalizes geometric concepts presented in all the different grade levels up to high school geometry. Topic A brings the relatively unfamiliar concept of construction to life by building upon ideas students are familiar with, such as the constant length of the radius within a circle. While the figures that are being constructed may not be novel, the process of using tools to create the figures is certainly new. Students use construction tools, such as a compass, straightedge, and patty paper to create constructions of varying difficulty, including equilateral triangles, perpendicular bisectors, and angle bisectors. The constructions are embedded in models that require students to make sense of their space and to understand how to find an appropriate solution with their tools. Students will also discover the critical need for precise language when they articulate the steps necessary for each construction. The figures covered throughout the topic provide a bridge to solving, then proving unknown angle problems.

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[1] Lesson Structure Key: **P**-Problem Set Lesson, **M**-Modeling Cycle Lesson, **E**-Exploration Lesson, **S**-Socratic Lesson