

Geometry Curriculum Bundle #1

Title	Suggested Dates
Geometry Basics	August 25 – September 11 (13 Days)



Big Idea/Enduring Understanding	Guiding Questions
Points, lines, planes, and angles are concepts used to model the physical world.	<ol style="list-style-type: none"> 1. How are points, lines, and planes related? 2. How are points, lines, and planes different? 3. How are distance, midpoint, and bisector useful in the real world?

The resources included here provide teaching examples and/or meaningful learning experiences to address the District Curriculum. In order to address the TEKS to the proper depth and complexity, teachers are encouraged to use resources to the degree that they are congruent with the TEKS and research-based best practices. Teaching using only the suggested resources does not guarantee student mastery of all standards. Teachers must use professional judgment to select among these and/or other resources to teach the District Curriculum.

Knowledge & Skills with Student Expectations	District Specificity/Examples	Suggested Resources (See note above)	
<p>G.1 Geometric Structure. The student understands the structure of, and relationships within, an axiomatic system.</p> <p>G.1A The student develops an awareness of the structure of a mathematical system, connecting definitions, postulates, logical reasoning, and theorems.</p> <p>Teacher Note: Focus on Geometric terms</p>	<ul style="list-style-type: none"> • Use verbal descriptions to define geometric terms throughout the curriculum. • Use manipulatives and technology to draw conclusions and discover relationships about geometric shapes and their properties. • Use direct proofs in a limited amount, replace with other justification strategies. • A historical discussion of Euclid’s elements and how they are used in the development of modern geometry • A time line of geometry’s developments • Make connections on why geometric systems were developed, including art & architecture 	<p>Discovering: 1.1, 1.2, Algebra Skills 1 (Midpoint), 1.3, 9.5, Algebra Skills 2, Improving Algebra Skills (p. 125)</p> <p>Holt 1.2 for Segment Addition Postulate</p>	<p>A&M: Ch 2 (Fall)</p> <p>from mathopenref.com “famous geometers”</p>
<p>G.7 Dimensionality and the Geometry of Location. The student understands that coordinate systems provide convenient and efficient ways of representing geometric figures and uses them accordingly.</p> <p>G.7A The student uses one- and two-dimensional coordinate systems to represent points, lines, rays, line segments, and figures.</p>	<ul style="list-style-type: none"> • Use coordinate plane to find properties such as midpoint, distance between two points, Pythagorean Theorem 	<p>Holt 1.2, 1.6, 5.7, 3.5</p>	<p>Geometry LTF (p. 35) Pythagorean Application (wait until Ch. 5)</p> <p>A&M: Ch 2 (Fall)</p> <p>from mathopenref.com points, lines and planes</p>

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<p>G.7 Dimensionality and the Geometry of Location. The student understands that coordinate systems provide convenient and efficient ways of representing geometric figures and uses them accordingly.</p> <p>G.7C The student derives and uses formulas involving length, slope, and midpoint.</p>	<ul style="list-style-type: none"> • Develop algebraic expressions, such as distance formula, midpoint formula 	<p>Holt 1.2, 1.6, 3.5</p>	<p>A&M: Ch 2 (Fall)</p> <p>from mathopenref.com Plane Geometry</p>
<p>G.2 Geometric Structure. The student analyzes geometric relationships in order to make and verify conjectures.</p> <p>G2A The student uses constructions to explore attributes of geometric figures and to make conjectures about geometric relationships.</p>	<ul style="list-style-type: none"> • The construction of angle bisectors, perpendicular bisectors, parallel lines, congruent angles, congruent segments, perpendicular lines at a point on a line, perpendicular lines from a point to a line and segment bisectors. • Explore attributes to make connections and verbalize how and why constructions work. • The use of math tools such as manipulatives, paper folding, MIRA's, and technology, such as Geometer's Sketchpad 	<p>Holt 1.2, 1.3</p>	<p>A&M: Ch 3 (Fall)</p> <p>from mathopenref.com constructions</p>