

Scope and Sequence

Subject/Title of Unit	Grade	6 Weeks	Estimated Time Frame (# of days)
Geometry Chapter 11 Measuring Length and Area	10	6 th	12 days
TEKS/Student Expectations		Examples/Specifications:	
<p>(G.1) Geometric structure. The student understands the structure of, and relationships within, an axiomatic system. The student is expected to:</p> <p>(A) develop an awareness of the structure of a mathematical system, connecting definitions, postulates, logical reasoning, and theorems;</p> <p>(B) recognize the historical development of geometric systems and know mathematics is developed for a variety of purposes; and</p> <p>(C) compare and contrast the structures and implications of Euclidean and non-Euclidean geometries.</p> <p>(G.2) Geometric structure. The student analyzes geometric relationships in order to make and verify conjectures. The student is expected to:</p> <p>(A) use constructions to explore attributes of geometric figures and to make conjectures about geometric relationships; and</p> <p>(B) make conjectures about angles, lines, polygons, circles, and three-dimensional figures and determine the validity of the conjectures, choosing from a variety of approaches such as coordinate, transformational, or axiomatic.</p> <p>(G.3) Geometric structure. The student applies logical reasoning to justify and prove mathematical statements. The student is expected to:</p> <p>(C) use logical reasoning to prove statements are true and find counter examples to disprove statements that are false;</p> <p>(D) use inductive reasoning to formulate a conjecture;</p> <p>(G.5) Geometric patterns. The student uses a variety of representations to describe geometric relationships and solve problems. The student is expected to:</p> <p>(A) use numeric and geometric patterns to develop algebraic expressions representing geometric properties;</p>		.	

(B) use numeric and geometric patterns to make generalizations about geometric properties, including properties of polygons, ratios in similar figures and solids, and angle relationships in polygons and circles;

(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.

The student is expected to:

(A) use one- and two-dimensional coordinate systems to represent points, lines, rays, line segments, and figures;

(G.8) **Congruence and the geometry of size.** The student uses tools to determine measurements of geometric figures and extends measurement concepts to find perimeter, area, and volume in problem situations.

The student is expected to:

(A) find areas of regular polygons, circles, and composite figures;

(B) find areas of sectors and arc lengths of circles using proportional reasoning;

(C) derive, extend, and use the Pythagorean Theorem;

(G.9) **Congruence and the geometry of size.** The student analyzes properties and describes relationships in geometric figures.

The student is expected to:

(B) formulate and test conjectures about the properties and attributes of polygons and their component parts based on explorations and concrete models;

(C) formulate and test conjectures about the properties and attributes of circles and the lines that intersect them based on explorations and concrete models; and

(D) analyze the characteristics of polyhedra and other three-dimensional figures and their component parts based on explorations and concrete models.

(G.10) **Congruence and the geometry of size.** The student applies the concept of congruence to justify properties of figures and solve problems.

The student is expected to:

<p>(A) use congruence transformations to make conjectures and justify properties of geometric figures including figures represented on a coordinate plane; and</p> <p>(B) justify and apply triangle congruence relationships.</p> <p>(G.11) Similarity and the geometry of shape. The student applies the concepts of similarity to justify properties of figures and solve problems.</p> <p>The student is expected to:</p> <p>(B) use ratios to solve problems involving similar figures;</p> <p>(C) develop, apply, and justify triangle similarity relationships, such as right triangle ratios, trigonometric ratios, and Pythagorean triples using a variety of methods; and</p> <p>(D) describe the effect on perimeter, area, and volume when one or more dimensions of a figure are changed and apply this idea in solving problems.</p> <p>a.1, a.4, a.5, a.6, 8.11.A, 8.11.B, 8.12.A</p>	
<p>Language of Instruction:</p>	<p>Instructional Resources/Textbook Correlations:</p>
<p>Bases of a parallelogram Height of a parallelogram Height of a trapezoid Circumference Arc length Sector of a circle Center of a polygon Radius of a polygon Apothem of a polygon Central angle of a regular polygon Probability Geometric probability</p>	<p>Weblinks/Other Resources:</p>
<p>Evaluation/External Assessment/Local Assessment:</p>	<p>Best Instruction Timeline:</p>

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