

Scope and Sequence

Subject/Title of Unit	Grade	6 Weeks	Estimated Time Frame (# of days)
Geometry Chapter 2 Reasoning and Proof	10	1 st	14 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>(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>(A) determine the validity of a conditional statement, its converse, inverse, and contrapositive;</p> <p>(B) construct and justify statements about geometric figures and their properties;</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; and</p> <p>(E) use deductive reasoning to prove a statement.</p> <p>(G.3) Geometric structure. The student applies logical reasoning to justify and prove mathematical statements. The student is expected to:</p> <p>(A) determine the validity of a conditional statement, its converse, inverse, and contrapositive;</p>		.	

(B) construct and justify statements about geometric figures and their properties;

(C) use logical reasoning to prove statements are true and find counter examples to disprove statements that are false;

(D) use inductive reasoning to formulate a conjecture; and

(E) use deductive reasoning to prove a statement.

(G.5) Geometric patterns. The student uses a variety of representations to describe geometric relationships and solve problems.

The student is expected to:

(A) use numeric and geometric patterns to develop algebraic expressions representing geometric properties;

(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.6) Dimensionality and the geometry of location. The student analyzes the relationship between three-dimensional geometric figures and related two-dimensional representations and uses these representations to solve problems.

The student is expected to:

(A) describe and draw the intersection of a given plane with various three-dimensional geometric figures;

(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;

(C) derive and use formulas involving length, slope, and midpoint.

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

The student is expected to:

(A) formulate and test conjectures about the properties of parallel and perpendicular lines based on explorations and concrete

models; (B) formulate and test conjectures about the properties and attributes of polygons and their component parts based on explorations and concrete models;	
a.1, a.5, a.6, 8.14.A, 8.15.A, 8.16.A	
Language of Instruction:	Instructional Resources/Textbook Correlations:
Conjecture Inductive reasoning Counterexample Conditional statement: converse, inverse, contrapositive If-then form: hypothesis, conclusion Negation Equivalent statements Perpendicular lines Biconditional statements Deductive reasoning Line perpendicular to a plane Proof Two-column proof Theorem	
	Weblinks/Other Resources:
Evaluation/External Assessment/Local Assessment:	Best Instruction Timeline:
	14 days Geometry Best Instruction Timeline.xls