UNIT OF STUDY

Title: Unit 6	**Subject/Course**: Geometry	**Length:** 10 days
Topic: Quadrilaterals	**Grade:** 10th	**Designer:** Boyd

UNIT GOALS AND EXPECTATIONS

IMPORTANT CONCEPTS/UNDERSTANDINGS:	**ESSENTIAL QUESTIONS:**
• Prove the type of quadrilateral using the distance and slope formulas • Use properties of quadrilaterals find missing angles and sides	• What are the types of quadrilaterals? • What is the slope formula? • What is the distance formula? • What are the properties of each quadrilateral? • What is the difference between convex and concave polygons?
STUDENT LEARNING EXPECTATIONS: R.4.G.1 Explore and verify the properties of quadrilaterals CGT.5.G.5 Determine, given a set of points, the type of figure based on its properties (parallelogram, isosceles triangle, trapezoid)	
SPECIFIC DECLARATIVE KNOWLEDGE – What I know • Vocabulary: convex, concave, triangle, quadrilateral, pentagon, hexagon, heptagon, octagon, nonagon, decagon, n-gon, dodecagon, trapezoid, square, rectangle, kite, parallelogram, isosceles trapezoid, rhombus • Review properties of angles and triangles • Classify polygons based on their properties	**SPECIFIC PROCEDURAL KNOWLEDGE – What I need to do** • Determine properties of quadrilaterals with respect to parallel sides, length of sides, diagonal measurements, and measurement of angles • Explore quadrilaterals and their properties to verify the type of figure formed • Use distance formula to determine lengths of sides and diagonals of a polygon • Use the slope formula to determine parallel and perpendicular sides and diagonals of polygons • Determine the type of figures based on their properties, when given a set of points plotted in the coordinate plane

UNIT ASSESSMENTS
(Include tasks related to Dimensions 3 and 4 and Bloom's Taxonomy)

- Open Response Unit 6 question 1 identify the type of quadrilateral given vertices
- Open Response TLI identify the type of quadrilateral given vertices

Traditional Assessments:	**Other Evidence of Learning:**
• Distance and Slope Quiz • Unit 8 Test • TLI module test • Vocabulary Quiz	• Homework • Class work

ACTIVITIES AND LEARNING EXPERIENCES	Resources
• Introduce vocabulary using 4-step strategy	

• Use quadrilateral flow chart to learn properties • "Easter Egg Hunt" Quadrilaterals Activity (students will locate examples of all types of quadrilaterals) • Areas of quadrilaterals Activity • Use Mastery Math to practice concepts	• Mastery Math Notebook • Textbook pg. 371
Career Connections	
Architect, Furniture Designer, Mechanical Engineer, Civil Engineer, Carpenter, Construction, Cake Designer, Gemologist	