



WEST SHORE SCHOOL DISTRICT  
Geometry Learning Module 1

<b>Title of Module</b>	Essentials of Geometry	<b>Grade Level</b>	9-12
<b>Curriculum Area</b>	Mathematics	<b>Time Frame</b>	10 days

Desired Results

**Best Practices**

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for and make use of structure (Deductive Reasoning)
8. Look for and express regularity in repeated reasoning.

**Transfer Goals**

Students will be able to independently use their learning to...

- Connect old problem solving techniques to new curriculum.
- Connect new material to real world applications.
- Create viable mathematical arguments and use them to critique the arguments of fellow classmates.

**Key Learnings/Big Ideas**

Students will learn fundamental terms and concepts for the course of geometry.

**Content and Reading and Writing Standards**

Content standards

**CC.2.3.7.A.2**

Visualize and represent geometric figures and describe the relationships between them.

**CC.2.3.HS.A.11**

Apply coordinate geometry to prove simple geometric theorems algebraically.

**CC.2.3.HS.A.4**

Apply the concept of congruence to create geometric constructions.

**CC.2.3.HS.A.14**

Apply geometric concepts to model and solve real world problems.

<b>Essential Questions</b>	<b>Vocabulary (Best Practices)</b> Utilize concepts & competencies to add to vocabulary
<b>Unit EQ:</b> Why is it important to be able to speak the language of geometry?  <b>LEQ:</b> 1. How can we model the three undefined terms of Geometry? 2. What symbols are used to represent the length of segments? 3. How do we find the coordinate(s) of a midpoint? 4. How can two angles be related by position, and how does this relate to their measures? 5. What are the types and classifications of the two-dimensional figures we will be studying in geometry?	Adjacent angles Angle, Angle bisector Between, Collinear points Complementary/Supplementary angles Concave Polygon, Congruent Convex polygon Regular, Equiangular, Equilateral Coplanar, Line Linear pair Line segment
<b>Concepts</b> Students will know...	<b>Skills/Competencies (I Can...) Based on LEQs</b> Students will be able to...
1. Points, lines and planes can be represented even though they are undefined. 2. The correct way to label a line segment and ask for its length. 3. The formula for finding the midpoint and length of a segment. 4. Complementary angles have a sum of $90^\circ$ and supplementary angles have a sum of $180^\circ$ . 5. Equiangular means all angles are congruent, equilateral means all sides are congruent and regular means all angles and sides are congruent.	1. I can plot points, lines and planes on a coordinate system. 2. I can label points, lines and planes correctly. 3. I can use the midpoint and distance formulas to solve a problem. 4. I can solve problems involving complementary and supplementary angles. 5. I can distinguish between polygons that are regular, equilateral and equiangular. I can classify a polygon by its number of sides.

### Assessment Evidence

#### Formative Assessment

Questioning, Think Pair Share, Graphic Organizers, Visual Representations.

#### Summative Assessment

Common Assessments

**Best Instructional Practices**

- [Activating Strategies](#)
- [Extended Thinking](#)
- [Summarizing](#)
- [Vocabulary in Context](#)
- [Advance Organizers](#)
- [Non-verbal Representation](#)
- [Integration of Webb's Depth](#)
- [Integration of 21<sup>st</sup> Century Skills](#)
- [Reading and writing across disciplines](#)
- [Rigor and Relevance](#)

Resources

Student	Teacher

Adapted from Wiggins, Grant and J. Mc Tighe. (1998). *Understanding by Design*, Association for Supervision and Curriculum Development, ISBN # 0-87120-313-8 (ppk)