



WEST SHORE SCHOOL DISTRICT
Geometry Essentials Learning Module 1

Title of Module	Essentials of Geometry	Grade Level	9-12
Curriculum Area	Mathematics	Time Frame	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.

Essential Questions

Vocabulary (Best Practices)

Utilize concepts & competencies to add to vocabulary

<p>Unit EQ: Why is it important to be able to speak the language of geometry?</p> <p>LEQ:</p> <ol style="list-style-type: none"> 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 set up an equation to solve for a variable when given a midpoint of a segment? 4. How do you identify whether an angle is acute, right, obtuse, or straight? 5. How do you identify complementary, supplementary and vertical angles? 	<p>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</p>
<p>Concepts Students will know...</p>	<p>Skills/Competencies (I Can...) Based on LEQs Students will be able to...</p>
<ol style="list-style-type: none"> 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. How to set up and solve equations for congruent segments and congruent angles. 4. Complementary angles have a sum of 90° and supplementary angles have a sum of 180°. 5. How to set up and solve equations for vertical angles. 	<ol style="list-style-type: none"> 1. I can plot points, lines and planes on a coordinate system. 2. I can label points, lines and planes correctly. 3. I can identify a midpoint in a diagram and label the diagram correctly. 4. I can solve problems involving complementary, supplementary, and vertical angles. 5. I can write and solve an equation for segment addition postulate, angle addition postulate, a segment with a midpoint and an two angles formed by an angle bisector.

Assessment Evidence

Formative Assessment

Questioning, Think Pair Share, Graphic Organizers, And 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 21st 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)

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