

Unit F - Geometry: All the Angles

Overview

This short Geometry unit focuses on angle measurements. Students review how to use a protractor and use the protractor to examine angles including those in a triangle. Students revisit solving equations by solving for an unknown in Geometric diagrams involving angles.

21st Century Capacities: Analyzing

Stage 1 - Desired Results

<p>ESTABLISHED GOALS/ STANDARDS</p> <p>MP 1 Make sense sense of problems and persevere in solving them MP4 Model with Mathematics MP5 Use appropriate tools strategically MP6 Attend to precision</p> <p>CC.7.G.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.</p> <p>CCSS.MATH.CONTENT.7.G.A.2 Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from</p>	Transfer:	
	<i>Students will be able to independently use their learning in new situations to...</i>	
	1. Draw conclusions about graphs, shapes, equations, or objects. (Analyzing)	
	Meaning:	
	<p>UNDERSTANDINGS: <i>Students will understand that:</i></p> <p>1. Mathematicians use geometric models, and spatial sense to interpret and make sense of the physical environment.</p> <p>2. Mathematicians analyze characteristics and properties of geometric shapes to develop mathematical arguments about geometric relationships.</p>	<p>ESSENTIAL QUESTIONS: <i>Students will explore & address these recurring questions:</i></p> <p>A. How does classifying bring clarity?</p>
	Acquisition:	
<i>Students will know...</i>	<i>Students will be skilled at...</i>	
1. That vertical angles are congruent	1. Naming an angle	

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<p>three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.</p> <p>CCSS.MATH.CONTENT.7.G.B.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.</p>	<ol style="list-style-type: none">2. The sum of two adjacent angles that form a straight line is 1803. The sum of the angles in a triangle is 180 degrees4. Vocabulary: complementary, supplementary, adjacent, vertical	<ol style="list-style-type: none">2. Using a protractor to draw and measure an angle3. Finding the complement/supplement of a given angle4. Determining if two angles are complements or supplements5. Write a simple equation for an unknown angle in a figure6. Distinguishing between vertical and adjacent angles7. Solving for a missing angle in a triangle including ones where angles are given as algebraic expressions
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