

Richmond Public Schools
Department of Curriculum and Instruction
Curriculum Pacing And Resource Guide – Unit Plan



Course Title/ Course #: Geometry

Unit Title/ Marking Period # (MP#2): Triangles

Start day:

Meetings (Length of Unit): 3 days

<i>Desired Results ~ What will students be learning?</i>		
<u>Standards of Learning/ Standards</u>		
<p>G.5 The student, given information concerning the lengths of sides and/or measures of angles in triangles, will a) order the sides by length, given the angle measures; b) order the angles by degree measure, given the side lengths; c) determine whether a triangle exists; and d) determine the range in which the length of the third side must lie. These concepts will be considered in the context of real-world situations.</p>		
<u>Essential Understandings/ Big Ideas</u>		
<ul style="list-style-type: none"> • The longest side of a triangle is opposite the largest angle of the triangle and the shortest side is opposite the smallest angle. • In a triangle, the length of two sides and the included angle determine the length of the side opposite the angle. • In order for a triangle to exist, the length of each side must be within a range that is determined by the lengths of the other two sides. 		
<u>Key Essential Skills and Knowledge</u>		
<ul style="list-style-type: none"> • Order the sides of a triangle by their lengths when given the measures of the angles. • Order the angles of a triangle by their measures when given the lengths of the sides. • Given the lengths of three segments, determine whether a triangle could be formed. • Given the lengths of two sides of a triangle, determine the range in which the length of the third side must lie. • Solve real-world problems given information about the lengths of sides and/or measures of angles in triangles. 		
<u>Vocabulary</u>		
Triangle Angle	Measure Degree Measure	Opposite Segment

Vertex	Range	Side
<i>Assessment Evidence ~ What is evidence of mastery? What did the students master & what are they missing?</i>		
<u>Assessment/ Evidence</u>		
Interactive Achievement		
Mulligan Checkpoint G.5		
Henrico Practice Quiz		
<i>Learning Plan ~ What are the strategies and activities you plan to use?</i>		
<u>Learning Experiences/ Best Practice</u>		
<ul style="list-style-type: none"> • Use AngLegs or Geoboards and rubber bands to construct triangles with sides of different lengths. Use this to illustrate the triangle inequality Theorem • Use AngLegs and the protractor or pencils, paper, rulers and protractors you can show that the measure of the angles of the triangle has a direct effect on the length of the sides across from the angle. • Use colored pencils or markers and scratch paper for student to draw triangles and color code drawing arrows from the angles to the side across from the angles to aid them in identifying and ordering sides and angles. 		
<u>Technology Integrations</u>		
Gizmo Khan Academy Virtual Nerd Discovery Education		
<u>Resources</u>		
Text Geometry, ©2012, Price, et al, McGraw-Hill School Education Group page(s) 359-366 Coach book, Virginia edition Lesson 14 page(s) 114-121 Mulligan Math in Minutes Technology Gizmos Triangle Inequalities Virginia Department of Education		

[How Many Triangles?](#)

[Other](#)

[Triangle Inequalities](#)

Cross Curricular Connection

Technology

Students can explore the use of triangles in GPS systems and mapping

Extended Core/Electives

Explore the use of triangles in architecture, planning, and design of all types of structures (buildings, bridges, ramps, highways, etc.)

Triangular formations in fashion. Sports for offensive and defensive purpose

Driver's Education can discuss triangular Road signs

History

Research the extensive use for triangles in the past and present

Science

Triangles used in Astronomy and Physics

English

Students can use research from History to write essays