

**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): 5 days**

<i>Desired Results ~ What will students be learning?</i>		
<b><u>Standards of Learning/ Standards</u></b>		
G.6 The student, given information in the form of a figure or statement, will prove two triangles are congruent, using algebraic and coordinate methods as well as deductive proofs.		
<b><u>Essential Understandings/ Big Ideas</u></b>		
<ul style="list-style-type: none"> <li>• Congruence has real-world applications in a variety of areas, including art, architecture, and the sciences.</li> <li>• Congruence does not depend on the position of the triangle.</li> <li>• Concepts of logic can demonstrate congruence or similarity.</li> <li>• Congruent figures are also similar, but similar figures are not necessarily congruent.</li> </ul>		
<b><u>Key Essential Skills and Knowledge</u></b>		
<ul style="list-style-type: none"> <li>• Use definitions, postulates, and theorems to prove triangles congruent.</li> <li>• Use coordinate methods, such as the distance formula and the slope formula, to prove two triangles are congruent.</li> <li>• Use algebraic methods to prove two triangles are congruent.</li> </ul>		
<b><u>Vocabulary</u></b>		
Triangle	Postulate	Hypotenuse
Congruent	Theorem	Slope
Proof	Leg	Distance
Angle-Side-Angle (ASA)	Hypotenuse-Leg (HL)	Side-Side-Side (SSS)
Angle-Angle-Side (AAS)	Side-Angle-Side (SAS)	Corresponding
Property		

***Assessment Evidence ~ What is evidence of mastery? What did the students master & what are they missing?***

**Assessment/ Evidence**

Interactive Achievement

[Mulligan Checkpoint G.6](#)

Henrico Practice Quiz

***Learning Plan ~ What are the strategies and activities you plan to use?***

**Learning Experiences/ Best Practice**

- Practice identifying corresponding parts of triangle first using tick marks and color codes. Have students practice writing the information in proportional form.
- Have students identify and list all the information they know from looking at diagrams and from what is given before they try to answer questions or fill in proofs
- Have students constantly given reasons for marking information back up statements made about the congruent triangle and its parts.
- Have students fill in proofs and explain them in groups as part of a gallery walk around the room.
- Link the concepts of coordinate distance to the measures of the sides of triangles

**Technology Integrations**

Gizmo

Khan Academy

Virtual Nerd

Discovery Education

**Resources**

**Text**

Geometry, ©2012, Price, et al, McGraw-Hill School Education Group page(s) 253-270 and 273-282

Coach book, Virginia edition Lesson 15 page(s) 122-130

Mulligan Math in Minutes

**Technology**

**Gizmos**

[Congruence in Right Triangles](#)

[Proving Congruent Triangles](#)

**Virginia Department of Education**

[Congruent Triangles](#)

[Other](#)

[Prove Congruent Triangles](#)

### **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

Art can discuss the importance in some works of being sure that there is congruence

#### **History**

Research the extensive use for triangles in the past and present and explore the origins of the concept of congruence and uniformity.

#### **Science**

Triangles used in Astronomy and Physics

#### **English**

Students can use research from History to write essays. Students can also practice proofs writing and development of reasons.