

# UNIT 4 - LESSON PLANS

**Class** Geometry    **Topic** U4 – Triangle Congruence by SSS and SAS    **Lesson** 2    **Of** 7

## Objective

Students will:

- Identify Triangles and prove their Congruence using SSS and SAS Postulates.

## “I Can” Statement

- I can use the properties of equilateral triangles to find missing side lengths and angles.
- I can write a congruency statement representing two congruent polygons.
- I can identify congruent parts of a polygon, given a congruency statement.
- I can prove triangles are congruent using SSS, ASA.

## Common Core Standards

### [CCSS.MATH.CONTENT.HSG.CO.A.2](#)

Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).

### [CCSS.MATH.CONTENT.HSG.CO.A.5](#)

Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.

### [CCSS.MATH.CONTENT.HSG.CO.B.6](#)

Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.

### [CCSS.MATH.CONTENT.HSG.CO.B.7](#)

Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.

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## [CCSS.MATH.CONTENT.HSG.CO.B.8](#)

Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.

## [CCSS.MATH.CONTENT.HSG.CO.C.10](#)

Prove theorems about triangles. *Theorems include: measures of interior angles of a triangle sum to  $180^\circ$ ; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.*

## [CCSS.MATH.CONTENT.HSG.CO.D.12](#)

Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). *Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.*

## [CCSS.MATH.CONTENT.HSG.CO.D.13](#)

Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.

### **Bell Work**

See 4-2 Bell Work

### **Procedures**

1. Start and lead student discussion related to the bell work.
2. Distribute the Guided Notes
3. Present lesson or play a video lesson.
4. Use an Online Activity if time permitted.
5. Distribute Lesson Assignment.

### **Assessment**

Bell Work 4-2

# UNIT 4 - LESSON PLANS

Assignment 4-2

Exit Quiz 4-3 (After 4-3 over ALL TRIANGLE CONGRUENCE)

**Additional Resources**    See Online Activities