

# **Lesson Plan: SPI 0606.4.3 Solve problems using the Triangle Inequality Theorem**

## **Letitia Cox 6<sup>th</sup> Grade Mathematics**

**Triangle Inequality Theorem:** The sum of the lengths of any two sides of a triangle is greater than the length of the third side.

**Overview:** Students will use masking tape to create various triangle models investigating the relationship between the longest side of the triangle and the sum of the other two sides of the triangle.

**Time Required:** One class period (can be extended or shortened to fit)

**Goals and Objectives:** Students will:

1. Investigate the relationship between the largest side and the sum of the remaining sides in a triangle.
2. Use the inequality for sides and angles in a triangle to solve problems involving triangles.
3. Use the triangle inequality to solve problems involving triangles.
4. Investigate the relationship between the largest side and the largest angle in the triangle.

**Materials needed:**

- Masking Tape
- Yard Sticks (for group work)
- Rulers (for individual work)
- Protractors
- Triangle Activity Sheet (attached)
- Teacher Created Student Direction Sheet (attached)

**Procedure:**

During this lesson, students will participate in activities where they will investigate relationships of sides and angles in a triangle. The teacher will first describe the triangle Inequality Theorem. Students will be put in small cooperative learning groups (depending on classroom size). From experience, groups of less than five work well. While students are engaging in the activity, the teacher's role will be facilitator. Students will be

provided a roll of masking tape and a set of directions given by the teacher. They will also receive a yard stick and protractor for measurement. When students complete the activity, the teacher will lead a classroom group discussion. Students come to an understanding about the important concepts. Provide students with the Triangle Inequality activity sheet, a ruler, and a protractor. Students should work individually on questions. They will then get in small groups to share answers and discussion. As the final task, the teacher will give the correct answers to the worksheet and answer any difficult questions. Students then can be given a quiz to check for individual understanding.