3.2 Angles of Triangles - **INQUIRY**

Name:

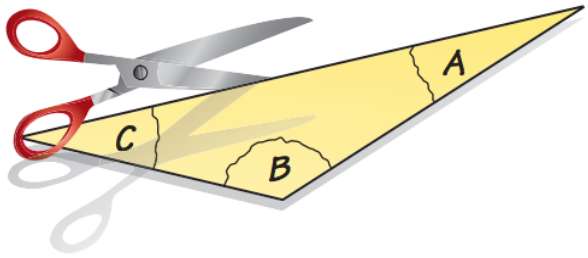
Essential Question: *How can you describe the relationships among the angles of a triangle?*

PART 1: Exploring the INTERIOR Angles of Triangles

1. Draw a triangle on your **yellow** piece of paper. USE A STRAIGHT EDGE.

2. Label the interior angles of the triangle A, B, and C.

3. *Carefully* cut out the triangle. Tear off the three corners of the triangle.



4. Arrange angles A and B so that they share a vertex and are adjacent on the line provided at the bottom of the page. *Example shown to the right →*

5. How can you place the third angle to determine the sum of the measures of the interior angles? What is the sum of these three angles?

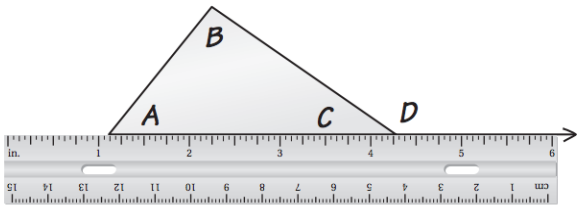
6. Compare your results with those of others in your table group or class. What did you notice?

PART 2: Exploring the EXTERIOR Angles of Triangles

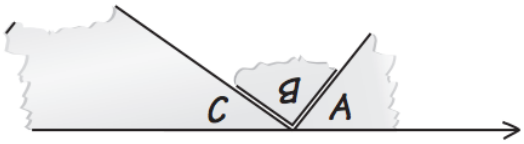
1. Draw a triangle on your **blue** piece of paper. USE A STRAIGHT EDGE.

2. Label the interior angles of the triangle A, B, and C.

3. Place the triangle at the bottom of this page and label the newly formed exterior angle D, *as shown.* →



4. Tear off the corners that are **not adjacent** to the exterior angle, D.
Arrange them to fill the exterior angle, *as shown.* →



5. What does this tell you about the measure of exterior angle D?

6. Compare your results with those of others in your table group or class. What did you notice?