



# TEACHER PAGE

## Lesson: Acute Triangles

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**New Arizona Math Strand 4 Geometry and Measurement Grade 4, 6**  
**Articulated 4M41-05** Classify triangles as right, acute, or obtuse. **4M64-04** Measure angles using a protractor.

**Old Arizona Math Standard 4 Geometry Grades 4-8**  
**4ME2-PO2** Classify triangles by their angles and sides (e.g., equilateral, acute, isosceles. . .)

**Learning objectives: Students will be able to:**

- classify acute triangles by their number of sides and measure of angles.
- select acute triangles among other triangles by measuring the angles accurately with a protractor.

**Materials or special things:**

Protractors, colored triangles

**Overview and Content:**

From a space ship emerges many different triangles, one of which is studied here, the acute triangle. There are many exercises helping students remember the attributes of acute triangles as distinguishable from other triangles. Students will use an interactive protractor for practice to correctly measure angles to find only acute triangles.

**Engage Students:**

Show a batch of various triangles made from colored paper and ask the class how they would prove the identity of the triangles. Help students start a chart of attributes for each triangle regarding sides and angles. Be prepared to demonstrate using a protractor if you feel the class is ready.

**Follow-up and Extensions:**

Identify acute triangles in Navajo rug designs, beadwork and sand paintings. Create patterns for Navajo art projects using acute triangles in special areas for prominence, but include other triangles, too. Students must be able to identify, or prove, the triangles used in their patterns.

**Assessment:**

Students must be able to select only acute triangles for the Navajo rug.

**Teacher Note:**

Acute triangles are studied in grade 4 in the new Arizona Math Standards. However, the SHOW of this lesson allows use of a protractor for students to select only acute triangles. Measuring with protractors in the standards now occurs in grade 6. This lesson offers value for both grade levels.

