



## TEACHER PAGE

**Lessons: Angle Action 1, 2, and 3    Teacher-Author: Lori Reardon  
ASSET Animator: Sarayus (Tao) Somviwatanachai**

**New Arizona Math Strand 4 Geometry and Measurement                      Grades 5, 6, 7**  
**Articulated 4M64-04** Measure angles using a protractor. This lesson contains concepts related to acute, obtuse and right angles first introduced in the fourth grade. Angle Action III is also **4M71-06** Identify the angles created by two lines and a transversal. This lesson also includes using a protractor, and **4M51-06** Recognize that all pairs of vertical angles are congruent.

**Bibliography:** Cavanagh, Mary C., *Math At Hand*, Mass., Great Source, 2000.

**Learning Objectives:** The student will be able to:

- demonstrate measuring specified angles correctly
- designate specified angles with labels

### **Overview:**

Through three lessons students will have opportunity to practice with a protractor in finding angles that are acute, obtuse, and reflexive. Students drag a protractor to measure angles within a configuration, label them and match the angles with the correct definition or cowboy.

### **Pre-entry skills and engaging students:**

Students need to know how to drag objects with a mouse. Minimum third grade reading level preferred. This concept is related to the world around students. The “out west” theme is used to engage the student interest and involvement in the concept immediately.

### **Content:**

- 1) After an explanation on labeling angles and using protractors, students drag and manipulate a protractor over angles (branding irons) to measure them.
- 2) Students measure angles within branding irons and then place them with a matching rancher. Students will also match labels with the correct angles and also with branding irons.
- 3) Finally, students will relate their understanding of information, measuring, matching and labeling in a true-false quiz.

### **Follow-up and extension:**

- A) With a “hands-on” protractor, students should be engaged in many activities of measuring the angles of objects and pictures. As an extension, they should list their measurement data, the sort and organize by objects, angles, or their choice of category.
- B) Interesting research topics could range from the history of protractors, or the study of particular angles, to the development and use of branding irons throughout history.

### **Assessment:**

Answering the true-false questions correctly in SHOW will relate the success of students with the activities throughout the lesson.

