



## TEACHER PAGE

### Lesson: Pyramids with Basic Bases

Teacher-Author: Nellie Jo Hendricks

ASSET Animator: Harue Yoshida

New Arizona Strand 4 Geometry and Measurement

Grades 3, 4

**Articulated 4M41-O2** Identify models or illustrations of prisms, pyramids, cones, cylinders and spheres; **4M31-03** Describe relationships between 2-D, 3-D objects.

**Old Arizona Math Standard 4: Geometry, Essentials 1**

Grades 4-5

**4ME1-PO1A** Classify 2-dimensional shapes and 3-dimensional figures by their properties, A. by sight.

#### Materials:

Students will need manipulatives, individual slates or white boards with appropriate writing tools, tag board, scissors and glue to build pyramids.

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

- identify a pyramid as a three-dimensional figure
- describe a pyramid by its attributes of faces and base
- make models of pyramid with various numbers of faces, then compare and explain differences of attributes among them.

#### Overview:

This lesson, originally at the Essential level in the Arizona Standard, enables students to identify and classify pyramids as three-dimensional figures by name and attributes. Classroom resources provided in 2nd website, Dig Deeper section.

#### Engage students:

Direct students to tell of their experiences with pyramids from stories or movies they have experienced. This includes pyramids in Egypt, Mexico, or South America. Ask them to describe the figures they have seen. Ask for the number of sides or faces on the pyramids. Ask for the reasons that pyramids have been built. Then ask: *If you lived in the desert, would you want to live in a pyramid? Why?*

#### Content:

Students learn that pyramids are three-dimensional figures. They are made of triangular faces (3, 4, 5 and more) with a polygon base. The faces have edges that meet at a point (vertex).

#### Follow-up, extensions:

Request that students construct several pyramids on different bases. Then they are to identify the attributes of their pyramid to another students or the class.

#### Assessment:

After viewing an assortment of figures, students can correctly identify the pyramid and list the attributes of its three-dimensional figure.

#### Teacher Note:

The material of this lesson also supports **AZ Articulated 4M51-03 and 4M51-04.**

