



TEACHER PAGE

Lesson: 2-D and 3-D Presents at Pedro's Party

Teacher-Author: Janet Spencer-Phillips
ASSET Animator: Harue Yoshida

New Arizona Standard 4 Geometry and Measurement **Grade 5, 8**
Articulated 4M51-04 Identify the properties of two- and three- dimensional geometric figures using appropriate terminology and vocabulary; **4M81-02** Draw 3-D figures by applying properties of each (e.g., parallelism, perpendicularity and congruency).

Learning Objectives: The student will able to:

- list the properties of 2- and 3-dimensional objects
- determine objects to belong to 2- or 3- dimensional categories by properties
- explain the properties of objects with the correct terminology and vocabulary
- explain drawings of 3-D figures in regard to parallelism, perpendicularity and congruency

Overview and Content:

Students will learn that a certain group of objects can be organized in 2-D or 3-D groupings. Then the correct terminology of the properties of those objects will be introduced. Students have to label objects, group objects and organize a group of objects according to property categories. Students will encounter standard **4M81-02** in the **DIG DEEPER** section of the lesson and should be able to explain these concepts from the drawings.

Engaging students:

From a group of objects students will categorize them into two groupings of their choice. They may make the rules guiding both categories. The actual grouping could be a timed activity for two vying student groups. The rules and results will be explained in class.

Follow-up and extensions:

SO WHAT! refers to 2-D and 3-D in famous art, such as Cubist art. Libraries of Modern Art are available on the web where students could view sophisticated uses of the two dimensions in one painting.

In **DIG DEEPER**, students encounter the parallel-perpendicular-congruent bridge between 2-D drawings and 3-D drawings of objects.

TALK ABOUT IT! suggests students make a mural of figures from magazines. The idea would be to outline with markers or paint the 2-D properties of 3-D figures.

Assessment:

Students will drag all displayed shapes to the correct 2-D or 3-D category.

