



TEACHER PAGE

Lesson: Transformations - Shapes on the Move

Teacher Author: Pamela Roeller

ASSET Animator: Sarayus (Tao) Somviwatanachai

New Arizona Math Strand 4 Geometry and Measurement **Grades 4,5,7,8**

Articulated 4M42-01 Demonstrate translation using geometric figures; **4M52-01** Demonstrate reflections using geometric figures; **4M72-02** Recognize single rotations, translations or reflections on a coordinate grid; **4M82-02** Model a simple transformation on a coordinate grid (e.g., translate right four units and down two units).

Old Arizona Math Standard 4 Geometry

Grades 4-8

4ME3-PO1 Demonstrate slide, flip or turn using concrete geometric figures. **4ME3-PO2** Illustrate, using concrete or pictorial models A. slide, flip or turn.

Learning Objectives: Students will be able to:

- describe the transformation using a common word for reflection, rotation and translation
- demonstrate reflection, rotation and translation of geometric figures and pictorial images

Overview and Content:

Students see objects turn, slide and flip many times to illustrate rotation, translation and reflection transformations. They must learn to distinguish the pairs of words that describe the action to be able to demonstrate understanding. They are given many opportunities to practice selecting the correct action, plus the correct terms. The DIG DEEPER section shows a translation on a coordinate grid moved by specified units and direction. This lesson also has English, Navajo and Spanish narrations and scripts.

Engage Students:

Show transformations on the overhead or computer and ask students to describe the actions precisely. Then give them cut out shapes to try their hand at following your directions to turn, flip and rotate.

Follow-up:

Get acquainted with M.C. Escher in the TALK ABOUT IT! Ask student partners to create their own Escher-like pictures. DIG DEEPER places coordinate knowledge on top of transformation information for deeper learning. SO WHAT shows you images from home in daily life with their transformations.

Assessment:

Students must select the correct (landed) shape of the transformations and select the correct term.

