Making a Salt Dough Map of Arizona

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Grade Level: 3-5
Duration: 2 class periods

Overview

Maps show location and direction. A map that shows the shape or relief of the land is called a topographic
Making a Salt Dough Map of Arizona

A topographic map can help students visualize their state.

**Purpose**

In this lesson, students will gain a better understanding of the 3 regions of Arizona (mountain, plateau, and desert) by using a 3 to 1 ratio to build a 3D map of Arizona.

**Materials**

- 3D relief map of Arizona
  https://geoalliance.asu.edu/sites/default/files/maps/ArizonaRelief.gif
- Flour, salt, water
- Paper cups or containers
- Tablespoons
- Popsicle sticks
- Arizona’s Topography and Rivers map
  https://geoalliance.asu.edu/sites/default/files/maps/AZTOPO.PDF
- Landform Regions of Arizona map (unlabeled)
- Landform Regions of Arizona map (labeled)
  https://geoalliance.asu.edu/sites/default/files/maps/AZLNDFRM.pdf
- Tempera Paints: orange, brown, yellow
- Small brushes or cotton swabs
- Arizona Regions: Salt Dough Maps Rubric (3rd grade)
- Arizona Regions: Salt Dough Maps Assessment and Answer Key (4th and 5th grade)
- Newspaper to cover desks
- Flour – Salt – Water: Salt Dough Recipe

**Objectives**

The student will be able to:

1. Identify the 3 regions of Arizona on a map.
2. Practice measuring fractional parts then adding and subtracting. (4th and 5th grade)
3. Gain information from a map.

**Procedures**

*Prior knowledge: Students should have knowledge of landforms.*

1. Project the relief map of Arizona.
   https://geoalliance.asu.edu/sites/default/files/maps/ArizonaRelief.gif
2. Ask what the bumps mean on the map. What do the colors represent? Have students compare the relief map to Arizona’s Landforms and Rivers map. Then have students compare the Landforms and Rivers map to the Landform Regions of Arizona map and discuss the similarities and differences. Elicit the three regions of Arizona.
3. Explain that they are going to make their own relief map. They will mix their own salt dough and apply it to a paper map. Then they will identify the plateau, mountain, and desert regions.
4. Distribute the unlabeled version of the Landforms of Arizona map and the Flour – Salt – Water: Salt Dough Recipe to each group or each student. Each group/student needs a small cup or container. Using the tablespoon, they will put 3 tablespoons of salt to 1 tablespoon of flour and mix well with the popsicle stick. Caution students to add water a little at a time depending on what landform is being made. Note that 3 out of the 4 tablespoons (3/4) and (1/4) equal one whole mix (In the interest of time, teacher could demonstrate a class batch using a cup of flour to 3 cups of salt).
5. Create the mountains first. Add just enough water to moisten salt dough. Apply to the paper and form peaks.
6. For the plateau, add a little more water. The plateau region should be high in elevation but flat.
7. Add water to make the salt dough runny. The desert will simply be a film on the paper.
8. Allow map to dry overnight.
10. Fourth and fifth grade students can complete the Arizona Regions: Salt Dough Maps Assessment.

**Assessment**

**Geography and ELA**

The final project will be measured using the Arizona Regions: Salt Dough Maps Rubric. A score of 3 or higher is considered mastery.

**Mathematics**

Arizona Regions: Salt Dough Maps Assessment can be used to assess mastery of fractions. Mastery is considered a score of 80% or higher on the assessment.