



California Geographic Alliance Lesson Plan

GOOP TO GEOFORMS

Author:	California Geographic Alliance revised by Ann Henry
Grade:	K-5
Subject:	Geography, Social Studies
California Academic Content Standards:	History-Social Science Analysis skills: Chronological and spatial thinking, Grades 1- 8 History/Social Science: K.4.2, 1.2.2, 2.2.1, 3.1.1, 4.1.3, 5.7.2
Objectives:	Students will: <ul style="list-style-type: none"> • Use magic modeling goop and paint to create features of the geographic landscape. • Will explain the meaning of geographic terms
Instructional Strategy:	Brainstorming, inductive discussion, lecture, atlas research, guided activity, independent work.
Teacher Background:	Teacher needs to have store of landform knowledge and resources. Teacher needs to have experience and skill in organizing small groups and implementing art projects with messy materials.
Student Background:	Students need knowledge of basic landforms. Students need to have had experience with art materials (e.g water colors and modeling clay)
Learning Context:	This lesson should be taught early in the year as an introduction to physical geography.

	Goop can be used then throughout the year in many other activities. See extensions.
Essential or Guiding Question	What are landforms?
Instructional Materials:	<ul style="list-style-type: none"> • Magic Modeling Goop • Sturdy cardboard 5"x5" squares (1 per geoform) • Tongue depressors (1 per geoform) • Hot glue gun • Water color sets and brushes • Tools for flattening and sculpting though hands are usually enough
Resources:	<ul style="list-style-type: none"> • Geographical terms laminated desk map • <u>Geography from A to Z</u> • Social Studies text landform map • Google Earth
Duration:	one hour
Procedure	
Introduction/ Anticipatory Set:	What is a landform?
Instruction:	<ol style="list-style-type: none"> 1. Brainstorm list of geographic terms students are familiar with and/or have previously discussed or illustrated. 2. Teacher records on board or overhead and discusses with students. 3. Teacher shows examples of geoforms to students and explains that they will also create their own geoform model.
Guided Practice:	<ol style="list-style-type: none"> 4. Students choose one term to illustrate. 5. Students write their land form definition on a 3" x 5" index card using a definition from a book, the laminated geographical term desk map or a class definition. 6. Students glue definition on back of cardboard platform, given to them by teacher 7. Teacher demonstrates modeling of goop and explains process of modeling. 8. Teacher explains and demonstrates painting process.

	9. Teacher gives each student a ball of Goop.
Independent Practice:	10. Students create geofom and pressing onto cardboard. 11. Students paint the geofoms using water colors and small brushes. Students are encouraged to mix colors to achieve appropriate landform color.
Closure:	12. Students present geofoms to class. Student creator explains the term and definition of geofom in full view of group.
Assessment:	13. Students might reinforce what they've learned by orally quizzing each other after they have shared. 14. Landforms can be displayed and numbered and students will identify each.
Extension Activities:	1. Place geofoms around the classroom and allow students to read and explore on their own. 2. Use the display daily to reinforce student knowledge. 3. On a rotating basis, display 5 geofoms per day. Call on five students, one at a time, to choose a geofom, identify and describe it and suggest a location where it may be found in the U.S. 4. Make a memory game of geofoms using images when possible. Match to definition. 5. Goop can be used in dioramas to illustrate settings, characters, important scenes in literature studies. 6. Goop can be used to form physical maps of California and the U.S. To complete a large map, it is suggested that a map be gridded and each section give to one student to form.
Reflection:	This lesson can be done with a class of 35! and is creative, enjoyable and educational. After individual modeling, the painting sessions can be done at tables for 5 or more sharing the paints and water which leads to cheerful bantering and comparison and chat among the students. This leads to community building!!

DIRECTIONS TO MAKE GOOP

Purchase:

- **5 lbs of salt---Safeway sells a 4 pound box of table salt. You will need to buy two---and split the second box into fourths.**
- **Measure out 16 oz dry measure to equal a pound.**
- **1 pound box of cornstarch**

Prepare:

- **Mix and heat on medium: 5lbs salt and 2 cups water.**
- **Use a large pot with handles and a strong handled spoon as you will be doing some tough stirring and mixing.**
- **Mix in separate bowl:**
 - ❖ **1 lb cornstarch and 2 cups water.**
 - ❖ **Stir until smooth.**
 - ❖ **It is a very weird mix and may seem as though it won't blend but suddenly it forms a lovely fluid mix.**
- **Add cornstarch mixture to hot salt mixture, stirring constantly while on stove. Add a little at a time and begin stirring.**
- **At first it's easy, but as cornstarch begins to thicken the mix, it is really tough to stir. Get a helper to hold the pot or stir while you hold it!**
- **When two mixtures are thoroughly combined, remove from heat, and let cool.**
- **There may be pieces of unmixed stuff, but when you make the little balls, you can mix it with your hands.**
- **Roll into balls and wrap in a large ziplock baggie. It will keep indefinitely.**
- **Makes between 18 tennis ball size balls and 32 smaller ones.**
- **Kids don't need that much to make their landforms, or whatever it is you are making, as the extra ends up in their pockets or flying across the room!**