



# Playdough Great Basin Watershed

Students will create models to understand watersheds in their area and how they affect the ecosystem.

## Time

- 20 min. pre-activity
- 20 min. activity
- 10 min. extension activity

## Next Gen Science Standards

- 2-ESS2-2      Develop a model to represent the shapes and kinds of land and bodies of water in an area.

## Materials

- 1 clear cup
- 4 spray bottles
- Playdough (from last activity)
- Recycled cardboard or plate for each student

## Utah Core Standards

- 1.2.1.b      Identify and describe a variety of natural sources of water, including streams, lakes, and oceans.
- 3.2.2.d      Compare a small-scale environment to a larger environment.

## Videos

Please visit: <http://www.greatbasinobservatory.org/lesson-plans/playdough-watershed> for supporting videos and a PowerPoint for this lesson plan.

## Intro to the Activity

- Turn on the faucet and fill up a clear cup with water. Ask the class what makes the water so important? Have students “think pair share” various reasons water is important to them.
- After a minute of discussion have the class share a few of their responses.
- Ask the students:
  - Where did the water come from? Many students will quickly respond with something such as the faucet or the sink. Have them dig deeper.
  - Where did the faucet water come from? Encourage students to think about where their water originates.



## Activity Directions

- Explain to students that today we want to find where our water comes from.
- Begin by using the PowerPoint provided to discuss the watershed of the Great Basin. Find this at <http://www.greatbasinobservatory.org/lesson-plans/playdough-watershed> on the slideshow tab.
- After learning the new vocabulary and understanding what makes the Great Basin a unique watershed, students are ready to create their own watershed models.
- Students will now make a model of a Basin and Range watershed using their playdough. Pass out the playdough from the previous activity. Give each student a piece of cardboard/paperboard/paper plate.
- Tell students you want their model to represent the watershed they live in. It should have the following landforms represented-
  - At least one hill
  - One or several mountains, also called a range (as in the Basin and Range)
  - A plateau
  - A valley
  - A place that would make a river
  - A low spot that could become a lake, also called a basin
- Have students form a watershed that will be like ours- a Great Basin. This means that they need the lower places to be in the center of their model and higher places around the model.
- After the students create their models, student should discuss the following questions:
  - When it rains, where will the water in the rivers flow to? Can they predict this on their model?
  - Will rivers be connected to lakes? Can they predict where lakes will be?
- Have students gather around one model and demonstrate spraying “rain” on the model to view the watershed. Tell students how you want them to do this themselves, give instructions on how much to spray and where to aim the water.
- Place students into groups of 4 or 5. Give each group a spray bottle. Students can now take turns spraying their models with “rain” to see their watershed in action.



- Discuss the interactions of the landform vocabulary. Ask the students what they learned.
  - What happened to the water? Where did it start and end?
  - Why didn't any of the water go to the ocean? -We created a watershed like the Great Basin. The Great Basin is unique in that the water does not flow to the ocean.
  - How would snow melt be different than rain in the watershed?
  - Where does the water in the cup (from the beginning of the lesson) come from? It comes from the Great Basin watershed!
- Before cleaning up prepare the watershed models for the next lesson by having students choose a mountain on their model. Push the peak down slightly to make it flatter on the top.
- Let the watershed models dry to be used again in the next lesson plan.