**Lesson 2: The Great Basin Watershed**

**Objective:** Students are familiar with the concept of a watershed and the defining features of the Great Basin watershed. Students can think critically about where their water comes from.

**Time Consideration:** 45 - 60 minutes

**Materials:** Plastic cups, bowls, or other items (these will simulate landforms), 1 plastic bag per student or per group, spray bottles or watering cans

**Introduction:** In this hands-on lesson, students will learn about the defining traits of the Great Basin watershed. Then, students will construct their own watershed to visualize how water moves throughout the Great Basin.

**Content:**

**Background:**

The Great Basin is a region of contiguous endorheic watersheds - watersheds in which the water does not drain to the sea. Rather than flowing into an external body of water, all water in the Great Basin flows into lakes, sinks into the ground, or evaporates. The Great Basin is the largest area comprising only endorheic watersheds in North America. There are several smaller basins within the Great Basin, including the Great Salt Lake and Humboldt Sink.

**Introduction:**

1. Fill a clear cup with water. Ask students to reflect on why water is important to them. Have students share their answers with a neighbor.
   1. What does water do for them? How do they use water?
   2. What do they like about water?
2. Then, ask the students the following questions. Have students answer the questions as a class.
   1. Where does their water come from?
   2. Students will probably say “the sink” or “the faucet.” Where does the water in the sink come from?
3. Tell students that they will be learning about where their water comes from.
4. Show students the first 2 minutes and 16 seconds of [this video](https://www.youtube.com/watch?v=RBXE5x2-J9M). It explains very simply what a watershed is and gives an example of the Mississippi Watershed. Discuss the video with students.
   1. What is a watershed?
   2. Where does water come from? (Rain)
   3. Where does water drain to? (A larger body of water: a lake, a river)

**Activity:**

1. Each student will now build the Basin and Range out of cups, bowls, and other items, covered by a plastic bag. See 2 minutes and 35 seconds in [this video for an example](https://www.youtube.com/watch?v=RBXE5x2-J9M). Encourage students to remember what they learned about the Basin and Range in “What is the Great Basin?”
   1. Students should include the following in their watershed: a hill, one or several mountains (a mountain range), a plateau, a valley, a place that would make a river, a low spot that would become a lake (a basin).
   2. To form a watershed like the Great Basin, students will need the lower places to be in the center of their model and the higher places to be around the edges of their model.
2. Have students make a prediction.
   1. When it rains, where will the water flow to?
   2. Will the rivers be connected to lakes?
3. Demonstrate spraying “rain” on one model. Then, instruct students to spray rain on their own models. Instruct students to spray the bottle several times, aiming at different spots on their maps.

**Conclusion:**

1. What happened to the water? Where did it end up? What direction does the water flow?
   1. Where does water go in the Great Basin? Can students think of any areas near them where water ends up?
2. Now, pull up a topographical map of your region in Nevada. Utilizing Google Maps and selecting the “Terrain” view provides a high detail, zoomable map.
3. Ask students the following questions.
   1. What streams are nearby?
   2. Where do they start? Where does the water end up?
   3. Tell students that this is their watershed.
4. Think again about the water in the cup at the beginning of the lesson. Where did it come from?

**Sources:**

“[Playdough Watershed](https://greatbasinobservatory.org/lesson-plans/playdough-watershed)”, Great Basin Observatory

“[What is a Watershed?](https://www.youtube.com/watch?v=RBXE5x2-J9M)”, Water Rocks

**Next Generation Science Standard**

4.ESS2.2. Analyze and interpret data from maps to describe patterns of Earth’s features.