



It's Raining in the Basin

Understanding How Rain Flows Through A Watershed By Creating A Watershed Model

Duration
20 min

Materials
Large sheet
Boxes/items
to change the
“elevation of
the sheet”
Blue balloons

Background information

A **watershed** is an area of land that contributes its surface water flow to a particular body of water. In southern Florida water has a unique way of flowing over the land called sheetflow. Water also flows through rivers, streams and drainage canals toward the ocean. Water flowing under the land has filtered through the limestone into the aquifer. Every drop of rain that falls in our watershed that is not consumed or evaporated will eventually flow into the Gulf of Mexico.

A watershed can also be called a drainage basin. The boundary of the basin is created by land that is higher in elevation. The higher elevation directs **runoff** toward a major drainage feature, such as a stream, lake, bay, or ocean.

The watershed that we all live in is called the **Big Cypress Basin**. The basin covers about 2,470 square miles. The northern boundary of the watershed is the Caloosahatchee River. The Immokalee Rise, a sandy ridge that was formed when the sea level was higher, is the eastern boundary

This activity reinforces understanding of the form and function of our watershed. It requires a large area of floor space and is best suited for outdoors.

Student Activity

1. Explain that students are going to create a **model** of the watershed. A model is a miniature representation of a larger object.
2. Spread the sheet out flat on the ground.
3. Using the student map as a reference, assign the following positions:
 - Caloosahatchee River (highest side on the top/north side)
 - The Coast (lowest side of the sheet) and Gulf of Mexico
 - Immokalee Rise (highest side on the right/east side)

Have these students position themselves around the sheet to recreate the boundaries of our watershed, grasp the sheet and simulate the elevation of their location. Make sure the “Immokalee Rise” side of the sheet is held up higher than the rest. Coastal students need to make sure that their area stays anchored to the ground.



4. Explain that many people see Florida as a flat state (no mountains or hills) but our state has subtle changes in elevation. Can students think of areas that might have higher elevations? (**Habitats (pine flatwoods, hammock), residential areas, city, roads.**)
5. Assign one child or items to represent each of the higher elevation areas.
 - a. Students can put chairs, their bodies, etc. under the sheet causing it to rise “to a higher elevation”.
6. Have the balloons represent raindrops.
7. Explain to the class that they will be using this model to show how rain flows through a watershed to the Gulf of Mexico. Examine the model. Do they think the raindrops will make it to the Gulf of Mexico? Why or why not?
8. Position the raindrops around the model and have the students release their balloons as if rain were falling over the watershed. Observe what happens and discuss.
9. Add the items to represent man-made areas of higher elevation to the watershed model. A student holding a yardstick under the sheet might represent a roadway.
10. Repeat the rainstorm. Observe what happens. Compare and contrast the results.
11. Discuss what construction events in your neighborhood or manmade structures may be altering the watershed.