



Explore: Take It a Step Further

“Water and Wind Make Changes”

Features Module

This hands-on activity provides students with the opportunity to reveal prior knowledge while generating interest in and curiosity about features of Earth and how they can change by working with peers at a center.

This offline hands-on activity can be completed after participation in the online Explore.

Objective: Upon completion of this activity, students will have explored key concepts by examining how wind and water shape Earth’s features and by formulating ideas and questions to investigate as the module proceeds.

Estimated time for activity: 20 minutes

Materials:

- Student handout, “Water and Wind Make Changes,” one per student
- Hair dryer, one for teacher demonstration.
- Aluminum trays, two for every group of three to four students
- Blocks or books for stacking to create slopes for the aluminum trays (optional)
- Construction paper to fold into a fan, one per student
- Small pitcher of water, one to two for each group of three to four students
- Small paper cups to hold the different Earth materials
- Paper towels
- Variety of Earth materials to manipulate, enough for each group to have a selection of each material
 - soil
 - sand
 - pebbles
 - rocks

Procedure:

- 1 Conduct teacher demonstration.
 - a Make a small pile of soil in the center of an aluminum tray, and allow students to carefully observe the way the soil is arranged.
 - b Draw a picture on the board of the way the soil looks.
 - c Use the hairdryer to move the soil around and change the shape of the pile.
 - d Draw a picture, next to the first one, of the way the soil looks now.
 - e Lead a class discussion about how air (wind) can move and shape Earth’s materials.
- 2 Distribute student handout “Water and Wind Make Changes” to each student.
- 3 Discuss directions for completion.
- 4 Distribute supplies so each group has two aluminum trays (one to start with and an extra tray in case the first one gets too messy), blocks (for creating slopes), a pitcher of water, a piece of construction paper (for making a fan) and a selection of Earth’s materials in paper cups.
- 5 Students fold construction paper into a fan.



- 6 Students work collaboratively to make and record observations about how wind and water can move Earth's materials and shape the different features we see on Earth.
- 7 Students use "Small Group Discussion Questions" sheet to talk about their experiences within their groups.
- 8 Use the completed student handout to lead a discussion about Earth's changing features.

Accommodations:

If students have difficulty completing the activity, a variety of accommodations can be employed.

- The teacher can lead the class in completing the activity as a group.
- The activity can be completed at a center with an aide or with the teacher.
- The activity can be completed with the assistance of a peer buddy.
- The activity can be completed with a science buddy from an older grade.



Name: _____

Date: _____

Water and Wind Make Changes

For each of the materials (soil, sand, pebbles, rocks), follow the directions below.

- Pour a small pile of the material into your aluminum pan.
- In the first box, draw a picture of what you see.

- Without touching the material, use your fan (wind) to try to move it.
- In the second box, draw a picture of what you see.

- Pour a small amount of water over the material to try to move it.
- In the third box, draw a picture of what you see.

Material	First Pile	After Wind	After Water
rocks			
sand			
pebbles			
soil			



Small Group Discussion Questions

Talk about what you noticed when you used wind and water to make changes to the Earth's materials.

- Did the *wind* cause any changes to the pile of rocks? Describe what you noticed. Why do you think this happened?
- Did the *water* cause any changes to the pile of rocks? Describe what you noticed. Why do you think this happened?
- Did the *wind* cause any changes to the pile of sand? Describe what you noticed. Why do you think this happened?
- Did the *water* cause any changes to the pile of sand? Describe what you noticed. Why do you think this happened?
- Did the *wind* cause any changes to the pile of pebbles? Describe what you noticed. Why do you think this happened?
- Did the *water* cause any changes to the pile of pebbles? Describe what you noticed. Why do you think this happened?
- Did the *wind* cause any changes to the pile of soil? Describe what you noticed. Why do you think this happened?
- Did the *water* cause any changes to the pile of soil? Describe what you noticed. Why do you think this happened?
- Which pile of materials changed the most with the *water* (rocks, sand, pebbles, or soil)? Why do you think this happened?
- Which pile of materials changed the most with the *wind* (rocks, sand, pebbles, or soil)? Why do you think this happened?
- Overall, did the *water* or the *wind* cause the most changes? Why do you think this happened?