

# Erosion Experiments

Adapted from: <http://www.cas.muohio.edu/scienceforohio/Erosion/L.html>

## Experiment #1: Splash Erosion



### Materials

- large piece of white bulletin board paper
- dropper or pipette
- watch glass or shallow saucer
- 2-3 tablespoons of soil

### *Splash erosion instructions*

- Place a large sheet of bulletin board paper on a table or desk.
- Put a shallow saucer or Petri dish in the center of the paper/
- Fill the saucer or Petri dish with soil.
- Hold the dropper/pipette approximately 1 meter above the Petri dish/saucer filled with dirt; predict what will happen when the water is dropped on the saucer full of dirt.
- Demonstrate several splashes.
- Discuss with your group: "What type of erosion is this?" (splash erosion).
- Discuss erosion patterns you observe.

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## Experiment #2: Wind Erosion



### Materials

- 5-10 cups of sand to create a hill
- a blow dryer with cylindrical barrel
- a trough for a wind chamber (The one in the photo was made from a 90-degree-angle frame of 2x4s with Plexiglas sides. You can also use a section of guttering from a roof.)
- wooden matches, sticks, or coins

### *Wind erosion instructions*

- Pile the sand in a hill at one end of the wind chamber.
- Predict the results of turning on the blow dryer.
- Turn the dryer on low. Observe and discuss the changing landscape.
- Ask the members of your group: "What type of erosion is this demonstration?" (wind erosion).
- Stand a couple of matchsticks or coins in the sand and allow the dryer to continue blowing while observing.
- What happens to the sticks or coins?

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## Experiment #3: Water Erosion



### Materials

- large container with a spout filled with water (a watering can with a regular pour spout will work, or a ketchup squirt bottle)
- a long board to create a slope
- long sheet of plastic to cover board and drain water off
- large container for collection of the runoff water
- a small rectangular wood block
- plastic or rubber tubing
- soil
- water

### *Water (fluvial) erosion instructions*

- Cover the board with plastic. Drape one end of the plastic off the edge of the table and into the collecting bucket.
- Tilt the board on one end so there is a gentle slope.
- Cover the entire surface of the plastic-covered board with soil. Pat into place.
- Place the spout end of the water container in the soil.
- Predict what will happen when water is gently squeezed through the spout.
- Observe and discuss the resulting land forms. Continue to squeeze water through your soil until you have several river banks and curves in your stream.
- Stand a block of wood in one of the banks along the flowing stream. This block represents construction of buildings in the area.
- Observe effects of the block on the water flow.
- Lay the wood block on its side in an attempt to dam the water. Discuss resulting changes in the flow and landforms.