

Rising Mountains

Purpose

Students discover that mountains rise as they erode.

Time Required

15–20 minutes

Activity Ratings

EASY        HARD

TEACHER PREP   

CONCEPT LEVEL  

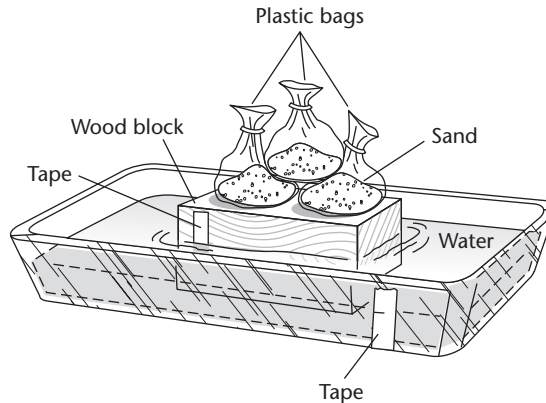
CLEANUP  

MATERIALS

- transparent, shallow plastic container
- tap water
- wooden block—about 5 × 10 × 10 cm
- 3–4 plastic sandwich bags
- sand (enough to fill sandwich bags)
- set of colored waterproof markers

What to Do

1. Fill the plastic container about two-thirds full with water. Place the block in the center of the water.
2. Fill each plastic bag with sand, and then place the bags on the block.
3. Tell students that the block and the bags represent a mountain. The mountain is a formation on the Earth's outermost layer, the crust. The Earth's crust is constantly moving in relation to the mantle, which is represented by the water.
4. Use a marker to indicate the water level on the wooden block and the plastic container, as shown in the diagram. Tell students that these lines will measure the original position of the mountain on the Earth's surface.
5. Tell students that erosion is constantly removing rocks and sand from the sides and top of mountains. Rocks and soil roll, slide, blow away, and wash away because they are being eroded by wind, rain, rivers, and gravity. Ask students to imagine that the sandbags are small rocks and soil being eroded from the mountainside. Ask: What would you expect to happen if the sandbags were removed (or if the soil were eroded away)? (*The wooden block would rise and float higher.*)
6. Gently remove a bag from the wooden block. With another color of marker, indicate the water level again. Compare this mark with the original water level.
7. Repeat the process several times to illustrate that the motion is slow and gradual. Mountains rise slowly and gradually over thousands of years.



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