What is a Rock?

Background Information

A mineral is a naturally occurring, solid, inorganic substance that has a crystalline structure. A rock is a naturally occurring combination of one or more minerals; minerals are the building blocks of rocks. Fossils are the preserved remains or traces of ancient animals and plants. All are formed through geologic processes.

Materials

- Collection of minerals, rocks, and/or fossils
- Collection of other items like soil, ice, wood, plastic, or pavement/concrete

Activity

1. Observe and analyze the minerals, rocks, and/or fossils with your young geologist. Write down any observations.
2. Now, using these observations, define a rock.
3. Next, observe and analyze the collection of other items. Write down any observations.
4. If necessary, update your original definition of a rock based on these new observations.
5. Reveal the actual definitions to your young geologist! Compare the two definitions and take pride in their work!

Scan to see this brochure in five other languages!

Scan for activity demonstration videos!

Josie Mbaye

Questions? Thoughts?

Contact me!

josephine-lester@uiowa.edu

LATHAM SCIENCE ENGAGEMENT INITIATIVE

Activities for Your Young Geologist!

Use the four fun activities in this brochure to learn about the wonderous world of geology!

CONTINENTAL DRIFT

BACKGROUND INFORMATION

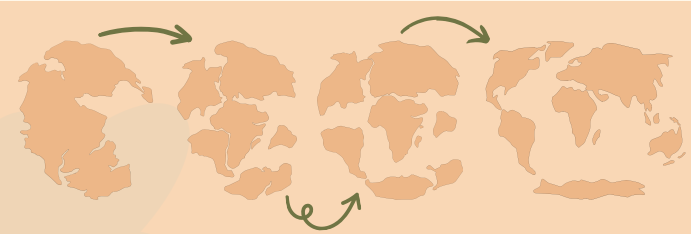
The theory of continental drift says Earth's seven continents used to be connected and later drifted apart due to plate tectonics, Plates are the parts of Earth's crust that are slowly moving along the surface.

MATERIALS

- Cup of water
- Smooth plate
- Dry-erase markers
- Paper towels

ACTIVITY

1. On a smooth plate that you are okay with drawing on, have your young geologist draw different shapes with different color dry-erase markers.
2. Slowly pour water on the side of the plate and watch the shapes begin to float. You may need to gently shake the plate.
3. These floating shapes are similar to the plates on Earth's surface, observe how they move!



MAKE A TRACE FOSSIL

Trace fossils tell scientists about ancient organisms' behavior!

BACKGROUND INFORMATION

A trace fossil is a specific kind of fossil that preserves a trace of an organism's activity or behavior. This may be a burrow, footprint, trail, or even a bite mark! This happens when an organism leaves a mark in sediment, then as the sediment hardens and becomes buried, it is preserved through a process called lithification.

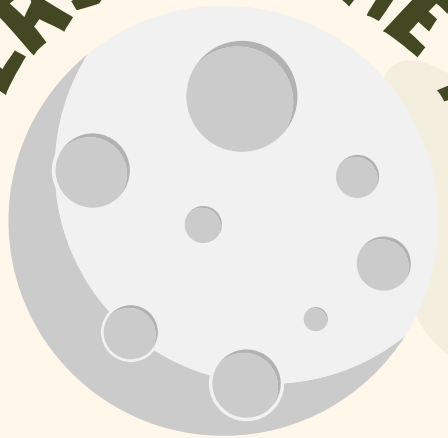
MATERIALS

- Oven-bake clay (4-8 oz per fossil, sold at Michaels and Joann Fabrics)
- Oven-safe baking tray and parchment paper
- Oven access

ACTIVITY

1. On a clean work surface, have your young geologist mold the oven-bake clay into a smooth, flat shape.
2. Next, stomp, poke, or leave any kind of mark on the clay. The goal is to leave evidence that your young geologist was there! Creativity and imagination are key!
3. Follow the oven-bake clay's baking instructions.
4. Admire your very own trace fossils!

CRATERS ON THE MOON



BACKGROUND INFORMATION

Craters form on the moon when rocks or comets from space crash into it's surface. Sometimes, they hit the moon with so much energy they leave a crater 10 times their size!

MATERIALS

- Baking tray
- Flour
- Cocoa powder
- Varied sprinkles
- Rocks, marbles, and/or other small objects
- Pencil and paper

ACTIVITY

1. On a baking tray, have your young geologist create a 1 inch/3 cm thick layer of flour, topped with a variety of sprinkles and a thin layer of cocoa powder. This is your pre-crater "moon surface."
2. After making predictions for each object, carefully drop them one at a time onto the surface. Write down any observations.
3. Compare the results to the predictions they made.