

Rocks & Minerals – Shake it Up (Mechanical Weathering)

Rocks can have rounded or sharp edges. Some rocks are egg shaped and are quite round. How did they get this way?



Materials:

- 15 rough, jagged same sized stones
- 3 Paper sheets
- Pen
- 3 containers with lids (coffee cans)
- Tape
- Masking tape
- 3 clear jars (size as coffee cans)

Procedure: (Remember to have your parent’s permission and have them watch and help you.)

- Separate the stones into three piles of five. One pile on a each sheet of paper.
- Label each pile, can and jar A, B, or C.
- Fill Can A halfway with water and add the stones from Pile A. Repeat for B and C. Let sit overnight.
- The next day, hold Can A in both hands and shake it hard 100 times (hold and tape the lid down).
- Remove the stones from Can A with your hands and pour the water into Jar A. Observe the stones and the water.
- Give Can B 1000 shakes (rest between shakes). Again remove stones and water. Observe.
- Do not shake Can C. Again remove the stones and water. Observe.
- Compare the observations of the three piles of stones and the three jars of water.

What's Happening:

How do the piles of stones differ? Why? Which pile acted as the control? Why? How do the jars of water differ? How does this show what happens to stones that are knocked about in a fast-moving river?

The stones that were shaken should have more rounded edges than the stones that weren't shaken, and the stones in can B should have rounder edges than the ones in Can A. Both jars should have some sediment in the bottom, but Jar B should have more sediment because more shakes would have broken off more bits of rock. The same thing happens to rocks that are carried along in rivers or are tumbled about by waves.

Extension:

Go down to the river and look at the rocks. Do they have rounded edges? If you find a rounded rock on the prairie, what do you know about its history? This activity is based on our Rocks & Minerals kit. The source for this lab was: http://www.consrv.ca.gov/cgs/information/kids_geozone/Pages/do_rocks_last_forever.aspx.

Praxis wishes to thank all the people who attend our Family Science Olympics last Saturday. This registered community event was our 20th Olympics in support of Science education. For more information and pictures of this event, please see our website: <http://www.praxismh.ca/s&tweek.html>

Lorne Cooper, Regional Executive Director

PRAXIS, “Making Science Fun”. Contact Praxis at praxis@praxismh.ca, www.praxismh.ca, Tweet or follow us @PraxisMedHat, or friend us on Facebook. Address: c/o 200 7th Street S.W., Medicine Hat, AB, T1A 4K1 Phone: 403-527-5365, Fax: 403-527-6570.