

WEATHERING & EROSION



Weathering is the process through which rocks are broken down into smaller sediments by direct contact with atmospheric conditions—such as heat, water, ice, and pressure. This breakdown happens in situ, and the new sediment remains in its original location.

Erosion is the process by which rocks are broken down through contact with natural forces such as wind, water, and ice. However, unlike weathering, erosion involves the transport of sediment from its original location to a new one. Because the PME's Jelly Roll is made of unconsolidated sediment (specifically, sand which has yet to turn to rock), it is particularly susceptible to forces such as erosion and weathering. Just days after its discovery, the formation slumped—losing a large portion of its original structure. Forces such as wind, water, and temperature continue to act on the exposed surface today, changing its shape and appearance over time.

What do you think the Jelly Roll will look like in a hundred or a thousand years?



EROSION AT HOME



Erosion and weathering are geological processes that are happening all around us. They occur by similar forces, mechanical or chemical, and often work together to change Earth's surface. For example, weathering may break down rocks into smaller pieces, where erosive forces can carry them away.

Go out and look for these processes in your own neighborhood. Consider the most likely places for them to occur. Do you live by a body of water? When you find signs of erosion or weathering, consider which forces are the most likely culprits.

ACTIVITY | Emulate erosion at home!

- 1 Fill a container with a "land" mixture of 3-parts cornmeal to 1-part salt, to 1-part water (or, use real sand!)
- 2 Place a ruler or other flat object across the container and secure a disposable cup to it using sticky tack or tape.
- 3 Make sure that the cup hangs over the edge of the platform, and has a small hole in the bottom for liquids to run through.
- 4 Slowly pour water into the cup, and watch how it affects your landform. What happens if you tilt the container?

