Weathering Breaks It, Erosion Takes It Away

How water, ice, wind and plants change rocks





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Today we will...

WE ARE LEARNING TO

- Tell weathering apart from erosion
- Test how water, ice, wind and plants change rock
- Use what we see and measure as evidence

SUCCESS LOOKS LIKE

- ✓ I can say if rock broke apart or moved away
- ✓ I can use measurements to show how fast erosion happened

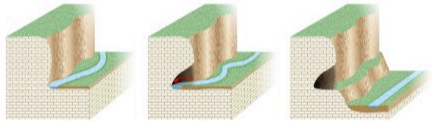




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Break or Move?

- Weathering breaks rock apart right where it is.
- Erosion carries the broken pieces to somewhere new.
- Sediment means the tiny pieces that get moved.



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From Crack to Gravel

Rain fills a tiny crack in rock

↓

Cold turns water to ice and it grows

↓

Ice pushes and the crack splits wider

↓

Melted water washes loose pieces away

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Think, pair, share

You see piles of broken rock under a cliff. What broke it? What moved it?



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Watch: Break Down, Carry Away



▶ 0:00 – 4:06

- Listen: does the rock break or move?
- Name the mover: water, ice, wind, plants

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How Ice Splits a Rock



1. Water drips into a small crack.
2. Cold night freezes the water solid.
3. Ice grows bigger and pushes outward.
4. Warm day melts ice, loose bits drop.



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Watch: How Fast Does It Erode?



▶ 0:00 – 3:34

- Watch how much water they pour
- Watch how far the soil moves

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Your task

Pour water on a model hill and measure the erosion.

1. Build a small soil hill in a tray.
2. Slowly pour 1 cup of water on top.
3. Measure with a ruler how many inches moved.
4. Pour faster and compare your two tries.

15 min

In pairs

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Four Big Movers



Water

Rain and rivers carry sand downhill.



Ice

Glaciers scrape and push rocks along.



Wind

Wind lifts dust and polishes rocks smooth.



Plants

Roots grow in cracks and split rocks.

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What could this be?

This rock has a big hole like a bridge. No tools made it. How?



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Exit ticket

1. Weathering is ___. Erosion is ___.

2. My measurement that shows erosion rate is ___.

3. One question I still have is ___.

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