Forces Shape Earth

Use evidence to explain how Earth's surface changes.

S6E5 "Obtain, evaluate, and communicate information to show how Earth's surface is formed."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline each observation or feature used as evidence, and circle the process it supports.

Clues on a Changing Surface

1. Earth's surface changes when materials move, break apart, or build up. Deep inside Earth, heat drives slow movement in the mantle. This movement can push tectonic plates together, pull them apart, or slide them past each other. Where plates collide, rock layers may fold and rise into mountains. At some plate boundaries, melted rock reaches the surface as lava. When lava cools, it hardens into new rock, adding land to Earth's surface nearby over time.

2. Surface processes also reshape rock already exposed to air and water. Weathering breaks rock into smaller pieces or changes its minerals. Moving water, wind, ice, and gravity can erode, or carry away, these pieces, called sediment. When the moving force slows, sediment is deposited. A river may leave sand and silt where it enters a lake, slowly building a delta. Rounded pebbles and layers of deposited sediment are evidence that material was transported and then left behind.

3. Scientists use observations to explain which processes formed a feature. For example, a steep volcano made of cooled lava supports the claim that eruptions built the land. However, loose sand piled along a shore supports deposition by waves or wind, not lava. A good explanation names the feature, identifies evidence, and connects that evidence to a process. It also separates a direct observation, such as layered sediment, from an inference, such as a river once slowed there.

2 ANSWER WITH EVIDENCE

Use the passage

1. Use the passage to explain how colliding tectonic plates can form mountains.

2. What is the difference between weathering and erosion in the passage?

3. Which two observations in the passage are evidence that sediment was moved and then deposited?

4. A student claims that a pile of loose sand along a shore was formed by lava. Does the passage support this claim? Use evidence to explain.

3 YOUR TURN

Your own words

A hillside has cracked rock near its top and a pile of rock pieces at its bottom. Write exactly three sentences that state a claim about how the hillside changed, use both details as evidence, and connect the evidence to a process.

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PART 1 · READ AND MARK

Underline each observation or feature used as evidence, and circle the process it supports. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Use the passage to explain how colliding tectonic plates can form mountains.	**When plates collide, rock layers may fold and rise into mountains.**
2	What is the difference between weathering and erosion in the passage?	**Weathering breaks rock into smaller pieces or changes its minerals. Erosion carries the pieces away.**
3	Which two observations in the passage are evidence that sediment was moved and then deposited?	**Rounded pebbles and layers of deposited sediment.**
4	A student claims that a pile of loose sand along a shore was formed by lava. Does the passage support this claim? Use evidence to explain.	**No. The passage says loose sand along a shore supports deposition by waves or wind, not lava.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

The cracked rock near the top shows that weathering broke the rock into pieces. Gravity likely moved the pieces downhill, which is erosion. The pile of rock pieces at the bottom is evidence that sediment was deposited there.

Accept accurate claims that connect cracked rock to weathering and downhill movement to erosion by gravity. The final sentence should use the pile at the bottom as evidence of deposition.