

SCIENCE GRADE 3

A. Open-Ended (OE) 4 points

Mean: 1.07

Standard: II.c.B.1

Strand: Content of Science

Content Standard: Earth and Space Science: Understand the structure of Earth, the solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.

Benchmark: Know the structure and formation of Earth and its atmosphere and the processes that shape them.

1. Know that Earth's features are constantly changed by a combination of slow and rapid processes that include the action of volcanoes, earthquakes, mountain building, biological changes, erosion, and weathering.

Earth's surface can change very quickly. It can also change slowly over a long period of time.

A. Name 1 event that can change the shape of the land very quickly. Explain your answer.

B. Name 1 event that can change the shape of the land very slowly. Explain your answer.

B. Rubric

Student Sample Response:

(Students can answer with one of the following or any other scientifically correct response.)

Part A:

- Volcanoes change the land quickly by pouring lava over an area of land.
- An earthquake changes the land quickly by breaking apart the land when plates crash together or pull apart.
- A flash flood can change the land quickly by washing away soil and plants with fast moving waters.

Part B:

- The blowing wind changes the land slowly by eroding away rock or soil over a long period of time. As the wind blows it slowly breaks down rock or blows soil away.
- Rainfall changes the land by water eroding rock and soil over a long period of time.

Score	Description
4	The student demonstrates thorough understanding of the relevant scientific concepts and/or procedures. The student completes the task correctly, using scientifically sound procedures and provides clear and complete explanations and interpretations. The response may contain minor flaws that do not detract from the demonstration of thorough understanding.
3	The student demonstrates an understanding of the relevant scientific concepts and/or procedures. The student completes most of the task correctly, but the scientific procedures, explanations and/or interpretations are incomplete or only partially supported. The response may contain minor flaws that indicate some misunderstanding of the scientific concepts and/or procedures.
2	The student demonstrates partial understanding of the relevant scientific concepts and/or procedures. The response includes some correct information, but indicates a lack of essential understanding of the scientific concepts and/or procedures. Explanations and/or interpretations are incomplete or only partially supported. The response may contain flaws that indicate misunderstanding of the task or of the scientific concepts and/or procedures.
1	The student demonstrates a minimal understanding of the relevant scientific concepts and/or procedures. The student has reached an inadequate conclusion and/or provided reasoning that is faulty or incomplete. The response is incomplete and exhibits many flaws, but does contain some correct work that addresses the task.
0	The student demonstrates no understanding of the relevant scientific concepts and/or procedures. The response is incorrect or irrelevant to the skill or concept being measured, or no response is provided.

C. Student Responses

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Earth's surface can change very quickly. It can also change slowly over a long period of time.

A. Name 1 event that can change the shape of the land very quickly. Explain your answer.

A volcano lava melts rock

B. Name 1 event that can change the shape of the land very slowly. Explain your answer.

A erosion the water hits rock and
moves it to change

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Earth's surface can change very quickly. It can also change slowly over a long period of time.

A. Name 1 event that can change the shape of the land very quickly. Explain your answer.

A volcano can change the
shape of land quickly because
it erupts and the lava flows
out.

B. Name 1 event that can change the shape of the land very slowly. Explain your answer.

When water hits a rock it
moves it just a little bit.

Earth's surface can change very quickly. It can also change slowly over a long period of time.

A. Name 1 event that can change the shape of the land very quickly. Explain your answer.

Earthquakes, They can cut a line
threw the ground and cause
things to break or humans to die.

B. Name 1 event that can change the shape of the land very slowly. Explain your answer.

Glaciers, Glaciers move very slowly
and can change the land. It is very
big from the bottom and so it could harm
things under it.

Earth's surface can change very quickly. It can also change slowly over a long period of time.

A. Name 1 event that can change the shape of the land very quickly. Explain your answer.

An volcanic eruption can
It can because lava
goes out and hardens

B. Name 1 event that can change the shape of the land very slowly. Explain your answer.

Erosion can change
slowly. It can because
it has to wear away
land.

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Earth's surface can change very quickly. It can also change slowly over a long period of time.

A. Name 1 event that can change the shape of the land very quickly. Explain your answer.

Earth quakes. They shake the earth

B. Name 1 event that can change the shape of the land very slowly. Explain your answer.

Cutting the forest down. It changes the environment.

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Earth's surface can change very quickly. It can also change slowly over a long period of time.

A. Name 1 event that can change the shape of the land very quickly. Explain your answer.

Forest fire can knock down trees.

B. Name 1 event that can change the shape of the land very slowly. Explain your answer.

Rivers form land into Vally.

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Earth's surface can change very quickly. It can also change slowly over a long period of time.

A. Name 1 event that can change the shape of the land very quickly. Explain your answer.

I think a volcano
because it can melt
things very quickly.

B. Name 1 event that can change the shape of the land very slowly. Explain your answer.

I think a glasher
because it can take
100 years or less.

Earth's surface can change very quickly. It can also change slowly over a long period of time.

A. Name 1 event that can change the shape of the land very quickly. Explain your answer.

An hurricane because a
hurricane comes from a
ocean and it will destroy
the lands

B. Name 1 event that can change the shape of the land very slowly. Explain your answer.

Wind because the wind
moves the sand from one
place to another.

Earth's surface can change very quickly. It can also change slowly over a long period of time.

A. Name 1 event that can change the shape of the land very quickly. Explain your answer.

A volcano it throws rocks out

B. Name 1 event that can change the shape of the land very slowly. Explain your answer.

~~A~~ glacier because it moves so slow

Low

Earth's surface can change very quickly. It can also change slowly over a long period of time.

A. Name 1 event that can change the shape of the land very quickly. Explain your answer.

A lava flow will change the sides of the world.

B. Name 1 event that can change the shape of the land very slowly. Explain your answer.

A tornado

Earth's surface can change very quickly. It can also change slowly over a long period of time.

A. Name 1 event that can change the shape of the land very quickly. Explain your answer.

digging holes can make land different
because it changes its shape.

B. Name 1 event that can change the shape of the land very slowly. Explain your answer.

water can change land very slowly
one bit at a time.