

Shaping the Surface Assignment

Instructions: Read and follow the steps to complete each section of this assignment.

Student Name:

Identify It: Complete the following steps.

1. Read the passage, “A Hike on the Coast.”
2. Use the passage to complete the following tasks.

Passage: A Hike on the Coast

- 1 On a warm summer day, Mia and her brother Ethan walked along a coastal trail and watched the waves crash against the rocky cliffs. “Look at how the water carves away and shifts the rocks,” Mia said, pointing to a small sea cave forming at the base of the cliff. “I bet this will be even bigger in a few years.”
- 2 As they walked further, they noticed the wind picking up, lifting tiny grains of sand, and swirling them through the air. They watched the wind carry the sand across the beach, creating small piles near the rocks. “It’s like the wind moves the sand bit by bit, building a little dune,” Ethan said, crouching for a closer look.
- 3 Further down the trail, they found a wide river. “Remember how last spring the river overflowed?” Mia asked. “It took some of the soil from the riverbank with it.” They saw the rushing water erode the bank, leaving it with less land than before. But just downstream, they saw the river slow down, drop the soil, and create a small sandbar in the middle of the water.
- 4 As they continued walking, Ethan pointed to a large pile of dirt. “I heard that landslides happen when too much rain loosens the soil on steep hillsides,” he said. “All that soil, sediment, and rock slides down and settles somewhere else, just like what happened during last year’s big storm.”
- 5 Mia smiled. “Yeah, the wind, water, and even landslides always change things. What gets worn down in one place ends up moving and building something new somewhere else.”
- 6 And so, as they wandered along the coast, they realized that even though the world seemed the same every day, nature constantly reshaped it, grain by grain, wave by wave, and sometimes all at once.

Tasks	Answers
1. Identify TWO examples of erosion from the passage.	
2. Identify TWO examples of deposition from the passage.	

Classify It: Complete the following steps.

1. Read each example.
2. Record whether the example **best** describes erosion or deposition.

Example	Erosion or Deposition
1. Rain washes away soil from the side of a hill.	
2. Layers of sediment settle at the bottom of the ocean.	
3. Sediment settles and makes a sand dune in the desert.	
4. Wind blows sand from one location to another.	
5. Sediment is carried by a fast-moving river.	
6. Deltas form at the mouths of rivers.	
7. A valley glacier drags rocks and sediment as it moves.	

Compare It: An analogy is a comparison between two things that are different from one another. Analogies are made for the purpose of explaining an idea in a new way. Complete the following steps.

1. Read the example analogy and explanation for erosion and deposition.
2. Complete two analogies for erosion. In your own words, explain each analogy.
3. Complete two analogies for deposition. In your own words, explain each analogy.

Examples:

Analogy	Explanation
<u>Example:</u> Erosion is like people on a train.	A train moves people from one place to another; and erosion moves rocks and sediment from one place to another.
<u>Example:</u> Deposition is like a pile of leaves.	Deposition is when rocks and sediment settle after being moved. A pile of leaves settles after being raked.

Your work:

Analogy (Complete the sentence)	Explanation (Explain how your analogy relates to erosion or deposition)
1. Erosion is like	
2. Erosion is like	
3. Deposition is like	
4. Deposition is like	

Claim It: Read the scenario, then answer the questions.

Four friends build a sandcastle at the beach. Then, they go for a walk, and when they come back their sandcastle is gone. Each friend agrees that water must have removed their sandcastle. The friends wonder what processes were involved in the building and removal of their sandcastle. Here is what each friend claims about the processes involved:

- **Liam:** I think erosion was the only process involved with the building of our sandcastle, and deposition was involved with the removal.
- **Destiny:** I think erosion and deposition were involved with the building of our sandcastle, and erosion was the only process involved with the removal.
- **Micah:** I think deposition was the only process involved with the building and removal of our sandcastle.
- **Jasmine:** I think erosion was the only process involved with the building and removal of our sandcastle.

Question	Answer
a. Which friend do you most agree with?	a.
b. Explain why you agree with this friend the most .	b.

Practice It: Answer the multiple-choice questions.

Questions	Answers
1. A lake is surrounded by land covered with trees and shrubs. Which of the following impacts would most likely result from removing the trees and shrubs from around the lake? A. Increased erosion B. Decreased runoff C. Increased deposition D. Decreased temperatures	Record the letter answer:
2. There are many different ways erosion can occur on Earth's surface. Which of the following best identifies how sand is eroded to form dunes? A. Moving glaciers B. Flowing water C. Blowing wind D. Sliding land	Record the letter answer:
3. Two students visit the beach on a hot summer day. While at the beach, they notice a sandbar in the ocean. Which of the following processes most likely formed the sandbar? A. The erosion and deposition of sand by ice. B. The erosion and deposition of sand by water. C. The erosion and deposition of sand by wind. D. The erosion and deposition of sand by plants.	Record the letter answer:

