

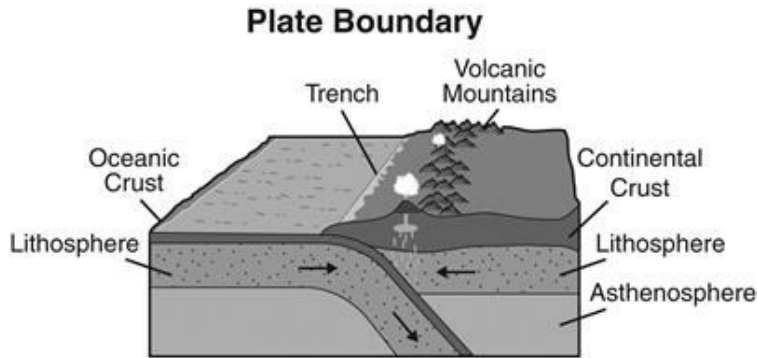
TEST NAME: **Mid-Term Quiz**  
TEST ID: **387611**  
GRADE: **09 - 12**  
SUBJECT: **Life and Physical Sciences**  
TEST CATEGORY: **My Classroom**

Student: \_\_\_\_\_

Class: \_\_\_\_\_

Date: \_\_\_\_\_

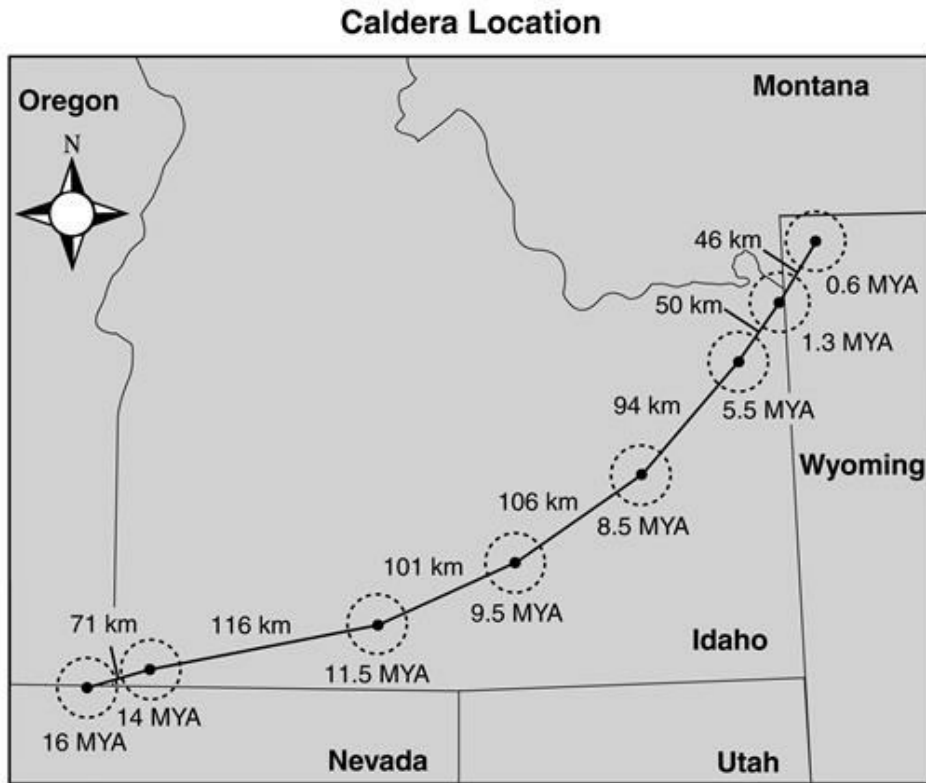
1. Along the west coast of South America, volcanic mountains are found due to movement along a plate boundary. The diagram illustrates the movement that is taking place.



Which is the most likely reason for the formation of the volcanic mountains?

- A. The volcanic arc is sliding from the continental crust into the trench.
  - B. A fault line, created by the sinking lithosphere, is filling with water.
  - C. Oceanic crust collides with continental crust, heating as it subducts.
  - D. As a result of an earthquake, multiple volcanic arcs are appearing.
2. In the Four Corners area in the US Southwest, there are large rocky outcroppings of basalt. These were formed by ancient lava flows. Using this information, what class of rock is this?
- A. metamorphic
  - B. sedimentary
  - C. igneous
  - D. weathered
3. Two fossils of the same species were found on two different continents. The continents are separated by the Atlantic Ocean. Scientists dated the fossils to be 2 million years old. Which is the least likely explanation for these findings?
- A. A great land bridge once connected the continents.
  - B. The remains were carried by ocean currents.
  - C. A single landmass once existed with both continents.
  - D. The animals swam across the ocean.

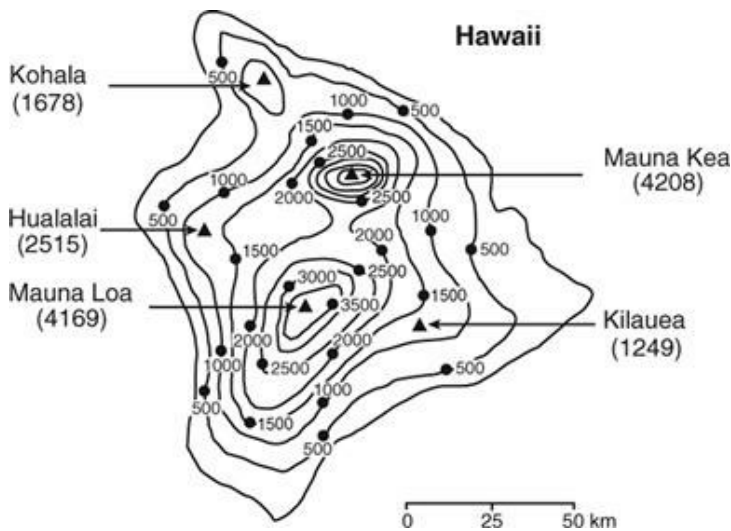
4. The diagram shows the location of the caldera that formed from major eruptions as the North American tectonic plate moves over the hot spot that is found below Yellowstone National Park.



Based on the historical data, what is the predicted average velocity of the North American tectonic plate for the next one million years?

- A. 3.65 centimeters/year northeast
  - B. 3.65 centimeters/year southwest
  - C. 36.5 kilometers/year northeast
  - D. 36.5 kilometers/year southwest
5. In order for boulders to become sediments, the boulders must first be
- A. heated and melted.
  - B. weathered and eroded.
  - C. recrystallized.
  - D. buried.
6. Which rock is most likely to contain fossil seashells?
- A. basalt
  - B. gneiss
  - C. granite
  - D. limestone

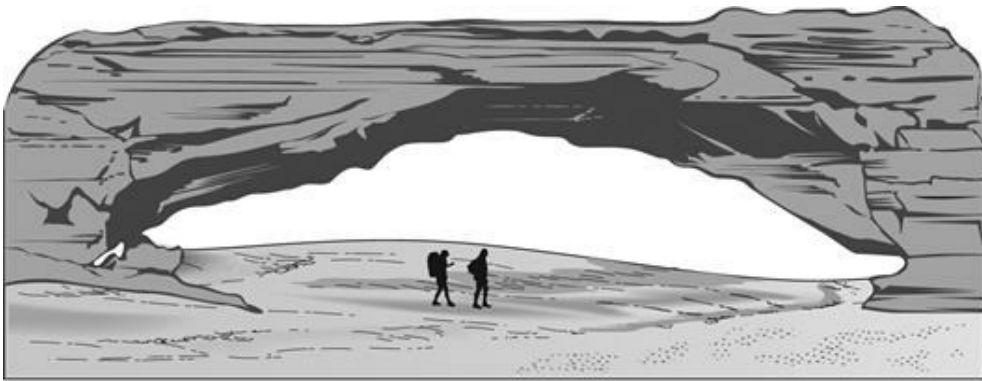
7. Over time, non-volcanic mountains can form due to the interaction of plate boundaries. Which interaction is most likely associated with the formation of non-volcanic mountains?
- oceanic plates colliding with oceanic plates
  - oceanic plates separating from oceanic plates
  - continental plates colliding with continental plates
  - continental plates separating from continental plates
8. Which statement describes an aspect of tectonic plate motion directly caused by density differences among tectonic plates?
- Ocean plates move outward from the mid-ocean ridge.
  - When ocean and continental plates collide, the ocean plate is subducted.
  - Continental plates are thicker and contain older material than ocean plates.
  - The orientation of magnetic particles in ocean plates changes at regular intervals.
9. The diagram below shows the locations of several volcanic mountains on the big island of Hawaii.



Which two volcanic mountain summits are closest to 50 kilometers apart?

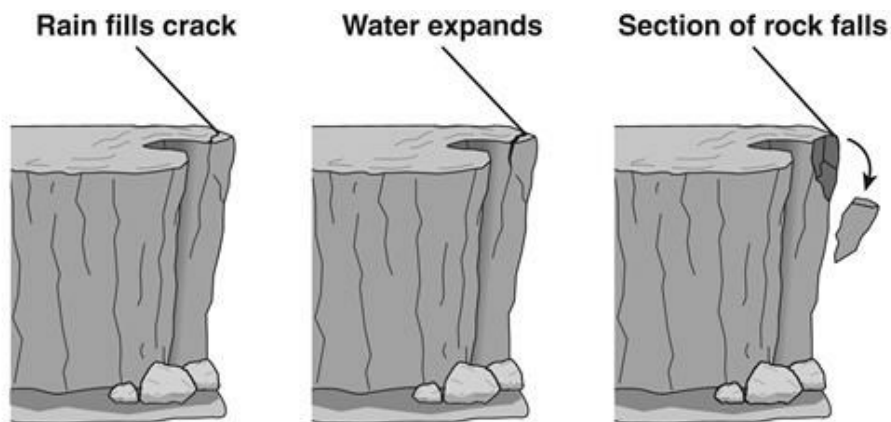
- Hualalai and Kilauea
  - Kilauea and Mauna Kea
  - Mauna Kea and Kohala
  - Mauna Loa and Kohala
10. In areas where limestone is present underneath the soil, continued rains can alter the limestone formation. The limestone can change to a highly porous formation that can lead to the formation of caves and sinkholes. Which process is directly responsible for changing the limestone?
- compaction
  - erosion
  - faulting
  - weathering

11. There are many natural rock formations such as the one shown.



Which two processes most likely removed the center portion of the rock and transported it to another location?

- A. earthquakes and wind
  - B. tectonic activity and magma
  - C. chemical weathering and glaciers
  - D. mechanical weathering and water
12. As rain falls on the top of a cliff, water seeps into the cracks of the rock. As the temperature reaches 0°C, the water expands and breaks the rock apart. Eventually, the rock falls to the ground.



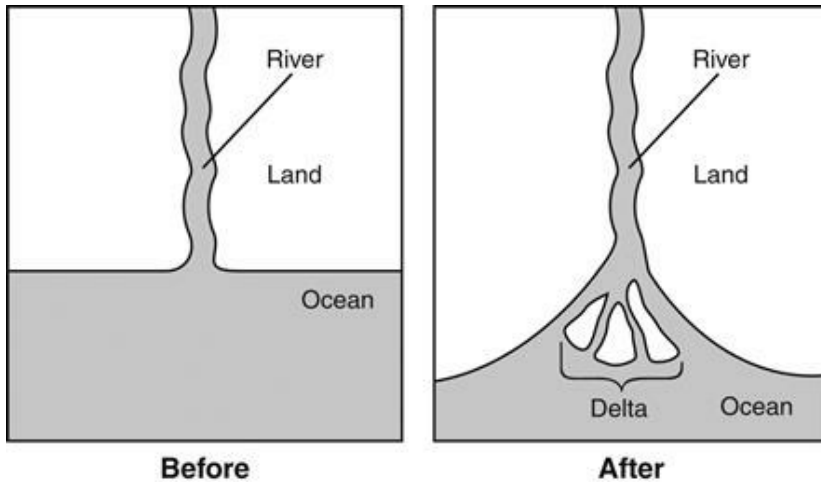
Which statement best describes the process shown?

- A. creep
  - B. abrasion
  - C. ice wedging
  - D. chemical weathering
13. What contributes the most to beach erosion?
- A. animal activity
  - B. evaporation
  - C. precipitation
  - D. wave action

14. A rock has most likely traveled a long distance from its place of origin if it is

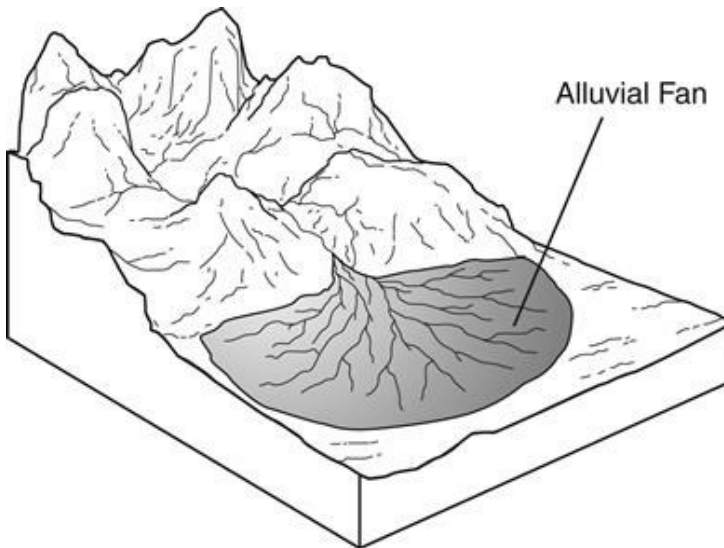
- A. very small.
- B. rounded and smooth.
- C. partially faded.
- D. rough and dense.

15. What process formed this delta?



- A. erosion and deposition
- B. condensation and precipitation
- C. shifting tectonic plates
- D. rock layer deformation

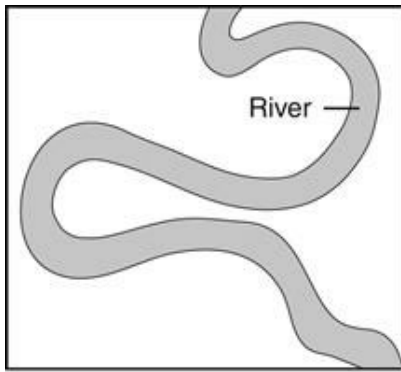
16. Alluvial fans form at the mouths of steep canyons.



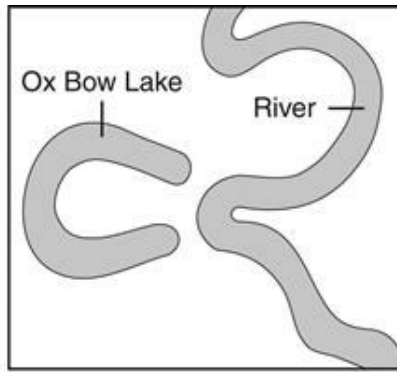
The formation of alluvial fans is most likely a result of which process?

- A. wind erosion
- B. flash floods
- C. glacial erosion
- D. chemical weathering

17. Some historians compared an old map of a river in a rural area to a current map of the same river. The historians observed that the old map showed the river with a different flow pattern from the current map.



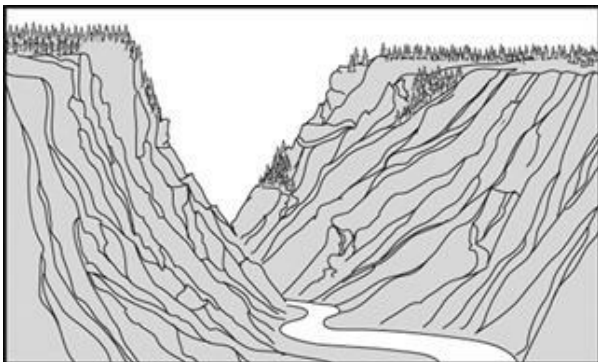
**Old Map**



**Current Map**

Which geological process most likely caused the river to change its pattern of flow?

- A. volcanoes erupting
  - B. chemical weathering
  - C. soil erosion and deposition
  - D. humans boating and fishing
18. Which of these best describes how the surface of a beach is formed?
- A. mechanical weathering
  - B. chemical weathering
  - C. mass movement
  - D. volcanic eruption
19. A student observes the many V-shaped valleys that are part of Grand Canyon National Park.



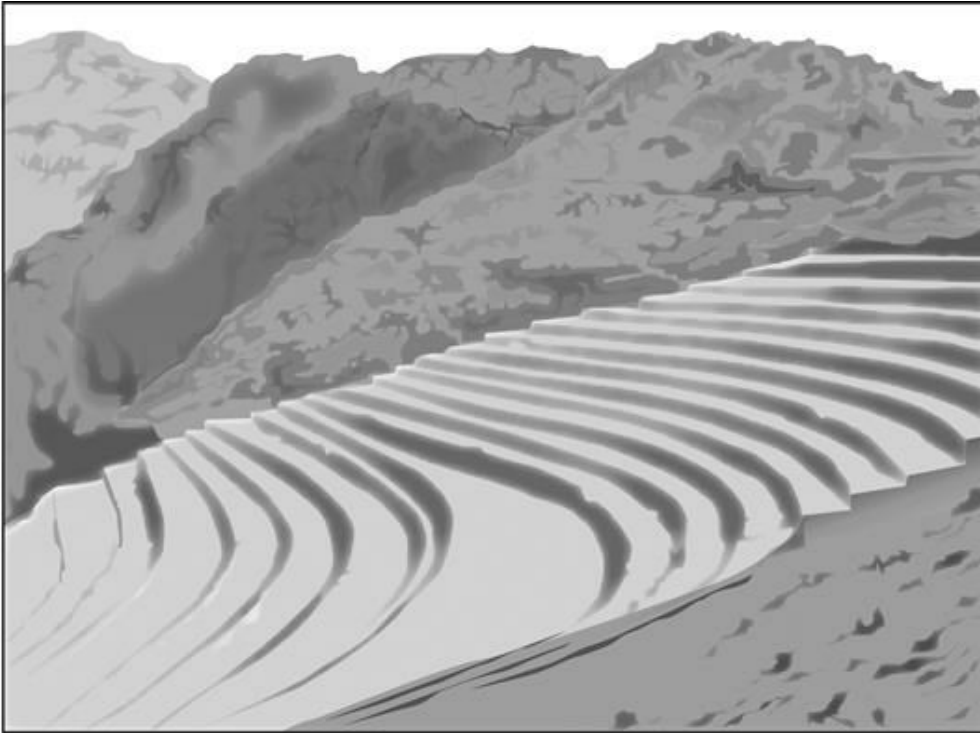
What destructive force has done the most work on this landscape?

- A. wind erosion
  - B. water erosion
  - C. glaciation
  - D. subduction
20. Which process contributes most to the formation of a sinkhole?
- A. plate movement
  - B. volcanic eruption
  - C. wind erosion
  - D. chemical weathering

21. **A group of citizens want to have a statue built out of marble. They want to place it in a climate that has a slow rate of chemical weathering. In which type of climate would it be best to place the statue for the slowest rate of chemical weathering?**
- A. hot and dry
  - B. cold and dry
  - C. hot and humid
  - D. cold and humid
22. **A farmer has a steeply sloping pasture that is eroding. Which is the best option to stop the immediate erosion of the topsoil?**
- A. Increase the amount of vegetation on the sloping pasture.
  - B. Plant trees and shrubs at the bottom of the sloping pasture.
  - C. Increase the soil thickness by adding five inches of sandy soil.
  - D. Increase the organic content of the topsoil by adding earthworms.
23. **When trees are removed from an area in a tropical rainforest, the area experiences an increase in soil erosion. Which statement best explains why removing the trees can lead to soil erosion?**
- A. Less bedrock will be available to make soil.
  - B. There will be fewer roots to hold the soil in place.
  - C. The number of soil-eating insects in the area will increase.
  - D. The amount of solar radiation reaching the ground will increase.
24. **In some dry areas, large amounts of water have been pumped from underground sources where water has been naturally stored for thousands of years. If the water is not replaced, what type of land feature is most likely to result?**
- A. delta
  - B. lake
  - C. desert
  - D. mountains
25. **Which of these methods of energy resource acquisition has the least effect on the lithosphere?**
- A. surface mining for uranium
  - B. pumping oil from under water
  - C. harvesting wood by selective cutting
  - D. collecting natural gas from old oil wells
26. **How is the changing balance of cost to benefits helping to speed the development of hybrid motor vehicles that utilize both gas and electrical motors?**
- A. Gasoline motor vehicles are reaching higher top speeds.
  - B. Hybrid motor vehicles are developed with less powerful engines.
  - C. Gasoline motor vehicles are being designed with improved mileage.
  - D. Hybrid motor vehicles are getting cheaper as the price of gasoline increases.



27. While on a trip to Peru, Carlos saw that a mountainside had been terraced by the ancient Inca Indians. The Incas had terraced the side of the mountain to grow food.



**Which other purpose did the terracing of the mountain serve?**

- A. It provided a transportation system.
- B. It encouraged wild plant growth.
- C. It helped control erosion.
- D. It prevented flooding.