

Earth's Surface

Key Concepts

Choose the letter of the best answer.

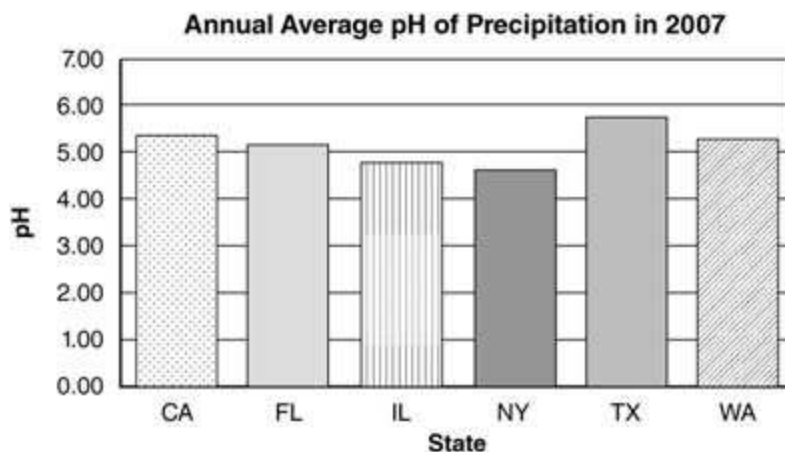
- A river starts as a steep channel in the mountains. It then leaves the mountains and enters a flatter area of land. It meanders across a plain and then enters the ocean. Which of the following actions causes the deposition of sand at a delta?

 - river water slowing as it enters the ocean
 - salt water and fresh water mixing together
 - ocean waves transporting sand toward land
 - ocean water slowing as it reaches the coast

- What can cause granite to break down into soil over time?

 - rain and wind
 - sand deposition
 - heat from magma
 - pressure underground

- The graph shows the average acidity of precipitation for various locations in the United States in 2007. The lower the pH value is for a substance, the more acidic that substance is.

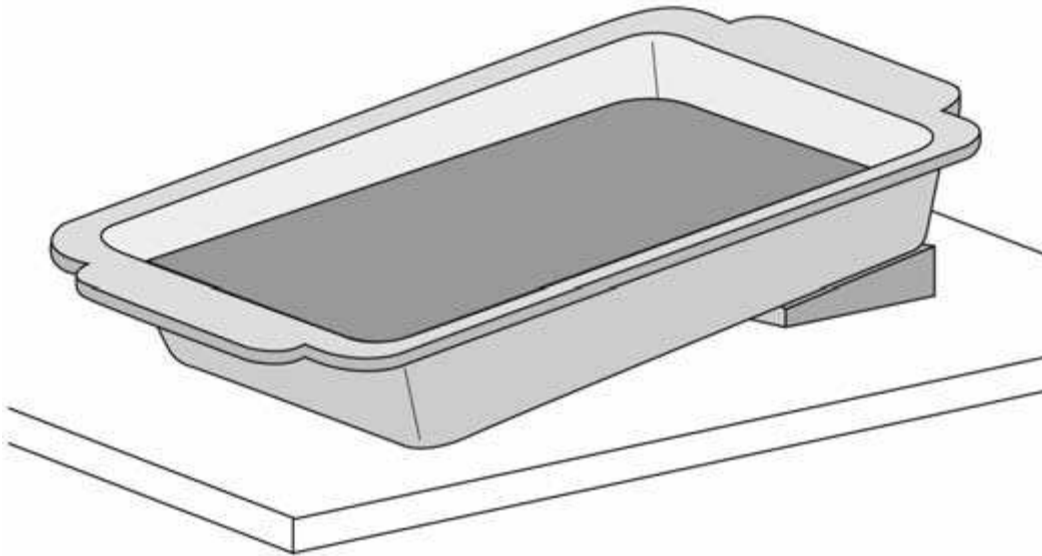


Based on the data in the graph, if each state had about the same amount of precipitation in 2007, which state would have had the highest rate of chemical weathering?

- Texas (TX)
- California (CA)
- New York (NY)
- Washington (WA)

Name _____ Date _____

4. Canyons, caverns, channels, and valleys all form because of erosion by water. Which landform listed is **mainly** formed because of erosion by groundwater?
- A. a broad valley
 - B. a narrow canyon
 - C. a human-made channel
 - D. an underground cavern
5. Emily used a tray filled with dirt as a model of a stream. Emily poured water into the top of the tray and observed how much erosion happened. Emily then increased the slope of the tray and repeated the experiment.



What would happen when the slope of the tray increased?

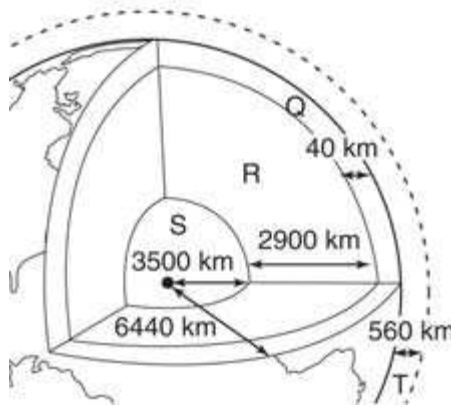
- A. The speed of the water and the amount of erosion would increase.
 - B. The speed of the water and the amount of erosion would decrease.
 - C. The speed of the water would increase, while the amount of erosion would decrease.
 - D. The speed of the water would decrease, while the amount of erosion would increase.
6. Which of the following is the source of humus found in soil?
- A. bedrock
 - B. B horizon
 - C. parent rock
 - D. plants and animals

Name _____ Date _____

7. Which is an example of abrasion of a rock?
- A. a color change due to exposure to air
 - B. a shape change due to exposure to wind
 - C. a hole forming due to a reaction with water
 - D. a layer falling off due to a lessening of pressure
8. What is the composition of Earth's atmosphere?
- A. 78% nitrogen and 22% water vapor
 - B. 78% oxygen and 22% carbon dioxide
 - C. 78% nitrogen, 21% oxygen, and 1% other gases
 - D. 78% oxygen, 21% carbon dioxide, and 1% other gases
9. In places where there is loose sediment and strong wind, the wind can pick up the sediment and carry it. When the wind slows, it deposits the sediment. Which type of sediment will be dropped first as the wind slows?
- A. the biggest
 - B. the lightest
 - C. the smallest
 - D. the heaviest

Name _____ Date _____

10. The picture below shows the layers of the geosphere.



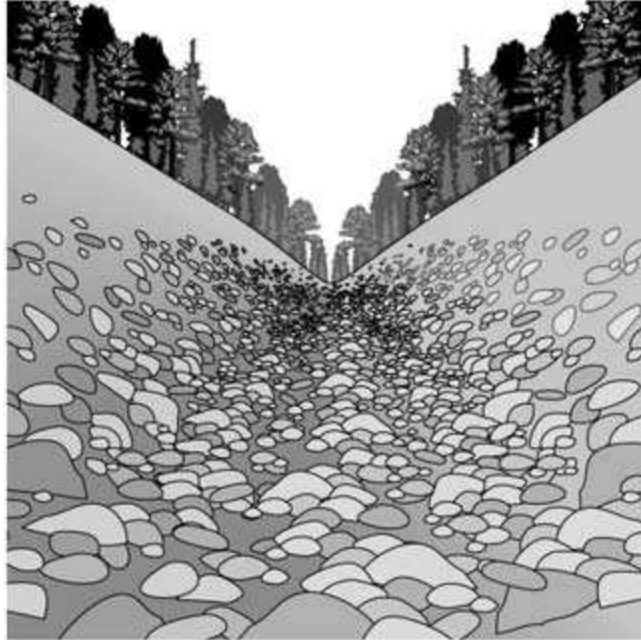
What is the order of the layers of the geosphere when starting from Earth's center and moving outward?

- A. core, crust, mantle
 - B. core, mantle, crust
 - C. mantle, core, atmosphere
 - D. atmosphere, crust, mantle
11. Landslides, rockfalls, and mudslides are responsible for both erosion and deposition. What force is mainly responsible for the erosion and deposition that happens in landslides, rockfalls, and mudslides?
- A. ice
 - B. wind
 - C. gravity
 - D. temperature
12. Granite has only recently been exposed at a location on Earth's surface. How will this most likely affect the soil that will eventually form at this location?
- A. The soil will have a thick layer of humus in the A horizon.
 - B. The soil will contain many of the same minerals as the granite has.
 - C. The soil will consist of thin horizons compared to other types of soils.
 - D. The soil will be made of mostly rock material instead of organic matter.

Name _____ Date _____

Critical Thinking**Answer the following questions in the space provided.**

13. The following picture shows a mountain valley.



Explain how you would expect this valley to look after a glacier moves through it. Explain how the glacier changes the valley.

Name _____ Date _____

Extended Response**Answer the following questions in the space provided.**

14. List four of Earth's spheres that contain water, and identify one way that water is stored in each.
