

Science-----Earth's Landforms-----Test Friday, Feb. 24, 2023

Vocabulary

Deposition- The buildup of land by the settlement of sediment and soil in a new location.

Earthquake- A sudden release of energy under Earth's surface that makes the ground shake or crack.

Biosphere- The sum of all living matter made of a limited number of elements, including oxygen, carbon, hydrogen, nitrogen, calcium, and phosphorus.

Erosion- The gradual wearing down of something by wind, water, and other natural forces.

Weathering- The breakdown of solid materials into very small particles by water, air, and natural events.

Landform- A feature on the surface of Earth that is not covered by water.

Natural Processes- Series or groups of events that occur naturally.

Earth's Surface- The part of Earth we can see.

Geosphere- Earth's system that includes Earth's interior, rocks and minerals, landforms, and the processes that shape Earth's surface.

Tsunami- A great sea wave produced, especially by an earthquake or volcano eruption under the sea.

Hydrosphere- All of the water in the air, oceans, rivers, lakes, ice caps, soil, rocks, and organisms of Earth.

Marsh/Swamp- An area of low-lying land that is usually saturated with water and is dominated by herbaceous, rather than woody, plants.

Hurricane- A large, tropical weather system in the northeastern Pacific Ocean or northern Atlantic Ocean consisting of an extreme, low-pressure air mass with heavy rains and wind speeds of at least 119 km/h.

Atmosphere- The layer of gas surrounding planet Earth, held in place by gravity and composed of a limited number of elements, primarily nitrogen and oxygen.

Notes

Weathering has several causes:

- a. **Wind** can cause weathering. Wind wears away and picks up tiny pieces of soil and rock called sediment.
- b. **Water** can also cause weathering. Rivers carry sediment that grinds the rock along the riverbanks.
- c. **Ice** is water that expands when it freezes. If water gets into cracks in rocks and then freezes, the ice pushes against the cracks.

Landslides happen when land moves over the surface of Earth.

Lightning rod- was invented to save people's lives and property. They catch lightning bolts and carry the electric current safely to the ground.

Seawalls are constructed to protect cities from high storm surges.

Floodgate is a specific type of barrier that controls the amount of water that is allowed through so that flooding is not as drastic.

Multiple Choice

1. Weathering by rain and wind can change the shape of a mountain. People cannot see this change taking place because the change is very slow.
2. Hurricanes are storms. People who live where there are lots of hurricanes build tall walls near the ocean. What do these walls help protect them from tall waves during a hurricane.
3. The shape of landforms is mostly due to the effects of oceans and the atmosphere.
4. Comparing a map of land elevation to a map of tree ranges and observing that trees do not grow above a certain altitude is evidence of how the geosphere can affect the biosphere.
5. Humans can have a positive effect on Earth's air and water by setting aside land for parks and wilderness areas that allow human use while preserving natural habitats.

Open Ended Responses

1. What are some damages that hurricanes can cause as it strikes land? What are some ways people can reduce the impact of hurricanes? **A hurricane can bring damage by flooding as the water from the ocean gets pushed onto land. Flooding can also occur because of the amount of rain that falls during a hurricane. Damage can also happen due to the strong winds that come with hurricanes. People can board up windows. People can evacuate dangerous areas. People can build seawalls to protect from storm surges. People can build houses on stilts to avoid flooding. People can design houses that are wind resistant and use materials that withstand high wind speeds.**
2. Have you ever seen a beach form? **Why can't a beach form right before your eyes? No. Beaches take a long time to form. Rocks need to be broken into sand, and the sand has to be washed ashore.**
3. What effect does landfills have on the environment? **Landfills can pollute the environment by leaking liquids into groundwater and by releasing methane gas into the atmosphere. They are also ugly to look at.**

4. Look at the picture of the beach. Describe how the beach would look like after a hurricane. Is this a fast or slow change to Earth's surface? **The beach would look different. Sand would be moved and grass and trees swept away. Houses and bridges might be destroyed. Sand would be over the roads. A hurricane is a fast change.**

5. Identify Earth's Systems and how they are interacting. How does these interactions support life in the biosphere? **The air would be the atmosphere. Coral can build colonies on the ocean floor (geosphere) in the water (hydrosphere). A fish and other creatures live in the water (hydrosphere). Water can evaporate into the atmosphere. As part of the water cycle, that evaporated water will become precipitation that helps support life on land (geosphere). Anything that supports life is part of the biosphere.**