

Name: _____

Earth's Interactions and Reducing the Human Footprint Study Guide Answer Key

1. Provide an example of an interaction between two of Earth's spheres. Strong winds (atmosphere) move sand dunes (geosphere) in the desert.
2. How would the geosphere affect the biosphere? Hydrosphere? The geosphere affects the biosphere because without the land, there wouldn't be a place for the living things to live in or to grow in. The land can also provide shelter for animals. A cave can be home for many animals. The geosphere also impacts the hydrosphere because without the mountains, there would be no rivers. Also a delta is formed at the mouth of a river as sediment from the geosphere is carried downstream.
3. Explain why the west of the Cascade Mountains has significantly more rain than the east side of the mountains. The mountain caused rain to stay on the west side, so it was dry on the east side. The Pacific Ocean has a lot of water, which is evaporated by the Sun. Because of this, there is a lot of moisture on the west side of the mountain. When this air hits the mountain, it rises and cools. This causes clouds to form on the west side. It will eventually rain, providing the water that plants need to grow. The clouds do not make it over the mountain to the east side so it is drier with fewer plants.
4. What is acid rain and how does it affect humans? Acid rain happens when pollution released into the air from factories combines with the water in clouds. The water then falls to the earth as acid rain, which has a lower pH than normal rain. Acid rain can damage stone sculptures and anything made of iron.
5. What percentage of the water on Earth is freshwater? 3%
6. Where is most of the freshwater on Earth found? glaciers
7. How can we save more energy at home and school? We should always turn off the lights when not in use. Also we should unplug electronics when we aren't using them. We can also shut off the water while washing a car rather than leaving it running.
8. What is acid rain and how does it affect us? Same as question 4. (Sorry for the repeat.)
9. How can we improve the quality and availability of Earth's water? People can reduce the amount of pollution in water by decreasing the amount of fertilizer and picking up trash on the ground. If a town takes water from a freshwater lake or river and dumps it into the ocean after using it, that decreases the availability of freshwater.
10. How is it that water from the ocean that evaporates and goes through the water cycle ends up in the lakes as freshwater? As water evaporates from the ocean, it leaves behind the salt.
11. Why can't we use all the freshwater on the Earth? Most of the freshwater is unavailable because it is located underground or in glaciers.
12. Think of three ways that we can reduce the amount of pollution on Earth. People can reduce the amount of pollution by recycling. Carpooling or walking instead of driving a car is another option to reduce air pollution. Another way we can reduce the amount of pollution is to reuse grocery bags or even change to using paper bags instead of plastic bags.

13. Explain what people can do to reduce their damaging effects on Earth. Describe what you know if being done to protect Earth's resources and environments. People should be aware and informed about the damaging effects some of our actions have on Earth. Some of the things we are already doing to protect Earth's resources and the environment are using more energy efficient cars, recycling, and conserving water.