

Directions: use your science notebooks and your earth's water's study guide to complete the following questions about the relationships between planet earth, our atmosphere, and the water cycle.

1. When precipitation falls onto land surfaces, it is either soaked into the ground or becomes runoff. Runoff is surface water that travels downhill and drains into streams and rivers.

The area of land where water is drained downhill into a body of water is known as a drainage basin, or _____.

- A. aquifer
- B. water table
- C. watershed
- D. delta

2. What two gases make up 99% of the Earth's atmosphere?

- A. carbon dioxide and oxygen
- B. nitrogen and oxygen
- C. nitrogen and water vapor
- D. carbon dioxide and nitrogen

3. How could a scientist best investigate whether a certain pesticide that is harmful to fish is being carried into the water supply?

- A. Test samples of water in rivers and lakes near farms that use the pesticide.
- B. Count the number of fish that have died near farms that use the pesticide.
- C. Take a survey to find out whether people think that their water is safe.
- D. Test samples of the rain water that falls at a farm that uses the pesticide.

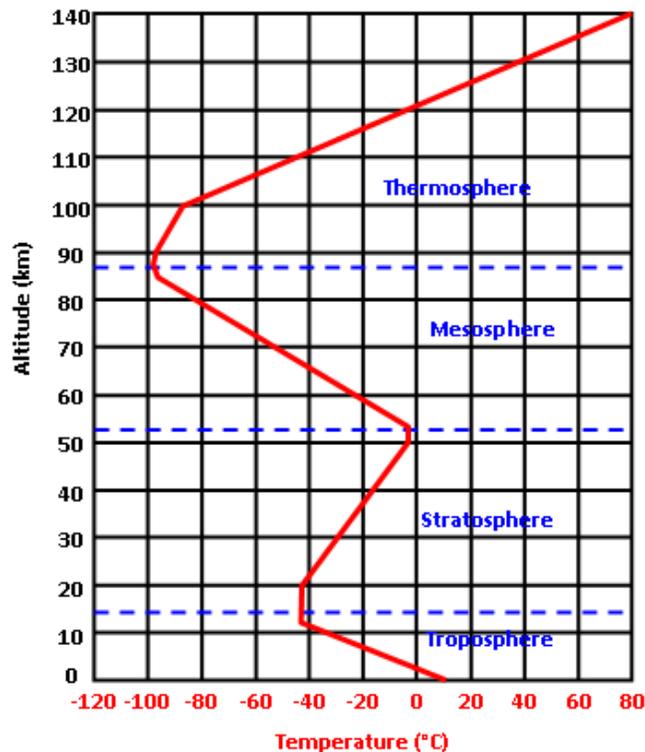
4. When hot and cold air meet, the hot air rises to the top. Which process causes the hot air to rise?

- A. induction
- B. convection
- C. radiation
- D. conduction

5. The equator tends to contain regions with hot climates. However, the Rwenzori Mountains, which are located close to the equator, are covered in ice caps. Why is the climate of the Rwenzori Mountains not hot?

- A. the mountains block solar radiation from the Sun
- B. temperatures decrease with elevation
- C. regions away from the ocean are cooler
- D. clouds form a cold blanket over the mountains

6. The graph below shows how temperature changes with altitude in the Earth's atmosphere. Examine the graph, and then answer the question that follows.



In the troposphere,

- A. temperature increases as altitude increases.
- B. temperature alternately increases and decreases as altitude increases.
- C. temperature stays the same as altitude increases.
- D. Temperature decreases as altitude increases.

7. Over the past 60 years, the level of carbon dioxide in the atmosphere has been continually increasing. Many scientists hypothesize that this increase has led to an imbalance in the carbon cycle and a climatic trend known as global warming.

In which of the following ways could humans help the carbon cycle return to normal?

- A. reduce the amount of fossil fuels they combust
- B. cut down trees and other large plants that depend on carbon dioxide
- C. pump nitrogen and oxygen into the air to help rebalance the atmosphere
- D. be careful not to dump any pollutants into our water.

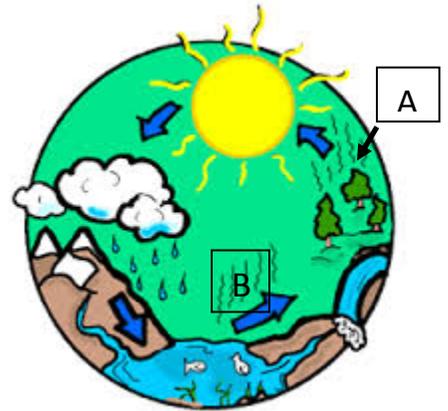
8. If rain from a thunderstorm falls into a mountainous area, in what order will the rainwater flow through the surrounding geographic features?

- A. watershed → river basin → ocean
- B. ocean → watershed → river basin
- C. ocean → river basin → watershed
- D. river basin → watershed → ocean

Use the Diagram to the left to answer the questions 9 and 10.

9, Identify the step in the water cycle that is being represented in the image by the letter A.

- A. Percolation
- B. Condensation
- C. Transpiration
- D. Precipitation



10 image by the letter B.

- A. Percolation
- B. Condensation
- C. Transpiration
- D. Precipitation

11. Use the graphic to the right to explain how a chemical spill at Site A could impact the aquatic life in the lake at Site C.

