

Name _____

Date _____

Forests

Use the text to answer each question below.

1. The forest is one of five biomes on Earth. The others are grassland, tundra, desert, and aquatic. A biome is a region with a certain climate and plant and animal life. Trees are the primary plant life in forests. There are different types of forests, but they are all generally characterized by four layers. The emergent layer is at the tops of the tallest trees. The canopy is the “roof” of the forest, where tree branches and leaves meet. The understory is at the height of smaller trees and plants. The forest floor is the bottom layer, or the ground.

What is the uppermost layer in a forest called?

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| A. Canopy | B. Forest floor |
| C. Emergent layer | D. Understory |

2. There are three major types of forest: tropical rainforests, temperate forests, and boreal forests, also known as the taiga. Tropical rainforests are located near the equator, between 23.5 degrees of latitude North and South. They are hot and humid year-round, with temperatures rarely falling below 70°F. As you may guess from their name, tropical rainforests get a lot of rain—up to 30 feet per year! They contain a great diversity of life: scientists estimate that half of the planet’s plant and animal species thrive there.

Which of these is true of tropical rainforests?

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| A. Only a few animal and plant species are able to survive there. | B. They are located a short distance above and below the equator. |
| C. They have short, cold winters and long, hot summers. | D. They don’t get much precipitation. |

3. Temperate forests are located at mid-latitude in eastern North America, northeastern Asia, and western and central Europe. They have four defined seasons, and precipitation is distributed evenly throughout the year. Temperate forests are home to deciduous trees, which drop their leaves in winter and regrow them in spring. As the fallen leaves decay, they enrich the soil with nutrients.

Boreal forests, also known as the taiga, are located between 50 and 60 degrees North latitude. They can be found in Scandinavia, Canada, and Siberia. The soil is generally thin and low in nutrients. Coniferous trees, which keep their leaves year-round, grow there. The taiga has short, wet, warm summers and long, cold, dry winters. Precipitation falls mostly in the form of snow.

Which of these best describes temperate forests?

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| A. Home to coniferous trees | B. Fertile, nutrient-rich soil |
| C. Longer winters than summers | D. Trees keep their leaves year-round |

4. Forest plant and animal species have developed special adaptations to help them survive. Rainforests are rainy and humid, so plants have evolved to deal with excess moisture. Some trees have thin, smooth bark. It helps water flow down to the roots and allows moisture to evaporate. "Drip tips" on tree leaves enable raindrops to run off quickly. In addition to being humid, rainforests can be quite dark. The rainforest floor gets very little sunlight. Some vines can climb over 100 feet high to reach openings in the tree canopy. Many rainforest animals, like spider monkeys and flying frogs, have adaptations that let them climb trees easily.

According to the passage, which of these characteristics would best help a plant survive in the tropical rainforest?

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| A. Short height that blocks access to sunlight | B. Cup-shaped leaves that collect raindrops |
| C. Thick, bumpy bark that absorbs water like a sponge | D. A slippery surface that lets water slide off easily |

5. Trees in the temperate forest evolved to have broad green leaves, which capture sunlight to make food through photosynthesis. In the winter, it is too cold for trees to protect their leaves from freezing. They drop the leaves and seal up the places where the leaves attached to the branch. This helps the trees conserve water. Temperate forest animals, like squirrels and chipmunks, store food in the ground or in trees to eat during the winter, when food is scarce. Some animals, like bears, hibernate through the winter. Others, like birds, have not adapted to cold weather. They migrate to warmer regions in the winter.

Why do trees in temperate forests drop their leaves in winter?

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| A. To save water | B. To maximize photosynthesis |
| C. To increase their freezing point | D. To store extra food |

6. In the taiga, most trees are evergreen conifers, whose leaves are known as “needles.” Evergreen needles have evolved to withstand the cold climate. The concentrated sap in their cells has a low freezing point, so it stays liquid even when the temperature is very cold. They also retain water during the cold, dry winter. Many taiga mammals, like caribou, foxes, bears, and minks, have a thick coat of fur to keep them warm and insulated against the cold.

Winter in the taiga is known for _____.

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| A. rain and fog | B. long, sunny days |
| C. below-freezing temperatures | D. hot days and cold nights |