

Name _____

Date _____

Tropical Rainforests

Use the text to answer each question below.

1. What's in a name? When it comes to tropical rainforests, we can learn a lot by examining each part of its name. Let's start with "tropical." Tropical means relating to or from the tropics. The tropics are regions of the Earth found near the equator. The climate of the tropics is warm and humid. The word "tropical" tells us where we can find rainforests and what this region's climate is like. Next, we have the word "rain." We all know what rain is, but it must be pretty significant if it is part of this ecosystem's name. This hints at how common rain is in tropical rainforests. With up to 30 feet of rain each year, "common" might be an understatement! The final part of the name is "forest." A forest is an area covered in trees and plants. This means we can expect to find plenty of trees, bushes and other vegetation in a tropical rainforest. Now put it all together. A tropical rainforest is a warm and humid ecosystem found near the equator. This area is covered in trees and plants and gets a lot of rain.

According to the passage, which of the following best describes the climate of the tropics?

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| A. cool and rainy | B. covered in trees |
| C. near the equator | D. warm and humid |

2. Tropical rainforests have four layers: the emergent layer, canopy, understory and forest floor. The emergent layer is the highest. This is where the tallest trees extend above the canopy. The canopy is where leafy treetops meet to form what some call a roof over lower layers. Up to 150 feet above the ground, this layer keeps the tropical rainforest shady. It is home to monkeys, birds, flying squirrels and many more animal species. The understory is shaded by the canopy and consists of smaller trees, bushes, flowers and other plants. Animals like snakes, frogs and many species of insects can be found there. The forest floor is the bottom layer. This layer is mostly bare. Due to a lack of sunlight and poor soil, this layer does not support plant life. It is home to fungi, bacteria and animals like chimpanzees, gorillas, deer and leopards.

Based on the passage, which of the following best describes the relationship between the canopy and forest floor?

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| A. Because the canopy blocks rain, the forest floor never gets wet. | B. Because the canopy blocks sunlight, the forest floor does not support plant life. |
| C. Because the canopy can reach 150 feet above the ground, it has no effect on the forest floor. | D. Because the canopy is home to monkeys, there are no chimpanzees on the forest floor. |

3. Tropical rainforests are known for their biodiversity. Biodiversity is the amount of different plant and animal species in a particular habitat. Biodiversity is low when there are only a few different species in a habitat. It is high when there are many different species. About half of all plant and animal species found on Earth can be found in tropical rainforests. Biodiversity makes an ecosystem more stable. With more species playing different roles in an ecosystem, disturbances have a smaller impact. The ecosystem can bounce back quickly and easily. This stability makes an ecosystem more productive. Since tropical rainforests produce more than one fifth of Earth's oxygen, this stability is important. Biodiversity is not only critical to the wellbeing of tropical rainforests, but also the wellbeing of the planet.

According to the passage, which of the following is true?

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| A. High biodiversity contributes to the climate of the tropical rainforest. | B. High biodiversity is the reason trees are so tall in the tropical rainforest. |
| C. High biodiversity makes a tropical rainforest a more stable environment. | D. High biodiversity means less plant and animal species play a role in the tropical rainforest's ecosystem. |
4. Deforestation is the greatest threat to tropical rainforests. Deforestation is the removal of trees in a certain area. Trees are often taken down to make room for farms and roads. Timber from trees can be harvested and sold. As a result of deforestation, tropical rainforests are shrinking. Since tropical rainforests cover only six percent of Earth's surface, every bit of rainforest left is critical. A smaller rainforest means less oxygen will be produced and less carbon dioxide will be stored in trees. Furthermore, trees that are cut down release carbon dioxide into the atmosphere. This has the potential to make climate change happen even faster. On top of this, a shrinking rainforest threatens biodiversity. As their habitat shrinks, plants and animals are at a higher risk of extinction. Many ingredients in medicine have been discovered in plants from the tropical rainforest. What if the next plant to go extinct is one that could have saved lives?

According to the passage, which of the following is an effect of deforestation?

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| A. decreased biodiversity in tropical rainforests | B. increased carbon dioxide in the atmosphere |
| C. decreased oxygen production | D. all of the above |

5. Many groups work to protect tropical rainforests. Some countries have officially recognized protected areas. Laws have been passed to regulate and reduce deforestation. Other groups promote low-impact farming and harvesting of non-wood products like rubber or cork. In recent years, an increased interest in sustainably-produced products around the world has helped slow deforestation. Businesses might make more money with an environmentally-friendly approach. Because of this, it is in their best interest to respect the rainforest around them. Still, the work isn't finished. Activists continue the fight to expand laws protecting tropical rainforests. As more countries take on climate change, tropical rainforests are a great place to focus on.

Based on the passage, cork is most likely a(n)

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| A. material that can be harvested without killing trees. | B. extinct tree that once grew in tropical rainforests. |
| C. type of law that regulates deforestation. | D. method of low-impact farming. |