



EARTH'S CHANGING CLIMATE

Biomes and Climate Change

In *Biomes and Climate Change*, learn how climate change affects Earth's many biomes—for example, its deserts, forests, and tundra. Such biomes exist under only certain climate conditions.

What did you learn?

QUESTIONS

- Which of the following is an important land biome?
 - Forest
 - Grassland
 - Desert
 - All of the above
- What is the oldest desert in the world?
 - The Gobi Desert
 - The Namib Desert
 - The Sahara Desert
 - The Sonoran Desert
- Which of the following is NOT a threat to grasslands caused by global warming?
 - Increased wildfires
 - Increased drought
 - Plowing land for farms
 - Changing wind patterns
- Which of the following is NOT contributing to global warming?
 - People burning fossil fuels
 - Increasing caribou populations
 - Loss of snow cover
 - Thawing permafrost
- What is a biome?
- Why are grasslands an important carbon sink?

TRUE OR FALSE?

- | | |
|---|---|
| _____ 1. Climate change may cause the world's deserts to get larger. | _____ 4. Warming temperatures and water pollution in a freshwater lake can lead to a harmful algae bloom. |
| _____ 2. When carbon dioxide reacts with seawater, the water becomes less acidic. | _____ 5. The rain forest biome is home to more than half of all plant and animal species. |
| _____ 3. Ocean water that is too cold causes coral bleaching. | _____ 6. Warmer temperatures are keeping invasive plants and animals out of the tundra. |

ANSWERS

- 1. d. All of the above.** According to page 4, "Important land biomes of the world include forests, grasslands, tundra, and deserts."
- 2. b. The Namib Desert.** According to page 8, "The Namib Desert is the oldest desert in the world."
- 3. c. Plowing land for farms.** According to page 30, "Global warming has increased wildfires and drought, giving grasses less time to recover. In some areas, changing wind patterns bring more rainfall, so shrubs and trees begin to replace grasses."
- 4. b. Increasing caribou populations.** On page 40, we learn that people burning fossil fuels; loss of snow cover; and thawing permafrost all contribute to global warming.
- 5.** According to page 4, "A biome is the collection of all living things in a large area of land or water."
- 6.** According to page 34, "Forests store carbon dioxide inside the wood and leaves of trees, which means that wildfires release it back into the atmosphere. But grassland plants store carbon dioxide in their roots and in the soil, where fire cannot release them."

TRUE OR FALSE? ANSWERS

- 1. True.** According to page 10, "More and more, climate change is also playing a role in desertification. ... If this trend continues, the world's deserts will get larger." So, the correct answer is True.
- 2. False.** According to page 12, "When carbon dioxide reacts with seawater, the water becomes more acidic." So, the correct answer is False.
- 3. False.** According to page 14, "Higher water temperatures from global warming are causing many corals to force out the algae that lives in and feeds the coral. This is called bleaching because the coral turns white without its algae." So, the correct answer is False.
- 4. True.** According to page 18, "Warming temperatures and water pollution can trigger algae blooms in lakes." So, the correct answer is True.
- 5. True.** According to page 26, "[The rain forest biome] is home to more than half of all plant and animal species." So, the correct answer is True.
- 6. False.** According to page 36, "Warmer temperatures are allowing some trees and other invasive plants and animals to move into the tundra, replacing the wildlife native to the area." So, the correct answer is False.