

Name \_\_\_\_\_

Date \_\_\_\_\_

# Deserts

Use the text to answer each question below.

1. The desert is one of four land biomes on Earth. The other biomes are grassland, forest and tundra. A biome is a region that shares a certain climate and plant and animal life. Deserts are characterized by extreme dryness. They get less than 10 inches of precipitation per year, and that precipitation usually evaporates very quickly. Deserts are usually very hot in the daytime, often over 100°F, and cool off to 50°F or below at night. However, deserts are not always hot. For example, the Antarctic desert is covered in snow and ice year-round.

Which of these is true about deserts?

- A. They are always hot and sometimes dry.      B. They are always hot and always dry.  
C. They are sometimes hot and always dry.      D. They are sometimes hot and sometimes dry.
2. Four factors influence the formation of a desert. The first is latitude. Latitude measures how far a location is from the equator. Deserts are often found around 30° north or south of the equator. The high atmospheric pressure in these areas causes the air to become extremely dry. An example of a latitude desert is the Sahara in northern Africa.

The movement of ocean currents can also form deserts. When moist air masses travel east over an ocean, they drop most of their moisture as precipitation. By the time the air reaches the west coast of a continent, it is very dry. One cold-current desert is the Atacama in Chile, South America.

Some deserts, like the Gobi in central Asia, form because a mountain range blocks them from getting rain. Others, like the Great Australian Desert, form in the center of a continent because they are far from moisture-rich ocean winds.

Based on the passage, which of these is the most likely explanation for why deserts form?

- A. The air over deserts has already dropped its moisture somewhere else, so it ends up very dry.      B. Deserts get 30 percent more sunlight than other areas of the Earth, and that is why they are so hot.  
C. The Sahara was the first desert on Earth, and other deserts formed around it as time went by.      D. Ocean currents cause precipitation to fall heavily, but desert sand absorbs the moisture too quickly.

3. All organisms on Earth, from the smallest bacterium to the largest blue whale, need water to survive. Desert plants and animals have developed special adaptations for getting and holding on to water. Without these adaptations, they would not be able to survive in the dry desert.

Cacti are the primary plants of the desert. They have long, sprawling, shallow roots that can soak up the maximum amount of water from the ground. They can store plenty of water in their rubbery stems. They don't have leaves, which can lose a lot of moisture. Cacti also have sharp spines meant to stop animals from taking their water.

According to the passage, how have cactus roots adapted to the desert's dry environment?

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| A. They are sharp and poke animals who try to dig them up.           | B. They are very short because there isn't much water for them to soak up. |
| C. Their rubbery texture helps them find the most water in the soil. | D. They are shallow and extend widely to help them absorb water.           |
4. During the day, deserts can be extremely hot and sunny, and there is little shade to offer relief. Many desert animals rest during the day. This helps them stay cool so they don't sweat out too much water. Then they come out to hunt when the sun goes down. Some animals, like kangaroo rats, live in underground dens, where it is several degrees cooler than on the surface. Others, like camels, have evolved to tolerate high temperatures. They conserve water by not sweating very much.

In addition to conserving water, some animals are able to collect water when it does rain. The Texas horned lizard has tiny channels between the scales on its back that can collect drinking water. The sandgrouse, a type of bird, can hold up to 25% of its body weight in water in its feathers.

Which of the following animals is best adapted to the dry desert environment?

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| A. a black bear, whose dark coat absorbs a lot of heat    | B. a jackrabbit, which can get rid of excess heat though its large ears                     |
| C. a river otter, which mainly eats fish, frogs and crabs | D. a spider monkey, whose long arms and hook-like hands help it swing through tree branches |

5. Climates naturally change over time, and desert organisms have evolved along with those changes. However, recently the climate has been changing too fast for plants and animals to keep up. Global temperatures continue to rise, and desert temperatures are rising even faster. As the deserts heat up, they are expanding. Every year, over 80,000 square miles of grass and farmland are turning into desert. This process is called desertification. Over time, many plant and animal species could become extinct. Losing farmable land to desert also means there may not be enough land for humans to grow food. It is important to find ways to combat desertification to ensure survival.

Based on the passage, which of these is true?

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| A. Climate change is contributing to desertification.                              | B. Desertification affects humans as well as plants and animals. |
| C. Desertification could cause the loss of biodiversity, the diversity of species. | D. all of the above  |