

Predict whether an organism can survive in a particular ecosystem.

Ecosystems

Read This:

An **ecosystem** consists of all the living and non-living things within an area. For example, an aquarium is a small ecosystem that consists of the fish and plants (living) and the water and rocks (non-living). In the forest ecosystem in Tennessee there are many living factors such as plants and animals, and there are many non-living factors such as soil, rocks, lakes, and rivers. There are many ecosystems in the world, but we will focus on four: tundra, aquatic, rain forest, and desert. We will discuss how plants and animals survive in these ecosystems.

The **tundra** (THINK snow) is known for its cold weather and abundant snow. Animals in the tundra have thick fur to help keep them warm, much like we wear coats when it gets cold. Also, the animals' fur is often white so they can be camouflaged in the snow. Some common animals in the tundra include polar bears, arctic fox, caribou, and snow owls. There are very few plants in the tundra, because the summer is very short. However, there are some tall grass and small shrubs that provide food for the small animals and caribou.

Aquatic (THINK underwater) ecosystems consist of the oceans, lakes, and rivers of the world. There are many fish and other aquatic animals that live in the water. An important adaptation that animals have is gills to allow them to breathe underwater or very large lungs that allow them to stay underwater for long periods of time. Fish have gills that allow them to breathe, but turtles and whales have large lungs that hold lots of air while they are underwater. Also, many animals have fins or large flippers that help them swim fast in the water. Aquatic plants usually have floating leaves (like lily pads) that allow the plants to get the sunlight they need.

Rain forests (THINK green) are full of many plants and animals. Most of the plants are tall and form a canopy of leaves that block much of the sunlight from reaching the forest floor. Any plants living on the forest floor have very large leaves that help them gather what little sunlight there is. Many of the animals will live in the tops of the tall trees. To help them balance in the tall trees they have long tails. Some examples are jaguars and monkeys. There are also many amphibians such as frogs that have moist skin. They are found in the rain forest, because the rain water helps keep their skin moist so they can survive.

Deserts (THINK water) are known for their hot and dry weather. Any plants and animals that want to survive in this habitat must be able to store water. Plants will often have very deep roots that allow them to soak up water that is deep underground. They store that water in their trunks (the base of the plant). Also, most plants such as cactus either have very small leaves or spines that prevent the plants from losing water through their leaves. The animals are also well adapted to the desert. Most only come out at night when the air is cooler. Since they hunt at night, most animals have large eyes that allow them to see in the dark. Many animals, like camels, also have the ability to store water in their body. Lizards and snakes scales also prevent them from losing water through their skin.

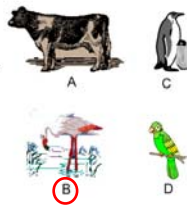
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1 In which habitat would the spider monkey find it easiest to survive?

- A an arctic forest
- B a farm field
- C a marsh wetland
- D a rainforest



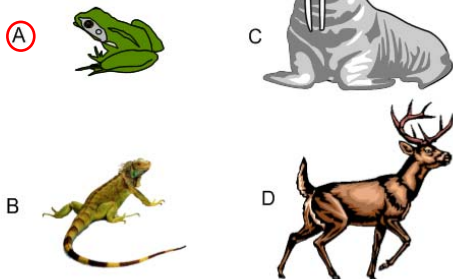
2 The Hillsborough Glades is a wetland ecosystem located in a warm part of the world. Most areas are flooded and it rains frequently. There are some trees but most of the plants are grasses. Which of the following animals is most likely to be found in the Hillsborough Glades?



3 Lucy brought live trout she caught while fishing the Mississippi River over to Sam's to eat for dinner. Sam does not like trout and does not want to cook the trout if he is not going to eat it. He decides to set it free. Which of the following habitats would be the best place for Sam to set the trout free?

- A the cold salty ocean
- B a rainy forest
- C a river behind his house
- D a small aquarium

4 Which animal is best suited for survival in a warm aquatic environment?



5 A Diamondback Rattlesnake lives in the desert regions of the world. Which of the following animals is it most likely to share its environment with?

- A a deer with brown fur
- B a fox with white fur
- C an owl with dark feathers
- D a rabbit with thin fur

6 Which of the following organisms would you expect to find in an tundra?

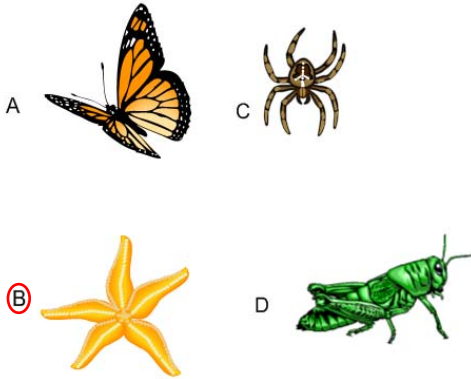
- A a bear with thick fur
- B a cactus with thorns
- C a monkey with a long tail
- D a white fish

7 A researcher is studying the plants and animals of a particular area. She observes monkeys with long tails, green iguanas, colorful birds, and leafy plants. Which kind of environment is she studying?

- A an arctic tundra
- B a dry desert
- C an ocean
- D a tropical rainforest

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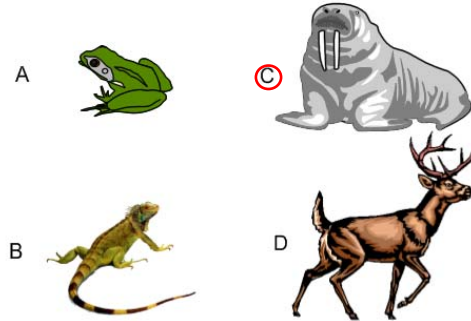
8 Which animal is most likely to survive in an aquatic habitat?



9 Lucy bought live Maine lobsters over to Burt's to eat for dinner. Burt does not like lobster and does not want to cook the lobster if he is not going to eat it. He decides to set it free. Which of the following habitats would be the best place for Burt to set the lobster free?

- A the cold salty ocean
- B the creek behind his house
- C a warm shallow lake
- D a rainy forest

10 Which animal is best suited for survival in the arctic tundra?



11 A King Penguin lives in the arctic regions of the world. Which of the following animals is it most likely to share its environment with?

- A a deer with brown fur
- B a fox with white fur
- C an owl with dark feathers
- D a rabbit with thin fur

12 Which of the following organisms would you expect to find in a tropical rainforest?

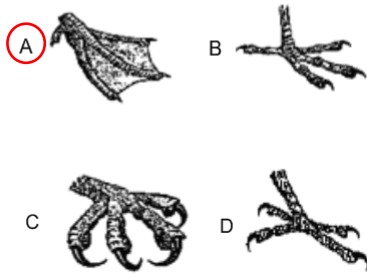
- A a bear with thick fur
- B a cactus with thorns
- C a monkey with a long tail
- D a white owl

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13 A researcher is studying the plants and animals of a particular area. He observes polar bear, penguins, seals, and very few plants. Which kind of environment is he studying?

- A an arctic tundra
- B a dry desert
- C an ocean
- D a tropical rainforest

14 Which foot is most likely an adaptation for a bird that lives in an aquatic environment?



15 Which of the following would be considered an adaptation for an animal that lives in a tropical rainforest?

- A green skin
- B small leaves
- C layer of blubber
- D thick fur

16 Which of the adaptations would be most useful to an animal living in the tundra?

- A body fat to keep warm
- B ability to store water
- C long, skinny legs
- D short feathers

17 Many animals that live in the desert hunt for food during the night. How does this type of behavior help the desert animals survive?

- A It is easier to find water at night.
- B It is not as hot during the night.
- C There are fewer animals out at night.
- D There are more plants to eat during the night.

18 What characteristic will help these polar bear be successful in their habitat?

- A their Coke commercials
- B their short claws
- C their small tails
- D their white fur



19 Which of these adaptations would be considered an adaptation for an animal that lives in a tropical rainforest?

- A green skin
- B small leaves
- C layer of blubber
- D thick fur