



Where Animals and Plants Are Found

What I Need to Know

Vocabulary

- ecosystem
- biome
- carnivore
- herbivore
- omnivore
- food chain
- food web
- archipelago
- atoll
- biodiversity
- extinct
- wetland
- bog
- marsh
- swamp

What I Do

About Animals and Plants

Many different animals and plants live on Earth. The animals and plants live in different places and make up parts of different ecosystems. In an ecosystem, animals and plants form a community. They are linked to each other and the land in a special way. People's actions may have an effect on ecosystems. Sometimes, their actions may result in animals or plants disappearing or becoming extinct.

Complete the Activities. When you are done, you will know where to find a tiny frog that can fit on a U.S. dime. You will know why a man was given a ticket for throwing a fish in the water.



Name _____ Date _____

Activity 1

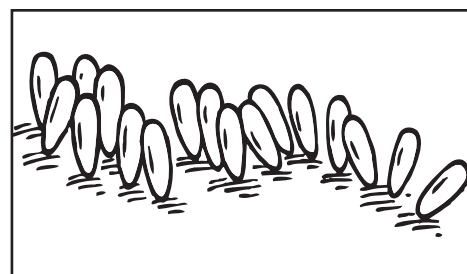
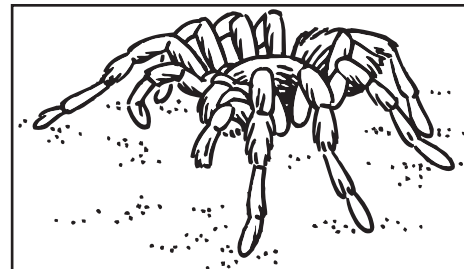
In tropical regions, some tarantulas grow big enough to eat small frogs. Yet even big tarantulas face danger. There is a type of wasp that lays its eggs on the tarantula's back. The tarantula becomes a living food supply for the hatching baby wasps.

The tarantula and the wasp are all part of an **ecosystem**. In an ecosystem, animals and plants are linked to each other and the land in a special way. They are a community, each member dependent on the other members. The ecosystem of a whole region is called a **biome**. There are forest, desert, grassland, and tundra biomes.

A stream ecosystem might make up part of a:

- A. forest biome
- B. tundra biome
- C. grassland biome
- D. all of the above

Explain what an ecosystem is. _____



Activity 2

In many ecosystems, there is a mix of different types of eaters. There are **carnivores**, **herbivores**, and **omnivores**.

Circle the part of the word that is the same in all three words below:

carnivore

herbivore

omnivore

Voro is a Latin word root meaning "to devour" or "to eat greedily." The words *carnivore*, *herbivore*, and *omnivore* are all based on this root. In Latin, *carn* means "flesh," *herb* refers to plants, and *omni* means "all."

Use the information above to list some:

carnivores _____

herbivores _____

omnivores _____

Did the animals you listed all belong to the same ecosystem? _____



Name _____ Date _____

Activity 3

A **food chain** shows how plants and animals are connected. It shows how even though different animals eat different things, plants and animals are all connected.

One food chain might be the following:

grass rabbit wolf vulture

The food chain helps show us that:

- A. vultures are omnivores
- B. wolves only eat rabbits
- C. it does not matter to a vulture if there is grass
- D. grass is important to a wolf because it eats herbivores

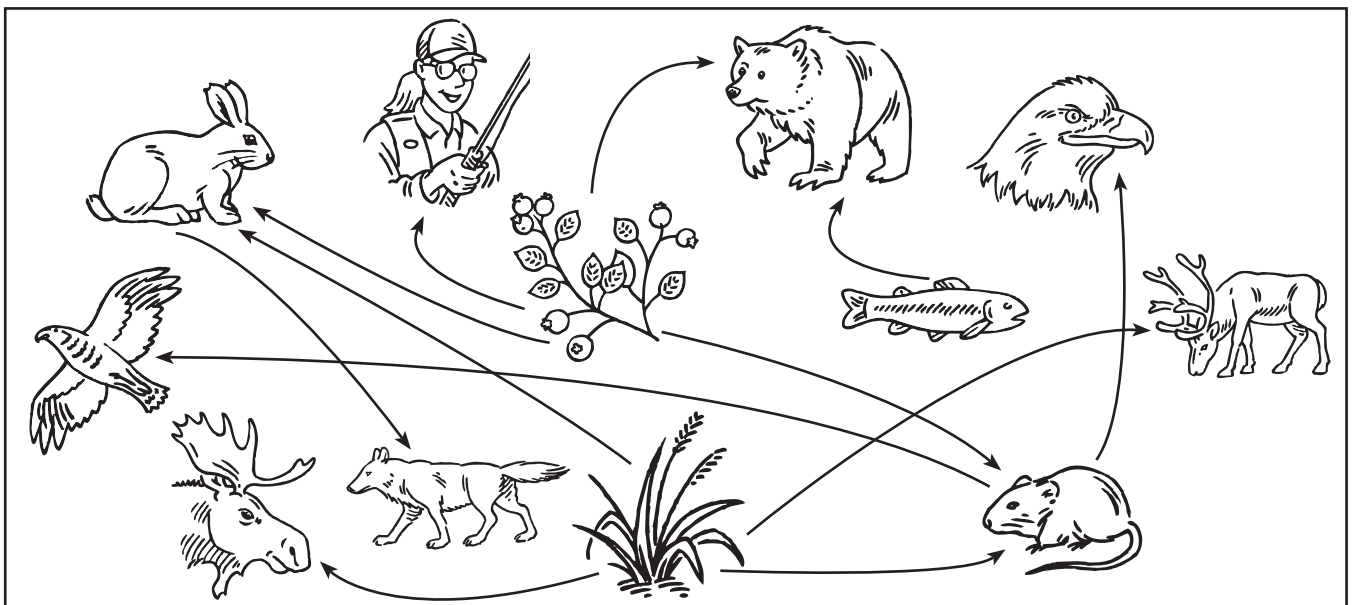
On another sheet of paper, make two food chains of your own.

1. Put yourself in one of the food chains.
2. Make a food chain for a particular biome (forest, desert, grassland, or tropic).
3. Identify the carnivores, herbivores, and omnivores in each food chain.

Activity 4

Food chains are linked within ecosystems and biomes. The food chains make a **food web**. Food webs are another way to show how plants and animals are linked within an ecosystem. Look at the example of the simple food web. It is for a tundra biome.

Make your own food web for a temperate, tropical, or boreal forest. Don't worry if your web has lots of lines going all over the place!





Name _____ Date _____

Activity 5

Ecosystems need to be protected. The world's largest protected marine area was created in 2006 around an **archipelago**. An archipelago is a group of islands. The marine preserve is in northwestern Hawaii and covers a vast chain of largely uninhabited islands, **atolls**, and coral reef colonies. An atoll is a coral island shaped like a ring around a lagoon.

One scientist said, "It is a place to maintain **biodiversity** . . . of the Pacific." When something is diverse, it is not alike. It is different. An area with great biodiversity is an area where there is a diversity of life. There are many different kinds of living things.

What might happen if the biodiversity of the oceans decreased?

Is the country of Indonesia an archipelago? yes/no

On the map, find and label these archipelagos: Galapagos Islands, Aleutian Islands, and the Marshall Islands.

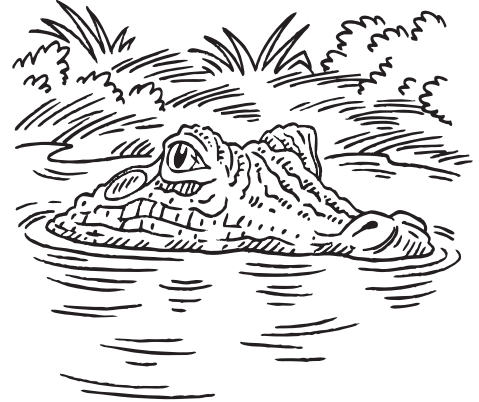




Name _____ Date _____

Activity 6

A man was ticketed for throwing a fish in the water in Florida. Why? The man was feeding an alligator. Forty years ago, the American alligator was almost **extinct**. When something is extinct, it is no longer living. It has died out. Laws were made to protect alligators and their population increased. Today, there may be as many as 2 million alligators. Many people live in urban areas that have encroached, or pushed into, the alligator's natural habitat.

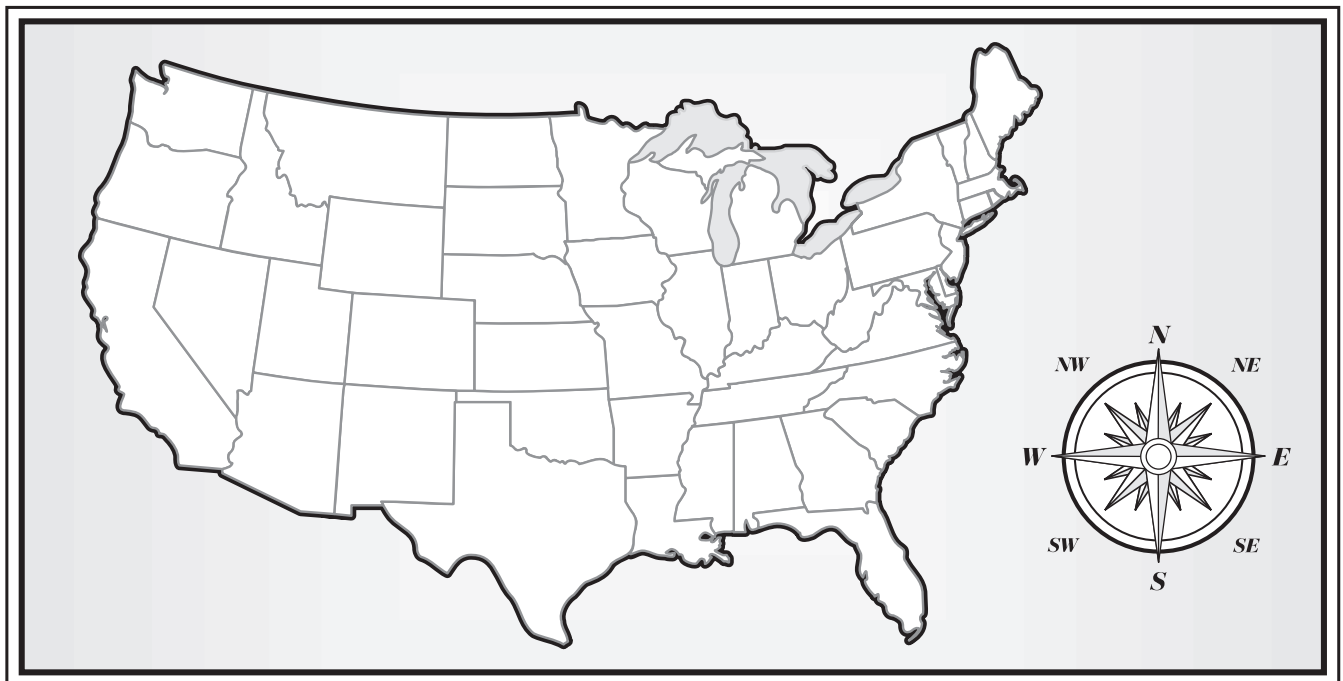


One biologist explained that feeding alligators a single fish, hot dog, or piece of candy might change their behavior. "They start to see humans as a food source," he said.

1. What effect have people had on biodiversity in your area?

2. What animals in your area see people as a food source?

Find Florida on the map. Which direction is it from where you live?





Name _____ Date _____

Activity 7

Sugarcane is a tall grass native to Asia. Europeans introduced it to the Caribbean. On the Caribbean island of Grenada, rats became a problem in the sugarcane plantations. How did the sugarcane farmers try to deal with the growing number of rats? They introduced mongooses, believing they would kill the rats. Today, mongooses are a serious problem and have greatly harmed the native plant life. And, they never killed the rats! Why not? Rats are active at night, and mongooses are active in the day!

From the story, you can tell that:

- A. ecosystems are the same all over the world
- B. rats can defend themselves against mongooses
- C. people should get sugar from beets rather than cane
- D. native plants or animals may be hurt by people's actions

Find Grenada on the map. Can you name three other Caribbean islands?



Activity 8

Bringing in new animals or plants can change ecosystems. Building houses, roads, or other structures can also change ecosystems.

On the map, find Lake Mead and Lake Powell. Describe their locations.

Both of these lakes are man-made. They were created when two enormous dams were built. The dams were the Hoover and Glen Canyon dams. These dams provide water for irrigation, hydroelectric power, and a place for recreation.



If you lived near the mouth of the Colorado River, would you think the dams were as important as those close to Lake Mead and Lake Powell? _____

Who should decide if keeping an ecosystem safe is worth more than what can be gained from new building structures? _____



Name _____ Date _____

Activity 9

A cave was discovered in 1986. The cave is located in Romania, near the Black Sea. The cave was cut off from the surface more than five million years ago. Of the 48 animal species identified, 33 species had not yet been discovered! No animals in the cave have backbones. All the animals are blind. There are leeches, centipedes, spiders, and earthworms.

Bacteria are at the bottom of the food chain. Then, other animals eat the bacteria and other animals. How do the bacteria get their energy? They do not get it from light energy. They get it from chemical energy. Hydrogen sulfide rises into the water from deep within the earth.

From the story, you can tell that:

- A. hydrogen sulfide provides light energy
- B. some food chains are based on chemical energy
- C. scientists know about all the animals on Earth
- D. chemical energy is the basis for all food chains

On the map, find Romania and the Black Sea. Name two other countries that border the Black Sea.



Activity 10

A new frog was discovered in 1993. The frog was discovered on a remote mountain in the Cuban rain forest. This frog tied with a frog found in 1971 in Brazil for the smallest frog in the world. How small is this frog? It can sit on the middle of a dime! It is two-fifths of an inch (10 mm) in length.

All animals have a special place in ecosystems. It is thought that most predators, such as snakes, which usually eat frogs don't eat this type. Why not? They are too small. Instead, centipedes and spiders may eat them.

About 90 percent of Cuba's rain forests have been cut down or burned. What do you think will happen to this frog if the practice

continues? _____

On the map, find Cuba and Brazil.

On a separate piece of paper describe how to get from Cuba to Brazil. In your instructions, include compass directions, hemispheres, and names of bodies of water and countries you have to fly over, cross through, or pass by.





Name _____ Date _____

Activity 11

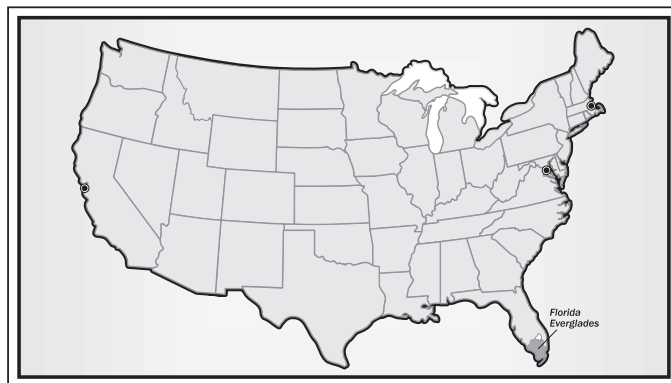
A **wetland** is a **bog**, **marsh**, or **swamp**. A bog is a small area of water that has no natural inlets. Rings of vegetation surround it. Sometimes, a mat of grasses covers it. A marsh is usually near a river or seacoast. It is a body of salty or fresh moving water with plants growing in it. A swamp is larger than a marsh. It supports a wider variety of plant life. Trees and shrubs are often found in swamps.

Which statement is *true*?

- A. A marsh has no natural inlets.
- B. A marsh is larger than a swamp.
- C. A mat of grass will sometimes cover a bog.
- D. A wider variety of plants live in a bog than a swamp.

Before, many wetlands were drained or filled in. In fact, parts of Boston, San Francisco, and Washington DC are built on filled-in wetlands. Today there are laws protecting wetlands. If someone owns property, should they be allowed to do what they want with it? Why or why not?

On the map, find and label Boston, San Francisco, and Washington DC. Which one is closest to where you live?



Activity 12

People used to think that wetlands were just breeding grounds for pesky insects. The truth is that by absorbing floodwaters, wetlands help control water cycles. They help clean the water by filtering pollution from it. They provide places for fish and shellfish to hatch and grow. It is believed that as many as two-thirds of the fish caught in the world are hatched in coastal tidal wetland zones.

Which statement is *true*?

- A. Wetlands help filter pollution.
- B. Wetlands do not help control water cycles.
- C. Wetlands are where all fish and shellfish hatch.
- D. Wetlands are just breeding grounds for pesky insects.

Describe a wetland area near you. If there are no wetland areas near you, describe the largest freshwater marsh in the world—the Florida Everglades.

Describe the location of your local wetlands or where you live in relation to the Florida Everglades.