

Name _____

Date _____

Food Chains

Use the text to answer each question below.

1. Every living thing, or organism, needs energy in order to live—including you! Every time an animal runs, jumps or does anything, it uses energy. Animals get energy from the food they eat.

A food chain shows who's eating what. It's a sequence that tells us how living things are connected through the food they eat. A plant or animal gives energy to, or gets energy from, the plants or animals connected to it.

Which of these organisms needs energy to live?

- A. a mouse
B. a maple tree
C. a person
D. all of the above
2. Plants use sunlight, water and nutrients to create their own food. They actually make it themselves! This process is called photosynthesis. Here's how it works: Plants get light from the sun, their roots bring water and nutrients from the soil and their leaves absorb carbon dioxide gas from the air. Plants combine these three things—sunlight, water and carbon dioxide—to get energy.

Some animals eat plants to get energy. And some animals eat other animals to get energy. For example, a cow eats grass and grain. Cows don't eat meat. But some humans eat beef, which is what we call meat from a cow. When we eat beef, we are getting the energy that the cow got from munching on grass and grain. Humans also get energy from eating plants.

Humans can get energy

- A. only from eating animals.
B. by eating both plants and animals.
C. only from eating plants.
D. from the sun only.

3. What are the links in a food chain? They're the individual plants or animals that eat or get eaten. Usually a food chain begins with plant life because plants are at the bottom. Here's an example of a food chain:

ALGAE < CLAM < SMALL FISH < LARGER FISH

Algae uses photosynthesis to make their own energy. Clams eat algae, small fish eat clams, and larger fish eat smaller fish.

Which of these is not a link in the food chain described above?

- A. turtles
 - B. algae
 - C. clams
 - D. small fish
4. Humans are at the top of the food chain. Why? Because we don't have many predators, or animals that eat us. A predator is an animal that is hunting another animal. So when a lion hunts an antelope, that lion is a predator. Prey is an animal that is being hunted. An antelope is a lion's prey.

Sometimes an animal can be both a predator and a prey. How? Check out the following food chain example:

PLANT < GRASSHOPPER < RAT < SNAKE

When a rat eats a grasshopper, the rat is the predator. But when a snake eats the rat, the rat is the prey.

Which of the following is a rat's predator?

- A. grasshopper
 - B. plant
 - C. rat
 - D. snake
5. Little things that affect one part of the chain can have a big effect on the whole chain. Some things that can affect a food chain are drought, sickness or human interference. If one type of animal or plant starts dying off, it will affect other animals in the food chain. These other animal populations will shrink or grow.

Often, it's humans that cause a problem within the food chain. For example, humans could cause an oil spill to pollute the sea. This might block sunlight in the water, which kills tiny ocean plants. This means fewer plants for shrimp and small fish to feed on. The shrimp and small fish may starve and die. Next, because larger fish have fewer shrimp and small fish to feed on, they may starve too, or move to another feeding area. But then, the animals already at this new feeding area have to share their food source with the newcomers, and there might not be enough food to go around.

Wolves feed on deer. If human hunt and kill many wolves, which of these would most likely happen?

- A. The deer population would grow.
- B. There would be no effect on the wolf population.
- C. The wolf population would grow.
- D. Both the deer and wolf populations would grow.

6. Plants are called producers. This is because they produce their own food. They do this using photosynthesis. Producers are the largest part of any food chain. They are also at the bottom.

Animals are consumers. They do not make their own food. They need to eat plants or animals to live. Consumers are divided into three different groups, depending on what they eat. An herbivore is an animal that only eats plants. Chipmunks, deer and butterflies are herbivores. A carnivore is an animal that only eats other animals. Tigers, wolves and spiders are carnivores. An omnivore is an animal that eats both plants and other animals. Both bears and people are omnivores.

In the food chain, all animals are

- A. decomposers.
- B. omnivores.
- C. consumers.
- D. producers.

7. In addition to producers and consumers, there are decomposers. Bacteria and fungi are decomposers. They eat decaying matter (dead plants and animals) and in the process, they break them down or decompose them.

Most animals are part of more than one food chain. There are lots of different food chains and all together these form a food web. A food web is a map that shows how all living things are connected.

Which of these is an example of a decomposer at work?

- A. A tree dies in the forest and organisms break down the wood until it's gone.
- B. A bear needs lots of nutrients in the summer so that it can hibernate all winter.
- C. A person eats a sandwich and throws away the scraps.
- D. A little fish eats plankton and then a bigger fish eats the little fish.