



PRACTICE TEST WITH SAMPLE TEST ITEMS

BASED ON GRADE LEVEL STANDARDS

ELA

SEVENTH GRADE

Read the text and answer questions 1 through 4.

Life in the Food Chain
What Do You Have in Common with Corn, Mushrooms, Cows, and Grass?
by Ellen R. Braaf

Like all living things, you need energy. The energy you use to live every day travels from one living thing to another, in a chain that starts with the sun.

The energy in all your food comes from the sun, 93 million miles away. How did the sun's energy end up in the things you eat? You can thank green plants. They contain chlorophyll—a substance that traps the energy in sunlight. This energy then helps plants change water from the soil and carbon dioxide from the air into oxygen and carbohydrates that power their cells. This process is called photosynthesis.

Most plants make more food than they need. They store the extra in their roots, leaves, stems, flowers, fruit, and seeds. So, when you eat carrots, spinach, celery, cauliflower, bananas, or walnuts, some of the energy stored in plants passes on to you.

Certain bacteria also make their own food. So do most algae. Found just about everywhere on Earth—in lakes, streams, oceans, deserts, soil, boiling hot springs, snow, and ice—algae range from 200-foot-long kelp to tiny ocean plants called phytoplankton. Living things that make their own food are called producers. All others—including humans—are consumers. They need to eat other living things to survive.

Living Links

Food chains link producers and consumers together. When scientists talk about food chains, they're not talking about the E-Z Burger restaurant chain. They mean the paths along which energy and nutrients pass from one living thing to another in our "eat-or-be-eaten" world. Food chains everywhere—in grasslands and deserts, oceans and tropical rainforests—begin with the producers. They are the first link.

The consumers come next, starting with the plant eaters, or herbivores, the vegetarians of the animal kingdom. Elephants grazing on grass, caterpillars munching leaves, and pandas chomping bamboo get energy directly from producers. So do the shrimplike krill that dine on one-celled plants in the ocean.

Carnivores, who consume other animals, come next. These predators get energy from plants indirectly. When an owl eats a mouse that nibbled seeds, it tops a three-link chain. But if its prey is a snake that ate a mouse that nibbled seeds, the snake becomes the third link, and the owl, the fourth.

Because all organisms use the energy they get from food to live, grow, and reproduce, only small amounts remain to pass between the living links in a food chain. That's why most chains are short—usually about two to five links—and why it takes a lot of producers at the bottom of a food chain to support a few super-carnivores at the top. It's also why life on Earth depends on a constant supply of sunlight.

Isle Royale: Predators, Prey, and Producers

On Isle Royale—a small, remote island in Lake Superior—wolves, moose, and balsam fir trees are bound together in a three-link food chain. Moose came to the island around 1900. These long-legged herbivores probably swam 15 miles to the island from Canada. There they found moose heaven—lots of plants and no large predators. As a result, they thrived, and their numbers grew. Many lived a long time for moose, about 17 years.

In summer, moose eat a variety of ferns, shrubs, wildflowers, leaves, and water plants. An 800-pound moose can scarf down 40 pounds of vegetation a day, packing on an extra 200 pounds in just a couple of months. That's like an 80-pound kid gaining 20 pounds over summer vacation by eating 4 pounds of salad every day.

But in winter when food is scarce, moose eat mostly the twigs and needles of balsam fir trees. These meals are much less nutritious than their summer fare, and the moose use up lots of energy plodding through deep snow to feed. They lose all the weight they gained in summer.

Wolves came to Isle Royale around 1950. Scientists think a mated pair probably walked across an ice bridge between the island and Canada. Wolves are the island's only big predators. Their arrival changed the lives of Isle Royale's moose forever.

Ups and Downs

Scientists have been studying this isolated food chain for 50 years to understand how changes in one link can cause changes in another. As more moose are born on the island, they eat more balsam fir. The more they consume, the more they damage the trees. Stunted trees mean less food. Eventually, there's not enough food to support all the moose. Many starve, and their numbers decrease. With fewer moose dining on them, fir trees gradually recover.

A similar boom-and-bust cycle occurs between predator and prey. Ten times the size of a wolf, a moose has long, strong legs and a dangerous kick. So wolves prey mainly on old and weak animals. Good hunting means food for the whole pack. Wolves then raise lots of pups, and their numbers increase. More wolves mean more mouths to feed and more moose get eaten. However, when the moose population decreases, wolves starve.

With fewer predators stalking the moose, more survive to old age. The moose population increases, and the cycle begins again.

Excerpt from "Life in the Food Chain" by Ellen R. Braaf, from *Ask* magazine. Copyright © 2008 by Carus Publishing Company.

1. Select the sentences that support the inference that the area is in danger of losing its moose population. Select **all** that apply.
 - A. A similar boom-and-bust cycle occurs between predator and prey.
 - B. Ten times the size of a wolf, a moose has long, strong legs and a dangerous kick.
 - C. So wolves prey mainly on old and weak animals.
 - D. Good hunting means food for the whole pack.
 - E. Wolves then raise lots of pups, and their numbers increase.
 - F. More wolves mean more mouths to feed and more moose get eaten.
 - G. However, when the moose population decreases, wolves starve.

2. Which of the following sentences from the passage **best** support the conclusion that all living organisms are part of the food chain?
 - A. "The energy you use to live every day travels from one living thing to another, in a chain that starts with the sun."
 - B. "This energy then helps plants change water from the soil and carbon dioxide from the air into oxygen and carbohydrates that power their cells."
 - C. "Food chains everywhere—in grasslands and deserts, oceans and tropical rainforests—begin with the producers."
 - D. "Scientists have been studying this isolated food chain for 50 years to understand how changes in one link can cause changes in another."

3. Read the sentence from the text.

On Isle Royale—a small, remote island in Lake Superior—wolves, moose, and balsam fir trees are bound together in a three-link food chain.

The word remote has multiple meanings. What does the word remote **most likely** suggest about human contact with the island?

- A. The island can only be reached by radio signals.
- B. The island is an uncomfortable environment for humans.
- C. The animals and plants on the island are rarely disturbed by humans because the island is isolated.
- D. The animals and plants on the island bear little resemblance to the animals and plants humans usually encounter.

4. This question has **two** parts. First, answer part A. Then, answer part B.

Part A

Which of these inferences about the author's point of view is **best** supported by the text?

- A. The author believes that all living things are connected.
- B. The author believes that wolves are weaker animals than moose.
- C. The author believes that all of the animals on the island will eventually disappear.
- D. The author believes that the moose population will cause the extinction of the balsam fir.

Part B

Which sentence from the text supports your answer in part A?

- A. "Scientists have been studying this isolated food chain for 50 years to understand how changes in one link can cause changes in another."
- B. "As more moose are born on the island, they eat more balsam fir."
- C. "Ten times the size of a wolf, a moose has long, strong legs and a dangerous kick."
- D. "However, when the moose population decreases, wolves starve."