

California Content Standards — Grade 4

Standard Set 2. Life Sciences

2. All organisms need energy and matter to live and grow.

2.b. Students know producers and consumers (herbivores, carnivores, omnivores, and decomposers) are related in food chains and food webs and may compete with each other for resources in an ecosystem.

Science and Literacy Strategies

Literacy Strategy: Comprehension Check: Chart to Guide Reading, Stop and Draw.

Standard 2.b. — Producers, Consumers and Food Webs

All organisms need energy to live. Scientists categorize organisms into three main groups according to the part they play in giving energy to one another. The three main groups are called producers, consumers, and decomposers.

Plants, bacteria, and algae are great examples of producers. Producers are important because they take energy from the Sun to make their own food, and they draw raw material from the Earth as well. All plants are producers, as producers use the energy from the Sun to make their own food. Therefore, plants rely on the Sun for food.

Organisms that eat plants and animals are called consumers. The word “consume” means “to take in”. There are three types of consumers: herbivores, carnivores, and omnivores.

Some organisms eat plants to survive. Organisms that eat only plants and feed directly on producers are called herbivores. Herbivores eat plants and plant products like berries. Examples of herbivores are rabbits, squirrels, and deer. Some humans eat only vegetables that come from plants and their products. We call these people “vegetarians”. They can be considered herbivores, too.

Other organisms are meat-eaters. They get their food by eating herbivores or other animals. These organisms are called carnivores. The word “carne” comes from the Spanish word which means “meat”. Sharks, wolves, and eagles are examples of carnivores.

The word “omni” means “all”. Omnivores are consumers that eat both plants and animals. They eat consumers and producers. Raccoons, bears, and skunks are omnivores. People who eat meat, chicken, fish and vegetables are considered omnivores.

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2.b. Students know producers and consumers (herbivores, carnivores, omnivores, and decomposers) are related in food chains and food webs and may compete with each other for resources in an ecosystem.

Decomposers are organisms that feed on waste and remains of other organisms. Bacteria and fungi are examples of decomposers. They get their energy from other dead animals and plants, and use their remains for food.

Plants and animals are interdependent, meaning that they depend on one another for survival. Sometimes living things compete with each other by trying to eat the same things or relying on the same things for shelter.

Comprehension Check: Chart to Guide Reading. Fill in the missing parts of the chart to understand the relationship between plants and animals. Look back at the passage for help.

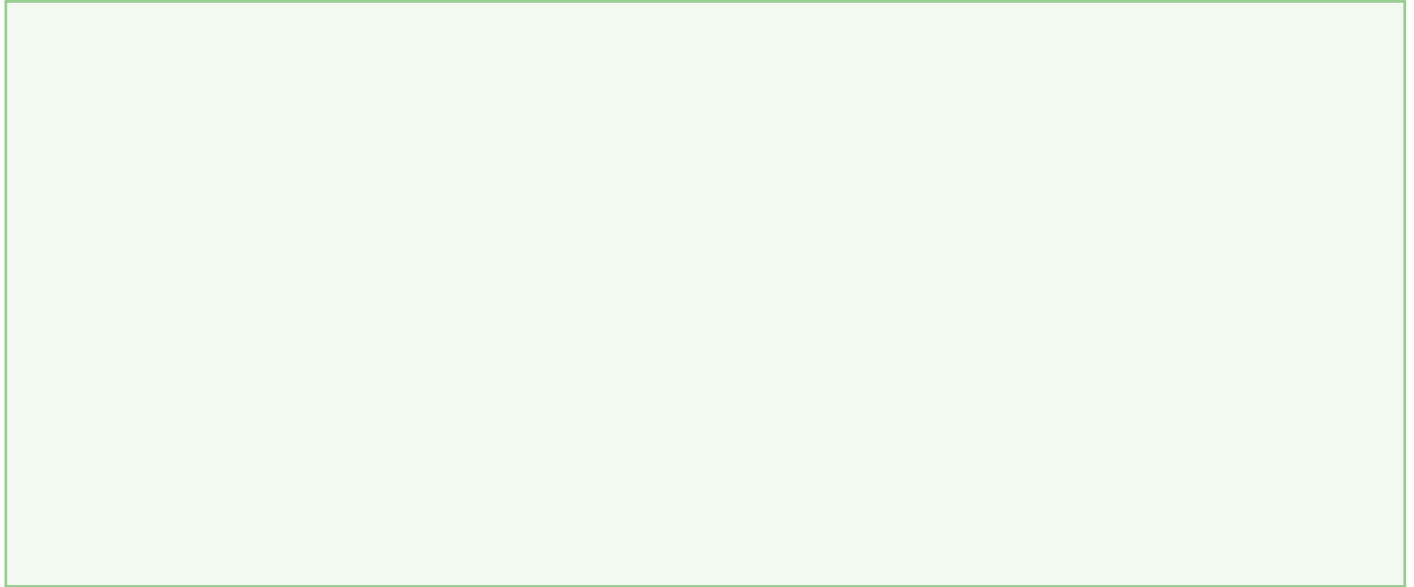
Type of organism	Examples	Where they get food	Notes
Producers			
Consumers			
Herbivores			
Carnivores			
Omnivores			
Decomposers			

Food chains consist of organisms known as producers and consumers. Producers are green plants which make their own food, and depend on the Sun to do so. When food chains are put together, they sometimes overlap one another. That means that there are some organisms from one food chain that also feed off of organisms on a different food chain. When food chains overlap like this, we call it a food web. A food web is a model that shows how food chains are connected and overlap in the environment.

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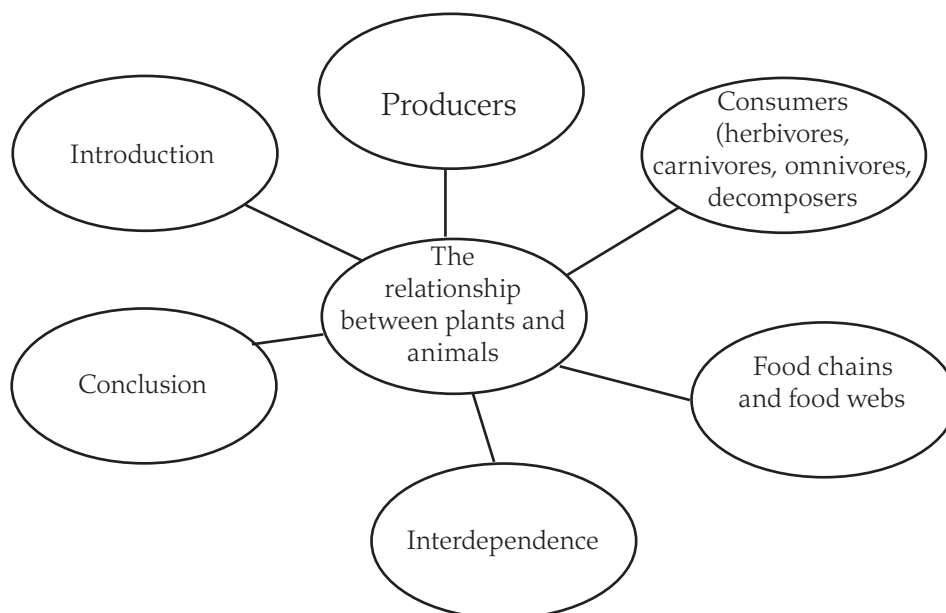
2.b. Students know producers and consumers (herbivores, carnivores, omnivores, and decomposers) are related in food chains and food webs and may compete with each other for resources in an ecosystem.

Comprehension Check: Stop and Draw. Draw a picture of a food web by drawing two food chains that overlap by feeding on the same animal. Challenge yourself by adding another food chain that overlaps!



Demonstrate What You Have Learned: Using the writing map below, write an essay about the relationship between plants and animals. Remember that the topics are in the ovals, and include an introduction and conclusion.

Writing Map



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2.b. Students know producers and consumers (herbivores, carnivores, omnivores, and decomposers) are related in food chains and food webs and may compete with each other for resources in an ecosystem.

Science and Literacy Strategies

Literacy Strategy: Mnemonic Device

Standard 2.b. — Producers, Consumers and Food Webs

We learned that plants and animals help each other by providing energy to one another. They provide energy by feeding on one another, and the order in which they consume each other is called a food chains. Food chains that overlap are called food webs.

One way that we can remember the order of steps in this process is to come up with something called a mnemonic device. A mnemonic device is a way of remembering the order of something by making it fun!

In the Student Textbook, reread the pages about producers and consumers. Here is a mnemonic device for remembering the order of energy and how it is used by living things!

- | | | |
|----|---------------|-------------------|
| 1. | Sun = | Some |
| 2. | Producers = | People |
| 3. | Consumers = | Can |
| 4. | Herbivores = | Have |
| 5. | Carnivores = | Crazy |
| 6. | Omnivores = | Outrageous |
| 7. | Decomposers = | Dreams |

Try this learning strategy yourself! Come up with a mnemonic device on your own! Remember, it must be meaningful and easy to remember.

- | | | |
|----|---|-------|
| 1. | S | _____ |
| 2. | P | _____ |
| 3. | C | _____ |
| 4. | H | _____ |
| 5. | C | _____ |
| 6. | O | _____ |
| 7. | D | _____ |