

Lesson 2 Part 1: Introduction

Summarizing Informational Texts

CCLS

RI.6.2: ... provide a summary of the text distinct from personal opinions or judgments.

Theme: *Links in the Food Chain*

When you give a **summary** of informational text, you briefly restate in your own words the text's central idea and its most important details.

Read the text below. After you read it, locate and underline its central idea.

The emerald ash borer (EAB) is an invasive pest that is threatening ash trees in the eastern United States. Native to parts of Asia, EABs were likely brought to the United States in the wood of shipping crates or packing material used in international shipping. The insect was identified in 2002 by scientists in Michigan who were investigating the widespread death of native ash trees. EAB larvae live under the bark of ash trees and feed on the trunk, cutting off the flow of water and nutrients that the tree needs to live.

Now complete the chart below. It will help you figure out the most important details to include in a summary of the text.

Important Detail	Important Detail	Important Detail
The emerald ash borer (EAB) is an insect that came to the United States from _____.	When EAB larvae feed on ash trees, they cut off the trees' _____.	The feeding habits of the EAB are causing _____.
<div>↓ ↓ ↓</div> <div>Summary</div> <div>The emerald ash borer is an insect that came to the United States from Asia. When the larvae of this insect feed on ash trees, they cut off the trees' water and nutrients, killing them.</div>		

A summary should state only what the text says, not the reader's **opinions** (personal ideas).

Read this draft of a summary about the emerald ash borer. Cross out any opinions.

The emerald ash borer is an annoying pest that destroys ash trees by feeding on their trunks. The EAB came from Asia, probably in shipping crates, and I wish they would go back there!

When summarizing a text, put its central idea and most important details in your own words. It's a great way to make sure you understand what you're reading!



Read the first two paragraphs of a scientific account about a food chain.

Genre: Scientific Account

Snakes' Place in the Food Chain *by Anna Axtell*

Many people consider snakes to be pests, but snakes are a vital part of the food chain, as are all organisms on Earth. A change within a food chain affects all of the organisms in that food chain.

Consider the following food chain, which can be found throughout the United States:

acorn → mouse → snake → hawk

The acorn is the seed of a producer—an organism (an oak tree, in this case) that makes its own food from the sun. The second link is a primary consumer—an organism that eats producers. The snake and the hawk are secondary and tertiary consumers (also called predators) that eat other animals.

(continued)

Explore how to answer this question: “How can I best summarize this part of the scientific account?”

The author provides a central idea and details. Identifying them and summarizing, or restating in your own words, will help you understand and remember the information.

Reread the account above and do the following:

- Find and underline the central idea
- Circle the three most important details.

Then examine the summary below and cross out the opinion statement.

Snakes, like all organisms, are a vital link in the food chain even though I think they are pests. In a snake's food chain are acorns (producers), mice (primary consumers), and hawks (tertiary consumers).

Explain to a partner what you crossed out and why. Then take turns summarizing this part of the account without including any opinions or judgments.



Close Reading

Underline the sentence that states the central idea.

Hint

Which choice restates the central idea but does not include opinions?

Continue reading about connections in a food chain. Use the Close Reading and the Hint to help you answer the question.

(continued from page 12)

If the snake population changes, other changes occur up and down the food chain. If the snake population increases, more snakes eat more mice. Fewer mice are left to eat acorns, so perhaps more acorns grow into oak trees. In addition, more snakes would mean more food for the hawks. Or, consider the alternative. If the snake population decreases, the mouse population would increase. More mice would eat more acorns, so fewer oak trees would grow. And the hawk population, without snakes to hunt, might decrease as well. Changing one link in a food chain affects all of the other links, even if just in small ways.

Circle the correct answer.

Which of the following best summarizes the entire scientific account?

- A** Some people think snakes are pests, but snakes are part of the food chain. They eat mice, which are the real pests.
- B** Hawks are the fiercest predators in the food chain. They hunt snakes, keeping the snake population from getting too high.
- C** A changing snake population would affect hawks. They would have less to eat, so there would be fewer hawks.
- D** Snakes play an important role in a complex food chain. Their population size affects the number of mice, hawks, and oak trees.



Show Your Thinking

Look at one of the answers that you did not choose. Explain why it is not a good summary.



Find an answer that includes an opinion. Talk with your partner about how you identified it.



Read the scientific article. Use the Study Buddy and the Close Reading to guide your reading.



I'm going to look for "big ideas" that have to do with food webs. I'll underline those big ideas when I find them. That will help me determine the article's central idea.

Close Reading

What forest food chain does paragraph 3 describe? **Underline** the plants and animals in this chain.

Each paragraph gives an example of a food chain in a different ecosystem. **Circle** the name of each ecosystem.

Genre: Scientific Article

from "Food Web" from National Geographic

- 1 Food webs connect many different food chains, and many different trophic levels. Food webs can support food chains that are long and complicated, or very short.
- 2 For example, grass in a forest clearing produces its own food through photosynthesis. A rabbit eats the grass. A fox eats the rabbit. When the fox dies, decomposers such as worms and mushrooms break down its body, returning it to the soil where it provides nutrients for plants like grass.
- 3 This short food chain is one part of the forest's food web. Another food chain in the same ecosystem might involve completely different organisms. A caterpillar may eat the leaves of a tree in the forest. A bird such as a sparrow may eat the caterpillar. A snake may then prey on the sparrow. An eagle, an apex¹ predator, may prey on the snake. A hawk, another apex predator, may prey on the eagle. Yet another bird, a vulture, consumes the body of the dead hawk. Finally, bacteria in the soil decompose the remains.
- 4 In a desert ecosystem, an autotroph² such as a cactus produces fruit. Herbivorous insects, such as flies, consume the cactus fruit. Birds such as the roadrunner consume these insects. Detritivores³ such as termites eat the roadrunner after it dies. Bacteria and fungi help decompose the remaining bones of the roadrunner. The carbon in the bones enriches the desert soil, helping plants like cactuses develop.

¹ **apex:** top, highest

² **autotroph:** a life-form that makes its own food

³ **detritivore:** an animal that feeds on dead plants and animals



Hints

Which choice tells the central idea of the article?

Which choice tells the paragraph's central idea without any opinions?

What is the central idea of the whole article?
What important details does each paragraph give?

Use the Hints on this page to help you answer the questions.

- 1** Which of the following best states the central idea of the article?
 - A** Both long and short food chains make up food webs.
 - B** Food webs connect different food chains and trophic levels.
 - C** Food webs consist of many different food chains, the shortest of which involves grass, rabbits, foxes, and decomposers.
 - D** The food chains that make up food webs stay in balance naturally as long as humans don't interfere.
- 2** Which statement best summarizes the central idea and important details of paragraph 3?
 - A** A forest food chain that includes leaves, caterpillars, sparrows, snakes, eagles, hawks, vultures, and bacteria is one of the longest in that ecosystem.
 - B** One forest food chain begins with caterpillars eating leaves. Then birds, snakes, and larger birds eat each other. Finally, bacteria in the soil decompose the remains.
 - C** A forest food chain starts with trees, leaves, and caterpillars. Birds eat the caterpillars and are eaten by snakes. The chain continues until a vulture eats a disgusting dead thing.
 - D** One ecosystem may have many different food chains. One example of a food chain in a forest involves leaves, caterpillars, sparrows, snakes, eagles, hawks, vultures, and bacteria.
- 3** Write a brief summary of the article. Include at least two details from the text in your summary.



Read the scientific article. Then answer the questions that follow.

Spiders: In Pursuit of Prey

by Harry Gardner

1 Have you seen a spider today? If you have, that's not surprising, because spiders live everywhere, indoors and out. They have adapted to living in deserts, caves, high mountain peaks, and even underwater. There are more than 36,000 known species. In the outdoors, there are as many as several million spiders per acre of land. In fact, you are probably six feet from a spider right now!

2 Spiders are predators and eat mainly insects. Because there are so many spiders, they are very important in controlling insect pests. Spiders eat the mosquitoes and yellow flies that can bite us.

3 Many people think that spiders themselves are insects. Actually, they belong to a class of animals called arachnids. Arachnids have two main body parts (insects have three) and eight legs (insects have six). Other arachnids include scorpions, ticks, mites, and daddy longlegs. Both arachnids and insects belong to a larger group called arthropods. All members of this group have a hard outer skeleton that covers the body, called an exoskeleton.

4 Many spiders have a clever tool for catching prey: a web made of silk. The spider produces silk from glands in the abdomen. The spider uses its two hind legs to "reel out" a fine strand of silk, and then it starts to weave its web.

5 Spiders make different kinds of silk. The yellow-and-black garden spider makes a strong, stretchy silk to build the basic framework of its web. Then it adds a sticky variety that makes it hard for a trapped insect to get away. Spider silk, which is made of protein, is very flexible but stronger than steel!

6 The garden spider weaves an elegant snare called an orb web. This web is basically round, with spokes like a bicycle wheel and many strands connecting the spokes. Some orb weavers lie in wait for their prey at the center of the web. Others attach a tripwire to the center of the web. Then they hide nearby, holding onto the line. When the insect struggles, the line vibrates. Then the spider swings into action. A coating of oil on its feet helps it glide across the sticky threads of the web. When it reaches its prey, the spider usually bites it, and the bite is full of venom. As the insect stops struggling, the spider wraps its meal in silk.

7 If the spider is hungry, it starts digesting the prey right away. Because spiders don't have teeth, they must break down their food in another way. They actually do this outside their bodies. They spit digestive juices onto the insect that liquefy it. Then they can suck down part of their meal a little at a time.

8 Other spiders weave different types of webs. Some build triangle webs, which look like a section of an orb web. The spider waits for its prey at one end corner of the web. Others build small sheet webs between tall blades of grass or branches of shrubs. Directly above this sheet, the spider may spin a web of nonsticky threads. The net causes a flying insect to lose its balance and fall onto the sheet, where the spider is waiting. Finally, many indoor spiders build tangle webs, or cobwebs, often in the corner of a room. They may look messy, but they are effective in catching prey.



9 As a spider web continues to catch meals, it becomes damaged and needs repairs. Orb weavers often build a new web every day, and the task can take less than 30 minutes. If the web is not too damaged, the spider repairs it. Often it eats parts of the old web to save silk.

10 About half of all spiders do not build webs to catch prey. Spiders such as the jumping spider and the wolf spider are called wandering spiders. They find hiding places and wait for passing prey. Unlike a web-builder, this hunter has excellent eyesight. It pounces on insects and stuns them with a bite. Then the wanderer settles down for a nice lunch.

11 Although large spiders such as the black widow are often featured in scary movies, most spiders are small and harmless to humans. They are useful animals and amazing food-catchers, and their unusual habits are fascinating to observe.

Answer the questions. Mark your answers to questions 1–3 on the Answer Form to the right.

Answer Form

1 (A) (B) (C) (D)

2 (A) (B) (C) (D)

3 (A) (B) (C) (D)

**Number
Correct****3**

1 Which sentence should **not** be included in a summary of the article?

- A** It is fun to watch the spiders in the backyard.
- B** It is common to find spiders in outdoor areas.
- C** Spiders spin webs that help them catch their prey.
- D** Spiders are useful because they consume harmful insects.

2 Which is the **best** summary of paragraphs 4 through 6?

- A** The garden spider weaves an elegant orb web. The web looks like a bicycle wheel. Other species of spiders also create webs with silk spun from their abdomen.
- B** Spiders spin silk to weave their webs. When an insect encounters the silky thread, it might become the spider's meal. Different sorts of spider spin different types of web.
- C** The spider uses its rear legs to reel out its silk and then weaves a web. Spider silk is even stronger than steel. The garden spider makes two kinds of silk to trap its insect prey.
- D** Spider silk is made of protein. The silk creates a strong web that might have a tripwire. Spiders have oily feet. A spider's bite is full of venom.



- 3 Which of the following **best** summarizes the entire article?
- A There are more than 36,000 different kinds of spiders. Some of them catch their food with a web, such as the garden spider with its orb web. Others, like the wolf spider, just jump on their prey, bite it, and then eat it.
 - B Spiders may resemble insects, but they are actually arachnids, which is a different class of animal. Arachnids have eight legs instead of six, as insects do. Other arachnids include scorpions, ticks, and daddy longlegs.
 - C From mountain peaks to deserts to caves, the spider is found almost everywhere. Wherever spiders go, they help humans by controlling the insect population through hunting. Since spiders don't have teeth, they dissolve their prey by spitting digestive juices on it.
 - D Spiders are predators in a group of animals called arachnids. More than half of all spiders catch prey by building webs from silk they spin themselves. Most spiders are harmless to humans, who actually benefit from the pest control provided by these insect-eating creatures.

- 4 Summarize the two main ways in which different types of spiders catch their prey. Support your answer with at least **two** details from the passage.



Self Check

Go back and see what you can check off on the Self Check on page 1.