

Lesson 17

EXPLAIN HOW EVIDENCE SUPPORTS
CLAIMS 3R8

WORDS TO KNOW

claim

support

reason

evidence

controversial

INTRODUCTION

Real-World Connection

THE NATURAL WORLD

Danica loves reading about science. Her favorite texts are about the environment and about ecosystems. She loves animals, bugs, and all kinds of living creatures. She loves to read about food webs, ecosystems, threatened species, and climate change, but some sciences have different opinions among themselves on these topics—and even different facts! How does she really know which are true? Her teacher tells her to look for the *support*. What does that mean? We will practice the skills in the **Guided Instruction** and **Independent Practice**. Then, at the end of the lesson, we will help Danica figure out how to determine an author's claims.



What I Am Going to Learn

- How to identify the authors' claims in a text
- How to determine and explain whether an author's claims have evidence to support them

What I May Already Know

- I know how reasons and evidence support the claims an author makes.

Vocabulary in Action

As you read, you will come across different types of words.

- When you read a text, you will find that authors often make **claims** about a topic or thing. A claim could be a statement of opinion or fact.
- Authors must **support**, or back up, their claims with **reasons** or with **evidence**. Evidence might be details, examples, facts, or even stories.
- Sometimes, the author wants to persuade you about something. Claims could be **controversial**, or disagreeable, meaning not everyone might agree with the claim. That is why claims require evidence.
- Reasoning is what ties together the claim and the evidence. In other words, it provides the reason why certain evidence is important to a claim.
- Some supporting evidence and reasoning are stronger and more convincing than others. Here are strong and weak statements of support. Can you tell which is which?

Scientific statistics show that 57% of all reindeer and caribou have disappeared in the past 20 years.

Scientists can't figure out why the reindeer and caribou are decreasing.

GUIDED INSTRUCTION

Read this informational text about Galen Clark's discovery of giant sequoias and answer the questions that follow.

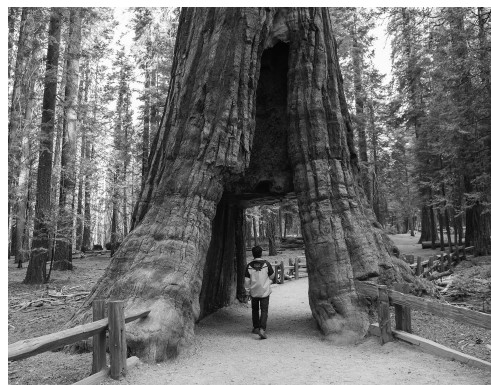
Saving Sequoias

The first step toward creating a national park was taken back in 1855. That's when Galen Clark saw his first giant sequoia. Clark was among the thousands of people who were pouring into California in 1848. The discovery of gold had unleashed a boom of construction. But by 1853 Clark found he had a serious lung problem. Doctors told him he had only six months to live. He decided to spend his final days in the wilderness and headed into the Sierra Nevadas.

There he fell in love with a tree! Not just one tree, but a whole grove of them. His group of giant sequoias was called the Mariposa Grove.

TIPS AND HINTS

To answer a question about a text when you are taking a test, go right to the text for evidence, or the answer.



This is one of the giant sequoias in Mariposa Grove that Clark saved. This photograph gives you an idea of how huge the trees are.

He knew that the huge, beautiful trees would need protection from all the development in Northern California. He and others took this cause to the U.S. government.

In 1864, President Lincoln signed the Yosemite Grant, which put Clark's Mariposa Grove and Yosemite Valley under protection. Clark stayed on as guardian of the trees. He not only regained his health but also lived to be 96!

TIPS AND HINTS

What evidence can you find in the text for the president signing the Yosemite Grant?

1. Which statement in the text supports the reason that Clark went to the Sierra Nevadas?

- (A) "The first step toward creating a national park was taken back in 1855."
- (B) "The discovery of gold had unleashed a boom of construction."
- (C) "Doctors told him he had only six months to live."
- (D) "There he fell in love with a tree!"

TIPS AND HINTS

Why did Clark head to the Sierra Nevadas? Look for evidence in the text.

2. Which supports the claim that Mariposa Grove needed to be protected?

- (A) He fell in love with the trees.
- (B) The discovery of gold caused a construction boom.
- (C) The giant sequoias needed protection from the development in Northern California.
- (D) Mariposa Grove was the name of Clark's group of giant sequoias.

3. Doctors told Galen he had only six months to live. Did he die in six months? How do you know? What evidence from the text do you have to support your answer?

4. Read this statement below.

“Galen Clark should be considered the father of national parks.”

In your own words, tell whether the passage supports this statement. Give as many reasons or evidence from the text to support this statement.

Learning Together

With a partner, choose an environmental cause you would pursue. Write about the cause, providing many reasons and evidence for why it is an important cause.

Circle the sign that shows how you are doing with the skill.



I am stuck.



I almost have it.



I understand the skill.



How Am I Doing?

What questions do you have?

Was the author's reasoning and support convincing for saving the sequoias? Why or why not?

Do you think it is important to preserve the environment or save certain environmental things? Explain why or why not.

INDEPENDENT PRACTICE 1

Directions

Read the article. Then answer questions 1 through 6.

Rachel Carson and Silent Spring

Genre: Environmental Science



DDT, a pesticide, was often dropped by airplane on crops, covering everything on the ground, including small animals. The chemical was banned by the U.S. government in 1972.

1 Have you ever watched a bald eagle soar across a blue sky? This magnificent bird almost disappeared from our skies. There were fewer than 500 nesting pairs in the 1950s. Nearly 60 years ago, in 1962, a woman named Rachel Carson made us aware of dangerous things lurking in our midst—environmental pollution. She wrote a book called *Silent Spring*.

2 *Silent Spring* told about studies she and other scientists did. These studies showed how harmful pesticides were. Pesticides are chemicals. They kill pests, but they also can kill plants and animals. They can be very harmful to our environment, the world we live in.

3 Farmers were using chemicals to kill insects that ate their crops. Carson's study found that the shells of the eggs of many birds, including eagles, were becoming too thin to protect the babies inside. One cause was a buildup of the pesticide DDT in the birds' systems. DDT would collect in fish. Then it would collect in eagles and other animals that ate the fish.

◀ WORDS IN CONTEXT

environmental pollution – substances harmful to the environment

pesticide – a chemical that kills pests and other organisms that harm plants

DDT – a dangerous pest-killing chemical that was banned

- 4 Carson argued that once the pesticides entered the atmosphere, they not only killed bugs, but they also threatened the whole food chain. Birds and fish could die and eventually children could get sick.
- 5 Carson got the idea to write the book because her friend told her about birds that died on her property after aerial spraying of DDT to kill mosquitos. Carson then studied the harm the pesticides caused.
- 6 Farmers and chemical companies attacked Carson's book *Silent Spring*. Eventually people saw that her arguments were valid. In 1972, the government banned DDT. People became aware, and an environmental movement grew from Rachel Carson's studies. In 1972, the U.S. government created the Environmental Protection Agency. Soon the great eagles began to make a comeback to the skies.

WORDS IN CONTEXT

aerial – by aircraft

Environmental Protection Agency –
The U.S. government created the
EPA in 1972 for protecting the
environment.

- 1** Which detail from the passage shows the **best** evidence for the claim that DDT collects in fish and other animals that eat the fish?

- A** “*Silent Spring* told about studies she and other scientists did.” (paragraph 2)
- B** “Pesticides are chemicals.” (paragraph 2)
- C** “They kill pests, but they also can kill plants and animals.” (paragraph 2)
- D** “Farmers were using chemicals to kill insects that ate their crops.” (paragraph 3)

TIPS AND HINTS

Read through paragraphs 2 and 3. Where do you see this claim supported?

- 2** Read this sentence from paragraph 6.

Soon the great eagles began to make a comeback to the skies.

What does this evidence show?

- A** farmers attacking Carson's book
- B** chemical companies attacking Carson's book
- C** farmers using chemicals to kill insects
- D** a ban on DDT in 1972

TIPS AND HINTS

Sometimes a cause-and-effect relationship could support a claim.

- 3 Which statement provides evidence that Carson was criticized for her work?
- A “One cause was a buildup of the pesticide DDT in the birds’ systems.” (paragraph 3)
 - B “Carson then studied the harm the pesticides caused.” (paragraph 5)
 - C “Farmers and chemical companies attacked Carson’s book *Silent Spring*.” (paragraph 6)
 - D “People became aware, and an environmental movement grew from Rachel Carson’s studies.” (paragraph 6)
- 4 Which supports the statement for why the EPA was created?
- A Farmers and chemical companies attacked Carson’s studies.
 - B People became aware, and an environmental movement grew.
 - C Soon the eagles made a comeback.
 - D Farmers were using pesticides to keep their crops free of insects.
- 5 Which detail **best** supports Carson’s claim that pesticides should be banned?
- A “Pesticides are chemicals.” (paragraph 2)
 - B “DDT would collect in fish.” (paragraph 3)
 - C “Farmers were using chemicals to kill insects that ate their crops.” (paragraph 3)
 - D “Birds and fish could die and eventually children could get sick.” (paragraph 4)

6

In the passage “Rachel Carson and Silent Spring,” what evidence does the author use in paragraphs 5 and 6 to support the claim that DDT is harmful? Use **two** details from the passage to support your response.

INDEPENDENT PRACTICE 2

Directions

Read the article. Then answer questions 1 through 6.

Where Have All the Reindeer and Caribou Gone?

Genre: Informational Text

- 1 Dasher and Prancer and Rudolph with his red nose are disappearing. They were commonly seen across Alaska 30 years ago. Today the number of reindeer and caribou has sharply decreased. There are less than half the reindeer and caribou today than there were just 20 years ago.



Reindeer and caribou migrate together in Alaska.

- 2 They travel in herds, or packs. Scientists can't figure out why the herds are decreasing. The population decrease can be from parasites, diseases, predators, or even hunters. The decrease could also be from a shortage of food supply. Climate change is another reason the population could decrease.
- 3 A warming world increases drought and affects the food supply for animals. It also causes the spread of more diseases and parasites. Climate change can also cause heat stress in animals and weaken their ability to resist diseases. It also makes it harder for them to live through food shortages.
- 4 The reduced number of herds also affect natural ecosystems because they are a main species of Arctic food webs. Reindeer and caribou also help cycle nutrients from plants back into the soil. They are very important to Arctic food webs. The decrease in the number of reindeer and caribou also threatens the food supply of the native people who rely on them for food. When there is a decrease of one population in the food chain, it affects all populations of the food chain.

- 1 What is the author's claim?
- A Reindeer and caribou are migrating to different places.
 - B Reindeer and caribou are leaving the tundra.
 - C Reindeer and caribou are shrinking in number.
 - D The number of reindeer and caribou is increasing.
- 2 Which detail from the passage shows the **best** evidence for the claim that climate change could affect animals?
- A They might leave their herds.
 - B There could be food shortages.
 - C They could move to different ecosystems.
 - D They could stop having offspring.
- 3 What does the author use mostly to support his claim?
- A opinions based on science
 - B scientific evidence
 - C stories
 - D firsthand experience

- 4 Which sentence in paragraph 1 **best** supports the author's claim?
- A "Dasher and Prancer and Rudolph with his red nose are disappearing."
 - B "They were commonly seen across Alaska 30 years ago."
 - C "Today the number of reindeer and caribou has sharply decreased."
 - D "There are less than half the reindeer and caribou today than there were just 20 years ago."

- 5 Which sentence from the passage shows the author's main claim?
- A "Today the number of reindeer and caribou has sharply decreased." (paragraph 1)
 - B "Climate change is another reason the population could decrease." (paragraph 2)
 - C "A warming world increases drought and affects the food supply for animals." (paragraph 3)
 - D "When there is a decrease of one population in the food chain, it affects all populations of the food chain." (paragraph 4)

- 6 What claim does the author make about the decrease and disappearance of reindeer and caribou? Use **two** details from the passage to support your response.

EXIT TICKET

3R8

Now you know how to identify an author's claim and supporting evidence in a text, let's revisit the Real-World Connection and Danica. She loves to read about science, but how does she determine different claims?

She loves to read about food webs, ecosystems, threatened species, and climate change, but some sciences have different opinions among themselves on these topics—and even different facts! How does she really know which are true?

