

LESSON OVERVIEW

Lesson 4 Describing Connections Between Scientific Ideas

Lesson Objectives

Describe the connection between . . . scientific ideas or concepts . . . in a text.

Reading

- Describe the connection between ideas or concepts presented in a scientific text.
- Explain how things work and why things change in a scientific text.

Writing

- Recall information from experiences or gather information from provided sources to answer a question.

Speaking and Listening

- Build on others' talk in conversations by linking their comments to the remarks of others.

Language

- Use glossaries and beginning dictionaries to determine or clarify the meaning of words and phrases.
- Use vocabulary acquired through responding to texts.

Academic Talk

See **Glossary of Terms**, pp. TR2–TR9

- describe
- ideas
- connections

Learning Progression

Grade 1

Students describe the connection between two people, events, or ideas in informational texts.

Grade 2

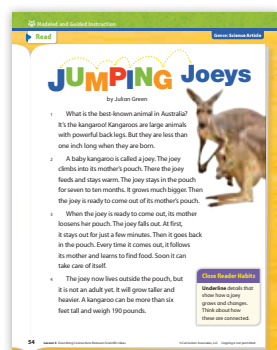
At Grade 2, students expand their ability to describe a simple connection by describing the connections between a series of ideas or concepts in a scientific text. Students deepen domain-specific knowledge in their reading of science articles, and are introduced to an important genre of informational text.

Grade 3

Grade 3 increases in complexity by requiring students to use language that pertains to sequence and cause-and-effect when describing the relationship between scientific ideas or concepts in a text. The replacement of the word “connection” with “relationship” in this standard requires an awareness of the dynamics between ideas and concepts.

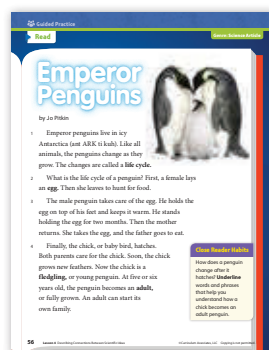
Lesson Text Selections

Modeled and Guided Instruction



Jumping Joeys
by Julian Green
Genre: Science Article

Guided Practice



Emperor Penguins
by Jo Pitkin
Genre: Science Article

Independent Practice



Seeds Get Around
by Kate Hoffman
Genre: Science Article

Lesson Pacing Guide

Whole Class Instruction 30–45 minutes per day

Day 1

Teacher-Toolbox.com Interactive Tutorial

Describe Connections Between Scientific Ideas
20 min (optional)

Introduction pp. 52–53

- Read Describing Connections Between Scientific Ideas 10 min
- Think 10 min
Graphic Organizer: Three-Column Chart
- Talk 5 min
Quick Write (TRB) 5 min

Day 2

Modeled and Guided Instruction pp. 54–55, 58

- Read Jumping Joeys 10 min
- Think 10 min
Graphic Organizer: Two-Column Chart
- Talk 5 min
- Write Short Response 10 min

Day 3

Guided Practice pp. 56–57, 59

- Read Emperor Penguins 10 min
- Think 10 min
- Talk 5 min
- Write Short Response 10 min

Day 4

Independent Practice pp. 60–65

- Read Seeds Get Around 15 min
- Think 10 min
- Write Short Response 10 min

Day 5

Independent Practice pp. 60–65

- Review Answer Analysis (TRB) 10 min
- Review Response Analysis (TRB) 10 min
- Assign and Discuss Learning Target 10 min

Language Handbook

Lesson 19 Prefixes, pp. 436–437
20 min (optional)



Ready Writing Connection

During Ready Reading Days 1–5, use:
Lesson 1 Writing to Inform: Paragraph

- Think It Through
 - Step 4 Plan
 - Step 5 Draft
- See Ready Writing TRB, p. 10a for complete lesson plan.



Small Group Differentiation

Teacher-Toolbox.com

Reteach

Ready Reading Prerequisite Lesson

- Grade 1 Lesson 8 Describing Connections
 - Read Aloud Lesson F

Teacher-led Activities

Tools for Instruction

- Cause and Effect

Introduction

Get Started

- Explain to students that in this lesson they will be describing the connections between ideas in science texts.
- Tell students that science explains how things work and why certain things happen in the real world.
- Tap into what students already know about the way facts and ideas are scientifically connected. Ask: **Why does your body need food and water?** Guide students in answering that eating and drinking makes the body grow (or, causes it to grow) and be healthy.
- Focus students' attention on the Learning Target. Read it aloud to set the purpose for the lesson.
- Display the Academic Talk words. Tell students to listen for these terms and their meanings as you work through the lesson together. Use the Academic Talk Routine on pp. A48–A49.

EL English Language Learners

• **Genre Focus**

Read

- Read aloud the Read section as students follow along. Restate to reinforce:

When you look for a connection between scientific ideas, it's helpful to stop and ask yourself what is happening in the illustrations. Understanding how scientific ideas and events are connected will help you see how things change and why things happen.

- Have students work with a partner to read the cartoon and identify the connections between the ideas.
- Remind them that paying attention to the sequence of events will help them figure out the connections. You may wish to list sequence signal words on a chart for students to use as a reference tool.

Lesson 4

Describing Connections Between Scientific Ideas

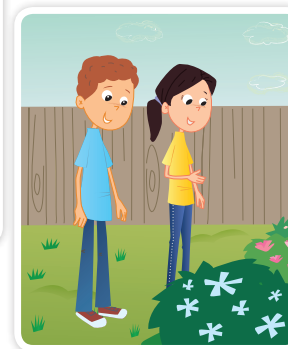
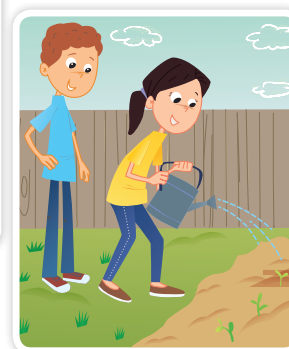
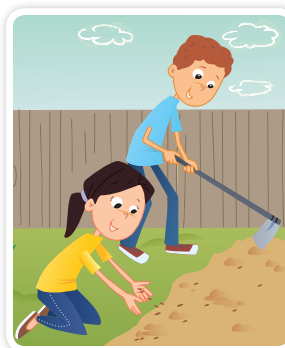


Learning Target

Describing how ideas in science texts are connected will help you understand how things work and why things change.

- **Read** When you read about science topics, look for **connections** that show how **ideas**, or thoughts, fit together. Connections may show how or why one thing changes into something else. Understanding these connections will help you **describe**, or tell, how things change or work and why things happen.

Look at the pictures. What is happening in the pictures? Think about how what is happening is connected.



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EL English Language Learners
Develop Language

Cognates To help students feel confident about the Learning Target, reread it and point out the Academic Talk words *connections*, *ideas*, and *describe*.

- Ask Spanish-speaking students (or students who speak other Latin-based languages) if they know the Spanish word for *connections*. If necessary, reveal that it is *conexiones*. Do the same for the words *ideas* (cognate, *ideas*) and *describe* (cognate, *describir*).
- Explain that these words are *cognates*, or words in two languages that share a similar spelling, meaning, and sometimes, pronunciation. Discuss how recognizing cognates can help students when they read in English.

• **Genre Focus**
Science Article

Tell students that in this lesson they will read science articles. Explain that science articles are informational texts that cover, or are about, science topics. They are often found on websites or in magazines and share the following characteristics:

- They explain or describe science facts, ideas, or events.
- They include special text features such as subheadings, photographs, diagrams, and charts that help organize the information.

► **Think** Look at the pictures that show the girl and boy working in the garden. Complete the chart by describing what happened in the garden. Think about how the events are connected.

First	Next	Last
The girl and boy plant seeds in a garden.	The girl and boy water the garden. The seeds start to grow.	The garden grows and flowers bloom.

► **Talk** Using details from the pictures and your chart, talk to your partner about what happened in the garden. How are the events connected?



Academic Talk

Use these words to talk about the text.

- describe • connections • ideas

● **Monitor Understanding**

If... students have difficulty understanding the relationships among the events in the cartoon,

then... tell them to provide one sentence that describes what is happening in each picture. Ask what would happen to the plants if the second event, the watering of the plants, didn't happen. Help students understand that water helped the plants grow. Those two events are connected.

Think

- Read aloud the Think section. Explain that the chart will help them organize the information that they find in the pictures.
- Have partners complete the chart together. Remind students that using the details in the pictures will help them write the events in order.
- As students work, circulate and provide assistance as needed.
- Ask volunteers to share what they wrote in their charts.
- Make certain that students understand the connection between the three events and how what the girl and boy did in the first event changed or caused what happened in the other two events.

● **Monitor Understanding**

Talk

- Read aloud the Talk prompt.
- Have partners take turns discussing what happened in the garden and how the events are connected.
- Remind students to listen carefully to their partners and then build on what their partners said. Use the Talk Routine on pp. A52–A53.

Quick Write Have students write a response to the following prompt:

Think about putting your coat on. How is each part or step connected?

Ask students to share their responses.

Wrap Up

- Invite students to share what they have learned about making a connection between scientific events, using the Academic Talk words *ideas* and *connections* in their explanations.
- Explain to students that when they describe the connection between scientific events, they can better understand why and how things change and happen.

In the next section, we'll be looking for connections between events in another science article. Knowing what happened first, next, and last will help you make connections between ideas and events.



Get Started

Today you will read a science article that describes the life of baby kangaroos. First you'll read to understand. Then you will reread to make connections between ideas in the text.

Read

- Read aloud the title and author of the article and call attention to the photograph. Guide students to an understanding that the article is about a baby kangaroo, called a joey.
- Read aloud the article or ask students to read it independently. Tell them to place a check mark above any confusing words and phrases as they read. Remind students to look inside, around, and beyond each unknown word or phrase to help them figure out its meaning. Use the Word Learning Routine on pp. A50–A51.
- When students have finished reading, clarify the meanings of words and phrases. Use the questions below to check understanding. Have students identify text details that support their answers.

What happens to a joey in its mother's pouch?
(It grows, feeds, and stays warm.)

Which event happens before the joey comes out of its mother's pouch? (It grows and gets much bigger.)

When does the joey live outside of the pouch?
(when it can care for itself but before it is an adult)

 English Language Learners

 Word Learning Strategy

Explore

- Read aloud the Explore question on p. 55 to set the purpose for rereading. Tell students they will need to take a closer look at the ideas in the article to see how they are connected.
- Have students read aloud the Close Reader Habit on p. 54. Tell students that underlining details in a text is an action of close and careful readers.

TIP Tell students that signal words such as *first* *next*, *then*, and *finally* can help them determine the order of events.

JUMPING Joeys

by Julian Green



- 1 What is the best-known animal in Australia? It's the kangaroo! Kangaroos are large animals with powerful back legs. But they are less than one inch long when they are born.
- 2 A baby kangaroo is called a joey. The joey climbs into its mother's pouch. There the joey feeds and stays warm. The joey stays in the pouch for seven to ten months. It grows much bigger. Then the joey is ready to come out of its mother's pouch.
- 3 When the joey is ready to come out, its mother loosens her pouch. The joey falls out. At first, it stays out for just a few minutes. Then it goes back in the pouch. Every time it comes out, it follows its mother and learns to find food. Soon it can take care of itself.
- 4 When the joey leaves the pouch for good, it is not an adult yet. It will grow taller and heavier. A kangaroo can be more than six feet tall and weigh 190 pounds.

Close Reader Habits

Underline details that show how a joey grows and changes. Think about how these are connected.

Responses will vary.

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 English Language Learners
Build Meaning

Scaffold Instruction Use a web (see p. TR16) and a Think Aloud to answer the question: **What happens to a joey in its mother's pouch?**

- Write: *A joey in its mother's pouch* in the center of the web. Then say:
Paragraph 2 tells me details about what happens to the joey in its mother's pouch, so I need to reread it carefully. It says the joey can feed there, so I will circle the word feed. What else does the text say?
- Have students find and circle other words or phrases from the text that answer the question.
- Have students refer to the words they circled to complete the web so that answers include: *feeds, grows, stays warm.*

 Word Learning Strategy
Use a Dictionary

- Read aloud the first sentence from paragraph 4 : **When the joey leaves the pouch for good, it is not an adult yet.**
- Underline the phrase *for good* and explain that it is a phrase that contains words that work together to form a new meaning.
- Have students locate the phrase in a dictionary and read its meaning: "forever" or "permanently."
- Brainstorm and write new sentences on the board with this phrase.

Explore How does each part of a joey's growth connect to the next?



As I finish the chart, I should think about how the ideas in it are connected.

Think

- 1 Use details from paragraphs 2, 3, and 4 in the article about joeys to fill in the chart.

First	When a <u>joey</u> is born, it climbs into its mother's <u>pouch</u> where it <u>feeds</u> and stays warm. It lives there for <u>seven to ten</u> months.
Next	When it grows larger, the joey falls out of the pouch. It stays out longer each time this happens and learns to take care of itself.
Finally	When the joey is big enough, it stays out of the pouch for good. It will grow taller and heavier.

Talk

- 2 Take turns talking to your partner about what changes a joey must go through before it can live on its own.

Write

- 3 **Short Response** Tell why each part of a joey's growth is important. Use details from the article in your answer. Write your answer in the space on page 58.

HINT What does the joey do at each part of its growth?

55

Think

- Read aloud the Think section. Explain to students that you will reread the article. Then you will model how text details help you complete the chart. Use the **Think Aloud** below to guide your modeling.
- Revisit the Explore question. Guide students to determine that they need to look for details in the text, using the Close Reader Habit.
- Encourage students to work with a partner to continue rereading the article and to complete the chart. Remind students that the Buddy Tip will help them think about how the ideas in the chart are connected.
- Ask volunteers to share their completed charts.
- Guide students to see that one event leads to the other and that each part of the chart explains how a joey grows and changes.

Talk

- Read aloud the Talk prompt.
- Have partners respond to the prompt. Use the Talk Routine on pp. A52–A53.
- Circulate to check that students can describe the changes a joey must go through before it can live on its own.

Write

- Ask a volunteer to read aloud the Write prompt.
- Invite a few students to tell what the prompt is asking them to do.
- Make sure students understand that they need to tell why each part of a joey's growth is important and connected to each other, using details from the article. Point out the Hint and ask a volunteer to read it aloud.
- Have students turn to p. 58 to write their response.
- Use Review Responses on p. 58 to assess students' writing.

Wrap Up

- Ask students to recall the Learning Target. Have them explain why understanding how ideas connect helps them see how things change and why things happen.

Think Aloud

- The chart helps me see how ideas about the growth of joeys are connected. It shows me what happens first when a joey is born and climbs out of its mother's pouch. Then it tells me what happens next after a joey grows larger.
- Paragraph 2 tells me what happens to a joey in its mother's pouch before and after it is born, which is where I can find ideas and events to fill in the details in the chart in the row labeled "First."
- Next I will look at paragraph 3 to see if I can find ideas and events about what happens to a joey as it grows larger and falls out of its mother's pouch. These details will help me to fill in details in the row labeled "Next."

 Guided Practice

Get Started

Today we will read a science article about the life cycle of emperor penguins. First you will read to understand what the article is about. Then you will reread with a partner to describe the connections between the ideas in the text.

Read

- Read aloud the title and author of the article and point out the picture. Ask if anyone knows any facts about emperor penguins such as where they live. Establish that emperor penguins live where it is very cold and icy year-round.
- **Read to Understand** Read aloud the article or ask students to read it independently. Tell them to place a check mark above any confusing words and phrases as they read. Remind students to look inside, around, and beyond each unknown word or phrase to help them figure out its meaning.
- When students have finished reading, clarify the meanings of words and phrases they still find confusing. Then use the questions below to check understanding. Encourage students to identify details in the text that support their answers.

What does this article mainly tell about emperor penguins? (*their life cycle*)

What is special about how the male emperor penguin cares for its egg? (*The male emperor penguin balances the egg on top of his feet and covers it to keep it warm.*)

What happens after the penguin chick hatches? (*Its parents take turns caring for it until it can care for itself; it changes as it grows; it loses its feathers and grows new ones.*)

 English Language Learners

● Word Learning Strategy

- **Read to Analyze** Read aloud the Close Reader Habit on p. 56 to set the purpose for rereading. Then have students reread the article with a partner and discuss any questions they might have.

Emperor Penguins

by Jo Pitkin



- 1 Emperor penguins live in icy Antarctica (ant ARK ti kuh). Like all animals, the penguins change as they grow. The changes are called a **life cycle**.
- 2 What is the life cycle of a penguin? First, a female lays an **egg**. Then she leaves to hunt for food.
- 3 The male penguin takes care of the egg. He holds the egg on top of his feet and keeps it warm. He stands holding the egg for two months. Then the mother returns. She takes the egg, and the father goes to eat.
- 4 Finally, the chick, or baby bird, hatches. Both parents care for the chick. Soon, the chick grows new feathers. Now the chick is a **fledgling**, or young penguin. At five or six years old, the penguin becomes an adult, or fully grown. An adult can start its own family.

Close Reader Habits

How does a penguin change after it hatches? **Underline** words and phrases that help you understand how a chick becomes an adult penguin.

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 English Language Learners
Build Meaning

Prior Knowledge Use a K-W-L chart (see p. TR12) to guide students through the text. Start by asking students to brainstorm everything they might know about penguins. Record this information in the **K** column.

- Next, generate a list of questions about what students **Want to Know** about the topic. Have students focus on ideas in the text to generate text-based questions. List these questions in the **W** column of the chart.
- As students read the article, have them record answers from the **W** questions and record them in the **L** column.
- When the chart is complete, review it together. Reread the article as needed to go answer any questions that may still be unclear or require further reading.

● Word Learning Strategy
Use Shades of Meaning

- Remind students that authors select words carefully.
- Focus attention on the word *holds* in paragraph 3. Use a thesaurus to create a list of other words the author might have used. Help students understand why some words would not work with this context, while others might work as well or better.
- You may try the same procedure with *stands* in paragraph 3.

Think

- 1 Why does the female penguin leave her egg?
 - A so the egg can begin to hatch
 - B** so she can hunt for food in the sea
 - C because the male rolls the egg away
 - D because the egg does not need much care
- 2 Why does the male penguin stand for two months without eating or hunting?
 - A When he cares for the egg, he doesn't feel hungry.
 - B He is too far from the sea to hunt.
 - C The female will bring him food when she returns.
 - D** If he moved to hunt, the egg could get cold or break.
- 3 What do the words "egg," "fledgling," and "adult" in dark print help you understand?

Responses will vary, but students should show that they understand that egg, fledgling, and adult are stages in the penguin's life cycle.

Talk

- 4 What happens when the egg hatches? Use details from the text in your answer.

Write

- 5 **Short Response** Describe how the penguin chick grows and changes after it hatches. Use the words "chick," "fledgling," and "adult" in your answer. Write your answer in the space on page 59.



When I read this passage, I'm going to look carefully at the words in dark print. They must be important.

HINT To find the details you need, look for the words "Finally, the chick, or baby bird, hatches."

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Think

- Have partners complete items 1 and 2. Draw attention to the words *female* and *male*.

TIP Help students order the stages of the penguin's life cycle by saying *first* egg, *next* chick, *then* fledgling, and *finally* adult.

Answer Analysis

When students have finished, discuss correct and incorrect responses.

- 1 **The correct choice is B.** The third sentence in paragraph 2 states that the female leaves her egg to hunt for food.

- A and C are not supported by text details.
- D contradicts details in paragraph 3 that say the male takes care of the egg.

DOK 2

- 2 **The correct choice is D.** The second sentence in paragraph 3 states that the male keeps the egg warm as he holds it on top of his feet.

- A and B are not supported by text details.
- C contradicts details in paragraph 3 that say that after the female returns, the male will go feed.

DOK 2

- 3 Responses will vary, but students should show that they understand that egg, fledgling, and adult are stages in the penguin's life cycle.

DOK 2

Integrating Standards**Talk**

- Have partners discuss the prompt. Emphasize that students should support their ideas with text details.

Monitor Understanding**Write**

- See p. 59 for instructional guidance.

Wrap Up

- Ask students to describe how the connections between ideas in a science text can help them understand how and why something changes.

Integrating Standards

Use the following questions to further students' understanding of the article.

- Based on the details in the first paragraph, how is the life cycle of an emperor penguin like the life cycle of other animals?** (*Penguins change as they grow.*)

DOK 2

- How do the male and female penguin share the responsibility of caring for the egg?** (*They take turns keeping it warm while the other goes to eat.*)

DOK 2

- What happens to a penguin chick after it grows new feathers?** (*It is called a fledgling, or young penguin.*)

DOK 2

Monitor Understanding

If... students have difficulty finding text evidence to answer the Talk prompt,

then... ask them to underline or highlight the parts of the text that reference the egg after it hatches. Remind students that the answer they give needs to come from what they read. Model an answer that demonstrates using the text as the source of the information.

Modeled and Guided Instruction

Write

- Remember to use the Response-Writing Routine on pages A54–A55.

Review Responses

After students complete the writing activity, help them evaluate their responses.

- Responses will vary. See the sample response on the student book page.
DOK 2

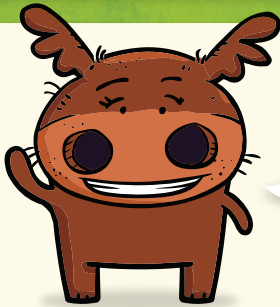
Write Use the space below to write your answer to the question on page 55.

JUMPING Joeys

- 3 Short Response** Tell why each part of a joey's growth is important. Use details from the article in your answer.

HINT What does the joey do at each part of its growth?

Responses will vary. Sample response: When a joey is first born, it stays in its mother's pouch, where it can eat and stay warm. As it gets older, it needs to learn how to find food, so it starts leaving the pouch. When it's big enough, it can stay out of the pouch for good.



Don't forget to check your writing.

Scaffolding Support for Reluctant Writers

If students are having a difficult time getting started, use the strategies below. Work individually with struggling students, or have students work with partners.

- Circle the verbs in the prompt that tell you what to do, such as *describe*, *explain*, or *compare*.
- Underline words and phrases in the prompt that show what information you need to provide in your response, such as *causes*, *reasons*, or *character traits*.
- Talk about the details from the text that you will include in your response.
- Explain aloud how you will respond to the prompt.

Write Use the space below to write your answer to the question on page 57.

Emperor Penguins

5 Short Response Describe how the penguin chick grows and changes after it hatches. Use the words "chick," "fledgling," and "adult" in your answer.

HINT To find the details you need, look for the words "Finally, the chick, or baby bird, hatches."

Responses will vary. Sample response: The chick grows new feathers. Then it's called a fledgling. The fledgling keeps growing. When it is five or six years old, it is a fully grown adult.

Check Your Writing

- ☐ Did you read the question carefully?
- ☐ Can you say the question in your own words?
- ☐ Did you use proof from the text in your answer?
- ☐ Are your ideas in a good, clear order?
- ☐ Did you answer in full sentences?
- ☐ Did you check your spelling, capital letters, and periods?



Write

- Have students read aloud the Write prompt.
- Invite students to tell what the prompt is asking them to do. Make sure they understand that they need to describe how the penguin chick grows and changes after it hatches.
- Call attention to the HINT.
- Remember to use the Response-Writing Routine on pages A54–A55.

Review Responses

After students complete the writing activity, help them evaluate their responses.

5 Responses will vary. See the sample response on the student book page.

DOK 2

Teacher Notes

Independent Practice

Get Started

Today you are going to read another science article. You will use what you have learned about making connections between scientific ideas and events to understand how and why something changed.

- Have partners take turns explaining to each other why looking at scientific ideas or events changed another idea or event can help readers make connections. Encourage students to use the Academic Talk words in their response. You may wish to have volunteers share their understandings with the class.

ELL English Language Learners

Read

You are going to read the science article independently and use what you have learned to think and write about the text. As you read, remember to look closely at how and why the ideas or events in the science article are connected.

- Read aloud the title and author of the passage and then encourage students to preview the text, paying close attention to the text and the photographs.
- Point out the Words to Know box on p. 60. Remind students to use what they know to figure out the meanings of unknown words—look inside, look around, and look beyond to determine the meanings. You may wish to remind students to use the Glossary of Words to Know in the back of the Student Book to check the meaning of unknown words.
- If students need support in reading the passage, you may wish to use the Monitor Understanding suggestions.
- When students have finished, have them complete the Think and Write sections.

● Monitor Understanding

Read

WORDS TO KNOW

As you read, look inside, around, and beyond these words to figure out what they mean.

- sprout
- pods
- hitchhikers
- parachuters

Seeds Get Around

by Kate Hoffman, Ranger Rick



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- 1 How do plants get to new places to grow? With help from bunches of seeds on the go!
- 2 Seeds are travelers. How many of these different kinds of seed-travelers can you find?

Nutty Ones

- 3 Squirrels spend lots of time collecting acorns and other nuts. Often a squirrel comes back for a nut it has buried. But sometimes it forgets—and then the lucky seed is already planted and ready to sprout!
- 4 Find a tree full of nuts. Count how many squirrels are busy with the harvest. Are any burying nuts in the ground?

ELL English Language Learners
Build Meaning

Text Structure Have students preview the passage “Seeds Get Around.” Discuss how the text is organized. Point out that this text uses headings to group the information. Read aloud one of the headings from the text and then ask the following questions:

- Based on this heading, what do you think this section will be about?
- How do headings help the readers?

Check to be certain students understand that headings group similar information together.

Shooters

- 5 The small seeds of jewelweed, witch hazel, and violets grow inside little pods that squeeze them tight. When the time is right, the dry pods pop open—surprise!—and shoot the seeds through the air.

- 6 Touch one of these seedpods. If it's just-right ripe, watch the seeds fly!

Hitchhikers

- 7 The seeds of burdock, sticktights, and certain other plants are called burs. Burs have tiny hooks that grab on to the fur of animals that pass by. This free ride may carry the seeds for miles.

- 8 Have burs come home stuck to you? Or to your dog?



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● Monitor Understanding

If... students struggle to read and understand the passage,
then... use these scaffolding suggestions:

Question the Text Preview the text with students by asking the following questions:

- **What types of text features has the author included?**
- **Based on the title and the text features, what do you predict the article will be about?**
- **What questions do you have about the text?**

Vocabulary Support Define words that may interfere with comprehension, such as *travelers* and *buried*.

Read Aloud Read aloud the text with students. You could also have students chorally read the text in a small group.

Check Understanding Use the questions below to check understanding. Encourage students to cite details in the text that support their answers.

- **What are some ways seeds get from place to place?** (*Some seeds are buried by squirrels, some are blown by the wind, some pop open, some stick to the fur of animals, and some float to a new place.*)
- **What is the article mostly about?** (*It is mostly about how seeds get from place to place.*)

Independent Practice

Integrating Standards

After students have read the passage, use these questions to discuss the text with them.

• **Why do seeds need to travel, or “get around”?**

(Seeds need to travel to new places in order to grow.)

DOK 2

• **Why do you think the author wrote “Seeds Get Around”?**

(She wants to explain the different ways that seeds get to new places where new plants can grow.)

DOK 2

• **How do squirrels help nuts travel?**

(Squirrels collect and bury the nuts in new areas to eat later. If a nut is forgotten, it can grow in a new place.)

DOK 2

• **How do “Shooters,” “Floaters,” and the other subheadings help you easily find facts about ways that certain types of seeds travel?**

(Each hints at the type of seed-traveler discussed in the section below it, so readers can go to that section instead of searching the whole passage.)

DOK 3

• **Theme Connection**

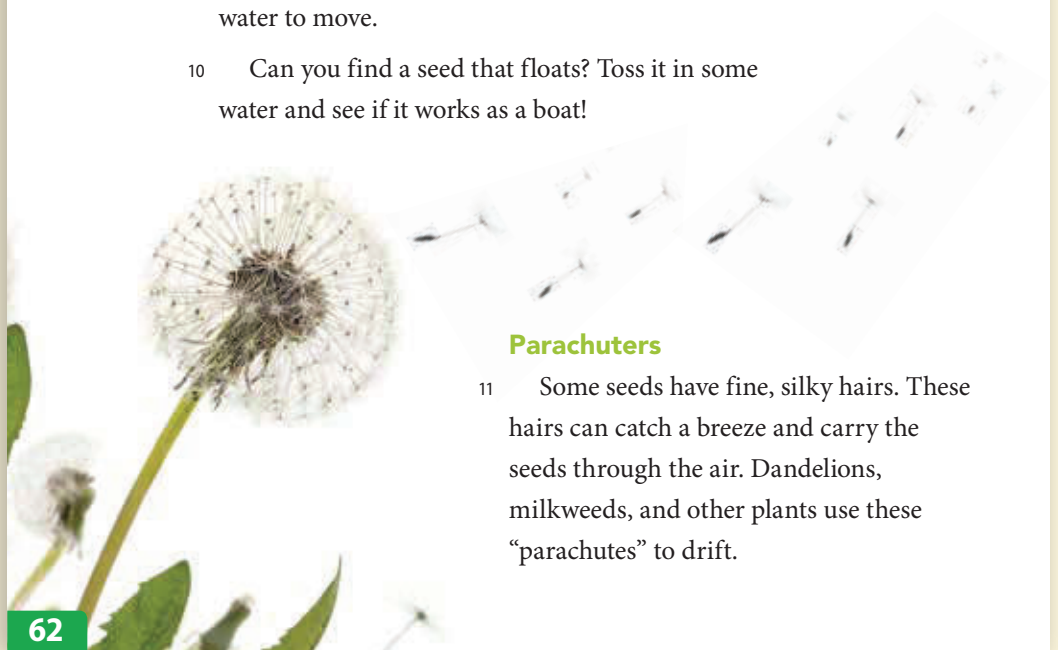
Independent Practice



Floaters

9 Water is almost always going somewhere. Seeds that float can bob all the way to a new home. Coconuts are famous for long-distance drifting, but many seeds use water to move.

10 Can you find a seed that floats? Toss it in some water and see if it works as a boat!



Parachuters

11 Some seeds have fine, silky hairs. These hairs can catch a breeze and carry the seeds through the air. Dandelions, milkweeds, and other plants use these “parachutes” to drift.

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• **Theme Connection**

- Remind students that the theme of this lesson is Life Cycles.
- Work with students to make a list on the board of how all of the articles they read relate to the theme of life cycles.
- Ask students to recall facts and ideas they learned from the passages about how the life-forms they read about are similar to one another.
- Encourage them to make connections between the life cycles they read about and what they already know.

Think Use what you learned by reading “Seeds Get Around” to respond to the following questions.

- 1** Look at the types of seeds listed.

floaters burs parachuters shooters nuts

Write each type of seed where it belongs in the chart below.

Need Animals to Travel	Use Air or Water to Travel
burs, nuts	floaters, shooters, parachuters

- 2** This question has two parts. First, answer Part A. Then answer Part B.

Part A

How do jewelweed, witch hazel, and violets travel to a new place?

- A** Squirrels bury their seeds and forget them.
- B** Dry pods shoot their seeds into the air.
- C** The seeds float in the water of a stream.
- D** Their hairs help them fly in the breeze.

Part B

Write the sentence from the passage that helped you answer the question in Part A.

“When the time is right, the dry pods pop open—

surprise!—and shoot the seeds through the air.”

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Think

- Use the Monitor Understanding suggestions to support students in completing items 1–5.

• Monitor Understanding

Answer Analysis

When students have finished, discuss correct and incorrect responses.

- 1 Need Animals to Travel:** burs, nuts

Use Air or Water to Travel: floaters, shooters, parachuters

DOK 2

- 2 Part A**

The correct choice is B. Paragraph 5 describes how those three plants shoot their seeds into the air.

- A, C,** and **D** name ways that other types of seeds travel to new places.

Part B

“When the time is right, the dry pods pop open—surprise!—and shoot the seeds through the air.”

DOK 1

• Monitor Understanding

If... students struggle to complete the items,
then... you may wish to use the following suggestions:

Read Aloud Activities

- As you read, have students note any unfamiliar words or phrases. Clarify any misunderstandings.
- Discuss each item with students to make certain they understand the expectation.

Reread the Text

- Have students reread the text with a partner.
- Have students discuss one heading at a time.

Independent Practice

- 3 The correct choice is A. The section "Hitchhikers" describes the tiny hooks found on burs.
- B, C, and D are incorrect because the text gives no such details.

DOK 1

- 4 A collect; B bury; C drift; D plant
- DOK 1

- 5 The correct choice is C. All the seeds described in the text have ways to travel from one place to another.
- A, B, and D only describe a way that a certain type of seed has adapted to disperse, but this characteristic is not shared by the other seed types.
- DOK 2

Write

- Tell students that using what they read, they will plan and compose a short response to the writing prompt.

Monitor Understanding

Review Responses

After students have completed each part of the writing activity, help them evaluate their responses.

- 6 Display or pass out copies of the Sample Response. Have students compare their planning response with the sample. Are they missing any details?
- DOK 3

- 3 Why can some seeds called burs stick to the fur of animals?

- A Burs have tiny hooks.
- B Burs have a sticky glue.
- C Burs have magnets.
- D Burs have arms.

- 4 Write the base word for each of these words from the selection.

- | | |
|-------------------|---------|
| A collecting | collect |
| B buried, burying | bury |
| C drifting | drift |
| D planted | plant |

- 5 How are all of the seeds in this article alike?

- A They can all fly through the air.
- B They can all stick to other things.
- C They can all travel from place to place.
- D They can all float down a river.



Write How are burs and parachuting seeds different from other seeds?

- 6 Plan Your Response Identify the special parts of burs and parachuting seeds.

Responses will vary. Students should note that burs have

hooks and parachuters have silky hairs.

Monitor Understanding

If... students don't understand the writing task, then... read aloud the writing prompt. Use the following questions to help students get started.

- What is the prompt asking you to write about?
- Do you need to reread the text to find more information?
- How will you identify the information you need to include?
- Have partners talk about how to they will organize their responses.
- Provide a graphic organizer to assist students, if needed.

- 7 Short Response** How are burs and parachuting seeds different from other seeds? Use details from the article in your answer.

Sample response: Burs and parachuters have special parts
that help them travel. Burs have tiny hooks. The hooks
attach the seeds to the fur of animals, and the animals carry
them to new places. Parachuters have silky hairs. The hairs
catch the wind, and the seeds are carried away.



Learning Target

How does describing how ideas in science texts are connected help you understand how things work and why things change?

Responses will vary. Sample response: Finding the
connections helps one see how things work and why they
work. The connections also help one see how things
change and why they change. Knowing these things makes
it easier to understand what happens in science.

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- 7** Display or pass out copies of the reproducible **2-Point Writing Rubric** on p. TR10. Have students use the rubric to individually assess their writing and revise as needed.

When students have finished their revisions, evaluate their responses. Answers will vary. See the sample response on the student book page.

DOK 3

Wrap Up

Learning Target

- Have each student respond in writing to the Learning Target prompt.
- When students have finished, have them share their responses. This may be done with a partner, in small groups, or as a whole class.

6 Sample Response

Burs: hooks on ends that stick to things

Parachuting seeds: fine, silky hairs to catch a breeze

7 2-Point Writing Rubric

Points	Focus	Evidence	Organization
2	My answer does exactly what the prompt asked me to do.	My answer is supported with plenty of details from the text.	My ideas are clear and in a logical order.
1	Some of my answer does not relate to the prompt.	My answer is missing some important details from the text.	Some of my ideas are unclear and out of order.
0	My answer does not make sense.	My answer does not have any details from the text.	My ideas are unclear and not in any order.