

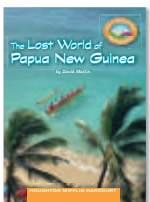
Lesson 6



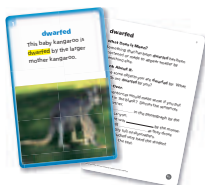
✓ TARGET VOCABULARY

dwarfed
presence
procedure
outfitted
transferred
calculate
snug
perch
enthusiastic
beaming

Vocabulary Reader



Context Cards



Vocabulary in Context

1

dwarfed

This baby kangaroo is **dwarfed** by the larger mother kangaroo.



2

presence

Wildlife photographers have to be careful that their **presence** doesn't scare away animals.



3

procedure

The veterinarian explained the **procedure** and said the cat would be fine.



4

outfitted

This woman is **outfitted**, or equipped, with a glove to protect her from the owl's talons.



COMMON
CORE

L.5.6 acquire and use general academic and domain-specific words and phrases

- ▶ Study each **Context Card**.
- ▶ Use a dictionary or a glossary to clarify the part of speech of each Vocabulary word.

5 transferred

This baby alligator will be **transferred**, or moved, to another area when it grows larger.

**6 calculate**

To **calculate** a cheetah's speed, measure the time it takes to cover a certain distance.

**7 snug**

It is important for an animal's collar to be **snug**, but not so tight that it is uncomfortable.

**8 perch**

Eagles and many other birds roost high on a **perch** to see prey or to avoid predators.

**9 enthusiastic**

This dog is quite **enthusiastic** about chasing and catching flying discs.

**10 beaming**

This girl is **beaming** over the news that her family is going to adopt the puppy.



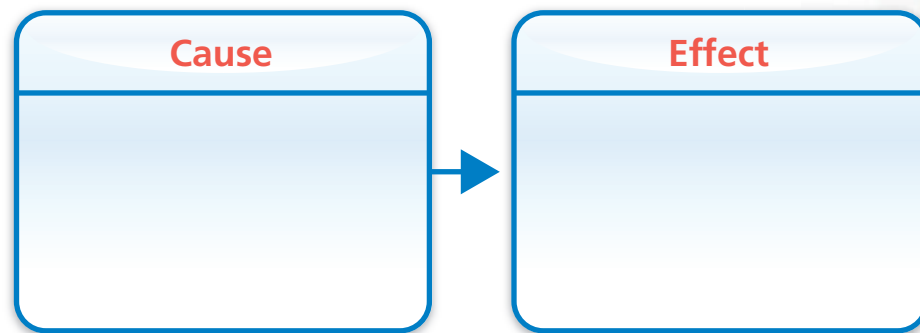


Read and Comprehend



✓ TARGET SKILL

Cause and Effect As you read “Quest for the Tree Kangaroo,” look for causes and their effects. A **cause** is an event that makes something else happen. An **effect** is something that happens because of an earlier event. Use text evidence and a graphic organizer like this one to help you identify the cause-and-effect relationships in the selection.



✓ TARGET STRATEGY

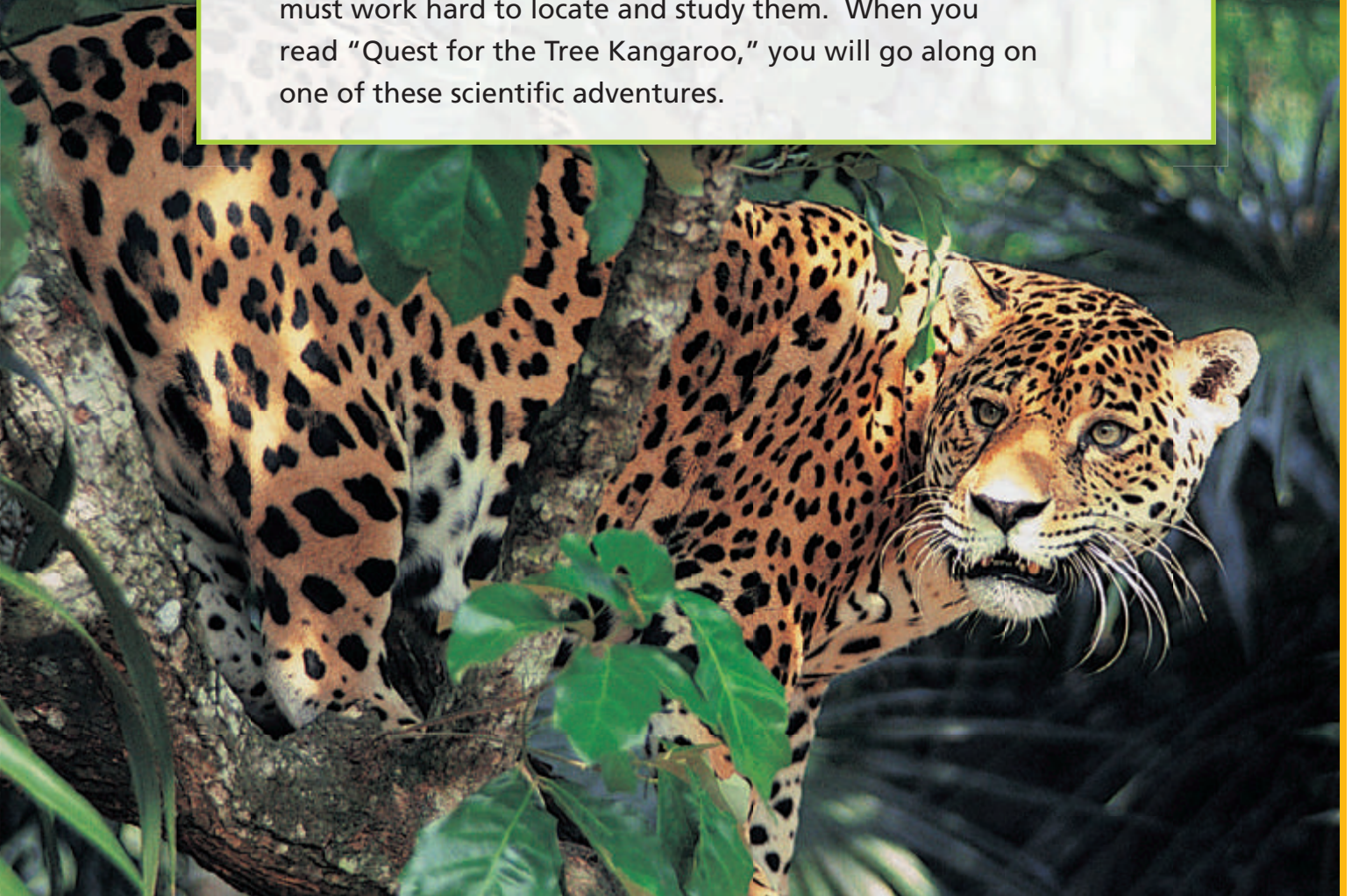
Question As you read “Quest for the Tree Kangaroo,” pause frequently to ask yourself what events lead to others and what events are caused by earlier ones. Asking and answering **questions** as you read can help you identify cause-and-effect relationships.

PREVIEW THE TOPIC

Wild Animals

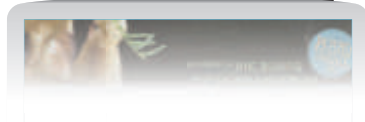
Wild animals are those that have not been domesticated, or tamed, by humans. They include the squirrels and pigeons you see every day and the exotic animals that live in faraway jungles and deep ocean waters. Many wild animals are endangered—their numbers are so low that they might disappear completely. Climate change, loss of habitat, and overhunting all contribute to the decline in animal populations.

The Matschie's tree kangaroo is an endangered species. It lives in the rain forests of Papua New Guinea. Because tree kangaroos spend most of their time in trees, scientists must work hard to locate and study them. When you read "Quest for the Tree Kangaroo," you will go along on one of these scientific adventures.



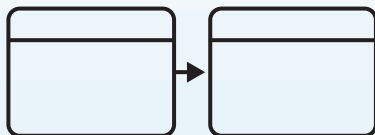
Lesson 6

ANCHOR TEXT



✓ TARGET SKILL

Cause and Effect Determine which events lead to others. Trace the relationships between causes and effects.



✓ GENRE

Informational text gives facts and examples about a topic. As you read, look for:

- text structure, or the way ideas and information are organized
- facts and details about a specific topic



RI.5.3 explain the relationships between individuals/events/ideas/concepts in a text;
RI.5.10 read and comprehend informational

texts; **L.5.6** acquire and use general academic and domain-specific words and phrases

MEET THE AUTHOR

Sy Montgomery

Award-winning author Sy Montgomery travels the world to study animals. Sometimes she faces the unexpected. “Once, in Borneo, an orangutan ate my interview tapes,” she says, describing one of many memorable incidents. Her adventures can require her “to hike for days and swim for miles.” She calls her trip to the cloud forest of New Guinea her most physically difficult one so far.

MEET THE PHOTOGRAPHER

Nic Bishop

Nic Bishop is a nature photographer and author of many books. Some of his animal photographs are taken in a studio, while others are taken in far-off places, in animals’ natural habitats. After traveling a great distance for a project, there is a lot of pressure to capture great photographs. “I simply cannot afford to be tired, or get ill, since there is never going to be a chance to repeat anything,” he says.




QUEST FOR THE TREE KANGAROO

by Sy Montgomery
photographs by Nic Bishop

ESSENTIAL QUESTION

Why is it important to research and protect endangered animals?



In lush and colorful Papua New Guinea, there lives an elusive animal called the Matschie's tree kangaroo. Biologist Lisa Dabek has been fascinated by the tree 'roo since seeing her first one in a Seattle zoo more than twenty years ago. Now she leads a research expedition to Papua New Guinea, accompanied by a team of scientists and local guides, with the goal of locating Matschie's tree kangaroos in the wild and fitting them with radio collars so they can be tracked and studied. Lisa and the others hope their studies will help them better understand and protect these special creatures.

The team is joined by author Sy Montgomery and photographer Nic Bishop, who are documenting the journey. The group has arrived at their destination and set up camp. They have seen signs that some tree kangaroos are nearby, in the forest, and are hoping to meet one soon.



Left: Matschie's tree kangaroo.

Opposite page: Cool winds have dwarfed some parts of the forest so it is only about twenty feet high.

**LISA IS WASHING HER CLOTHES IN THE RIVER WHEN WE GET THE NEWS:
"TREE 'ROOS," CALLS HOLLY. "TWO OF them!"**

One of the trackers has run back to camp to tell us. The two tree kangaroos are "klostu"¹ us—and still up a tree. While Holly and Christine ready the medical equipment, the rest of us race after the tracker to see.

We run past the tree kangaroo house, past the kunai,² down a trail—and then into the trackless bush. Will the tree kangaroos still be there when we get there?

It takes us nearly an hour to reach the site. We see the long golden tail hanging down from the branches of a Saurauia³—and then the animal to whom it belongs: a gorgeous red and gold tree kangaroo sitting eighty feet above us, looking down with ears pricked forward.

"I can't believe it!" Lisa says.

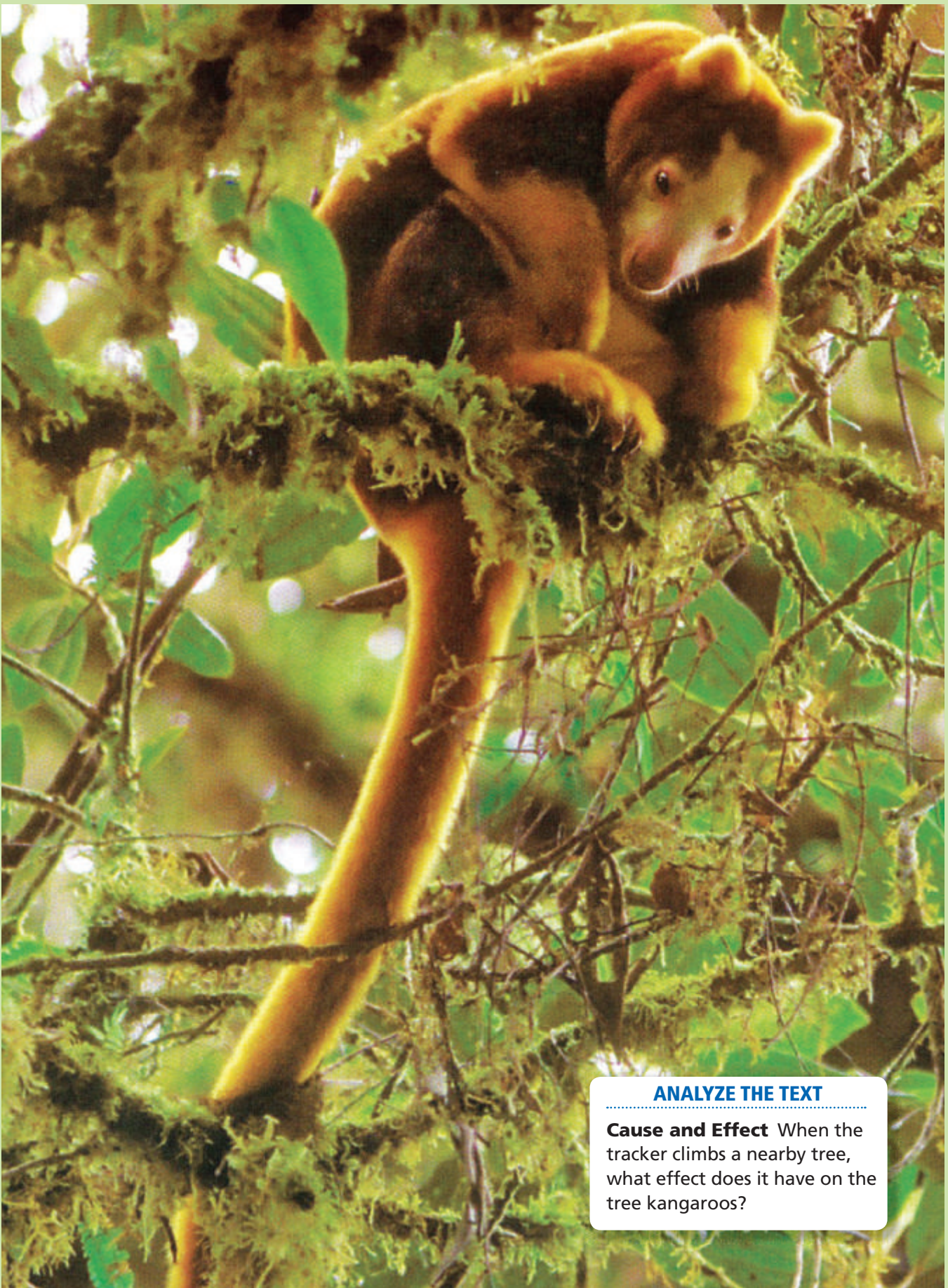
And then, in the tree right next to this tree kangaroo, we see another tail—leading to another tree kangaroo.

"Bigpela pikinini!" one of the trackers exclaims. "Pikinini" is Tok Pisin for child or baby. And "bigpela"? You guessed it: If this is her baby, it's a big one.

¹ klostu: "close to" in Tok Pisin—a popular language spoken in Papua New Guinea

² kunai: the area where Lisa and her team have set up camp, named for the kind of grass it has

³ Saurauia: tree kangaroos love to eat the shoots of this flowering tree



ANALYZE THE TEXT

Cause and Effect When the tracker climbs a nearby tree, what effect does it have on the tree kangaroos?



Matschie's tree kangaroo is one of the world's rarest and most elusive mammals.

"This is the miracle of doing work here," Lisa says. "They are so elusive. And then you finally find them. The whole field season is riding on these moments."



The men had left camp that morning feeling lucky. "It was sunny and warm," Gabriel recalled. "A good day for the tree 'roos to come out and warm themselves." They changed their strategy: "For the first three days, we were traveling more than one kilometer each day to find tree 'roos. I had wanted our **presence** to drive them closer to camp. So we decided today to try closer—and it worked."

The men spread out. One tracker decided he would look for a plant that the tree kangaroos love to eat. It grows high on tree branches and is easy to spot. The underside is brown and the top green. He found one in a tree—but no tree kangaroo. He scanned the next tree over—the *Saurauia*—and there was the tail!

"Immediately," the tracker explained through Gabriel, "I barked like a dog because that would keep her up in the tree. Everyone else heard the barking and knew what happened. Everyone ran and admired the 'roo. We all stood looking for about two minutes. And then someone noticed there was another tail."



We photograph and videotape and watch the two tree kangaroos for ten minutes. Now to get the animals down ...

The trackers have been thinking about this puzzle. Shortly after they spotted the animals, they began to cut sticks and brush to build a low fence they call an "im" around the tree. If the tree kangaroo leaps down and starts to hop away, the im will slow him down.

One of the trackers takes off his tall rubber boots. Barefoot, he begins to climb a smaller tree next to the *Saurauia*. Within two minutes, he's as high as the tree kangaroo.

"Joel, do you see where she is?" asks Lisa. Joel has the 'roo in his binoculars. "She's still there," he assures.

But the tree kangaroo isn't happy to see a human approaching. She climbs another 30 feet up to get away. If she jumps, it's a 110-foot drop.

Suddenly, she leaps, her forearms outstretched. She drops 30 feet. She grabs a smaller tree on the way down. And now she begins to back down the tree.

She's almost to the ground when one of the trackers grabs her by the tail and puts her in the burlap bag.

"Pikinini! Pikinini!" the men call. The other tree kangaroo is 65 feet up in a *Decaspermum* tree, and they don't want him to get away. The tree kangaroo lets go of the branch. Like an acrobat, he catches a vine with his front paws, turns himself around, and lands on the ground on his feet. One tracker holds the chest, another holds the back legs, and another man holds the front.

It's only now that we realize that the "baby" is a fully grown adult male. "Man na meri" the trackers say—this pair is no mother and baby, but a grown-up male and female on a tree kangaroo date. By 10:10 A.M., both tree kangaroos are in burlap bags, heading back to camp.



Twenty-five minutes later, we're all back in camp, where Holly and Christine have set up the exam table—a picnic table built from saplings lashed with vines. They've laid out medical supplies and sample vials, measuring tools and data sheets. Each tree kangaroo will be given medicine to make it sleep while the team puts on the radio collar and conducts a health exam.

We want to find out as much as we can. Because so little is known about tree kangaroos, every detail is important.

First, while the animals are in their burlap bags, they are weighed. The female weighs 6.4 kilograms (about 24 pounds) with the bag. The scientists will make sure to subtract the weight of the bag alone later. The male, with bag, weighs 8 kilograms.



At right: Gabriel spots a tree kangaroo.





Joel notes the temperature and humidity, too: It's 56.2 degrees Fahrenheit, 81 percent humidity.

"Let's measure the male's neck, to make sure the radio collar will fit on him," says Lisa. "But let's do the female first."

"With the female, we'll have the same priorities," Holly tells the group. "We'll measure the neck, put on the radio collar, insert the ID chip, pluck fur for more testing, check the pouch—see if she has a baby."


We hope to find out as much as we can while the animal is asleep. But anesthesia can be dangerous. That's why we'll be carefully watching how often she breathes in and out and how fast her heart is beating during the **procedure**. We'll have to work fast. Everyone will help.



"Christine will call out pulse and respiration every five minutes," says Holly. "Is everybody ready?"

"Do you have the radio collar?" Lisa asks Gabriel.

Gabriel is holding a leather collar much like one a dog might wear. Instead of metal tags, though, it has a little box of waterproof plastic. This contains a transmitter powered by a square battery and **outfitted** with an internal antenna. Each radio collar also has a computer chip. Without knowing it, the tree kangaroos will be sending their position not only to the scientists tracking them on the ground, but also to satellites circling thousands of miles above Earth. At six A.M. and six P.M.—times the 'roos are likely to be in the trees and the weather is likely to be less cloudy—the satellites read the animals' exact position on the earth's surface. They download this information to the chips in the collars, and this data can be **transferred** to a computer when the collar automatically falls off, after five months. The whole thing weighs less than half a pound.

 **Opposite page:** Once an animal has been seen, a tracker climbs a nearby tree to scare it into coming down.



Above: A Matschie's looks down from eighty feet in the canopy.

ANALYZE THE TEXT

Domain-Specific Vocabulary

What science terminology does the author use on this page while describing the purpose of the radio collar being fitted on the tree kangaroo? How does it affect your understanding?



"Do you have the screwdriver to put the collar on?" asks Lisa.

"Yes, yes," says Gabriel, holding the squirming bag on his lap. "We're ready!"

But the tree kangaroo isn't. Gabriel talks to the animal in the bag. "Wait, wait, come here," he says gently. And then, to two trackers: "Hold 'im!" Soon a pink nose pokes out through a hole in the bag.

It's 10:55 A.M. and Holly places the mask on the nose. A paw comes out through the hole. But within forty-five seconds, the tree kangaroo relaxes. The anesthesia's working. She's asleep.

Out comes the kangaroo. "Thermometer?" Holly requests.

The kangaroo's body temperature is similar to a person's: 97.1 degrees.

"Respiration is thirty-two," says Christine. That means she's breathing thirty-two times a minute. That's healthy.

Holly leans forward to listen to the heart through her stethoscope. For five seconds, she counts the beats. She wants to **calculate** the beats per minute. "Heart rate is sixteen times twelve. You do the math," she tells Joel, who is recording everything on a data sheet.

Meanwhile, Gabriel is putting on the collar. "Make sure the collar is comfortable but **snug**," says Lisa. (Yesterday Christine discovered that Ombum⁴ had taken his off and left it on the floor of his cage.)

⁴ Ombum: a tree kangaroo that was examined earlier and is being treated for an injured leg

 **Opposite page:** Christine and Holly get to work.

ANALYZE THE TEXT

Quotes and Description Why do you think the author includes quotes from the research team and detailed descriptions of their work?

Holly puts in the microchip and Joel records its number: 029-274-864.

"I'm going to do a pouch check," says Holly. Meanwhile, the other scientists measure everything they can as fast as they can.

"Pouch is empty," says Holly. "Now for the vitamin-mineral shot."

"This is it," says Lisa. She calls an end to the exam. Because he was injured, Ombum's exam took much longer; but we don't want to subject this tree kangaroo to the anesthesia any longer than necessary, for safety's sake.

Holly removes the face mask and quickly checks the teeth. She's coming to. It's 11:06 A.M.

"Put her in the bag," says Lisa. "Tail first, so she can sit." They name her Tess, in honor of my dog, a Border collie who died last year at age sixteen. The new Tess rests in her bag on a tracker's lap while we prepare for the male.



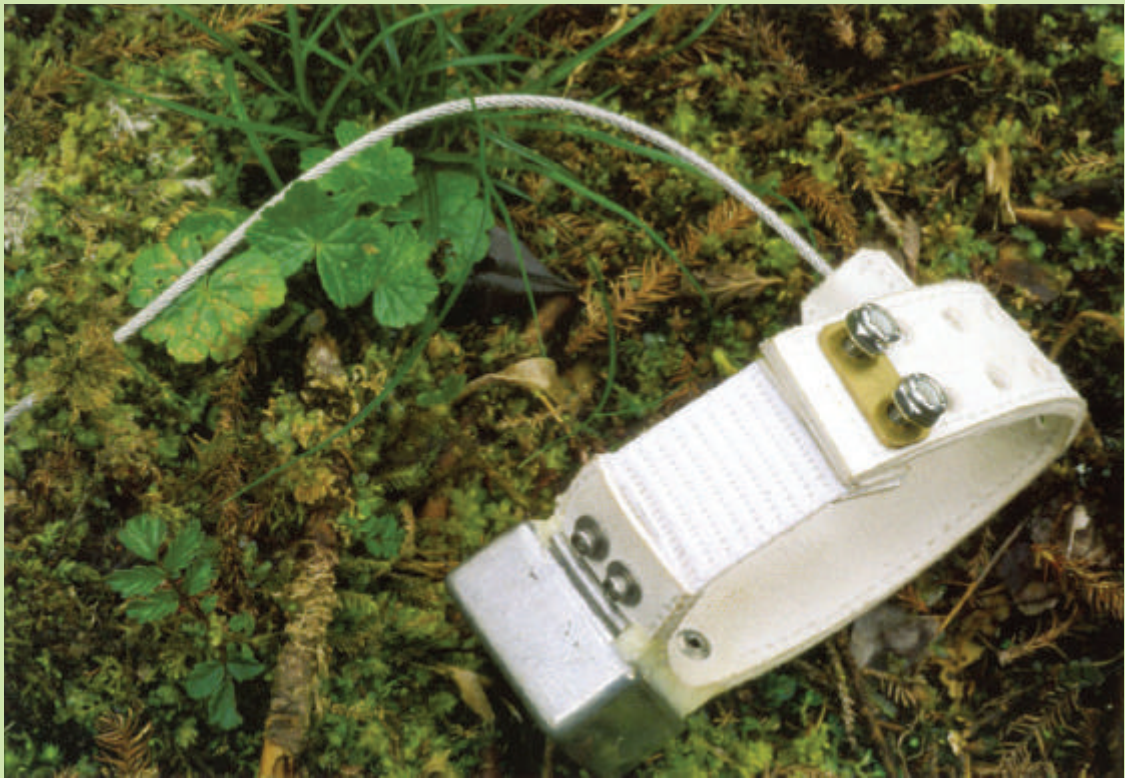
11:20 A.M.: "Anesthetic machine? Gas ready? Radio collar?" Holly asks. "And is the other 'roo OK?"

"OK," answers the team. "We're ready!"



The team works fast while the tree kangaroo is anesthetized.





Each collar allows scientists to track a tree kangaroo for several months.

Gabriel unties the top of the male's bag, and immediately the burlap boils with movement.

"He's doing somersaults in the bag," Gabriel reports. It's all he and Joshua can do to hold the 'roo.

Through the bag, the male grabs one man's glove and pulls it off. He bites another tracker on the finger. Now four men are struggling, "I've got his head here," says Gabriel, "but I can't get it out—but the nose is right here!"

Through the burlap, Holly delivers the anesthetic. "Oh, but he's tough!" says Gabriel.

Finally the bag stops wiggling. At 11:30 A.M. the male is lifted out of the bag and laid out on the table. The team goes to work.

"Seventeen times twelve is the heart rate," Holly tells Joel.

"Twenty-two point seven, circumference of neck," says Toby. "Here's the collar. Let's put it on."

"Respiration is twenty," says Holly. "Now we'll take his temperature. Next the chip. And after that we'll go for the hair."



Holly takes a hair sample for DNA analysis.

Everything is going like clockwork. Then Christine warns, “Respiration slowing ...”

“That’s it. Let’s pull the mask off,” says Lisa.

It’s 11:37 A.M. “His ears are twitching. Let’s get him back in the bag,” says Holly.

It’s all over in just ten minutes. “Great work,” says Lisa.



Noon. We’re at the tree kangaroo house.⁵ The men have cut fern fronds and lined the two apartments inside with this soft, moist carpet. They’ve used ferns to screen the wall between the new pair and Ombum, so the animals won’t upset each other. Ombum looks calm. Though his leg is no better, he is now taking banana leaves from Christine’s hands.

We all sit quietly while one of the trackers opens the cage door. Tess climbs out of the bag and scurries up a **perch**. She regards us with interest, but no fear. Lisa has named the male Christopher—in honor of my pig, who grew to 750 pounds and lived to age fourteen. The kangaroo Christopher rushes out of his bag and climbs to the highest perch.

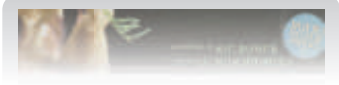
Joel and Gabriel want to make sure the collars are working, so they have brought their radio receivers along to check. Each animal has its own frequency, almost like a phone number. If Joel wants to tune in to Tess, he dials up channel 151.080. Christopher’s channel is 150.050. Both collars work fine.

We’re all delighted. One tracker is so **enthusiastic**, he wants to go out and hunt for more tree kangaroos this very afternoon. “But the hotel is full!” says Lisa. Since Christopher and Tess are healthy enough to return to the wild, they will be released tomorrow. For now, though, the cage has all the tree kangaroos it can hold.

We all shake hands, hug, and smile. Everyone is **beaming** with a mixture of excitement, exhaustion—and relief.

“The first collared male Matschie’s tree kangaroo,” says Gabriel. “History!”

⁵ tree kangaroo house: a fourteen-foot by eight-foot enclosure the team has built using sticks, vines, and mosses to keep the kangaroos comfortable



Dig Deeper

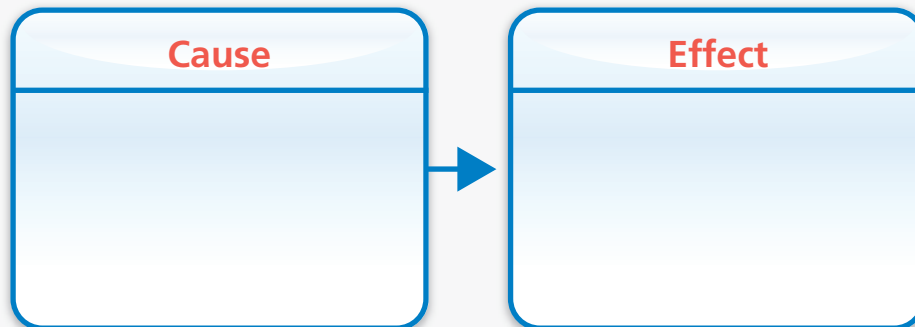
How to Analyze the Text

Use these pages to learn about Cause and Effect, Quotes and Description, and Domain-Specific Vocabulary. Then read "Quest for the Tree Kangaroo" again to apply what you learned.

Cause and Effect

In the informational text "Quest for the Tree Kangaroo," many of the events have **cause-and-effect** relationships. One event, called the cause, leads to a later event, called the effect. This effect can then become the cause for another effect, creating a chain of events that are related.

Look back at page 189 of "Quest for the Tree Kangaroo." After the male tree kangaroo has been under anesthesia for several minutes, his respiration begins to slow. What decision does Lisa make as a result? What effect does her decision have?



RI.5.3 explain the relationships between individuals/events/ideas/concepts in a text; **RI.5.4** determine the meaning of general academic and domain-specific words and phrases; **RI.5.10** read and comprehend informational texts; **RF.5.4a** read on-level text with purpose and understanding



Quotes and Description

To share information with readers in an engaging way, the author of “Quest for the Tree Kangaroo” includes **quotations**, or the exact words spoken by the team members. She also writes detailed **descriptions** of what the scientists see and do. Look back at pages 186–189. The conversation and the explanation of the scientists’ actions help readers imagine they are right there as the tree kangaroos are examined.



Domain-Specific Vocabulary

Many subject areas have their own special set of vocabulary. These terms, known as **domain-specific words**, express precise ideas and concepts related to the subject. By using domain-specific terms in their writing, authors can communicate accurate information to their readers. For example, the scientists in this selection don’t just give the tree kangaroos “some medicine”—they administer *anesthesia*, a medicine that makes the animals unconscious for a short time.



Your Turn



RETURN TO THE ESSENTIAL QUESTION



Review the selection to prepare to discuss this question: *Why is it important to research and protect endangered animals?* With a partner, list reasons drawn from text evidence and your prior knowledge. Share them with the class.



Classroom Conversation

Continue your discussion of “Quest for the Tree Kangaroo” by using text evidence to answer these questions:

- 1 How do the team members feel about the work they are doing? How do you know?
- 2 What are the challenges of studying the tree kangaroo?
- 3 Does the author do a good job of presenting information about tree kangaroos? Explain.

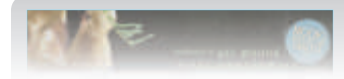
WHAT DOES IT MEAN?

Look It Up Many domain-specific words are used in this selection, including *tracker*, *humidity*, *anesthesia*, *respiration*, *stethoscope*, *transmitter*, *antenna*, *microscope*, and *frequency*. Use a print or digital dictionary to look up the definitions of these words or others that you find in the text. Then write a new sentence using each word. Share your sentences with a partner.



WRITE ABOUT READING

Response Think about all the effort that Lisa and her team put into studying the Matschie's tree kangaroo. What do they hope to learn? Why? Write a paragraph in which you explain how the information that Lisa and her team collect will help protect the species. Use specific facts and details from the text to develop your explanation.



Writing Tip

As you write your draft, use precise language and domain-specific vocabulary. Include transitions to show the connections between your ideas.



RI.5.3 explain the relationships between individuals/events/ideas/concepts in a text; **W.5.2d** use precise language and domain-specific vocabulary; **W.5.9b** apply grade 5 Reading standards to informational texts; **SL.5.1a** come to discussions prepared/explicitly draw on preparation and other information about the topic; **L.5.4c** consult reference materials to find pronunciation and determine or clarify meaning; **L.5.6** acquire and use general academic and domain-specific words and phrases

Lesson 6

MYTH



✓ GENRE

A **myth** is a story that tells what a group of people believes about the world or an aspect of nature.

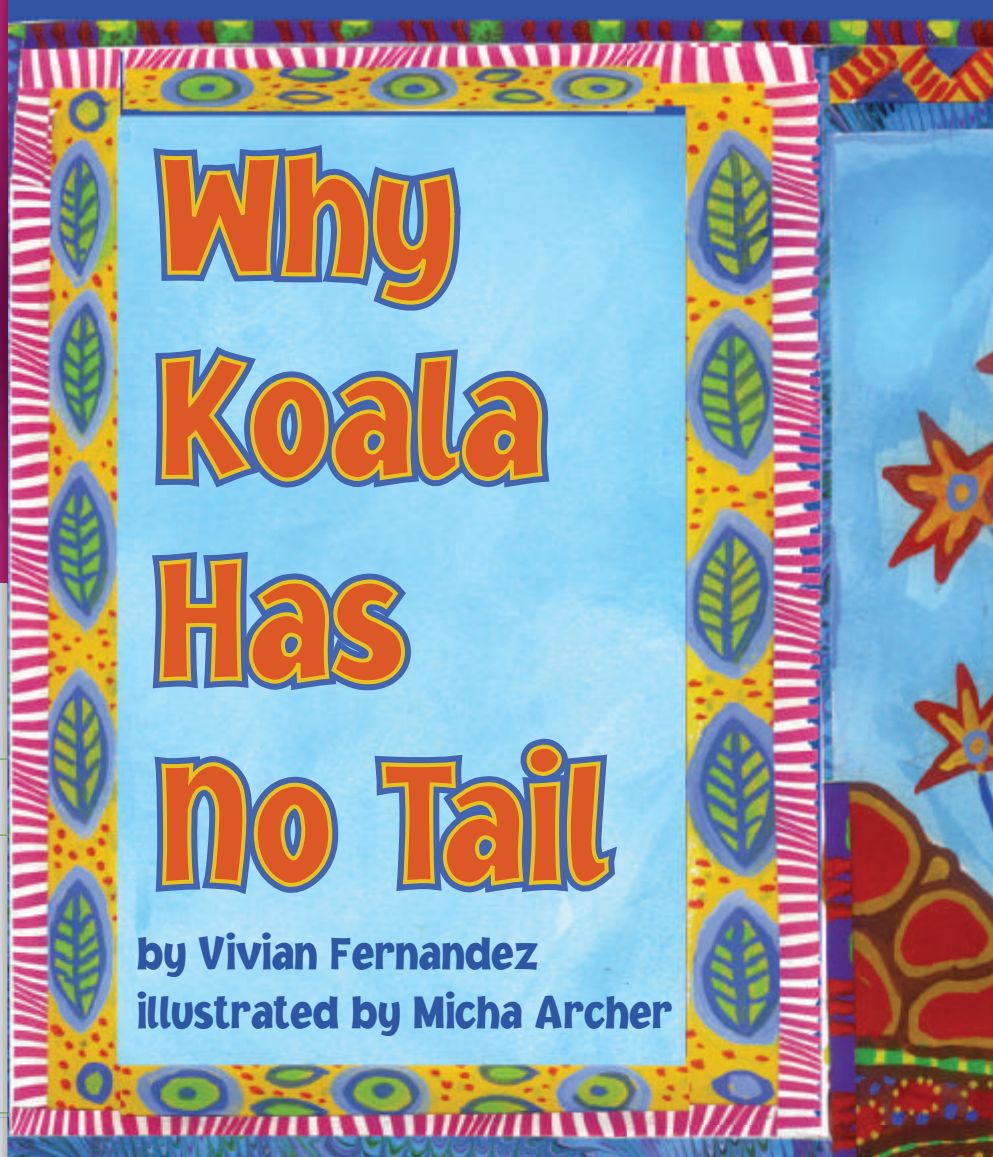
✓ TEXT FOCUS

Characteristics of Myths

Many myths feature animal characters that act like people. These characters often have one special trait, such as determination or wisdom. Myths also include a lesson or an explanation meant to help readers understand how something in nature has come to be.



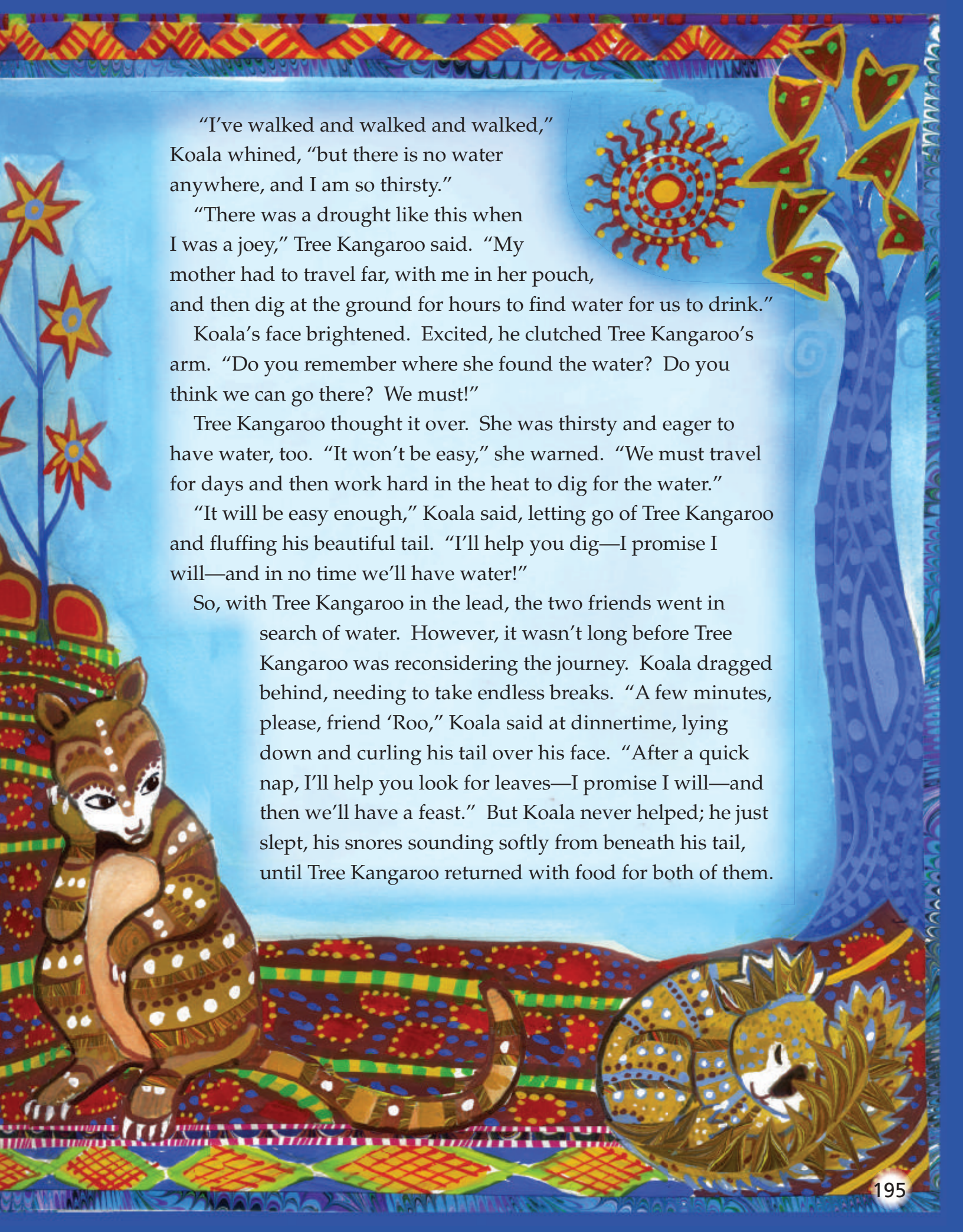
RL.5.10 read and comprehend literature



One day, in a long-ago time, Tree Kangaroo sat high above the ground, chewing worriedly on her bottom lip. It had been many days since the last rains. The grasses had dried, and the normally lush trees were bare except for a few scraggly leaves.

"Friend 'Roo," someone called from below. "Do you see water from where you sit?"

Tree Kangaroo looked down and saw Koala tugging anxiously on his long, bushy tail. "No water," Tree Kangaroo said, jumping down to stand next to Koala.



"I've walked and walked and walked," Koala whined, "but there is no water anywhere, and I am so thirsty."

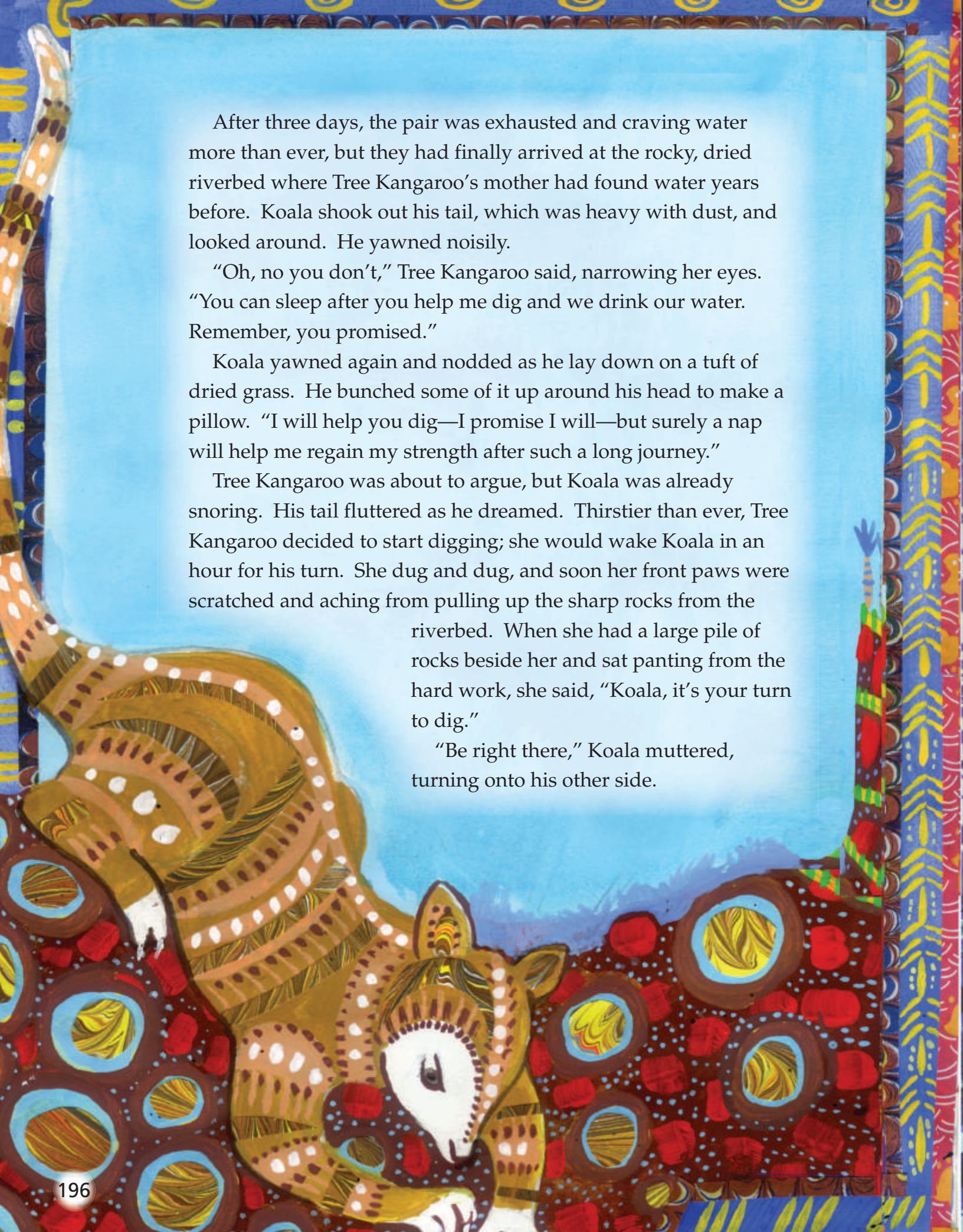
"There was a drought like this when I was a joey," Tree Kangaroo said. "My mother had to travel far, with me in her pouch, and then dig at the ground for hours to find water for us to drink."

Koala's face brightened. Excited, he clutched Tree Kangaroo's arm. "Do you remember where she found the water? Do you think we can go there? We must!"

Tree Kangaroo thought it over. She was thirsty and eager to have water, too. "It won't be easy," she warned. "We must travel for days and then work hard in the heat to dig for the water."

"It will be easy enough," Koala said, letting go of Tree Kangaroo and fluffing his beautiful tail. "I'll help you dig—I promise I will—and in no time we'll have water!"

So, with Tree Kangaroo in the lead, the two friends went in search of water. However, it wasn't long before Tree Kangaroo was reconsidering the journey. Koala dragged behind, needing to take endless breaks. "A few minutes, please, friend 'Roo," Koala said at dinnertime, lying down and curling his tail over his face. "After a quick nap, I'll help you look for leaves—I promise I will—and then we'll have a feast." But Koala never helped; he just slept, his snores sounding softly from beneath his tail, until Tree Kangaroo returned with food for both of them.

A stylized illustration of a kangaroo and a koala in a desert landscape. The kangaroo, with a long tail and a body covered in brown and white patterns, is on the left. The koala, with a white face and brown body, is in the foreground. The ground is dark brown with red and yellow circular patterns. The background is a light blue sky. The entire page is framed by a colorful border with yellow and blue patterns.

After three days, the pair was exhausted and craving water more than ever, but they had finally arrived at the rocky, dried riverbed where Tree Kangaroo's mother had found water years before. Koala shook out his tail, which was heavy with dust, and looked around. He yawned noisily.

"Oh, no you don't," Tree Kangaroo said, narrowing her eyes. "You can sleep after you help me dig and we drink our water. Remember, you promised."

Koala yawned again and nodded as he lay down on a tuft of dried grass. He bunched some of it up around his head to make a pillow. "I will help you dig—I promise I will—but surely a nap will help me regain my strength after such a long journey."

Tree Kangaroo was about to argue, but Koala was already snoring. His tail fluttered as he dreamed. Thirstier than ever, Tree Kangaroo decided to start digging; she would wake Koala in an hour for his turn. She dug and dug, and soon her front paws were scratched and aching from pulling up the sharp rocks from the riverbed. When she had a large pile of rocks beside her and sat panting from the hard work, she said, "Koala, it's your turn to dig."

"Be right there," Koala muttered, turning onto his other side.

Tree Kangaroo took another minute to catch her breath, using her paws to shield her eyes from the bright, hot sun. She was exasperated, but still thirsty, so she continued to dig. Koala slept on. Eventually, Tree Kangaroo began to see a shimmer of moisture on the rocks she was digging out, and her tender paws touched wet soil, and then—"Water!" she cried, overjoyed.

"Finally!" Koala said, instantly awake. He ran to where Tree Kangaroo was bent over the hole, tasting the delicious water at last. As he pushed Tree Kangaroo out of his way and took a long, greedy drink, his twitchy tail cut across the edge of one exceptionally sharp rock in Tree Kangaroo's pile. "My tail!" he cried when he saw it had been sliced clean off. Not even a small fluffy nub remained. Forgetting the water, he ran away, wailing, never to return to the area again.



Koala's laziness and greed had cost him his beautiful bushy tail, and since that day, all koalas have been born tailless as a reminder to work hard and to share.





Compare Texts

TEXT TO TEXT

Compare Genres Review “Quest for the Tree Kangaroo” and “Why Koala Has No Tail.” With a partner, complete a T-Map, recording details from each selection that describe the tree kangaroo. Compare and contrast the details and images of the tree kangaroo that each selection conveys. Then discuss how the genre of each text—an informational text versus a myth—influences how the tree kangaroo is portrayed.



TEXT TO SELF

Write a Letter What do you find most interesting or admirable about the work that Lisa and her team are doing? Write a letter to a member of the expedition, sharing your feelings about the scientists’ activities. Support your opinions with text evidence and quotes.



TEXT TO WORLD

Make a Poster With a partner, do further research on the tree kangaroo or another endangered animal. Use reliable print or electronic sources to find out more about the animal, why it is endangered, and what is being done to help protect it. Make an awareness poster, presenting the key points of your research. Share your poster with the class.



RI.5.1 quote accurately when explaining what the text says explicitly and when drawing inferences; **RI.5.7** draw on information from print and digital sources to locate answers or solve problems; **RI.5.9** integrate information from several texts on the same topic; **W.5.7** conduct short research projects that use several sources to build knowledge through investigation

Grammar



What Is a Verb? A **verb** is a word that can show action or state of being. Sometimes a verb is made up of more than one word—a main verb and a helping verb. **Verb tenses** can be used to convey various times, sequences, states, and conditions.

Verb Tenses Used to Convey Information

The trackers **bark** up the tree. The trackers **barked** up the tree. The trackers **will bark** up the tree.

Time Three tenses of *bark* are used to show action occurring in the past (*barked*), present (*bark*), and future (*will bark*).

The trackers **know** that they **made** the right decision.

Sequence Verb tense shows the order of events. The trackers know now that they made the right decision earlier.

The scientists **will examine** the tree kangaroo if the trackers **catch** it.

Condition Verb tense shows that one action or state of being depends on a condition being met. The scientists will examine the animal in the future—but only if the trackers catch it in the present.

The trackers **felt** happy about their success.

State Tenses of linking verbs indicate when the subject is in a particular state of being. The trackers were in a state of happiness in the past.

Try This!

Work with a partner. Identify helping verbs and main verbs in the sentences. Then tell whether each verb conveys time, sequence, state, or condition.

- 1 After I read the tree kangaroo article, I will watch the video.
- 2 I will learn even more if I get that book from the library.
- 3 The book includes many illustrations and explanations.
- 4 I will be an expert on these fascinating animals.

You can make your writing strong by using verbs that convey details and information vividly and accurately.

Sentence with Vague Verb



The tree kangaroo went up into a tree.

Sentence with Exact Verb



The tree kangaroo scrambled up into a tree.



The scientist watched the tree branches.



The scientist peered into the tree branches.



Connect Grammar to Writing

As you revise your procedural composition, replace vague verbs with exact verbs to show readers what you mean. Exact verbs will help clarify the actions and events you write about.



W.5.2a introduce a topic, provide an observation and focus, group related information/include formatting, illustrations, and multimedia; **W.5.2c** link ideas within and across categories of information using words, phrases, and clauses; **W.5.2d** use precise language and domain-specific vocabulary; **W.5.4** produce writing in which development and organization are appropriate to task, purpose, and audience

Informative Writing



✓ Organization In a **procedural composition**, you describe a process, or series of events or steps. You should begin by introducing the topic. Then explain each event in the order in which it happens or should happen. Using transition words such as *first*, *next*, *then*, and *finally* will make the order of events more clear to readers.

Barry wrote a procedural composition explaining how to plan a science fair project. Later, he reordered events and added transition words to link his ideas. Use the Writing Traits Checklist below as you revise your writing.



Writing Traits Checklist

- ✓ Ideas**
Did I describe the steps in a process?
- ✓ Organization**
Did I explain events in order and use transitions to link ideas?
- ✓ Sentence Fluency**
Did I use verbs correctly?
- ✓ Word Choice**
Did I use specific nouns and strong verbs?
- ✓ Voice**
Did I express my ideas in a clear and interesting way?
- ✓ Conventions**
Did I use correct spelling, grammar, and punctuation?

Revised Draft

The next steps have to do with planning your experiment and gathering supplies.

Include a hypothesis, or what you think you will discover. ^{Second,} Make a list of supplies that you will need. ^{First,} Write out a plan for how you will do your experiment. Finally, think about any special requirements.

How to Plan a Science Fair Project

by Barry Williams

Entering a science fair is a big job for most fifth graders. They have to prepare carefully for their experiments. What does it take to have a winning science fair project?

Think about your favorite science topic and write two or three experiments that relate to it. For example, maybe you'd like to study moonlight and whether it affects plants. Once you have written your experiments, choose the one you like best.

The next steps have to do with planning your experiment and gathering supplies. First, write out a plan for how you will do your experiment. Include a hypothesis, or what you think you will discover. Second, make a list of supplies that you will need. Finally, think about any special requirements. Will you need a special location or other students to help you? Put all of this information in your plan and get your teacher to approve it.

After your plan is approved, it is time to experiment. Work carefully and take many notes about what happens. Even after all your planning, there is a chance you will face challenges—but don't worry. One of these challenges could lead you to a great scientific discovery!

Reading as a Writer

Which steps did Barry reorder? What transitions did he use to clarify sequence? How can you clarify the process in your own composition for readers?

In my final paper, I reordered steps in the process and added transitions to make the sequence of events more clear. I also checked to see that I used verbs correctly.

