

NATIONAL GEOGRAPHIC



# Young Explorer



## Chameleons! <sup>1</sup>/<sub>2</sub>

**Making Music 10    Let It Glow 18**

## TEACHER'S GUIDE Scout and Voyager Vol. 18 No. 4

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Educational consultant **Stephanie Harvey** has helped shape the instructional vision for this Teacher's Guide. Her goal is to ensure you have the tools you need to enhance student understanding and engagement with nonfiction text.

### Lexile® Framework Levels

#### Scout

*Some articles with characteristics of emergent text will be easier for students to read. You may find that other articles are better suited for teacher read-alouds.*

#### Voyager

Chameleons ..... 370L  
Making Music ..... 370L  
Let It Glow ..... 370L

### National Standards Supported

- Common Core State Standards (CCSS)
- Next Generation Science Standards (NGSS)
- C3 Framework for Social Studies State Standards (C3)

For additional resources to extend your students' learning, visit EXPLORER's website:

**NATGEO.ORG/EXPLORERMAG-RESOURCES**

## INTRODUCTION

### BACKGROUND

Since 1888, the National Geographic Society has funded scientists and explorers and shared their findings with the world. To support educators who use our resources, we have created a Learning Framework, which lays out what we believe students should learn from their experiences with the Society.

### PURPOSE

The Learning Framework was designed to convey the Society's core beliefs and values. It is built around a set of attitudes, skills, and knowledge that embody the explorer mindset.

To determine the learning outcomes within the Learning Framework, we dug deep into national standards in key subject areas. We also sought advice from subject matter and child development experts, along with the combined expertise of NG instructional designers, researchers, and content developers. To learn more, go to: <https://www.nationalgeographic.org/education/learningframework/>.

### IMPLEMENTATION

Each article in this magazine has a knowledge-based link to the Learning Framework.

## MINDSET OF AN EXPLORER

### KEY FOCUS AREAS

#### A — Attitudes

*National Geographic kids are:*

**CURIIOUS** about how the world works, seeking out new and challenging experiences throughout their lives.

**RESPONSIBLE**, with concern for the welfare of other people, cultural resources, and the natural world. NG kids are respectful, considering multiple perspectives, and honoring others regardless of differences.

**EMPOWERED** to make a difference. NG kids act on curiosity, respect, and responsibility. They are adventurous and persist in the face of challenges.

#### S — Skills

*National Geographic kids can:*

**OBSERVE** and document the world around them and make sense of those observations.

**COMMUNICATE** experiences and ideas effectively through language and media. They are storytellers!

**COLLABORATE** with others to achieve goals.

**SOLVE PROBLEMS** by generating, evaluating, and implementing solutions after identifying alternatives, weighing trade-offs, and making well-reasoned decisions.

#### K — Knowledge

*National Geographic kids understand:*

**THE HUMAN JOURNEY** is all about where we have been, where we live now (and why), and where we are going.

**OUR CHANGING PLANET** encompasses all that coexists on our planet—interconnected through systems that generate and nurture each other.

**WILDLIFE AND WILD PLACES** inhabit our planet—from the butterflies in our backyards to the lions in Africa.

# LANGUAGE ARTS Merge Thinking with New Learning: Stop, Think, and React to New Information

## Kindergarten Standard Supported

- **CCSS Reading Informational Text:** With prompting and support, ask and answer questions about key details in a text. (K-1)

## First Grade Standard Supported

- **CCSS Reading Informational Text:** Ask and answer questions about key details in a text. (1-1)

## CONNECT & ENGAGE (5 minutes)

*Kids are in a group on the floor in front of you. Sit on a low chair and hold up the magazine.*

**Whoa! Take a look at this cover. What do you think about when you see this creature? Turn to each other and talk.**

*Kids turn and talk about the image on the cover.*

**That's a pretty unusual animal. The title is "Chameleons!" Turn and talk about what you think the title tells us.**

*Kids turn and talk about the word chameleons. Some have an idea; others aren't sure.*

**I think chameleons might be the type of animal this is. I am thinking that because I already know chameleons are a kind of lizard, and the animal on the cover looks like a lizard. Take a minute and preview pages 2 and 3 and see what you notice.**

*Kids flip through, oohing and ahing as they peruse.*

**Is anyone getting a better idea of what chameleons are? Does anyone want to share what they notice about chameleons?**

*A few kids share out.*

**Titles can sometimes give clues about what an article might be about. Let's read on and find out more about chameleons.**

## MODEL (10 minutes)

This very cool article is nonfiction, which means it has real, true information. Nonfiction writers write nonfiction to give us information, to teach us something. Nonfiction readers read to learn new information. One of the most important nonfiction reading strategies is to stop and think about new information and see if it connects with things

## What You Will Need

- "Chameleons!" (*Young Explorer*, pages 2–9)
- Think Sheet (Teacher's Edition, page 6)
- Clipboards
- Pencils

we already know. It helps to slow down and pay close attention to the details. We need to notice when we learn something new and take time to think about it. In that way, we have a better shot at remembering and understanding it.

I am going to read through a bit of this article and show you my thinking when I learn something new. I am going to stop, think, and react to new information by marking an *L* for Learn on a sticky note. I'm also going to jot down or draw my new learning and my reactions. A reaction is a thought or feeling you have.

**Turn to each other and talk. Have you ever read any nonfiction and learned something new?**

*Kids turn and talk. A few share out their ideas.*

**Okay, let me show you how it works for me.**

*Point out the photos on pages 4 and 5 of a chameleon's tail and toes.*

**Wow! I've already learned something new just from the photos. Chameleons have amazing parts! I'm going to mark a sticky note with an *L* for Learn and draw the chameleon's tail wrapping around a branch and its toes with the sharp claws holding on tightly to a branch.**

*Mark the sticky note with an *L* and draw the wrapping tail and the gripping toes. Then read the paragraphs on pages 4 and 5.*

I'm also going to mark my reaction on the sticky note, or my thought or feeling about what I read! I think that a chameleon's parts are pretty helpful, so I'm going to write "helpful parts" next to my drawings.

When readers stop and react to new information in text and photos, they learn more, and that makes reading a lot more fun.

# LANGUAGE ARTS Merge Thinking with New Learning: Stop, Think, and React to New Information



## GUIDE (10 minutes)

*Hand out the Think Sheets attached to the clipboards. Kids remain grouped in front of you on the floor.*

So what did you see me do as I was reading the section about the chameleon's tail and toes? Turn and talk about what you noticed me doing.

*Kids talk and share out things such as "I noticed you drew your new learning." "I noticed you mark your sticky note with an L for Learn." "I noticed you had reactions like 'helpful parts.'"*

Good thinking. I am going to read on. I'm thinking that this part may be about even more of the helpful parts chameleons have. What do you think?

Now it's your turn. As I read this part, when you learn something new, mark a Think Sheet rectangle with an L and write or draw your new learning. Feel free to add your reactions, too. We remember information more thoroughly when we react to it.

*Read the first paragraph on page 6.*

Wow! Some amazing information here! If you learned anything new, jot it down or sketch it. Don't forget to mark a Think Sheet rectangle with an L for Learn.

Okay, now turn and talk, sharing what you learned and any reactions you had.

*Kids turn and talk.*

Who would like to share their new learning?

*Several kids share out.*

Great, now I'll read on. There is so much new information here. This stuff about their eyes is new to me and kind of confusing. If you are confused, let me know, and I will check in with you.

**TEACHER TIP:** It's always good to make sure that confusions get clarified. Otherwise misconceptions abound. When reading nonfiction, continually check in with students to make sure there are no misconceptions.

Okay, go ahead and turn to the person next to you and share any new information you jotted or sketched on your Think Sheet.

*A few kids share out their new learning as well as any clarifications they made.*

## COLLABORATE (25 minutes)

Now it's time for you to read the rest of the article with a partner. As you read, think about why this article is called "Chameleons!" and why the title has an exclamation mark at the end. What is amazing about the chameleon's body parts? Keep the title in mind and keep that question in mind.

*Kids partner up to continue reading the article.*

As you are reading, remember to stop, think, and react to new information, and mark your Think Sheet with an L for Learn when you learn something new. If you finish the article, feel free to keep reading and practicing the strategy with your choice of another article in the magazine. Does this make sense? Any questions? Okay, Happy reading!

*Partners read the rest of the article and continue reading their choice of the other two selections, as they practice the strategy. Move around the room, conferring with partners.*

## SHARE THE LEARNING (10 minutes)

*Kids join a sharing circle with you and share out, using respectful language.*

Okay, flip through your article and choose a Think Sheet rectangle that you would like to share. I am going to invite [student name] to share new learning. We are going to share using respectful language. So when I ask: "[student name] would you like to share your new learning?" You need to say: "Yes thank you." Then you can share your learning. Then you can invite someone else to share. To do that, you need to call on the person by name and use the same language we just practiced. When we use polite, respectful sharing language, everyone pays closer attention to the important information being shared.

## **LANGUAGE ARTS** Merge Thinking with New Learning: Stop, Think, and React to New Information

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*Kids share out and invite others to share, always using the respectful sharing language that was modeled. There should be time for about 3 or 4 kids to share out with the whole group. Once they are finished, have everyone turn and share with the person next to them, so that all have a chance to be heard.*

**You learned so much today about chameleons. What was unusual and surprising about these animals? Turn and talk about that.**

*Several kids share out.*

**These animals have amazing parts, like eyes that can look in different directions and skin that changes color to show how they feel. That is awesome! Do you agree that these parts are amazing? Which ones do you wish you had?**

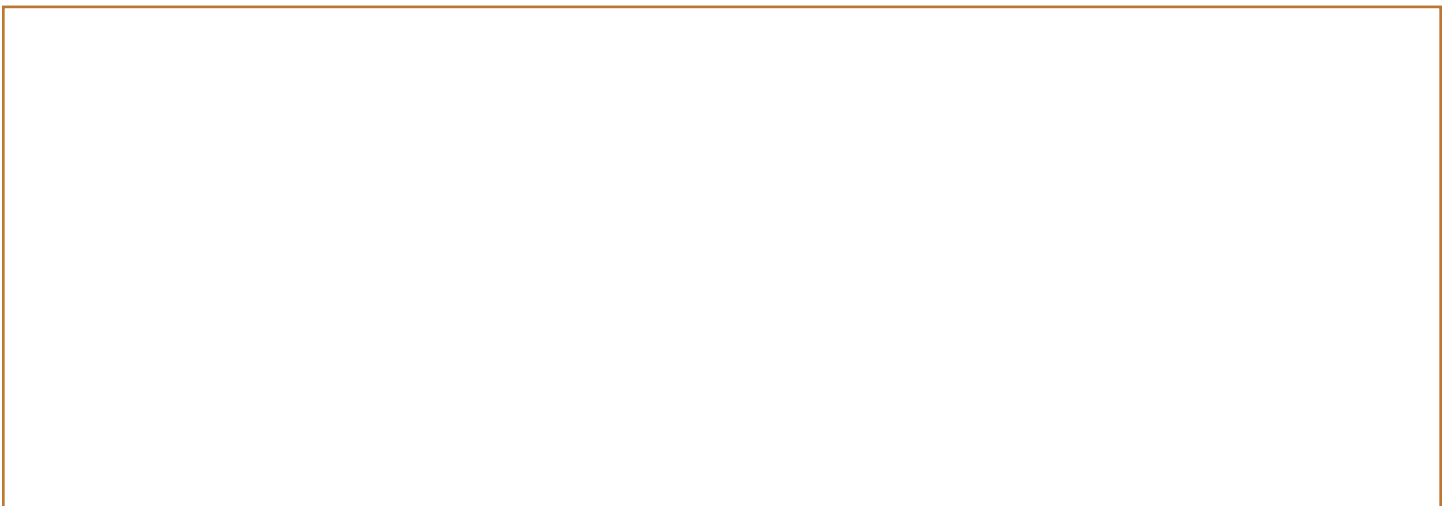
**Fascinating information! So remember when you read nonfiction, it is important to stop, think, and react to new information, marking any new learning with an *L*. Nonfiction is all about reading to learn, so we want to learn, remember, and understand what we have read. Great job today, everyone!**

Name \_\_\_\_\_

Date \_\_\_\_\_

**THINK SHEET**

Write or draw new learning.



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# LESSON FRAME Merge Thinking with New Learning: Stop, Think, and React to New Information

This frame is a template of the language arts lesson. It has the instructional moves and language of the lesson, but the specific content has been removed. This way you can use the Lesson Frame for the other articles in the issue or for any nonfiction text you might be teaching.

## What You Will Need

- Nonfiction text
- Think Sheet template
- Clipboards
- Pencils

## CONNECT & ENGAGE (5 minutes)

*Kids are in a group on the floor in front of you. Sit on a low chair and hold up the magazine.*

**Whoa! Take a look at this picture. What do you think about when you look at this picture? Turn to each other and talk about that.** *(Kids turn and talk about the picture.)*

The title of this article is \_\_\_\_\_. Turn and talk about what you think the title tells us. *(Kids turn and talk about the title. Some have an idea; others aren't sure.)*

I think the title might tell us \_\_\_\_\_. I think this because \_\_\_\_\_. Take a minute and preview pages \_\_\_\_\_ and see what you notice. *(Kids flip through the pages.)*

Does anyone want to share what they notice about \_\_\_\_\_? *(A few kids share out.)*

Titles can sometimes give clues about what an article might be about. Let's read on and find out more about \_\_\_\_\_.

## MODEL (10 minutes)

*Kids sit in a group on the floor, with you in a low chair in front of them.*

This very cool article is nonfiction, which means it has real, true information. Nonfiction writers write nonfiction to give us information, to teach us something. Nonfiction readers read to learn new information. One of the most important nonfiction reading strategies is to stop and think about new information and see if it connects with things we already know. It helps to slow down and pay close attention to the details. We need to notice when we learn something new and take time to think about it. In that way, we have a better shot at remembering and understanding it.

I am going to read through a bit of this article and show you my thinking when I learn something new. I am going to stop, think, and react to new information by marking an *L* for Learn on a sticky note. I'm also going to jot down or draw my new learning and my reactions. A reaction is a thought or feeling you have.

Turn to each other and talk. Have you ever read any nonfiction and learned something new? *(Kids turn and talk. A few share out their ideas.)*

Okay, let me show you how it works for me. *(Point out a photo.)* Wow! I've already learned something new just from the photo. I'm going to mark a sticky note with an *L* for Learn and draw what I learned so I keep my new learning in mind. I'm also going to mark my reaction on the sticky note, or my thought or feeling about what I read.

When readers stop and react to new information in text and photos, they learn more, and that makes reading a lot more fun.

## GUIDE (10 minutes)

*Hand out the Think Sheets attached to the clipboards. Kids remain grouped in front of you on the floor.*

So what did you see me do as I was reading the section about \_\_\_\_\_? Turn and talk about what you noticed me doing. *(Kids talk and share out what they noticed.)*

Good thinking! Now it's your turn. As I read this part, when you learn something new, mark a Think Sheet rectangle with an *L* and write or draw your new learning. Feel free to add your reactions, too. We remember information more thoroughly when we react to it.

*Read the first paragraph on page \_\_\_\_.* Wow! Some amazing information here! If you learned anything new, jot it down or sketch it. Don't forget to mark a Think Sheet rectangle with an *L* for Learn.

# LESSON FRAME Merge Thinking with New Learning: Stop, Think, and React to New Information



Okay, now turn and talk, sharing what you learned and any reactions you had. (*Kids turn and talk.*) Who would like to share their new learning? (*Several kids share out.*)

## COLLABORATE (25 Minutes)

Now it's time for you to read the rest of the article with a partner. As you read, think about why this article is called \_\_\_\_\_. (*Kids partner up to continue reading the article.*)

As you are reading, remember to stop, think, and react to new information, and mark your Think Sheet with an *L* for Learn when you learn something new. If you finish the article, feel free to keep reading and practicing the strategy with your choice of another article in the magazine. Does this make sense? Any questions? Okay, Happy reading!

*Partners read the rest of the article and continue reading their choice of the other two selections, as they practice the strategy. Move around the room, conferring with partners.*

## SHARE THE LEARNING (10 minutes)

*Kids join a sharing circle with you.*

Okay, flip through your article and choose a Think Sheet rectangle that you would like to share. I am going to invite [student name] to share new learning. We are going to share using respectful language. So when I ask: "[student name] would you like to share your new learning?" You need to say: "Yes thank you." Then you can share your learning. Then you can invite someone else to share. To do that, you need to call on the person by name and use the same language we just practiced. When we use polite, respectful sharing language, everyone pays closer attention to the important information being shared.

*Kids share out and invite others to share, always using the respectful sharing language that was modeled. There should be time for about 3 or 4 kids to share out with the whole group. Once they are finished, have everyone turn and share with the person next to them, so that all have a chance to be heard.*

You learned so much today about \_\_\_\_\_. What was unusual and surprising about \_\_\_\_\_? Turn and talk about that. (*Several kids share out.*)

Fascinating information! So remember when you read nonfiction, it is important to stop, think, and react to new information, marking any new learning with an *L*. Nonfiction is all about reading to learn, so we want to learn, remember, and understand what we have read. Great job today, everyone!



## SCIENCE

### Kindergarten Standard Supported

- **NGSS Crosscutting Concepts: Patterns:** Patterns in the natural and human designed world can be observed and used as evidence. (K-LS1-1)

### First Grade Standard Supported

- **NGSS LS1.D: Information Processing:** Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs. (1-LS1-1)

### What You Will Need

- Reptiles poster (Teacher's Edition)
- Science Master (page 10)

### Science Background

Chameleons are reptiles that mostly live in the rain forests and deserts of Africa, Asia, and Europe. There are more than 150 different species.

Chameleons have different adaptations that help them survive. One is their long, sticky tongues. A chameleon's tongue can fire out at great speed and to a distance of more than twice its body length. When it hits the intended prey, the tongue sticks to it and pulls the prey in.

Chameleons live in trees and bushes. Their feet and tails help them stay in place. A chameleon's toes are divided into groupings that allow it to grasp branches as it walks. Its tail coils around branches so it can balance.

Chameleons have cone-shaped eyes that can rotate and focus in different directions at the same time. This allows a chameleon to see its entire surroundings.

Chameleon skin can change colors. Contrary to popular belief, chameleons do not change colors to blend in with their surroundings. Rather, chameleons change colors to communicate or to respond to changes in mood or temperature.

### ENGAGE

Display three photos of chameleons, two of which show the same chameleon with different colors. Encourage students to compare and contrast the animals they see. Challenge students to identify the photos that show the same chameleon and then explain why the chameleon looks different in the photos.

### EXPLORE

Display pages 2-3 of the projectable magazine. Have students examine the photos. Read aloud the headline and text. Poll the class to see how many students think all of the photos could be showing parts of the same animal. Challenge them to defend their opinions. Then read the article aloud or have students read it in groups, with a partner, or on their own.

### EXPLAIN

After reading, instruct students to identify the different chameleon body parts that they read about in the article (*tail, toes, tongue, eyes, skin*). Have students turn and talk as they discuss what they learned about a chameleon's tail. (*It curls around branches and helps the chameleon hold on.*) Invite volunteers to point out examples of this in the photos. With their partners, have students identify, discuss, and find examples of the other body parts they read about. Challenge students to explain how the parts work together to help a chameleon survive.

### ELABORATE

Display the Reptiles poster. Read aloud the text at the top. Remind students that a chameleon is a reptile. Challenge them to find the chameleon on the poster (*column 2, row 1*). Ask: **What kind of reptile is a chameleon?** (*lizard*) **What other types of reptiles does this poster show?** (*crocodilia, snakes, turtles and tortoises*) **What are three things all reptiles have in common?** (*They have backbones, scales, and breathe air.*) Challenge students to identify major differences between the four reptile groups. Then invite students to share what else they know about reptiles.

### EVALUATE

Have students complete the Science Master for this lesson. Encourage them to share and compare their results in small groups or with a partner.

Name \_\_\_\_\_

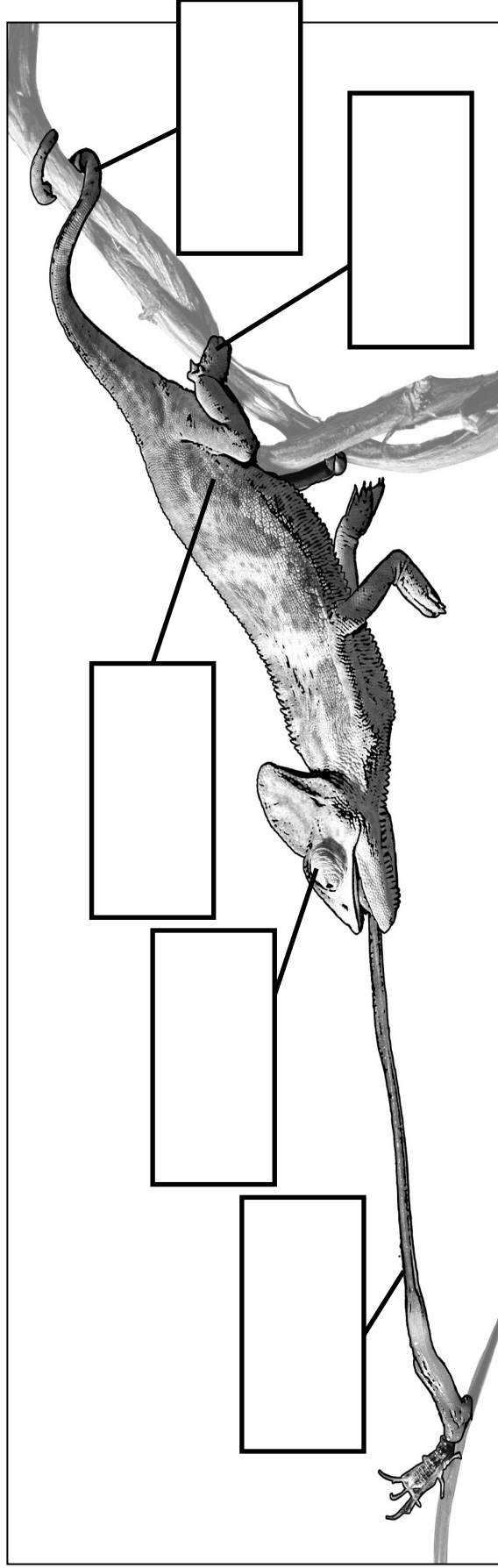
Date \_\_\_\_\_

## SCIENCE: Chameleons

Use the words in the Word Bank to name each part of a chameleon.

Then use the words to complete the sentences.

eye      tail      skin      tongue      toes



1. A chameleon uses its long \_\_\_\_\_ to catch bugs.
2. A chameleon's \_\_\_\_\_ is curly.
3. Each \_\_\_\_\_ can look a different way.
4. A chameleon's \_\_\_\_\_ can change colors.
5. Chameleons have strong \_\_\_\_\_.

## SCIENCE

### Kindergarten Standard Supported

- **NGSS Crosscutting Concepts: Cause and Effect:** Simple tests can be designed to gather evidence to support or refute student ideas about causes. (K-PS2-1), (K-PS2-2)

### First Grade Standard Supported

- **NGSS PS4.A: Wave Properties:** Sound can make matter vibrate, and vibrating matter can make sound. (1-PS4-1)

### What You Will Need

- Words for Sounds poster (Teacher's Edition)
- Science Master (page 12)

### Science Background

Sound is a form of energy created when objects vibrate, or move back and forth quickly. As objects vibrate, so do air particles around them. As the air particles move and bump into one another, they create a sound wave.

When a sound wave reaches your ears, the air particles in your ears begin to vibrate. The vibrations travel through the ear to the auditory nerve, which sends a signal on to the brain where it is turned into a sound you can understand.

The speed of vibrations in a sound wave determines the type of sound you hear. If the vibrations are moving fast, the sound is high. If they are slow, the sound is low. When the vibrations stop, the sound wave runs out of energy and the sound stops.

The size of a sound wave is important, too. Bigger waves make louder sounds. You can see this if you put rice on top of a drum and then tap the drum. When you tap, the skin of the drum vibrates, the rice moves, and you hear a sound. If you tap harder, you create a bigger sound wave so the sound is louder and the rice moves farther.

Music is produced by periodic vibrations that have regular wave patterns, like the sound of musical instruments.

### ENGAGE

Instruct students to remain quiet and listen closely for one minute. If your classroom is relatively quiet, open the door so students can hear sounds from the hall. After one minute, help students compile a list of sounds they heard. Challenge them to identify the source of each sound.

### EXPLORE

Display pages 10-11 of the projectable magazine. As students examine the photo, play two short clips of music for students to hear—one featuring an orchestra and another with a man singing while playing guitar. Ask: **How are these recordings alike?** (*Both feature music.*) **Which one sounds like what you see in this photo?** (*guitar/singer*) Encourage students to give reasons that support their opinions. Then read the article aloud or have students read it in groups, with a partner, or on their own.

### EXPLAIN

After reading, have students turn and talk with a partner to discuss what they learned about music and sound.

- Music is made from sounds you hear.
- You can make music with many different things—even your own voice.
- Things make sound when they vibrate, or move back and forth very quickly.

Use the illustrations to explore how drums, strings, and voices can create sound. If possible, provide supplies so students can do the experiments on their own. Guide the class to recognize that anything that vibrates can make sound and bigger vibrations make louder sounds.

### ELABORATE

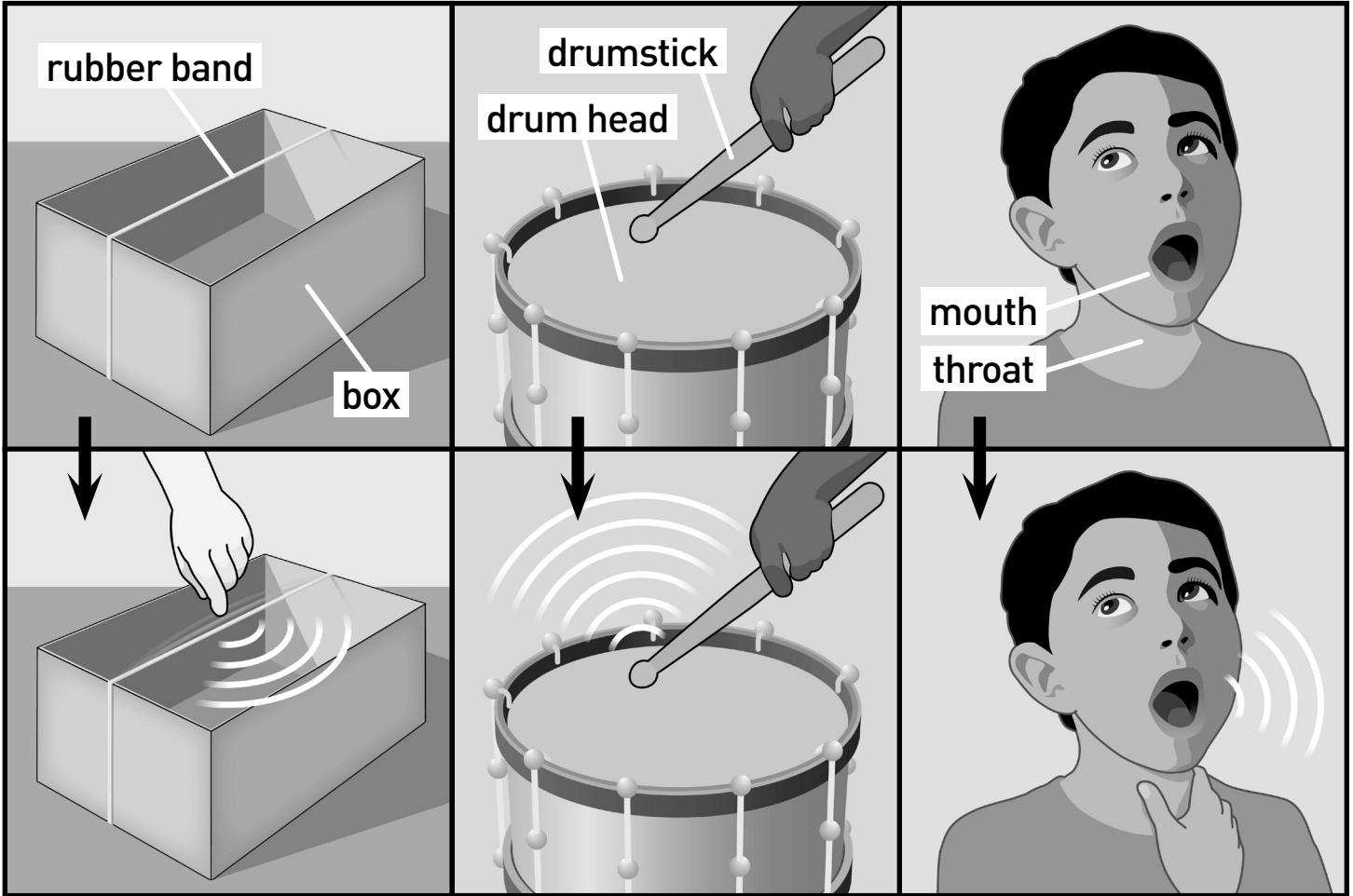
Point out that people often connect specific words with sounds they hear. Display the Words for Sounds poster. Read aloud the text. Encourage students to identify the object associated with each word. Challenge them to come up with more examples of their own.

### EVALUATE

Have students complete the Science Master for this lesson. Encourage them to share and compare their results in small groups or with a partner.

## SCIENCE: Making Music

Look at these pictures. Then follow the directions.



1. Circle the word that tells how each sound is made.

<p>sing beat pluck</p>	<p>sing beat pluck</p>	<p>sing beat pluck</p>
--------------------------------	--------------------------------	--------------------------------

2. Write the part that vibrates, or moves back and forth quickly, to make sound?

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### Kindergarten Standard Supported

- **NGSS Science and Engineering Practices: Analyzing and Interpreting Data:** Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-LS1-1)

### First Grade Standard Supported

- **NGSS PS4.B: Electromagnetic Radiation:** Objects can be seen only when light is available to illuminate them. Some objects give off their own light. (1-PS4-2)

### What You Will Need

- Science Master (page 14)

### Science Background

Some plants and animals can make their own light. Most animals that make their own light live in the ocean. The lights they produce can be different colors. The lights can also help the animals survive in different ways.

One example is the firefly squid. Just 7-8 cm (about 3 in) long, this little squid has special lights on many parts of its body. The lights on the tips of its tentacles and around its eyes are bigger. During the day, the squid lives deep in the ocean. But at night, it comes to the surface to capture prey. Unsuspecting fish that swim toward the lights become a quick meal.

The Atolla jellyfish uses its lights for self-defense. When a predator stalks, the jellyfish flashes bright lights. The lights temporarily blind the potential attacker in the dark sea. They also attract even bigger animals that turn the original predator into prey. Safe for the moment, the jellyfish swims away.

Flashlight fish have light organs beneath their eyes that are filled with glowing bacteria. The fish turn their lights on and off when they blink. At night, they swim to shallow waters and blink less so the lights stay on. This helps them see in the dark water so they can find and catch their prey.

### ENGAGE

Tell students to imagine that they could glow in the dark. Then have them turn and talk to brainstorm ideas about how they could put this new ability to good use in their daily lives.

### EXPLORE

Display pages 18-19 of the projectable magazine. Read aloud the headline and text. Brainstorm ideas about how making their own light could help these animals live in the ocean. Then read the article aloud or have students read it in groups, with a partner, or on their own.

### EXPLAIN

After reading, point out to students that some animals make their own light. Have students turn and talk to discuss how being able to glow could help animals survive in dark ocean waters. Then point out that the light helps animals in different ways. Create a two-column chart like the one below. Collaborate as a class to answer the question for each animal in column 2.

Animal	What Happens When It Glows?
firefly squid	Little fish swim to its lights.
Atolla jellyfish	It can scare away hungry fish.
flashlight fish	It can see food.

Encourage students to think about what happens next in each scenario. For example, when a firefly squid glows, little fish swim to its lights. Then the squid can get food. Have students turn and talk to elaborate on how making light helps the other animals survive.

### ELABORATE

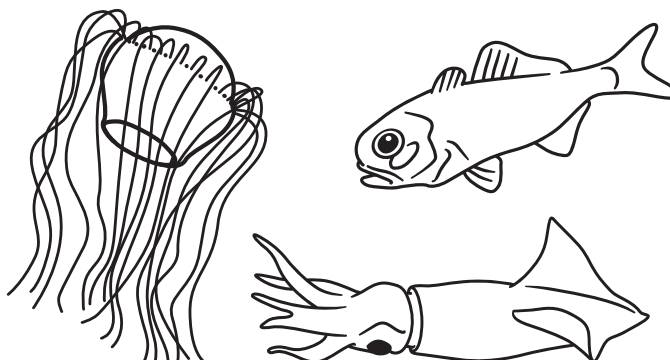
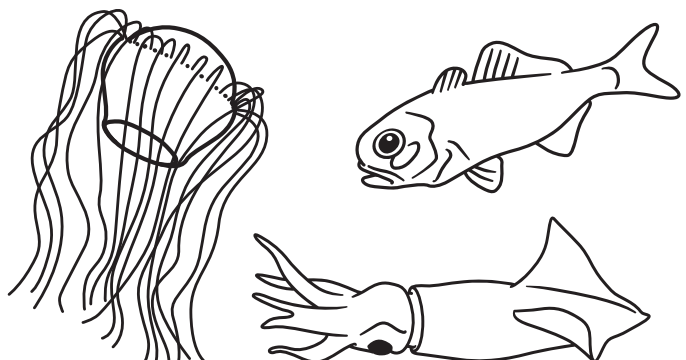
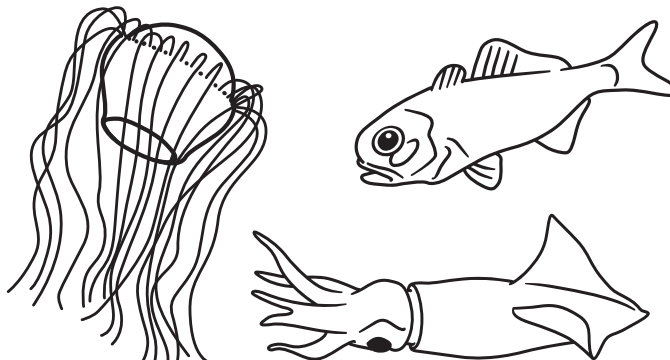
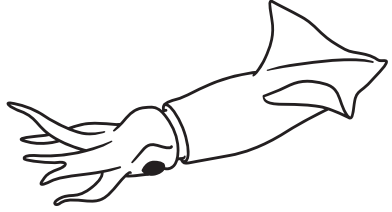
Have students examine the article's photos. Invite them to describe the glowing parts on each animal. Brainstorm ideas about how the different size, color, and location of these parts could help the animals in different ways.

### EVALUATE

Have students complete the Science Master for this lesson. Encourage them to share and compare their results in small groups or with a partner.

**SCIENCE: Let It Glow**

Follow the directions in each box.

<p>Color the animal that is a jellyfish.</p> 	<p>Color the animal that glows to stay safe.</p> 
<p>Color the animal that glows to see food.</p> 	<p>Draw a picture to show what happens when this squid glows.</p> 

Use the words in the Word Bank to finish the sentences.

live	dark	glow
------	------	------

Some ocean animals \_\_\_\_\_.

Light helps them \_\_\_\_\_ in the \_\_\_\_\_.



### Standard Supported

- **C3 Geographic Representations: Spatial Views of the World:** Construct maps, graphs, and other representations of familiar places. (D2.Geo.1.K-2)

### What You Will Need

- Social Studies Master (page 16)

### Social Studies Background

Creating maps is an essential skill that students must learn in order to better understand the world around them. Maps relay knowledge that is both personally and socially useful. Understanding how to read maps helps people make decisions and solve problems, whether they are studying places in ancient history or just trying to find the quickest route to the grocery store.

To create an accurate map, students must know how to gather relevant information about the area the map will represent. That process begins with asking geographic questions and then organizing and analyzing the answers. Students can use those answers to create a detailed map that is simple and easy for others to use.

### ENGAGE

Prior to conducting this activity, take photos of your school's street sign, the number on the front of the building, and the school itself. Display the photo of the street sign. Challenge students to identify it. Show the photo of the number. Do they know what it is? Ask students what they might find if they put these two items together. Then display the photo of the school. Encourage students to explain how these two items led to the school.

### EXPLORE

Display the activity on the back cover of the projectable magazine. Read aloud the Big Idea. Ask: **What does this illustration show?** (*a map of a town*) **Why do you need an address if you already have a map?** (*An address tells you how to find places on a map.*) Read aloud the rest of the activity or have students read it in groups, with a partner, or on their own.

### EXPLAIN

After reading, review the Big Idea with the class. Say: **Every place has its own address. And an address has two parts: a building number and a street name. It's much easier to find a place when you know its address because you know exactly where to go.** Invite students to discuss how they used the addresses in the text to find the store, the school, and the house located at 1 Lake Street. Have students turn and talk with a partner as they use addresses to locate other places on the map.

### ELABORATE

Prior to conducting this activity, draw a large map. Name each street, number each building, and decorate the buildings so students recognize what they are. Then write four sets of simple instructions that all lead to the same place. Divide the class into four groups and give each group a set of instructions. Can they all go from one address to another and find the final destination?

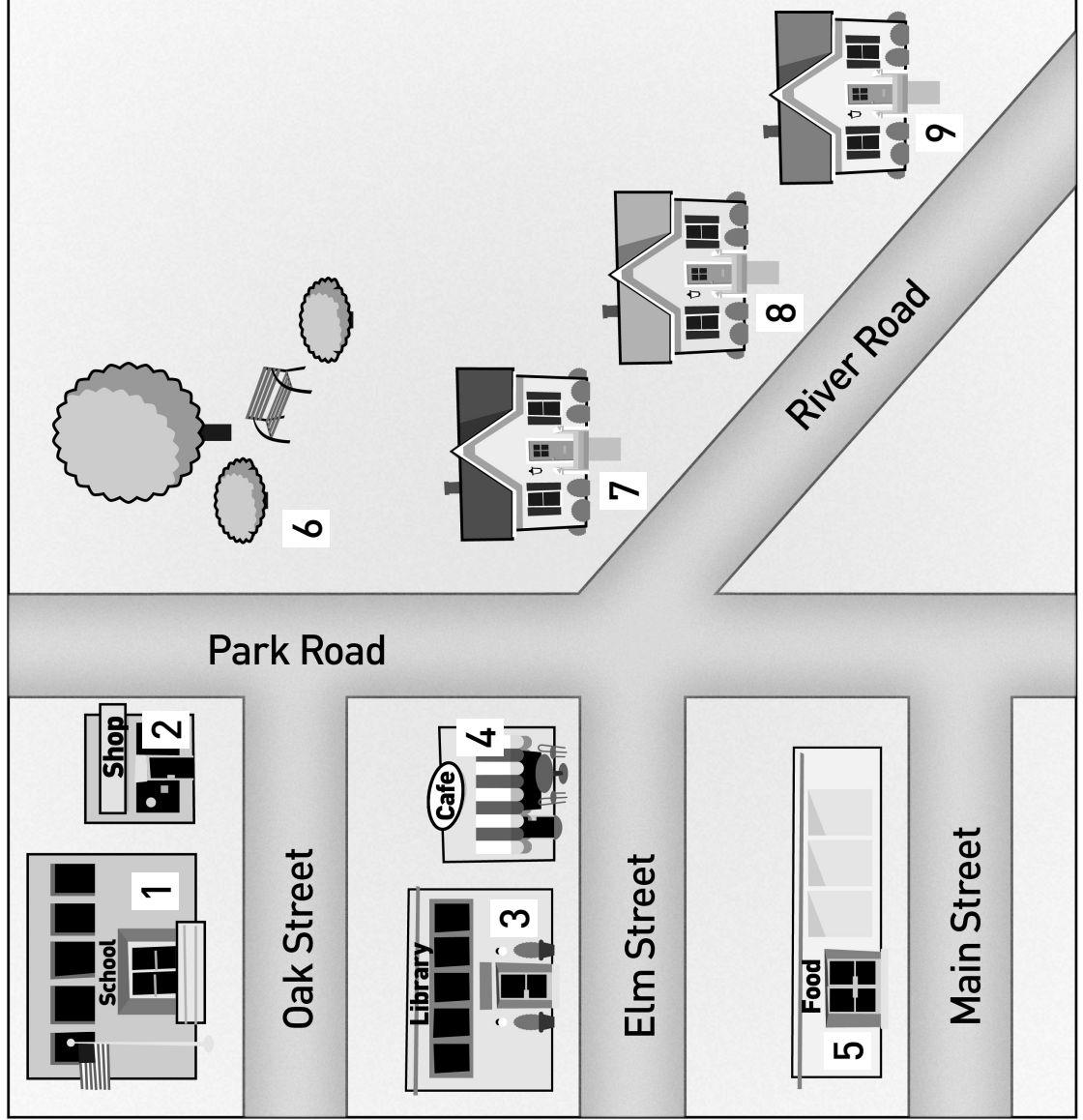
### EVALUATE

Have students complete the Social Studies Master for this lesson. Encourage them to share and compare their results in small groups or with a partner.

## SOCIAL STUDIES: Explore Maps

Find and color each place on the map. Then answer the questions.

- Emma lives at 9 River Road.  
Color her house purple.
- Ben lives at 7 River Road.  
Color his house blue.
- The park is at 6 Park Road.  
Color the park green.
- The food store is at 5 Main Street.  
Color the food store red.
- What is the address of the school?  
\_\_\_\_\_
- What is the address of the cafe?  
\_\_\_\_\_



## ANSWER KEY

### Language Arts

#### Think Sheet, page 6

Students should draw their thinking about the article they read in the rectangles on the Think Sheet.

### Chameleons

#### Science: page 10

Students should write the words *eye*, *skin*, *tail*, *tongue*, and *toes* in the correct boxes.

1. tongue
2. tail
3. eye
4. skin
5. toes

### Making Music

#### Science: page 12

1. Students should circle:

pluck	beat	sing
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2. Students should write:

rubber band	drumhead	throat
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### Let It Glow

#### Science: page 14

top left: Students should color the jellyfish (Atolla jellyfish).

bottom left: Students should color the fish (lantern fish).

top right: Students should circle the jellyfish (Atolla jellyfish).

bottom right: Students should draw little fish swimming toward the squid (firefly squid).

Students should write the correct words from the Word Bank.

Some ocean animals glow.

Light helps them live in the dark.

### Explore Maps

#### Social Studies: page 16

Students should do the following:

1. Color 9 River Road purple.
2. Color 7 River Road blue.
3. Color 6 Park Road green.
4. Color 5 Main Street red.

Questions:

5. The school's address is 1 Oak Street.
6. The cafe's address is 4 Elm Street.

### Explore Maps

#### Back page

1. Should locate the school on the bottom right side of the map.
2. Students locate the yellow house on the top left side of the map.