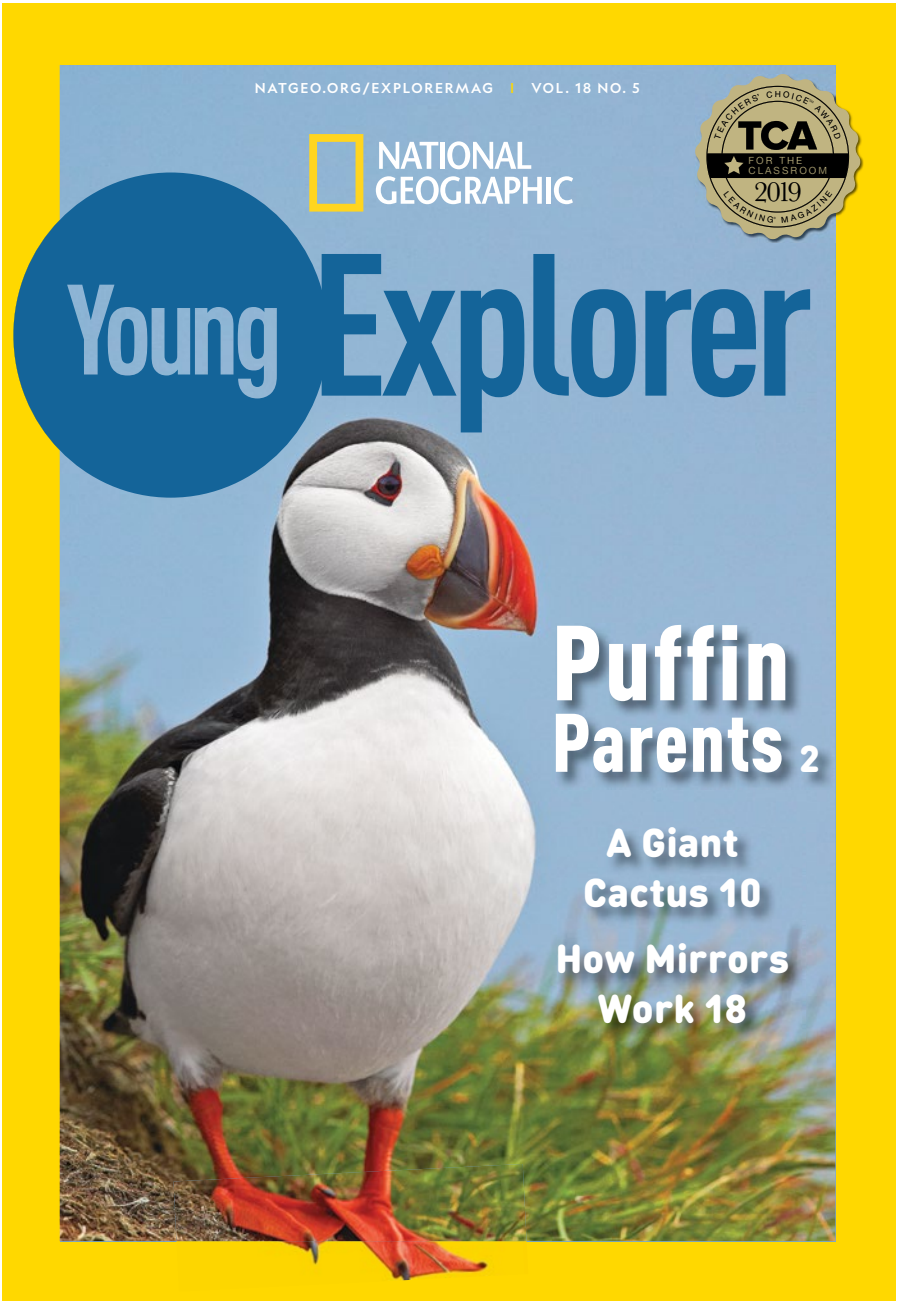


TEACHER'S GUIDE
Scout and Voyager
Vol. 18 No. 5

IN THIS GUIDE:

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

Puffin Parents 370L
A Giant Cactus 360L
How Mirrors Work.....330L

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

National Geographic Learning Framework

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:

CURIOUS 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.

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)

What You Will Need

- "Puffin Parents" (*Young Explorer*, pages 2–9)
- Think Sheet (Teacher's Edition, page 6)
- 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 pages 2–3.

One thing I know for sure is that good readers are curious. They wonder about things that they read. Good readers ask questions as they read to gain new information.

Take a look at pages 2–3. One thing I wonder and a question I have is "What kind of animal is shown here?" Turn to each other and talk about questions you have and what you wonder about this picture.

Kids turn and talk about the picture. You might want to write down some of the questions kids have.

Let's read to see if some of our questions are answered.

Read aloud the title and text on pages 2–3.

When we read the title and the text on these pages, we learn that these are puffins, and puffins are birds that live at sea. Sometimes we have even more questions when we gain new information. Do you have any new questions now? Turn and talk about any new questions you have.

Kids turn and talk about their questions.

We are going to keep asking questions as we read on, because the more we learn, the more we wonder. Remember, good readers are curious!

MODEL (10 minutes)

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

As I continue to read this article about puffin parents, I'm going to think aloud about what I'm wondering and questions I have. I'm going to use a chart to write down the questions I have and what I learned as I read. Listen and watch carefully to notice what I'm doing.

On page 3, the text says the puffins come to land once a year. I'm wondering about that. I have some questions: Why do they come to land? What do they do on land that they can't do in the water? I also wonder if the title "Puffin Parents" gives me a clue. I think it might.

I'm going to stop and write these questions down on my chart in the "I Wonder" column. Then I'm going to read to see if I can find the answers to these questions.

On the board, draw a chart like the one on the Think Sheet. Write the questions in the chart in the "I Wonder" column. Then read pages 4–5 aloud.

Wow! I found out some new information that answers my questions about why the puffins come on land and what they do there that they can't do in the water. They have to come on land to dig a hole in the ground and put grass in the hole. They do that to build a nest for the egg the female will lay. Then both parents care for that egg. I was right that the title "Puffin Parents" gave me a clue about why they come on land. I'm going to write what I learned in the "I Learned" column of my chart.

Write the answers in the chart in the "I Learned" column.

Did you listen and watch carefully to notice what I was doing? Who wants to share what they noticed?

Let students share what they noticed you doing. They should mention that you stopped to think about questions you had and what you were wondering. Then you wrote those questions in the first column of your chart. Next, you read on to see if your questions were answered in the text. Finally, you wrote in your chart what you learned.

Yes! I did all of those things. Good noticing, class!

GUIDE (10 minutes)

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

I'm going to keep reading aloud, and it's your turn to listen and ask questions. When you wonder about something, let's stop and talk about your questions. Then we can write your question on the Think Sheet chart. And when we find the answers, we can write what we've learned on the chart, too.

Read page 6 and let kids turn and talk about what they wonder and any questions they have.

Does anyone have a question to share with the class that we can write on our Think Sheet chart?

Have a few kids share their questions and write the questions on the Think Sheet chart.

Let's read on to see if any of our questions are answered.

Read page 7, and if questions are answered, kids can write what they learned in the "I Learned" column on the Think Sheet chart. Let kids know that all of their questions might not be answered.

Turn and talk about what you've learned and what you still wonder about. Remember, good readers are curious, and the more we learn the more we wonder!

Allow time for kids to discuss with one another about what they learned and what they still wonder about.

COLLABORATE (25 minutes)

Now it's time for you to read the rest of the article with a partner.

Kids partner up to continue reading the article.

When you have questions about what you are reading, stop and talk about them with your partner. Write your questions on your Think Sheet chart.

Give kids time to read, ask questions, and write them on their Think Sheet chart. Monitor how they are doing, as you move around the room.

How are you doing? Do you have some good questions to add to your chart? Keep reading, and when you've finished, write what you've learned on your chart. If you finish the article, feel free to keep reading and practicing the strategy with your choice of another article in the magazine.

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, let's share some of the questions you had and what you learned. I am going to invite [student name] to share a question and what you learned. We are going to share using respectful language. So when I ask: "[student name] would you like to share your question and what you learned?" You need to say: "Yes thank you." Then you can share. After you've done that, 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 asked a lot of questions and learned new information about puffin parents today. What do you still wonder about puffins? Turn and talk about that.

Kids turn and talk. Allow time for a few to share out.

Good work with this strategy, everyone! You asked questions to gain a lot of new information. Reading to find the answers to our questions helps us focus our attention on what we are reading. Let's keep wondering and learning as we read!

Name _____ Date _____

THINK SHEET

Write what you wonder. Write what you learned.

I Wonder:	I Learned:

LESSON FRAME Ask Questions to Gain 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 pages _____.

One thing I know for sure is that good readers are curious. They wonder about things that they read. Good readers ask questions as they read to gain new information.

Take a look at pages _____. One thing I wonder and a question I have is "_____?" Turn to each other and talk about questions you have and what you wonder.

Kids turn and talk. You might want to write down some of the questions kids have.

Let's read to see if some of our questions are answered.

Read aloud and discuss if any of the questions were answered in the text.

Sometimes we have even more questions when we gain new information. Do you have any new questions now? Turn and talk about any new questions you have.

Kids turn and talk about their questions.

We are going to keep asking questions as we read on, because the more we learn, the more we wonder. Remember, good readers are curious!

MODEL (10 minutes)

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

As I continue to read this article about _____, I am going to think out loud about what I'm wondering and questions I have. I'm going to use a chart to write down the questions I have and what I learned as I read. Listen and watch carefully so you can notice what I'm doing.

On page _____, the text says _____. I'm wondering about that. I have some questions: _____?

I'm going to stop and write these questions down on my chart in the "I Wonder" column. Then I'm going to read to see if I can find the answers to these questions.

On the board, draw a chart like the one on the Think Sheet. Write the questions in the chart in the "I Wonder" column. Then read pages _____ aloud.

Wow! I found out some new information that answers my questions about _____. I'm going to write what I learned in the "I Learned" column of my chart.

Write the answers in the chart in the "I Learned" column.

Did you listen and watch carefully to notice what I was doing? Who wants to share what they noticed?

Let students share what they noticed you doing. They should mention that you stopped to think about questions you had and what you were wondering. Then you wrote those questions in the first column of your chart. Next, you read on to see if your questions were answered in the text. Finally, you wrote in your chart what you learned.

Yes! I did all of those things. Good noticing, class!

GUIDE (10 minutes)

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

I'm going to keep reading aloud, and it's your turn to listen and ask questions. When you wonder about something, let's stop and talk about your questions. Then we can write your question on the Think Sheet chart. And when we find the answers, we can write what we've learned on the chart, too.

Read on and let kids turn and talk about what they wonder and any questions they have.

Does anyone have a question to share with the class that we can write on our Think Sheet chart?

Have a few kids share their questions and write the questions on the Think Sheet chart.

Let's read on to see if any of our questions are answered.

Read on, and if questions are answered, kids can write what they learned in the "I Learned" column on the Think Sheet chart. Let kids know that all of their questions might not be answered.

Turn and talk about what you've learned and what you still wonder about. Remember, good readers are curious, and the more we learn the more we wonder!

Allow time for kids to discuss with one another about what they learned and what they still wonder about.

COLLABORATE (25 Minutes)

Now it's time for you to read the rest of the article with a partner.

Kids partner up to continue reading the article.

When you have questions about what you are reading, stop and talk about them with your partner. Write your questions on your Think Sheet.

Give kids time to read, ask questions, and write them on their Think Sheet chart. Monitor how they are doing, as you move around the room.

How are you doing? Do you have some good questions to add to your chart? Keep reading, and when you've finished, write what you've learned on your chart. If you finish the article, feel free to keep reading and practicing the strategy with your choice of another article in the magazine.

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 and use respectful language.

Okay, let's share some of the questions you had and what you learned. I am going to invite [student name] **to share a question and what you learned. We are going to share using respectful language. So when I ask: "**[student name] **would you like to share your question and what you learned?" You need to say: "Yes thank you." Then you can share. After you've done that, 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 asked a lot of questions and learned new information about _____ today. What do you still wonder about _____? Turn and talk about that.

Kids turn and talk. Allow time for a few to share out.

Good work with this strategy, everyone! You asked questions to gain a lot of new information. Reading to find the answers to our questions helps us focus our attention on what we are reading. Let's keep wondering and learning as we read!

Puffin Parents

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.B: Growth and Development of Organisms:** Adult plants and animals can have young. In many kinds of animals, parents and the offspring themselves engage in behaviors that help the offspring to survive. (1-LS1-2)

What You Will Need

- Puffins poster (Teacher's edition)
- Science Master (page 10)

Science Background

Puffins are small seabirds, usually about 18 centimeters (10 inches) tall and not much heavier than a can of soda. They are excellent fliers, traveling up to 88.5 kph (55 mph). And they are excellent swimmers, able to dive up to 61 meters (200 feet) and stay underwater for up to 30 seconds.

There are four different species of puffins. Atlantic puffins, shown in the article, have penguin-like coloring and colorful beaks. They live in the North Atlantic Ocean and land on North Atlantic seacoasts and islands once a year to breed. Puffins can live up to 20 years. Usually, they stay with the same mate for life.

Puffin parents use their feet and bills to dig nests between rocks on steep cliffs. Then they line the nests with soft feathers and grasses. Females lay one egg, and both parents take turns sitting on the egg until it hatches.

After the chick hatches, the parents continue working together to take care of it. Their beaks are built to catch and hold fish, which they bring back and feed to their young. Once the chick is able to fly, swim, and hunt for itself, the puffins return to the sea.

ENGAGE

Write the word "parent' on the board. As a class, discuss what a parent is. Invite volunteers to describe examples of things they have seen animal parents do to help their young survive.

EXPLORE

Display pages 2-3 of the projectable magazine. Read aloud the headline and text. Brainstorm ideas about why puffins might go to land once a year and what that has to do with them being parents. 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 puffins are a type of bird. Like many other animals, puffins take care of their young. Ask: **How do puffin parents take care of their young before the chicks are even born?** (*They build a nest.*) Have students turn and talk as they discuss how puffins build nests. (*They dig a hole and put grass in it.*) Encourage students to identify other ways puffins care for their young. (*They care for the eggs before they hatch. They get food and feed chicks after they're born.*) Challenge students to identify skills chicks must learn so they can take care of themselves. (*how to fly, swim, and hunt*) Then have students brainstorm ideas about how the puffin chicks will act when they become adults and have chicks of their own.

ELABORATE

Display the Puffins poster. Read aloud the text at the top. Remind students that puffins are seabirds, but they go to land once a year to raise their young. Review the poster as a class. Challenge students to explain how the puffin's body parts and behaviors help it survive while it is on land and at sea.

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.

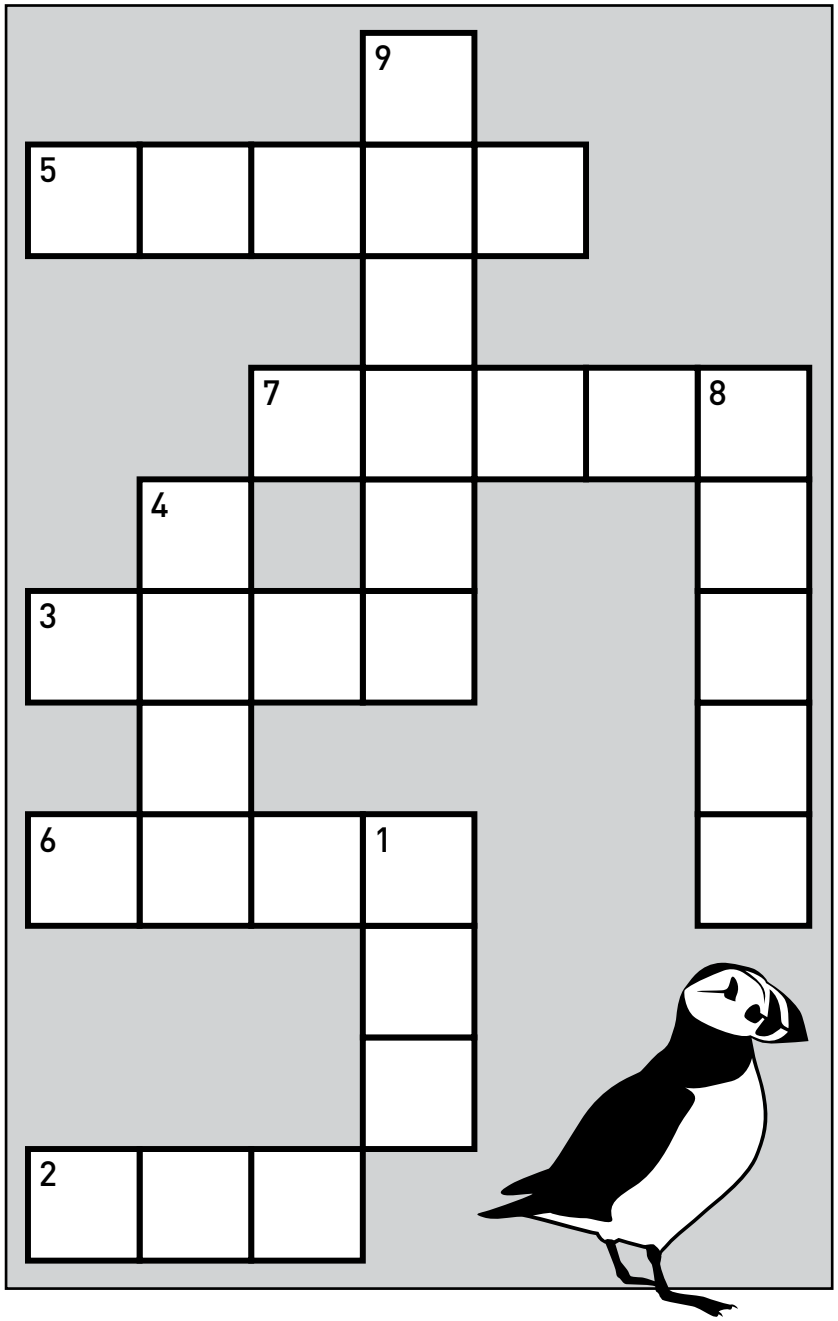
Name _____ Date _____

SCIENCE: Puffin Parents

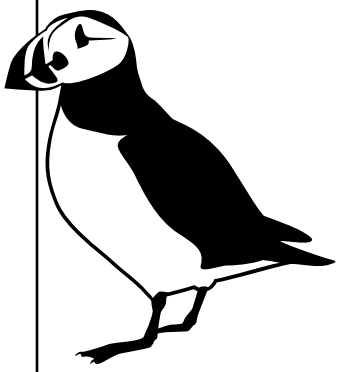
Use words from the Word Bank to complete each sentence.

Use your answers to complete the puzzle.

Discuss how puffin parents help their chicks survive.



Word Bank
put
grows
dig
feed
learns
lays
care
comes
bring



1. Puffins _____ a hole for a nest.
2. Puffins _____ grass in the hole.
3. A female puffin _____ one egg.
4. Both parents _____ for the egg.
5. A chick _____ out of the egg.
6. Both parents _____ the chick.
7. They _____ fish to the chick.
8. The chick _____ bigger.
9. It _____ to fly.

A Giant Cactus

SCIENCE

Kindergarten Standard Supported

- **NGSS ESS3.A: Natural Resources:** Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. (K-ESS3-1))

First Grade Standard Supported

- **NGSS Crosscutting Concepts: Patterns:** Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (1-LS1-2)

What You Will Need

- Cactus Look-alikes poster (Teacher's edition)
- Science Master (page 12)

Science Background

The saguaro (suh-war-oh) cactus, found only in the Sonoran Desert, is the largest cactus in the United States. With an average height of about 12 meters (40 feet), this giant tree-like cactus can grow nearly twice that tall and can live for up to 200 years.

The saguaro is built to survive the driest desert conditions. Like many cactuses, it stores water inside its trunk. A waxy coating on its skin waterproofs the plant so it doesn't lose water to transpiration. Sharp spines and bristles protect the water from thirsty animals. A large taproot shoots deep into the soil, giving the cactus access to water deep underground. And a maze of roots on the surface helps the cactus capture rain when it falls.

Despite—or possibly because of—its spiny defenses, the saguaro is an attractive home for birds that peck nests in it. The saguaro's white flowers, which bloom between April and June each year, attract birds, bats, and bees. Animals that eat the cactus's fruit spread its seeds across the desert so eventually, more saguaros can grow.

ENGAGE

Poll the class to see if any students have ever seen a saguaro cactus in real life. If so, invite volunteers to describe what the cactus looked like. If not, provide photos for students to see. Invite students to share what they know about cactuses like these.

EXPLORE

Display pages 10-11 of the projectable magazine. Read aloud the headline and text. Brainstorm ideas about how a saguaro cactus might help animals (Scout) or why different types of animals might visit a cactus like this (Voyager). 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 identify animals that visit the saguaro cactus. Encourage them to discuss how the cactus helps each animal.

- Birds make nests inside the cactus for their eggs. They raise chicks there after the eggs hatch.
- Bees, bats, and birds drink the flowers' nectar.
- Many animals eat the cactus's fruit or get water from the juice.

Display pages 16-17 of the projectable magazine As a class, identify reasons why so many animals need the saguaro cactus to survive here. (*Possible response: The cactus is one of the few places to find food, water, and shelter in this desert.*)

ELABORATE

Display the Cactus Look-alikes poster. Read aloud the text at the top. As a class, match each object to its look-alike cactus. Encourage students to identify clues that helped them make each match.

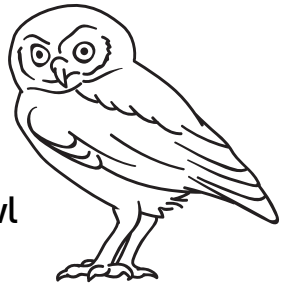
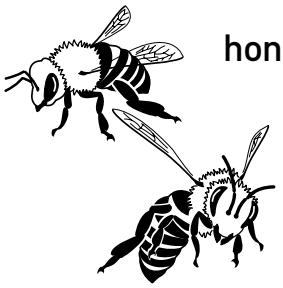
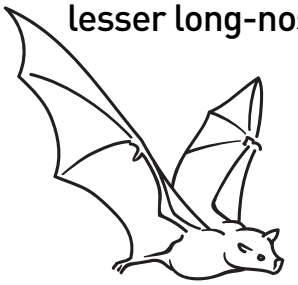
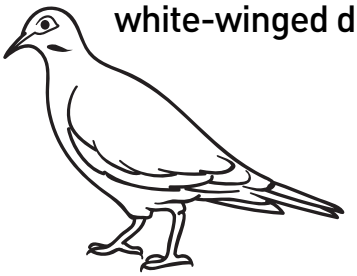
EVALUATE

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: A Giant Cactus

Write or draw something the saguaro cactus gives to each animal.

 Gila woodpecker	
elf owl 	
honeybees 	
lesser long-nosed bat 	
white-winged dove 	

How Mirrors Work

SCIENCE

Kindergarten Standard Supported

- **NGSS Crosscutting Concepts: Cause and Effect:** Events have causes that generate observable patterns. (K-PS3-1), (K-PS3-2)

First Grade Standard Supported

- **NGSS PS4.B: Electromagnetic Radiation:** Some materials allow light to pass through them, others allow only some light through and others block all the light and create a dark shadow on any surface beyond them, where the light cannot reach. Mirrors can be used to redirect a light beam. (1-PS4-3)

What You Will Need

- Science Master (page 14)

Science Background

To understand how mirrors work, one must first understand basic principles of light. Light is invisible. It cannot be seen until it hits our eyes. When light hits a surface, it bounces back. How it bounces depends on the type and shape of surface it hits.

In the case of a smooth, shiny, flat mirror, light bounces back without distorting the incoming image. The result is a reflection, or virtual image, of whatever is in front of the mirror.

Any smooth, shiny surface can reflect light in this way. The first humans saw their reflections in calm pools of water. Eventually, people made mirrors out of polished metals and stones.

Today, people make mirrors out of sheets of clear glass that have been coated with a thick layer of silver or aluminum on one side. To change the way a mirror works, people can change its shape. Some mirrors bulge out and reflect a wider view. Others curve in so people can get a closer look. Two-way mirrors have a thin layer of reflective material on one side. When the coated side faces a lighted room, the glass looks like a mirror to people on the bright side but a window to those in the dark.

ENGAGE

Read the following riddles to the class. Challenge students to name what you are describing (a mirror):

- I can turn everything around without moving.
- If you drop me, I'll crack. But if you smile at me, I'll smile back.

Have students identify clues that helped them solve the riddles and share what they know about mirrors.

EXPLORE

Display pages 18-19 of the projectable magazine. Read aloud the headline and point out the words "Explore Light" next to the headline. Brainstorm ideas about how light could be linked to how mirrors work. Then read the article aloud or have students read it in groups, with a partner, or on their own.

EXPLAIN

After reading, display pages 18-21 of the projectable magazine. Have students turn and talk with a partner to discuss why the dolphin and orangutans see themselves in the mirrors. (*A mirror is a smooth, shiny surface. Light bounces off smooth, shiny surfaces. When light bounces off a mirror, the mirror shows an image of everything in front of it.*) To emphasize this final fact, point out that the animals aren't the only things students can see in the mirrors. Then display pages 22-23. Ask: **Why can the elephant see itself in the water?** (*The water is a smooth, shiny surface. Light bounces off it, too.*)

ELABORATE

Give each student a small hand mirror. Have students examine their reflections. Challenge them to identify other things they can see. Then have students turn to face the opposite direction. Ask: **Why did the image change?** (*The background is different. A new image is bouncing back.*)

EVALUATE

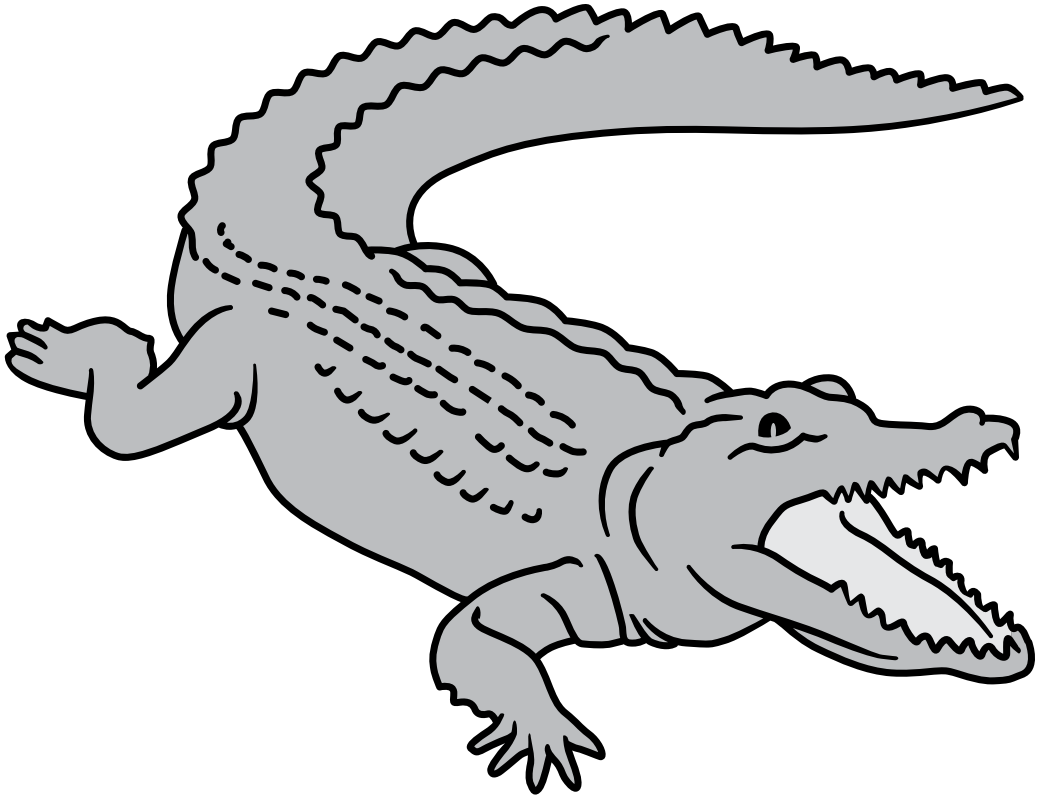
Have students complete the Science Master for this lesson. Encourage them to share and compare their results in small groups or with a partner.

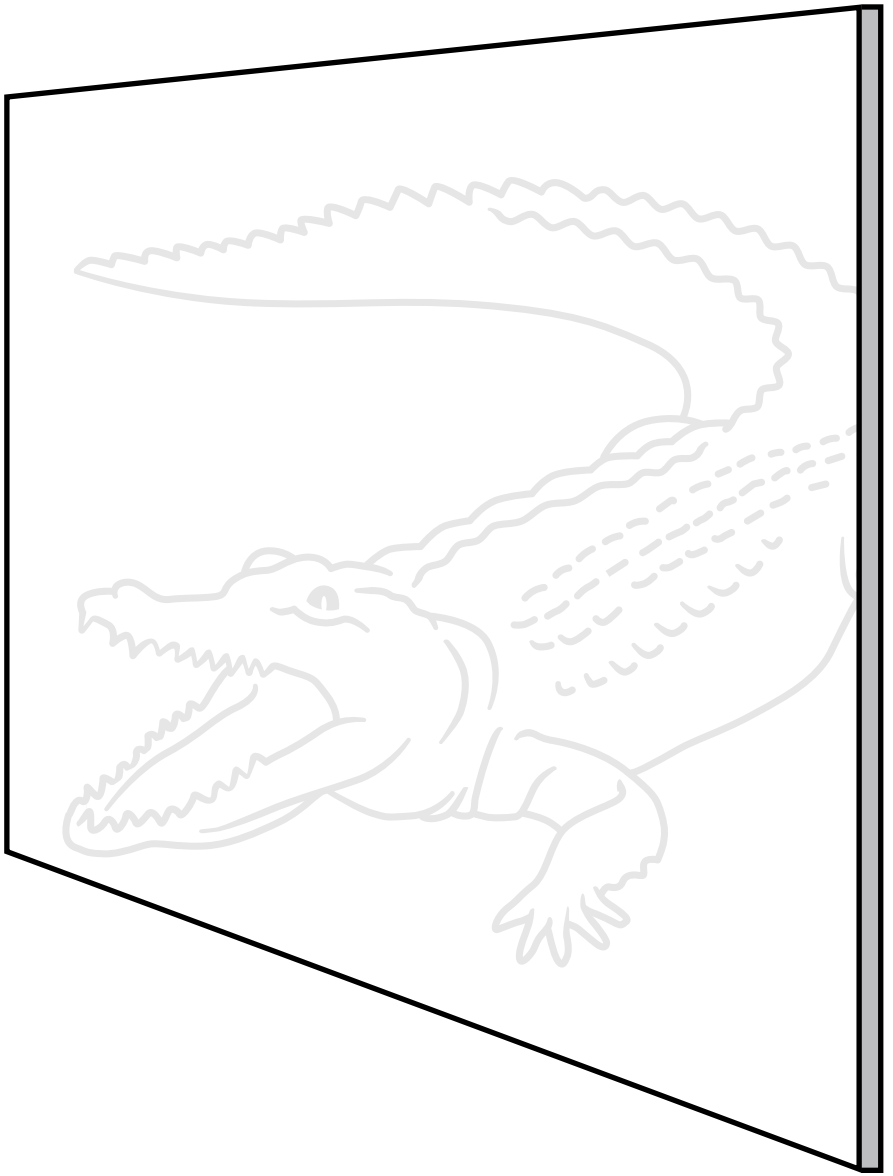
Name _____ Date _____

SCIENCE: How Mirrors Work

The alligator looks in a mirror.

Trace the lines to show what it sees.





Explore Maps

SOCIAL STUDIES

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, collect photos of common symbols students will be familiar with. Examples could include a stop sign, a restroom sign (male or female), or even restaurant logos. Display the symbols for the class. Challenge students to identify each one. Guide them to recognize that the symbols stand for the objects they represent.

EXPLORE

Display the activity on the back cover of the projectable magazine. Read aloud the Big Idea. Ask: **What is a symbol?** (*a drawing that stands for a real thing*) **Why do you need a map key if a map has symbols?** (*A map key tells what the symbols stand for.*) 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 map has symbols. The symbols stand for real things on the map. The type of symbols you see will depend on what the map shows. For example, a map of a town, will have symbols for different types of buildings. A map of an amusement park might have symbols for different types of rides, games, or food stands.** Invite students to use the Map Key to interpret the map's symbols. Then have students turn and talk with a partner as they use the symbols to identify more places on the map.

ELABORATE

Display a map of a local park or attraction. Have students identify what the symbols in the map key stand for and then find examples of each symbol on the map. Discuss how the symbols help visitors find their way around the park or attraction.

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.

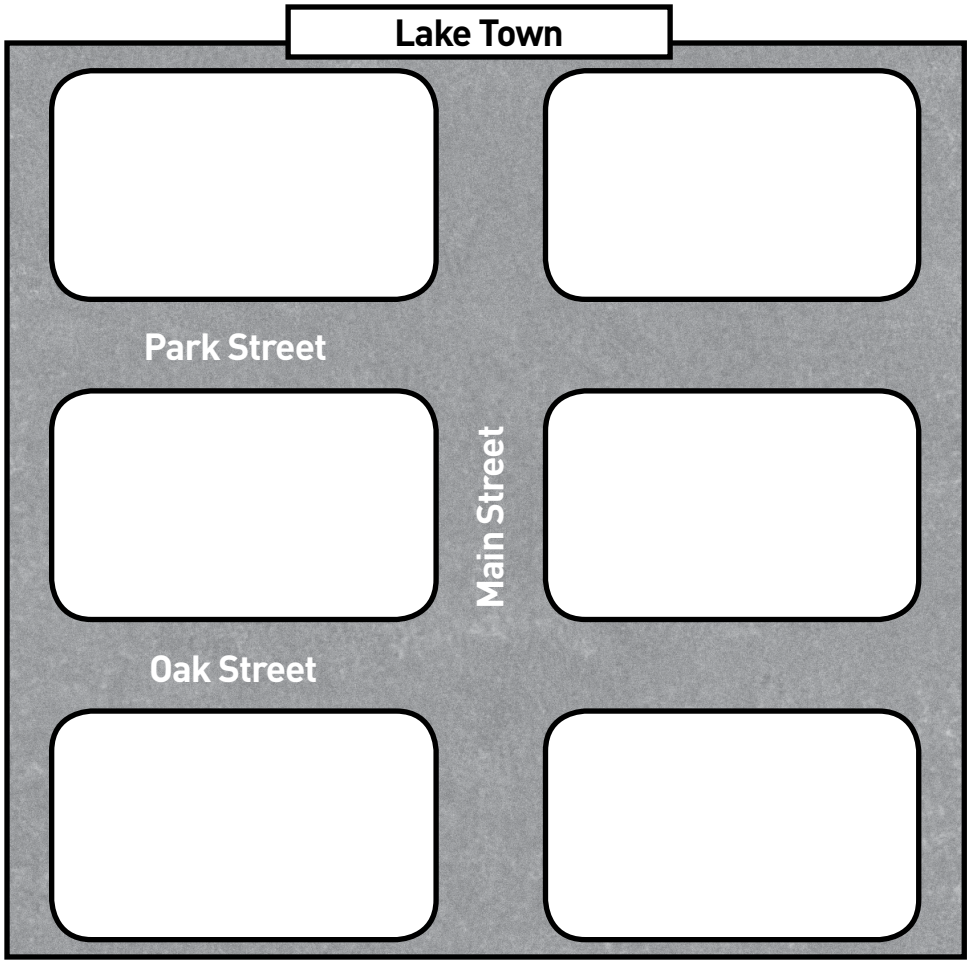
Name _____ Date _____

SOCIAL STUDIES: Explore Maps

Draw symbols for each item on the map key.

Draw the same symbols on the map.

Then answer the questions.



Map Key

- school
- house
- store
- cafe
- library
- park
- zoo

1. What is a symbol? a drawing a map a map key

2. What does a symbol stand for? an idea a real thing a map key

3. Find the symbol for the zoo in the map key. Draw it here.

4. Find the symbol for the zoo on the map. Circle it.

Scout and Voyager

ANSWER KEY

Language Arts

Think Sheet, page 6
Students should write their questions in the "I Wonder" column and their answers in the "I Learned" column.

Puffin Parents

Science: page 10
1. dig
2. put
3. lays
4. care
5. comes
6. feed
7. bring
8. grows
9. learns

A Giant Cactus

Science: page 12
Students should write or draw to explain how the saguaro cactus provides food, water, or shelter to each animal. Responses should be based on information in the article.

How Mirrors Work

Science: page 14
Students should trace the mirror-image of the alligator in the illustration.

Explore Maps

Social Studies: page 16
1. a drawing
2. a real thing
3. Students should draw the same symbol they drew for the zoo in the map key and on the map.
4. Students should circle the symbol they drew for the zoo on the map.