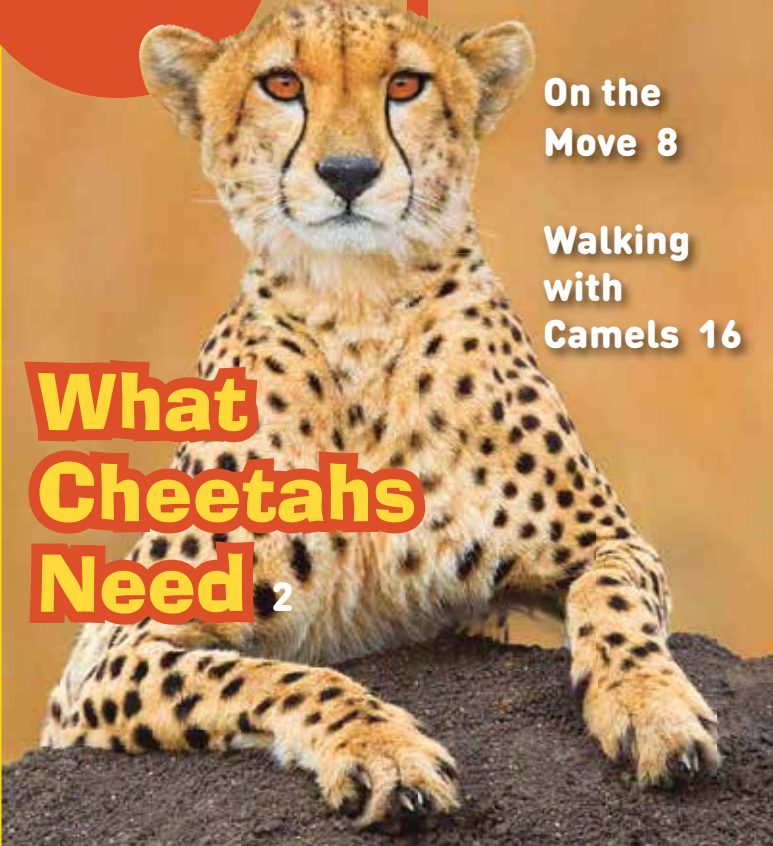




Young Explorer



On the Move 8

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What Cheetahs Need 2

TEACHER'S GUIDE Scout and Voyager Vol. 18 No. 1

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Answer Key 15

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

What Cheetahs Need 310L
On the Move 340L
Walking with Camels 390L

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



Attitudes

National Geographic kids are:

CURIOS 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.



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.



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 Read, Listen, and View with a Question in Mind: Pay Attention to the Photos and Features when Reading Nonfiction



Kindergarten Standard Supported

- **CCSS Reading Informational Text:** With prompting and support, describe the relationship between illustrations and the text in which they appear. (K-7)

First Grade Standard Supported

- **CCSS Reading Informational Text:** Use the illustrations and details in a text to describe its key ideas. (1-7)

What You Will Need

- “What Cheetahs Need” (*Young Explorer*, pages 2–7)
- 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 the magazine.

Let’s take a look at the photo on this cover. Anyone know what this amazing, spotted animal is? Exactly. That’s a cheetah. I love cheetahs. Turn and talk about what you think you already know about cheetahs.

Kids turn and talk, and a few share out.

TEACHER TIP: Children need plenty of time to discuss information and ideas, so build in many opportunities for them to talk to one another throughout the lesson and the day. It is helpful for you to model how we talk to a partner about the text before we ask kids to do it themselves. Take a little time, find a partner, and show kids how to turn and talk before asking them to do it the first time.

Let’s read the title: “What Cheetahs Need.” What do you think that title means? What does it mean to need something? Think about what you need to be healthy. Turn and talk about what you need to be healthy.

TEACHER TIP: It is important to clarify concepts that represent the big ideas in an article early in the reading. That way all kids understand concepts that are necessary to constructing meaning from the text. Young children come more quickly to an idea, if they first apply it to themselves.

Kids share out their understanding of need, including some of what the article will allude to.

Good thinking! Titles are important. They usually give us an idea of what an article is mostly about. I’m thinking this might be about what cheetahs must have; what they need to live. Let’s see if we can get this question answered. What do cheetahs need?

MODEL (10 minutes)

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

This very cool cheetah article is a piece of nonfiction. The *Young Explorer* magazines we read are nonfiction. Nonfiction gives us true information. We learn a lot when we read nonfiction. It is full of facts that are real. It has words, but it also has photos, labels, and other parts of an article that give us information. These things are called text features. One cool thing about nonfiction is that you can get a lot of information from the photos as well as the words. So it is important that we look carefully at the photos and other text features to learn new things. Flip through your magazine and notice what you see besides just the words at the bottom of the page.

Kids flip through the magazine and share what they see, other than the words, especially the photos.

Let me show you how it works for me. I am going to look carefully at the photos, text features, and some words, to see if I can figure out the answer to our question: What do cheetahs need?

LANGUAGE ARTS Read, Listen, and View with a Question in Mind: Pay Attention to the Photos and Features when Reading Nonfiction

On page 3, I look first at the photo and notice the cheetah drinking water. I'm thinking maybe cheetahs need to drink water to stay alive. I also notice this little illustration of an animal paw in the top corner. We call this a text feature, and it is kind of a fun one. The word in the paw begins with a W. Since the cheetah is drinking water, and water begins with W, I think this word could be water. So with the photo and the animal paw feature, I think water is one of the things cheetahs need to live. What do you guys think? Turn and talk.

Kids nod in agreement and talk to each other.

So cool! I could answer that question mainly by looking closely and thinking about the photo, without even reading the words on the bottom of the page. Do you think we are getting our question answered from the photos and text features? Turn to each other and talk.

Kids turn and talk, and a few share out.

Let's read the words on the bottom of page 3. *(Read the text on page 3.)* Sure enough, cheetahs do need water to live. The words say that, but we already knew that from the photos and the cheetah paw feature, didn't we? Anyone surprised about this? Turn and talk.

Kids turn and talk.

Always remember to pay close attention to the photos and text features to get information and to help answer any questions you have.

I have this sheet of paper I call a Think Sheet. There are three rectangles to jot down and/or draw our answers. I am going to draw and label our first answer in the first rectangle. You can do it, too.

Draw a cheetah drinking water and write water in a cheetah paw outline.



GUIDE (10 minutes)

Hand out Think Sheets and have kids attach them to their clipboards.

Now it's your turn. I am going to share these next two pages, and I want you to keep our question in mind. Turn and talk. What is our question again?

Kids turn and talk, and one shares out our question: What do cheetahs need? You can write the question on the board, and kids can copy it on their Think Sheet.

Hold up pages 4 and 5.

Okay, take a good look to see if you can figure out what else cheetahs need by looking at the photos and the cheetah paw feature. Once you have an idea, go ahead and draw it in the second rectangle on your Think Sheet. Remember to check out the cheetah paw feature!

Kids look closely at the images and text features on the pages and jot and draw their thinking in the

TEACHER TIP: Some will be able to read the text and can't resist doing so, which, of course, is a wonderful problem to have. But make it clear that viewing and drawing our learning is every bit as important as reading and writing.

second rectangle on the Think Sheet.

Great! Now share with your partner what you wrote or drew about what cheetahs need.

Kids talk and share out that cheetahs need food.

Exactly! Now turn and talk about how they get that food.

Kids share out that they run fast to catch the food.

Good Thinking! I'll read these two pages now.

Read pages 4 and 5.

COLLABORATE (25 minutes)

Okay, time for you to work with a partner and read and view the last two pages—pages 6 and 7—to find out what else cheetahs need. Once you figure it out, you can add that in the last rectangle on your Think Sheet. Take time to talk to each other about all the facts you learned about cheetahs today. When you finish you can turn your Think Sheet over and draw something you learned about what cheetahs need on the back of the page.

Kids read, view, talk about, and draw what they learned about cheetahs' needs. 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.

TEACHER TIP: The sharing phase is done in a circle, so that the focus is on one another rather than the teacher. During the instruction phase, kids are grouped in front of the teacher, so that the focus is on the instruction.

We are going to practice polite sharing today. So I will invite [student name] and [student name] to share what they learned and what they drew about cheetahs. [student name] would you like to share what you learned?

Partners say "yes, thank you" and share their new learning. Continue inviting others to share their new learning and their drawings. Often, there isn't enough time for all kids to share, so have them turn and talk to the person next to them, to make sure everyone gets heard before the sharing session comes to a close.

Great thinking today! Remember when you have a nonfiction text like National Geographic Young Explorer magazine, you need to look carefully at the photos and text features to get your questions answered. The words can give you even more information, but with nonfiction, you can get a lot of information from the photos and text features, too. I love that about nonfiction!

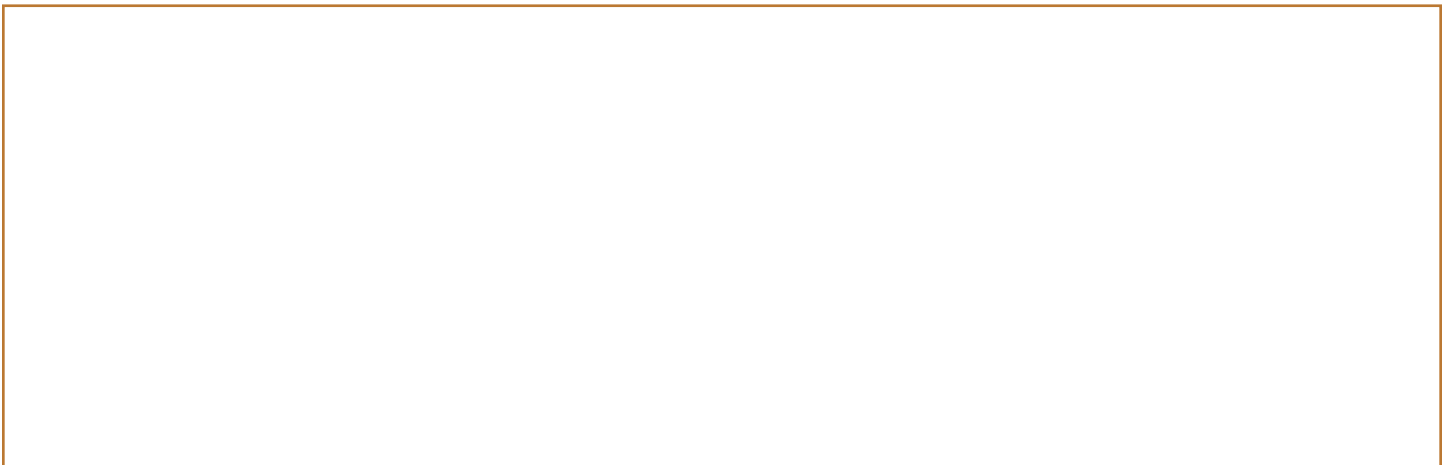
Name _____

Date _____

THINK SHEET

Question: _____

Use these boxes to draw or write about things you learned.



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LESSON FRAME Read, Listen, and View with a Question in Mind: Pay Attention to the Photos and Features when Reading Nonfiction



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.

Let's take a look at this cover. Anyone know what this photo is? Turn and talk about what you think you already know about _____.

Kids turn and talk, and a few share out.

Let's read the title: _____.

What do you think that title means?

Turn and talk about that.

Kids share out their understanding of what they think the title means.

Good thinking! Titles are important. They usually give us a sense of what the article is mostly about. I'm thinking this might be about _____, and this title leads me to a question: _____.
Let's see if we can get this question answered.

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 a piece of nonfiction. The Young Explorer magazines we read are nonfiction. Nonfiction gives us true information. We learn a lot when we read nonfiction. It is full of facts that are real. It has words, but it also has photos, labels, and other parts of an article that give us information. These things are called text features. One cool thing about nonfiction is that you can get a lot of information from the photos as well as the words. So it is important that we look carefully at the photos and other text features to learn new things. Flip through your magazine and notice what you see besides just the words.

Kids flip through the magazine and share what they see, other than the words, especially the photos.

Let me show you how it works for me. I am going to look carefully at the photos and text features, and some words, to see if I can figure out the answer to our question: _____?

As I look at this first page, I look first at the photo and notice _____. I also notice this _____. We call this a text feature. I can get some information from these without even reading the words. Turn and talk about what you can learn from these.

Kids turn and talk to each other.

So cool! I could answer our question by looking closely and thinking about the photo, without even reading the words on the page. Do you think we are getting our question answered from the photos and text features? Turn to each other and talk.

Kids turn and talk, and a few share out.

Now I'll read the words.

Read the text.

Sure enough, the words say what we already know. Anyone surprised about this? Turn and talk.

Kids turn and talk.

Always remember to pay close attention to the photos and text features to get information and to help answer any questions you have.

I have this sheet of paper I call a Think Sheet. There are three rectangles to jot down and/or draw our answers. I am going to draw and label our first answer in the first rectangle. You can do it, too.

Draw and write new learning that relates to the question.

LESSON FRAME Read, Listen, and View with a Question in Mind: Pay Attention to the Photos and Features when Reading Nonfiction



GUIDE (10 minutes)

Hand out Think Sheets and have kids attach them to their clipboards.

Now it's your turn. I am going to share these next two pages, and I want you to keep our question in mind. Turn and talk, what is our question again?

Kids turn and talk, and one shares out our question: _____? You can write the question on the board, and kids can copy it on their Think Sheet.

Hold up pages.

Okay, take a good look to see if you can get more information to answer our question. Once you have an idea, go ahead and draw it in the second rectangle on your Think Sheet. Remember to check out the photos and text features!

Kids look closely at the images and text features on the pages and jot and draw their thinking in the second rectangle on the Think Sheet.

Great! Now share with your partner what you wrote or drew.

Kids talk and share out.

Who wants to share what they learned and anything that might answer our question?

A few share out.

Good Thinking! I'll read these pages now.

COLLABORATE (25 Minutes)

Okay, time for you to work with a partner and read and view the remaining pages to find out more information that helps answer our question. Once you figure it out, you can add that to your Think Sheet. Take time to talk to each other about all the facts you learned about _____. When you finish you can turn your Think Sheet over and draw something you learned on the back of the page.

Kids read, view, talk about, and draw what they learned. 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.

We are going to practice polite sharing today. So I will invite [student name] and [student name] to share what they learned and what they drew. [student name] would you like to share what you learned?

Partners say "yes, thank you" and share their new learning. Continue inviting others to share their new learning and their drawings. Often, there isn't enough time for all kids to share, so have them turn and talk to the person next to them, to make sure everyone gets heard before the sharing session comes to a close.

Great thinking today! Remember when you have a nonfiction text like *National Geographic Young Explorer* magazine, you need to look carefully at the photos and text features to get your questions answered. The words can give you even more information, but with nonfiction, you can get a lot of information from the photos and text features too. I love that about nonfiction!

What Cheetahs Need

SCIENCE

Kindergarten Standard Supported

- **NGSS LS1.C: Organization for Matter and Energy Flow in Organisms:** All animals need food in order to live and grow. They obtain their food from plants or other animals. Plants need water and light to live and grow. (K-LS1-1)

First Grade Standard Supported

- **NGSS LS1.A: Structure and Function:** All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water, and air. (1-LS1-1)

What You Will Need

- One Fast Cat poster (Teacher's edition)
- Big Cat Bests poster (Teacher's edition)
- Science Master (page 10)

Science Background

Cheetahs are the fastest land mammals in the world. Most wild cheetahs live in the grasslands of eastern and southwestern Africa. There, these daytime hunters use their speed, flexibility, and keen eyesight to capture antelope, hares, and other prey.

ENGAGE

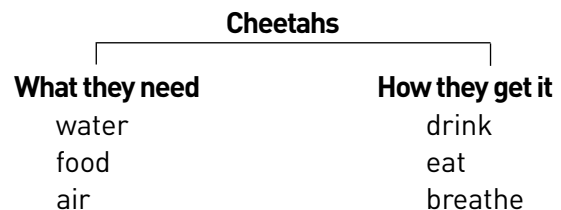
Display several photos of cheetahs. Encourage students to describe the animal they see. Invite them to compare cheetahs with other cats they've seen.

EXPLORE

Display pages 2-3 of the projectable magazine. Have students examine the photo. Ask: **What is the cheetah doing?** (*drinking water*) **How does a cheetah drink water?** (*with its tongue*) Brainstorm ideas about why a cheetah would drink water. 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 cheetahs—like all living things—need three things to live: food, water, and air. Have students turn and talk to discuss how each item helps cheetahs live. Encourage students reading the Voyager edition to also identify body parts cheetahs use to get each thing. Challenge them to identify other body parts cheetahs use to get these things. Then, collaborate as a class to create a tree map like the one below.



Point out to students that they can use the tree map to create sentences about cheetahs. (*i.e.*, "Cheetahs need water." "Cheetahs drink to get water.") Have students turn and talk with a partner to create sentences of their own.

ELABORATE

Display and review the One Fast Cat poster. Invite students to share what they know about each part of a cheetah's body. Then have students turn and talk as they review the Big Cat Bests poster. Brainstorm ideas about how the outstanding abilities of each big cat help it live.

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: What Cheetahs Need

Cut out the words.

Work with a partner to put the pieces in the correct boxes.

Then talk about what you learned.

What Cheetahs Need

How Cheetahs Get What They Need



water

eat

air

breathe

drink

food

SCIENCE

Kindergarten Standards 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 Standards Supported

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

What You Will Need

- Science Master (page 12)

Science Background

Animals need air, water, and food to live. Sometimes, they can get these things in one location. But often, they must move from place to place, or migrate, to get what they need to survive. Many kinds of animals migrate. Some animals travel long distances. Most migrations follow the seasons.

ENGAGE

Invite students to identify their favorite animals and demonstrate different ways they move. Then have students turn and talk to describe places they've seen animals move in each way.

EXPLORE

Display pages 8-9 of the projectable magazine. Have students examine the photo. Ask: **What kind of animals are these?** (*Canada geese*) **How are they moving?** (flying) Brainstorm ideas about where the geese might be going and why. 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 how and why animals move to different places.

- Butterflies fly to warm places to spend the winter.
- Whales swim to warm waters to have their babies.
- Elephants walk to green places to find food and water.

Point out that animals have a reason for moving from one place to another. For students reading *Scout*, brainstorm ideas about what those reasons might be. Have students reading *Voyager* work with a partner to find the answers in the text. Guide students to understand that the animals will move again when conditions change in the new place. Often, they will move back to where they started.

ELABORATE

Display the activity on the back cover of the student magazine. Ask: **Why is this picture a map?** (*The words left and right on the sides of the picture indicate directions.*) As a class, read aloud the text above the map. Encourage students to demonstrate the meaning of the words *left*, *right*, *near*, *far*, *high*, and *low*. Review the questions. Then have students turn and talk with a partner as they use the direction words they learned to describe where things in the photos are located throughout their student magazines.

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.

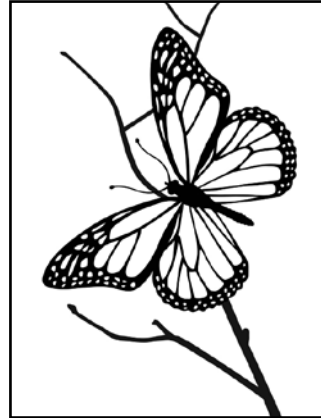
SCIENCE: On the Move

Color the picture that answers each question.

1. Where do butterflies spend the winter?



in warm
places



in cold
places

2. Why do whales swim to warm waters?

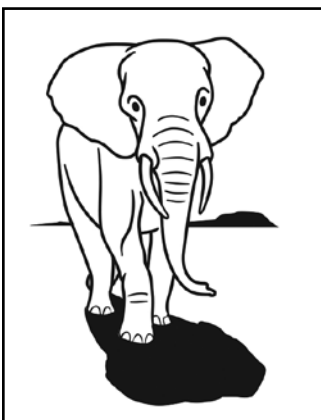


to find
food

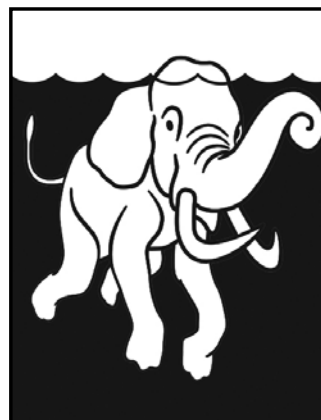


to have
babies

3. How do elephants move to green places?



They walk.



They swim.

Standard Supported

- **C3 Human Populations: Spatial Patterns and Movements:** Explain why and how people, goods, and ideas move from place to place. (D2.Geo.7.K-2)

What You Will Need

- Social Studies Master (page 14)

Social Studies Background

In January 2013, National Geographic Fellow Paul Salopek left Ethiopia for the beginning of a very long walk. In what he calls his “Out of Eden Walk,” Salopek plans to retrace the migration of our earliest ancestors out of Africa to the rest of the world. His decade-long trek will cover 21,000 miles and take him from Ethiopia to the southern tip of South America. Along the way, he will rely on a variety of animals to help him carry his supplies.

ENGAGE

Poll the class to choose a place the majority of students would like to go if they went on a long trip. Brainstorm a comprehensive list of things students would want or need to take with them. Challenge students to explain how they would move all of their things to their destination.

EXPLORE

Display pages 16-17 of the projectable magazine. Have students examine the photo. Ask: **Where are these people walking?** (*in a desert*) **What kind of animal is with them?** (*camels*) **What are the camels doing?** (*walking and carrying things*) Brainstorm ideas about why the people are using camels to carry things across the desert.

EXPLAIN

After reading, point out to students that camels can be very helpful animals. Ask: **How do the camels help Paul Salopek when they move his things?** Encourage students to think about the answer on their own. Then have them turn and talk to share their ideas with a partner. Challenge partners create a new response that incorporates both of their ideas. Then have pairs share their ideas with the class. As a class, write one complete answer to the question. When you are finished, brainstorm ideas as a class about why camels are good animals to help people move things across the desert. (*Possible responses: They live in the desert so they can survive in this environment.*)

ELABORATE

Point out to students that camels are one of many animals that help people move things. Horses and mules helped Paul move things, too. Brainstorm a list of other animals that help people move things. (*Possible responses: elephants, sled dogs, oxen, llamas, etc.*) Identify the kinds of things each animal could move and the type of place where each animal would be most useful.

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.

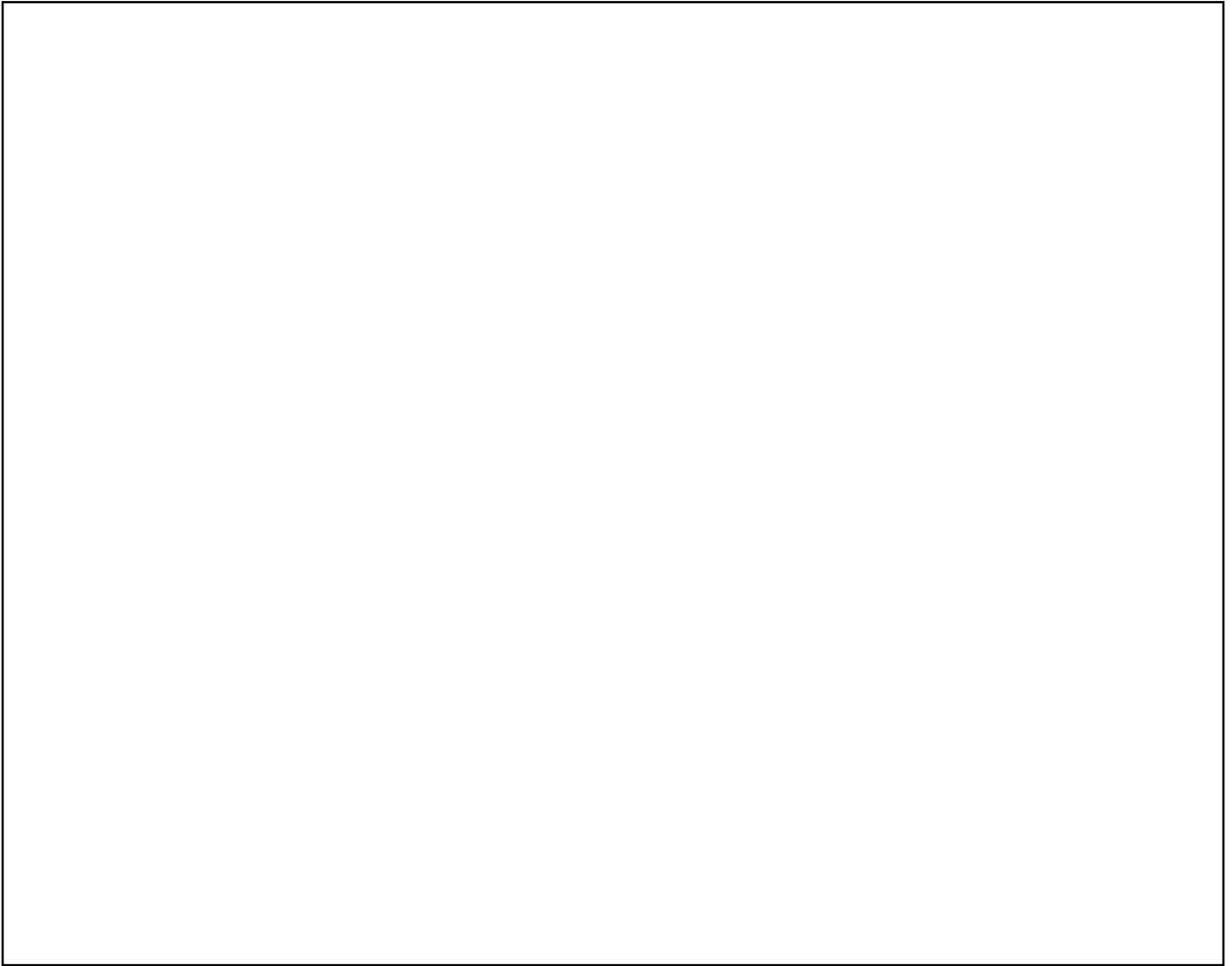
Name _____

Date _____

SOCIAL STUDIES: Walking with Camels

Draw a picture of an animal that is helping people move things.

Write about your drawing.



Two sets of horizontal lines for writing. Each set consists of a solid top line, a dashed middle line, and a solid bottom line.

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.

What Cheetahs Need

Science: page 10

In the tree map, students should match the following words: water/drink; food/eat; air/breathe.

On the Move

Science: page 12

1. Students should color the picture for “in warm places.”
2. Students should color the picture for “to have babies.”
3. Students should color the picture for “They walk.”

Walking with Camels

Social Studies: page 14

Students should draw a picture of an animal that is helping people move things and write about their drawing.

Explore Maps

Back page of magazine

1. right
2. left
3. near
4. low