



Voyager (Grade 1) Vol. 17 No. 3

In This Guide

In this guide, you will find language arts, science, and social studies lessons for the articles in this issue of YOUNG EXPLORER VOYAGER.

Young Explorer Magazine

YOUNG EXPLORER classroom magazines for kindergarten and grade 1 develop young readers' literacy skills through engaging informational text. Great storytelling and stunning photographs teach students about our planet and the people, plants, and animals that live on it. Encourage your students to read and explore our world with YOUNG EXPLORER magazines.

Voyager

The Voyager edition is written for first grade readers. All articles in the Voyager edition have been measured using the Lexile® Framework for Reading. Some articles will be easier to read than others, though all articles will be within the 190-400L range.

Visit YOUNG EXPLORER's website, [NatGeo.org/explorermag-resources](https://www.natgeo.org/explorermag-resources), to find additional resources for extending your students' learning.

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- Teacher's Guide
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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. Students will use the skills and attitudes as they do the activity on the back cover. The activity relates to the article "Push to Move."

MINDSET OF AN EXPLORER

KEY FOCUS AREAS



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.



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 back yards to the lions in Africa.

Objective

- Students will ask and answer questions about key details in a text.

Standards Supported

- **CCSS Reading Informational Text:** Ask and answer questions about key details in a text. (1-1)
- **CCSS Speaking and Listening:** Ask and answer questions about key details in a text read aloud or information presented orally or through other media. (1-2)

Resources

- Language Arts Master (page 5)

Summary

The arctic hare and the short-tailed weasel live in the north. They have fur that changes color with the seasons. Their fur is brown in the summer, which helps them blend in with the ground. Their fur begins to change in the fall, when the days get cooler. In the winter, their fur is white, which helps them blend in with the snow. The weasel hunts for hare to eat. The fur color helps the hare to hide and the weasel to sneak up on the hare.

WORD WORK

Sight Words: *has, from, when, again*

BUILD VOCABULARY AND CONCEPTS

- hare
- weasel
- blend in
- hide
- hunt
- change
- summer
- fall
- winter

Introduce the vocabulary words by displaying them in the classroom on a word wall or on a board. Show students pictures that match the words' meanings. You might want to use the following sentence frames to initiate discussion, using the words.

- This animal is called a _____.
- It has fur that will _____ color.
- When you _____ you can't be seen.
- When you look for something, you _____ for it.
- _____ is a season.

READ AND DISCUSS

Read the article "Hide, Hare!" aloud to students as they follow along. You may want to read the entire article first, and then reread the article, taking time to stop and discuss each two-page spread.

Pages 2–3 Read the title and the text aloud to students. After reading say: **The title is "Hide, Hare! Why does the hare need to hide?** (*It wants to hide from animals that want to eat it.*) Continue by asking: **The text says in the summer the hare's fur is brown. How might that help it hide?** (*The hare blends in with the ground, which helps it hide.*) **What do we find out about the weasel's fur?** (*It is brown, too.*) **What does the text tell us about that?** (*This makes it hard to see when it hunts.*) **Do you think that means that it would be easier for the weasel to sneak up on the hare without the hare seeing him?** (*yes*) You might want to point out and read the labels that tell the type of hare and weasel shown in the pictures.

Pages 4–5 Read the text. Ask: **What happens in the fall?** (*The days get cooler.*) **Look at the pictures. The text says the hare and the weasel begin to change. How are they changing?** (*Their fur changes color.*) **Where do these animals live?** (*in the north*) **What do we learn about the north?** (*Snow covers the ground in winter. The winter is long and cold.*) Have students compare the pictures of the hare and the weasel on pages 4–5 with the pictures on pages 2–3 and discuss the changes.

Pages 6–7 Read the text. Ask: **What color is the fur of the hare and weasel in winter?** (*white*) **How does blending in with the snow help the hare and the weasel?** (*It helps the hare hide, but it also might help the weasel sneak up on the hare.*) **What does the text say the hare should do?** (*Run!*)

TALK AND WRITE

Students can respond to the article by talking and writing. Use the following prompts to guide them. You might also want to use the Language Arts Master for this article.

- **Talk about what you learned about the hare and the weasel.**
- **Draw or write something you learned about how the hare and the weasel change.**

Objective

- Students will learn that some animals use the color of their bodies in different ways.

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)

Resources

- Blending In poster (Teacher's Edition)
- Science Master (page 6)

Science Background

Some animals, such as polar bears and snowy owls, have white fur year round. There are other animals whose fur changes as the seasons change. Two of those animals, the arctic hare and the short-tailed weasel, are featured in "Hide, Hare!" This change in fur color certainly helps the animals blend into their environment, but there may be other advantages to snowy-white winter coats. One idea is that the white coats may provide properties for keeping animals better insulated in winter. A few other animals besides those featured in the article that also have fur or feathers that change with the seasons are the Peary caribou, collared lemming, ptarmigan, and arctic fox.

ENGAGE

Talk with students about the advantages an animal in the wild might have by being able to blend in with its surroundings. Ask if they have ever been outside and been surprised by a bug that blends in with the grass, dirt, or flowers. You might show them a few pictures of insects, such as mantis, katydids, and grasshoppers. Let students know this is called camouflage.

EXPLORE

Expand on the idea of the advantages of camouflage by exploring the concept of predator and prey. Let students know that animals in the wild need to find food to eat.

Some eat plants, others eat other animals, and some eat both plants and animals. Discuss how camouflage might help both predator and prey.

EXPLAIN

After reading, have students turn and talk with a partner to tell what they learned about the hare and the weasel and how their fur changes with the seasons.

You might have students divide into three groups, with each group responsible for digging more deeply into one of the seasons to talk about what they learned and to describe what they observe in the pictures.

- Group 1: Have students look carefully at the pictures on pages 2–3 to observe, describe, and explain what the hare and the weasel and their surroundings look like in the summer.
- Group 2: Have students look carefully at the pictures on pages 4–5 to observe, describe, and explain what the hare and the weasel and their surroundings look like in the fall.
- Group 3: Have students look carefully at the pictures on pages 6–7 to observe, describe, and explain what the hare and the weasel and their surroundings look like in the winter.

Then have students in each group share what they discussed with the whole class.

ELABORATE

You can use the Blending In poster to show other examples of animals that can blend into their environment. Read the text aloud. You might have partners work together to find the animal in each picture.

EVALUATE

Assess students' understanding with the Science Master for this article. You might also use the following prompts.

- **What color are the hare and the weasel in the summer? How does color help them in the summer?**
- **What color are the hare and the weasel in the winter? How does color help them in the winter?**

LANGUAGE ARTS: Write the Right Numbers

Sort the words into groups. Write the numbers in the blanks.

- 1. brown
- 2. hare
- 3. winter
- 4. white
- 5. weasel
- 6. summer
- 7. fall

animals

2

colors

seasons

Write about the hare and the weasel in one of the seasons.

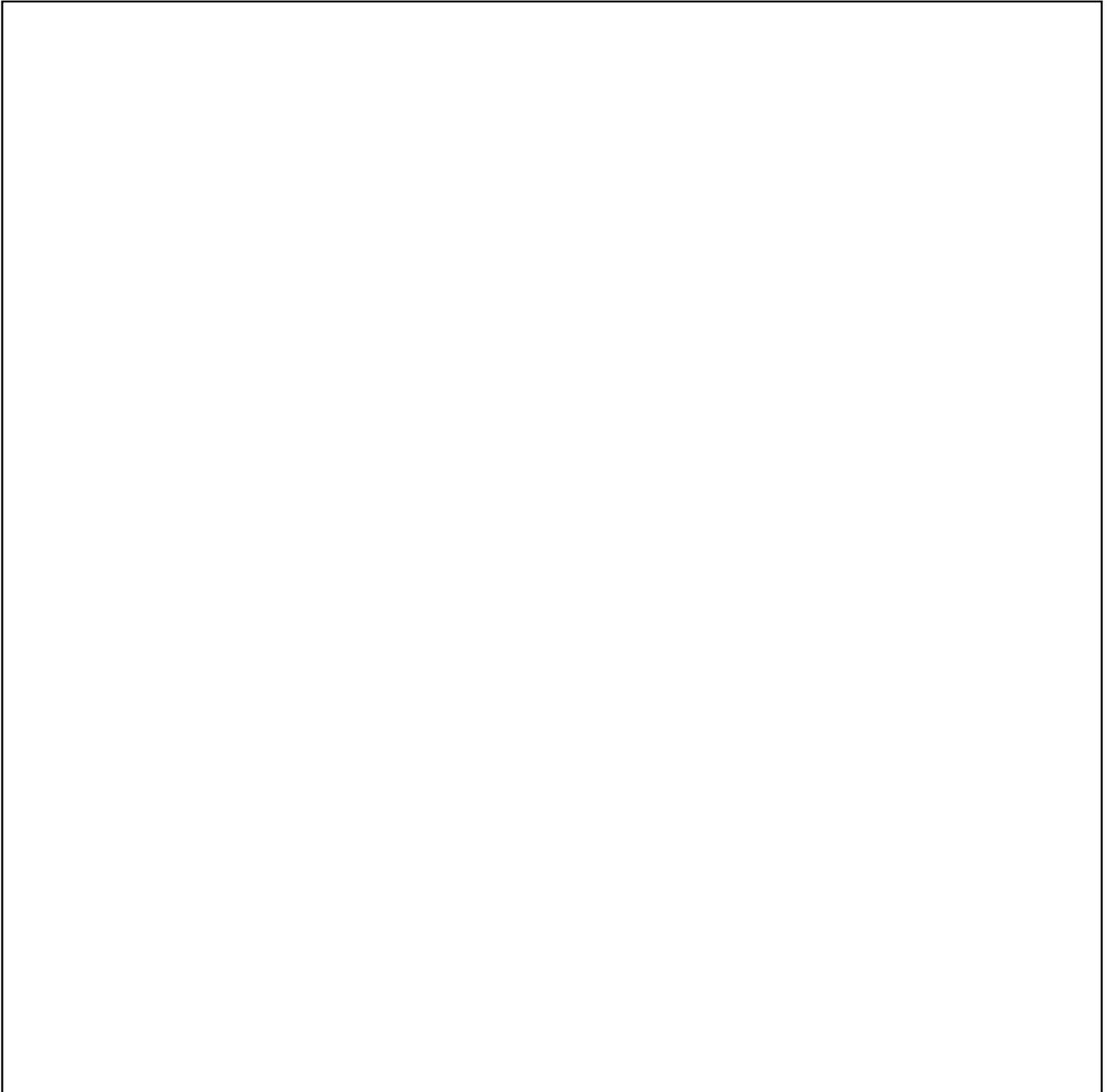
Name _____

Date _____

SCIENCE: Hide in a Habitat

Draw an animal that uses camouflage.

Draw it in a habitat it can hide in.



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Objective

- Students will describe the connection between ideas in a text.

Standard Supported

- **CCSS Reading Informational Text:** Describe the connection between two individuals, events, ideas, or pieces of information in a text. (1-3)

Resources

- Language Arts Master (page 9)

Summary

Robots show how a push is a force that can move things.

WORD WORK

Sight Words: *some, stop, them, could*

BUILD VOCABULARY AND CONCEPTS

- robot
- stop
- push
- away
- force
- forward
- move

Introduce the vocabulary words to students by displaying them in the classroom on a word wall or on a board.

Do a picture walk through the article “Push to Move” and point out pictures that will help students understand the words.

- Point out the robots.
- Let students know that each robot is showing a push.
- Explain that a push is a force that moves something.
- Pushes move things away.
- Pushes move things forward.
- Pushes can stop something from moving, too.

You might want students to act out different pushes or mimic what the robots are doing in the article.

READ AND DISCUSS

Read the article “Push to Move” aloud to students as they follow along. You may want to read the entire article first, and then reread the article, taking time to stop and discuss each two-page spread.

Pages 8–9 Read the title and text on pages 8 and 9. Let students know that the title tells us what a push does. Then ask: **What does a push do?** (*It moves things.*) **What else did we learn about a push?** (*A push is a force.*)

Pages 10–11 Read the text. Ask students to show and tell what happens when Green-bot pushes a door. (*The door moves and shuts.*) **What does Green-bot push with?** (*Its arms.*) **What direction does the door move?** (*away*) Ask: **What does Blue-bot push?** (*a red button*) **What direction does it push?** (*down*) **What happens?** (*It stops the game.*)

Pages 12–13 Read the text. Ask students to show and tell what happens when Orange-bot runs. Ask: **What does Orange-bot push to run?** (*It pushes its feet on the ground to move fast.*) Ask: **What is White-bot’s push called?** (*a kick*) **What does the kick do to the ball?** (*It moves the ball forward.*)

The question at the end of the article asks what other things the robots could push. Have students turn and talk with a partner about other things the robots could push. Then have partners share their ideas with the class.

TALK AND WRITE

Students can respond to the article by talking and writing. Use the following prompts to guide them. You might also want to use the Language Arts Master for this article.

- **Talk about what you learned about pushes.**
- **Draw or write something you learned about how a push can move things.**

Objective

- Students will understand that pushing an object can start it (make it move/put it in motion).

Standard Supported

- **NGSS From Appendix E: PS2.A: Forces and Motion and PS2.B: Types of Interactions:** Pushes and pulls can have different strengths and directions, and can change the speed or direction of its motion or start or stop it.

Resources

- Science Master (page 10)

Science Background

Things don't move on their own. A force is needed to make them move. Pushes and pulls are forces, and pushes and pulls can have different strengths. They can be hard or soft, depending on the amount of force that is exerted. Pushes move things away, and pulls move one thing toward another. Pushes and pulls can slow things down, stop them, or speed them up. They can also make things that are in motion change direction. Think about what happens to a soccer ball throughout a game. The soccer ball often gets rerouted in the course of a game as players kick (push) the ball across the field.

ENGAGE

If students are familiar with pushing in their desk or table chairs, ask students to use their chairs to show what a push is. Let them know that there are many other pushes we do every day.

EXPLORE

With students, brainstorm common examples of things we push. You can use the following examples to get started.

- pushing shopping carts in the grocery store
- pushing a car door shut when you get out of the car
- pushing away from the table to get up out of your chair
- pushing/kicking balls in various sports (volleyball, soccer, basketball, etc.)
- walking, running, and jumping

EXPLAIN

Ask students to explain what they learned about pushes in the article "Push to Move." Have them work with a partner, taking turns telling what each two-page spread of the article explains about pushes. They can use the pictures to guide them.

- A push is a force that moves things.
- A push moves something away.
- When you push a door it moves. Green-bot pushes the door to shut it.
- You can push things down, like the button Blue-bot pushes to stop a game.
- You push your feet on the ground to run. Orange-bot runs fast.
- You can push a ball by kicking it. White-bot kicks a ball to move it forward.

ELABORATE

Extend Your Thinking About Pushes

Divide the class into pairs. Give each pair 10 dominoes or blocks of identical size. Instruct students to line up their blocks, as they are on the back page of the magazine. Then tell them to gently push the first one. What happens? (*The second block falls, causing other blocks to subsequently fall.*) If not all blocks fell, have students brainstorm ideas about why.

Then vary the experiment to test how distance between blocks affects the results:

- Space the blocks far apart. What happens? (*Only the first block falls. It is too far away to touch the next block.*)
- Space the blocks close together. What happens? (*The blocks touch and push each other sooner. This makes them fall faster.*)
- Put all of the blocks together. Have students make one long chain. Can they make all of the blocks fall? If not, was distance between the blocks the reason? Have students reset the blocks and try again.

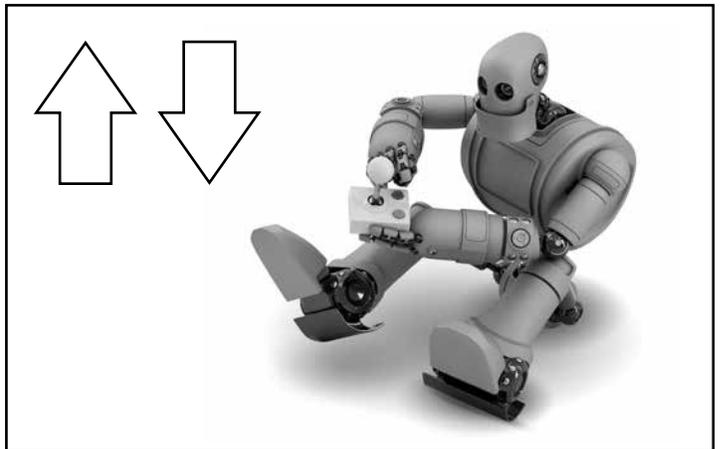
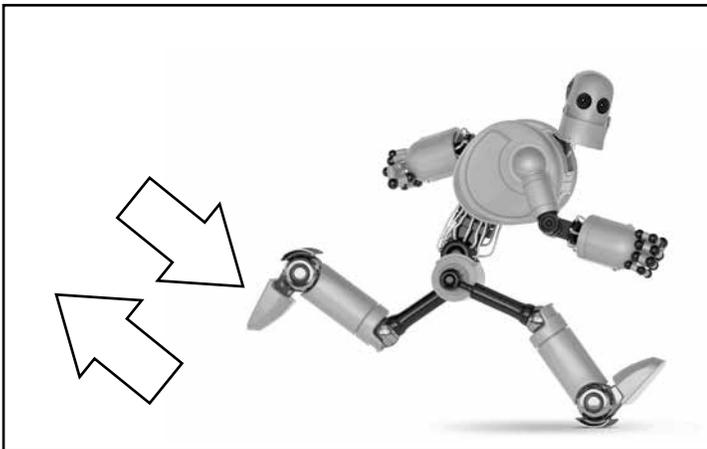
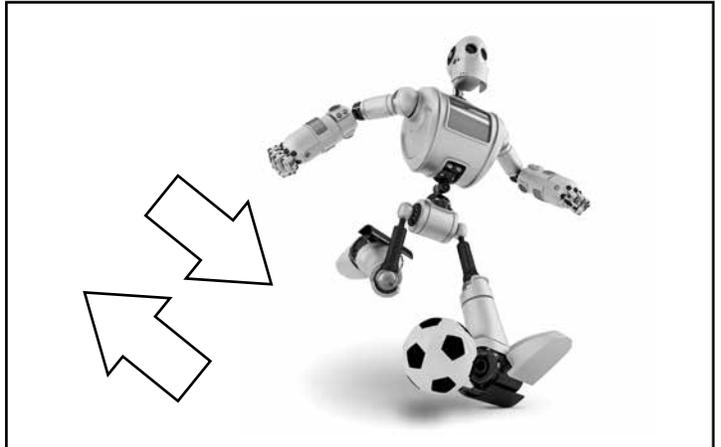
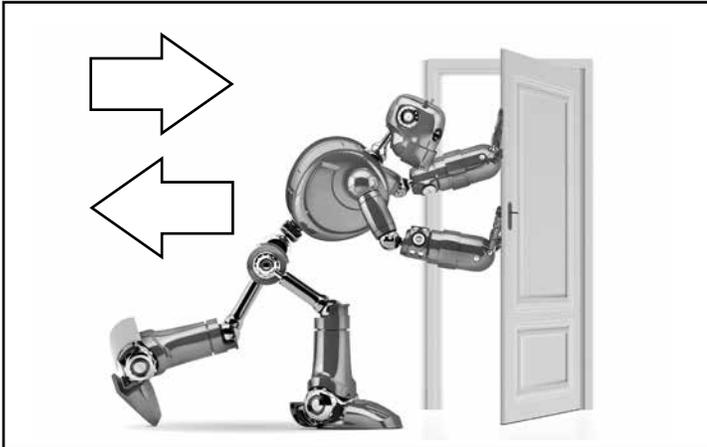
EVALUATE

Assess students' understanding with the Science Master for this article. You might also use the following prompts.

- **What happens when you push a door?**
- **What happens when you kick a ball?**

SCIENCE: Help the Robots Push

Color the correct arrow to show the direction of the push.



Pretend you have a robot. Write about what you would like it to push. Tell why.

Objective

- Students will ask and answer questions to help determine or clarify the meaning of words in a text.
- Students will identify continents on a map.

Standards Supported

- **CCSS Reading Informational Text:** Ask and answer questions to help determine or clarify the meaning of words and phrases in a text. (1-4)
- **D2.Geo.3.K-2.** Use maps, globes, and other simple geographic models to identify cultural and environmental characteristics of places.

Resources

- A World Map poster (Teacher's Edition)
- Language Arts and Social Studies Master (page 12)

Summary

A world map is a flat picture of Earth that shows land, water, and the seven continents.

WORD WORK

Sight Words: *of, once, live*

BUILD VOCABULARY AND CONCEPTS

- **map**
- **Earth**
- **land**
- **water**
- **ocean**
- **continent**

The words above are used to talk about maps and the things you find on them. You might want to display the world map poster that is included with the Teacher's Edition of this magazine to discuss these words. Let students know that the world map you have displayed is a flat picture of Earth. Point out the land and water. Let students know that the large land masses are called continents and the blue area is ocean. The oceans are not labeled in the article, but they are on the world map poster.

READ AND DISCUSS

Read the article "A World Map" aloud to students as they follow along. You may want to read the entire article first, and then reread the article, taking time to stop and discuss each two-page spread.

Pages 14–15 Read the title and text. Ask: **What did we find out a world map is?** (*It is a flat picture of Earth's land and water. The map shows all of Earth at once.*) **This map shows the continents. What is a continent?** (*It's a large body of land.*)

Spend some time exploring the map with students.

- Point out the labels of the continents. Read aloud the names of each continent.
- Ask students to count the number of continents. Say: **There are seven continents on Earth.**
- Show students that each of the continents has a different color. Tell them that helps us know the amount of land that makes up each continent.
- Show students the continent they live on. Tell them the name of the continent.

TALK AND WRITE

Students can respond to the article by talking and writing. Use the following prompts to guide them. You might also want to use the Language Arts and Social Studies Master for this article.

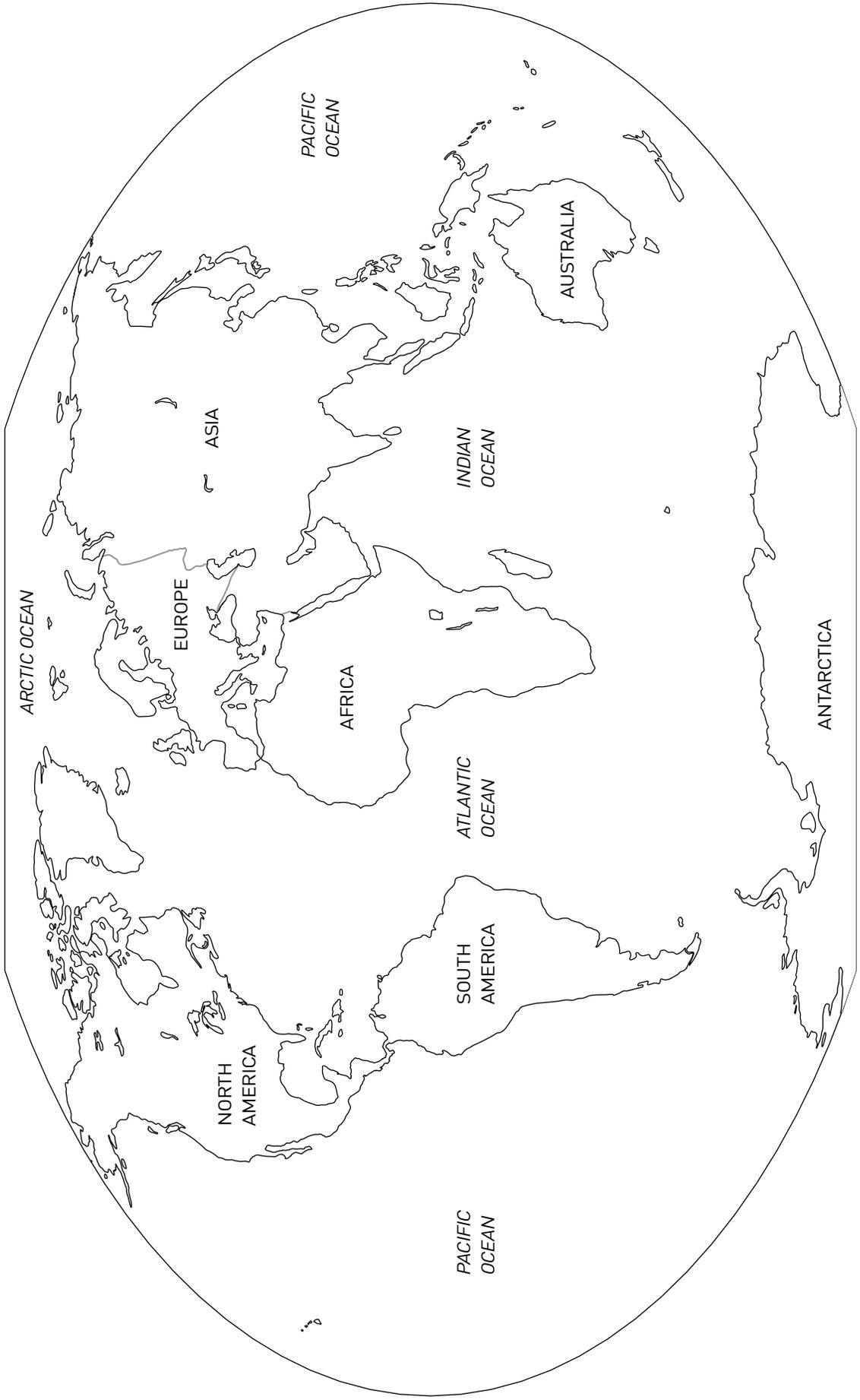
- **Talk about what you learned about a world map.**
- **Draw or write something you learned about a world map.**

Name _____

Date _____

LANGUAGE ARTS AND SOCIAL STUDIES: Our World

Color the continents green. Color the oceans blue. Circle the name of the continent you live on.



LANGUAGE ARTS



Objective

- Students will use text features (locator maps) to locate information in a text.

Standard Supported

- **CCSS Reading Informational Text:** Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text. (1-5)

Resources

- Language Arts Master (page 15)

Summary

Different animals live on only one continent. Crowned cranes live in Africa near rivers and wetlands. Lion tamarins live in South America in rain forests. Bengal tigers live in Asia in forests, grasslands, and swamps. Kangaroos live in Australia in woodlands and grasslands.

WORD WORK

Sight Words: *some, live, let/let's, over, them, when*

BUILD VOCABULARY AND CONCEPTS

- crane
- Africa
- tamarin
- South America
- tiger
- Asia
- kangaroo
- Australia

The words above are used in the article “Animals Around the World.” Have pictures of the animals available for students to see, or do a picture walk through the article to point out the animals. Also display the world map poster that shows the names of the continents.

Post the words and pictures on a classroom word wall. Refer to the word wall throughout discussion of the article, and, as you read and learn about the different animals, place them on the continents they live on.

READ AND DISCUSS

Read the article “Animals Around the World” aloud to students as they follow along. You may want to read the entire article first, and then reread the article, taking time to stop and discuss each two-page spread.

Pages 16–17 Read the text. Ask: **What animals are pictured?** (*crowned cranes*) Point to the label on page 16. Read it and let students know that these cranes are called gray crowned cranes. Ask: **Where do these cranes live?** (*in Africa near rivers and wetlands*) **How do a crane’s long neck and legs help it?** (*They help it see over the tall grass.*) **Find Africa on the map. How do you know that is Africa?** (*It is shown in a different color than the other continents.*)

Pages 18–19 Read the text. Ask: **What animal is pictured?** (*lion tamarin*) Point to the label on page 18. Read it and let students know that this tamarin is called a golden lion tamarin. Ask: **Where does it live?** (*in South America in rain forests*) **How do the tamarin’s claws help it?** (*It uses them to climb trees and grab food.*) **Find South America on the map. How do you know that is South America?** (*It is shown in a different color than the other continents.*)

Pages 20–21 Read the text. Ask: **What animals are pictured?** (*Bengal tigers*) Point to the label on page 20. Ask: **Where do they live?** (*in Asia in forests, grasslands, and swamps*) **How does a tiger’s fur help it?** (*It helps it blend in with the grass and hide while it hunts.*) **Find Asia on the map. How do you know that is Asia?** (*It is shown in a different color than the other continents.*)

Pages 22–23 Read the text. Ask: **What animals are pictured?** (*kangaroos*) Point to the label on page 23. Read it and let students know that these kangaroos are called eastern grey kangaroos. Ask: **Where do they live?** (*in Australia in woodlands and grasslands*) **How does a kangaroo’s strong back legs help it?** (*They are good for jumping. It can hop to find food.*) **Find Australia on the map. How do you know that is Australia?** (*It is shown in a different color than the other continents.*)

TALK AND WRITE

Students can respond to the article by talking and writing. Use the following prompts to guide them. You might also want to use the Language Arts Master for this article.

- **Talk about an animal you learned about.**
- **Draw or write something you learned about the animals.**

Objective

- Students will learn about animals and the places they live around the world.

Standard Supported

- **D2.Geo.3.K-2.** Use maps, globes, and other simple geographic models to identify cultural and environmental characteristics of places.

Resources

- A World Map poster (Teacher's Edition)
- Social Studies Master (page 16)

Social Studies Background

This year, National Geography Awareness Week is November 12–18, 2017. You can find out more information at www.nationalgeographic.org/education/programs/geographyawarenessweek/about. You can also find mapping resources to use in your classroom at www.nationalgeographic.org/education/mapping.

ENGAGE

Engage students by talking about animals found in their area of the world. Let them know that many different kinds of animals are found in other areas of the world. And some animals are only found in certain places in the world.

EXPLORE

If you and your students have already talked about the article “A World Map” and have looked at the world map poster, your students should be familiar with the different continents. On the world map poster, point out Africa, South America, Asia, and Australia. Let students know you will be learning about animals that live on those continents. Point out the continent on which you live, and trace the distance between those continents and the ones on which the animals live.

EXPLAIN

Ask students to explain what they learned about different animals that are found around the world. As a class, review the different animals and point out on the map where each animal lives.

- The crowned cranes live near rivers and wetlands in Africa.
- The lion tamarin lives in rain forests in South America.
- The Bengal tigers live in forests, grasslands, and swamps in Asia.
- The kangaroos live in woodlands and grasslands in Australia.

You might have students draw pictures of the different animals and place them on the world map poster on the appropriate continent. You might have them write about the different parts these animals have that help them live in their environments

- the crane's long neck and legs (*seeing over tall grass*)
- the tamarin's claws (*climbing trees and grabbing food*)
- the tiger's fur (*blending in with shadows and tall grass when hunting*)
- the kangaroo's strong back legs (*jumping and hopping to find food*)

ELABORATE

As a class, you might want to research animals found on other continents or find more animals that are found in Africa, South America, Asia, and Australia. You could also ask students to name different animals and together you can find out the continent(s) on which those animals live.

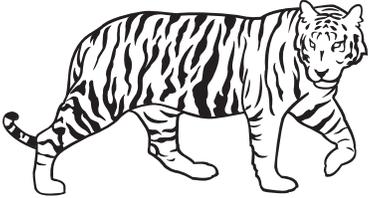
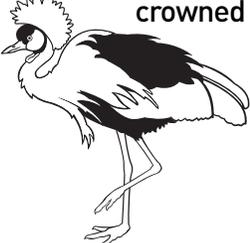
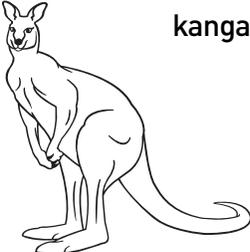
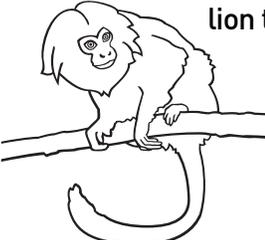
EVALUATE

Assess students' understanding with the Social Studies Master for this article. You might also use the following prompts.

- **How do lion tamarins use their claws?**
- **How does the Bengal tiger's fur color help it?**

LANGUAGE ARTS: Where Does It Live?

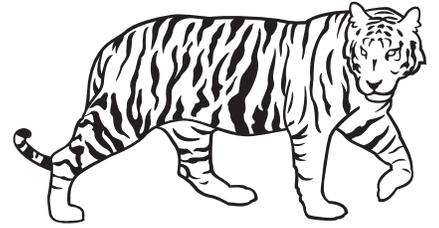
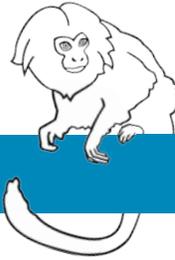
Write the continent next to the animal that lives there.

Africa	Australia	Asia	South America
<p>Bengal tiger</p> 			
<p>crowned crane</p> 			
<p>kangaroo</p> 			
<p>lion tamarin</p> 			

Write about one of the animals.

Name _____

Date _____



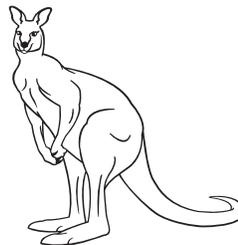
SOCIAL STUDIES: 3-2-1

3 Things I Learned



2 Interesting Facts

1 Question I Have



ANSWER KEY

Hide, Hare!

Language Arts: Write the Right Numbers, page 5

Students should write the correct numbers in the blanks to sort the words into categories. Then they should write about the hare and the weasel in one of the seasons.

animals: 2, 5

colors: 1, 4

seasons: 3, 6, 7

Science: Hide in a Habitat, page 6

Students should draw an animal that uses camouflage and a habitat it can hide in.

Push to Move

Language Arts: Push Puzzle, page 9

Students should use the words in the word bank to complete the puzzle and then list five things they push.

Across

1. When you kick a ball it moves forward.

Down

2. A push can move something from one place to another.

3. When you push something it moves away.

4. A push is a force.

Science: Help the Robots Push, page 10

Students should color the correct arrow that show the direction the robot needs to push. Students should write about what they would like a robot to push.

A World Map

Language Arts and Social Studies: Our World, page 12

Students should color in the continents and oceans and circle the name of the continent they live on.

Animals Around the World

Language Arts: Where Does It Live?, page 15

Students should write the correct continent next to the animal that lives there and then write about one of the animals.

Bengal tiger > Asia

crowned crane > Africa

kangaroo > Australia

lion tamarin > South America

Social Studies: 3-2-1, page 16

Students should write 3 things they learned, 2 interesting facts, and 1 question they have.