

## Voyager (Grade 1) Vol. 17 No. 6

### 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](https://www.natgeo.org/explorermag), to find additional resources for extending your students' learning.

## Your Subscription Includes:

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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 articles "A Cub in the Wild" and "Message in a Bottle."

## 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.

# A Cub in the Wild

## LANGUAGE ARTS

LEXILE 380L

NATIONAL GEOGRAPHIC

Young Explorer

### Objective

- Students will describe the connection between pieces of information 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 5)

### Summary

A panda cub is born and lives in a mountain forest. His mother takes care of him and teaches him how to live in the forest. Some pandas no longer live in the wild. They live in reserves, when their forests are cut down. People take care of these pandas. The reserve is a safe place for the pandas.

## WORD WORK

**Sight Words:** *live, how, from, his, when, take, of, him, from, some, were, by, had*

## BUILD VOCABULARY AND CONCEPTS

- panda cub
- mountain forest
- bamboo
- shelter
- reserve

The words above are used in the article. Pronounce the words and ask students to pronounce them after you. Find pictures that you can add to the word wall for each of the words, and use the photos in the article to talk through the meanings of each of the words with students. Point out the panda cub, the mountain forest, and bamboo. Explain to students that the mountain forest is the wild place where the pandas live. Let students know that when forests are cut down by some people, other people set up reserves where pandas can get the food and shelter they need to survive. Ask students to listen for the vocabulary words as you read the article.

## READ AND DISCUSS

Read the article “A Cub in the Wild” 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 text. Ask students: **Where does a panda cub live?** (*in a mountain forest that is a wild place*) **How does he learn to live in the forest?** (*He learns from his mother.*) Ask students to look at the picture of the giant panda cub and describe how it looks. They should notice its black and white fur, and they might notice the shape of its ears.

Pages 4–5 Read the text. Ask: **What new information do we learn about the cub and his mother?** (*The cub lives with his mother when he is small. She takes care of him and teaches him.*) **What does the cub learn from his mother?** (*He learns about the forest and where to find bamboo plants to eat.*) Have students look at the pictures of the panda cub and his mother. Ask them to tell what they see in the pictures.

Pages 6–7 Read the text. Ask: **What do we find out about the trees in the forest?** (*They are good places to hide from danger and sleep.*) **What does the cub learn to do?** (*climb trees*) **Why does the mother panda teach her cub?** (*so her cub learns how to live on his own in the wild*) Have students look at the pictures on pages 6 and 7 and describe what they see.

Pages 8–9 Read the text. Ask: **What is a reserve?** (*A reserve is a safe place for pandas.*) **Why do some pandas have to live in a reserve?** (*Their forests were cut down, and they have no food or shelter.*) **What happens to these pandas?** (*People take care of them on a forest reserve and make sure they get what they need.*) Have students look at the pictures on pages 8 and 9 and describe what they see.

## 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 a panda cub and his mother.**
- **Draw or write something you learned about what a panda cub learns.**

# A Cub in the Wild

## SCIENCE

### Objective

- Students will learn how panda mothers help their cubs.
- Students will understand that people can come up with solutions to problems.

### 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)

### Learning Framework Key Focus Area

- **Skills:** *National Geographic kids can:* SOLVE PROBLEMS by generating, evaluating, and implementing solutions after identifying alternatives, weighing trade-offs, and making well-reasoned decisions.

### Resources

- A Panda Cub's First Year poster (Teacher's Edition)
- Science Master (page 6)

### Science Background

The giant panda is one of the rarest mammals, and only about 1,500 survive in the wild in remote bamboo forests in the mountains in central China. Giant pandas eat mostly bamboo shoots and leaves, eating nearly 12 hours every day. They have to eat a lot and very fast to stay healthy. The average life span of giant pandas in the wild is 20 years. They weigh about 300 pounds and are about 4-5 feet in length/height. Giant pandas are excellent at climbing trees and are also good swimmers.

### ENGAGE

Find pictures of pandas in the wild, including pictures of pandas climbing trees, eating bamboo, and sitting and lying in different positions. Ask students to turn and talk with a partner to describe the pandas and their surroundings.

### EXPLORE

As a class, come up with questions you'd like to ask to find out about giant pandas. Some examples of questions are:

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### EXPLAIN

After reading, have students discuss what they found out about giant pandas and if all of their questions have been answered. If not, be sure to research with students to find the answers to their unanswered questions.

- A mountain forest is where a panda cub lives.
- When the cub is small, he lives with his mother. She teaches him and takes care of him.
- The cub learns where to find bamboo plants to eat.
- He learns how to climb trees. They are good places to hide and to sleep.
- The cub learns how to live, so he can live on his own.
- Some pandas whose forests have been cut down live on reserves. Reserves are safe places.
- People take care of pandas on the reserves.

### ELABORATE

#### Extend Your Thinking

Review the activity on the back cover of the student magazine. Discuss what responsibility is. Brainstorm a list of ways people can be responsible and help save ocean animals. Divide the class into small groups. Ask each group to pick one animal and record facts about their animal. Then choose an idea from the activity or another idea from National Geographic Kid's "Mission Animal Rescue Fundraising Kit" at [http://images.nationalgeographic.com/wpf/media-content/file/MAR\\_Fundraising\\_Kit-cb1402327097.pdf](http://images.nationalgeographic.com/wpf/media-content/file/MAR_Fundraising_Kit-cb1402327097.pdf). Provide supplies, and give groups time to complete their projects.

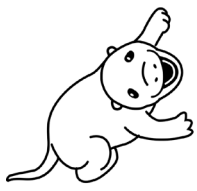




### EVALUATE

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

- **What is one thing a panda cub learns from his mother?**
- **Describe how people help some pandas.**

## LANGUAGE ARTS: A Panda Cub Grows

Look at the chart. Write the answers to the questions.

<p><b>1</b></p>  <p>When a cub is born, it doesn't have much fur.</p>	<p><b>2</b></p>  <p>At 3 weeks, a cub is covered in fur.</p>	<p><b>3</b></p>  <p>At 6 weeks, a cub's eyes are open.</p>	<p><b>4</b></p>  <p>At 3 months, a cub starts to crawl.</p>	<p><b>5</b></p>  <p>At 6 months, a cub starts to walk and climb trees.</p>
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1. When does a cub crawl?

\_\_\_\_\_

2. When do a cub's eyes open?

\_\_\_\_\_

3. When can a cub walk?

\_\_\_\_\_

4. At what age is a cub covered in fur?

\_\_\_\_\_

5. When can a cub climb trees?

\_\_\_\_\_

6. When is it that a cub doesn't have much fur?

\_\_\_\_\_

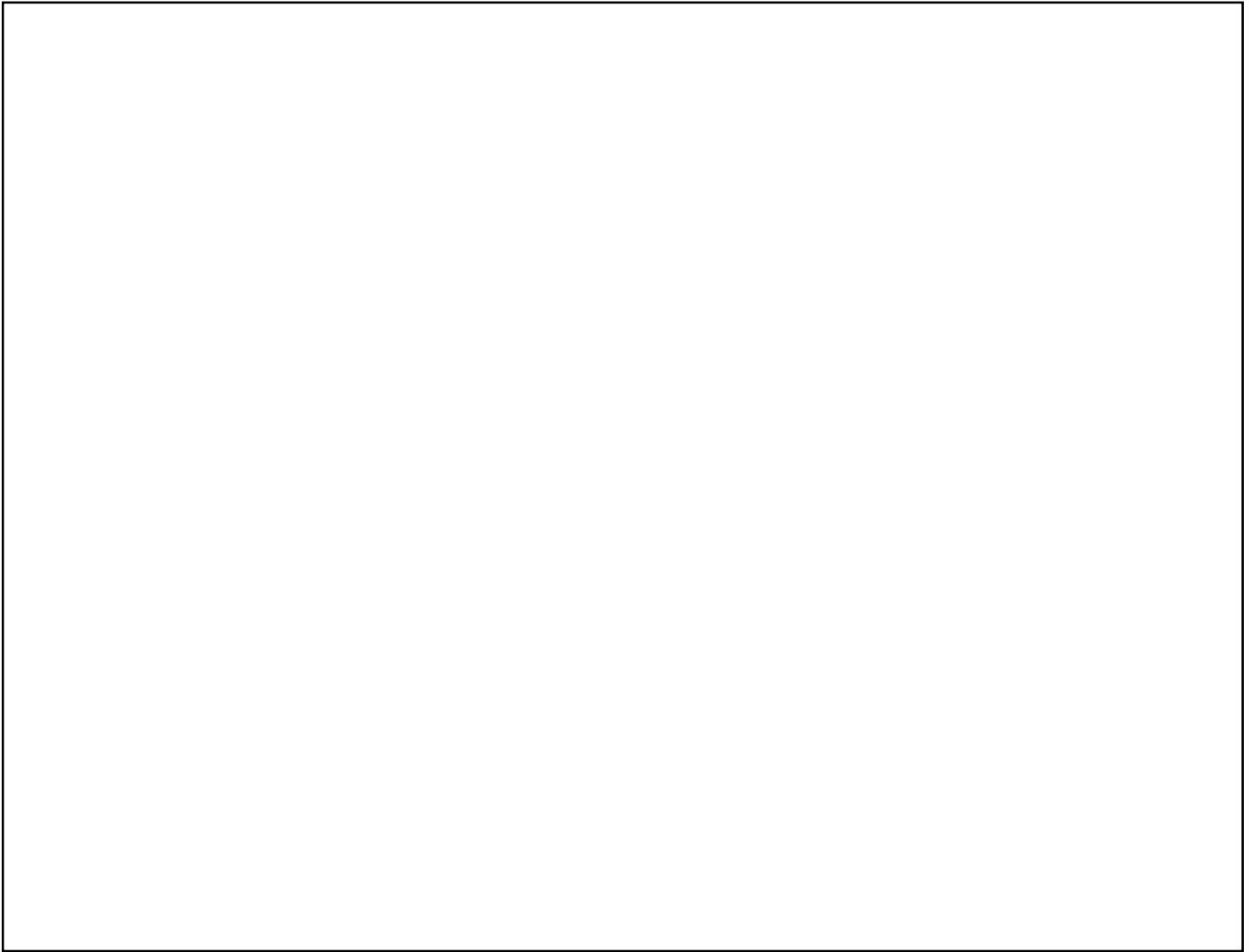
Name \_\_\_\_\_

Date \_\_\_\_\_

## SCIENCE: A Mother Teaches Her Cub

Draw a panda cub and its mother. Show something the mother teaches her cub.

Write about your drawing.



Four horizontal lines for writing, consisting of a solid top line, a dashed middle line, and a solid bottom line, repeated twice.

# Message in a Bottle

## LANGUAGE ARTS

LEXILE<sup>®</sup> 390L

NATIONAL  
GEOGRAPHIC

Young Explorer

### Objective

- Students will ask and answer questions to clarify the meaning of words in a text.

### Standard Supported

- **CCSS Reading Informational Text:** Ask and answer questions to help determine or clarify the meaning of words or phrases in a text. (1-4)

### Resources

- Language Arts Master (page 9)

### Summary

There are many things you can do with a plastic bottle when it is empty. You could throw it away in the trash, where it will end up in a landfill, or you could recycle it, so it could be made into something new. You could also use your bottle in a new way, such as to make a bird feeder. The choice is yours--toss, recycle, or use in a new way.

## WORD WORK

**Sight Words:** *could, from, may, of, them*

## BUILD VOCABULARY AND CONCEPTS

- plastic bottle
- trash
- landfill
- recycle
- choice

Introduce the vocabulary words to students by displaying them in the classroom on a word wall or on a board. Pronounce the words for students. Together, talk about what each means. You might have an empty plastic water bottle on hand to use as an example. Ask students what they can do with the empty water bottle.\* Some will say they can throw it in the trash. Others might be familiar with recycling and will mention that. Let students know that as you read "Message in a Bottle," they will find out what they could choose to do with an empty plastic bottle. Help them understand what it means to have choices. As you read and learn about the different choices, have students add information and pictures to the word wall.

\*Please make sure students know that it is dangerous to reuse disposable bottles for drinking purposes.

## READ AND DISCUSS

Read the article "Message in a Bottle" 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 10–11 Read the title and text on pages 10 and 11. Then say: **In your own words, tell what the question is that the text is asking of readers.** (*What will happen to an empty plastic bottle?*)

Pages 12–13 Read the text. Ask: **What is one thing you could do with your plastic bottle?** (*throw it in a trash can*) **What will happen to the bottle, if you throw it away?** (*It will go to a landfill.*) Have students look at the picture on page 12 and describe what they see. Let them know that this is a landfill. Have them ask and answer questions and make sure they understand what a landfill is. Ask: **Besides a landfill, where else might your plastic bottle end up?** (*in the ocean*) **What might happen if the bottle ends up in the ocean?** (*It can hurt ocean animals.*) **Does it seem like a good idea to throw away your bottle?** (*no*) Let's read on to see if there are some other choices.

Pages 14–15 Read the text. Ask: **What else could you do with your plastic bottle?** (*recycle it*) **What could happen to your bottle, if you recycle it?** (*It could be made into something new, such as new plastic bottles, toys, backpacks, and pens.*) Ask students to look at the pictures of the recycled items. Have students ask and answer questions about what *recycling* means and make sure they understand that the plastic from empty bottles is processed and used as a material to make other items.

Pages 16–17 Read the text. Ask: **What else could you do with your plastic bottle?** (*use it in a new way*) Ask students to name some of the things they could do to use the bottle in a new way. (*grow a plant in it; make a bird feeder out of it*) Ask students if they have other ideas.

## 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.

- **Tell what you can do with an empty plastic bottle.**
- **Draw or write something you learned about one of those choices.**

## SCIENCE

### Objective

- Students will learn that an explorer has concern for the planet.

### Learning Framework Key Focus Area

- **Attitudes:** *National Geographic kids can:* SOLVE PROBLEMS by generating, evaluating, and implementing solutions after identifying alternatives, weighing trade-offs, and making well-reasoned decisions.

### Resources

- Reuse It! poster (Teacher's Edition)
- Science Master (page 10)

### Science Background

Since the 1950s, massive amounts of plastic, most as disposable products, have been produced. Most of these disposable products have ended up as trash. Approximately 91% of plastic is not recycled. Plastic takes more than 400 years to degrade, and huge amounts of plastic end up in our oceans, causing harm to the animals that live there. By mid-century, it is predicted that the oceans will have more plastic waste than fish.

For that reason, it makes sense that the three “Rs” students learn today aren’t only reading, writing, and arithmetic. They are also reduce, reuse, and recycle. The article “Message in a Bottle” focuses on a few ways to recycle and reuse empty plastic water bottles.

### ENGAGE

Talk with students about reduce, reuse, and recycle to see if they have ever heard these terms before. If some students have, ask them to explain what these terms mean and what they refer to. If no one has heard the terms before, let them know that these words refer to ways that we can safely reduce, reuse, and recycle trash and things we no longer need or use.

### EXPLORE

With students, explore some of the ways you might be able to reduce, reuse, or recycle items in your classroom, such as paper. Together, research online and create a

list that will work for you and your students, and then implement these ideas in your classroom.

### EXPLAIN

Ask students to explain what they learned about what they can choose to do with an empty plastic water bottle.

Ask: **What are the three choices we learned about?**

1. You could throw away the bottle.
2. You could recycle the bottle.
3. You could use the bottle in a new way.

Ask students to get into groups and decide, as a group, what they would choose to do with their empty plastic bottle.\* Have them explain why they made that choice, and then share their group’s choice with the whole class. You may want students to use these sentence frames to help them talk about their choices:

- We chose to (throw away, recycle, reuse) our bottle.
- We chose to do this because \_\_\_\_\_.
- We chose to use our bottle in a new way. Here’s what we are going to do with our bottle: \_\_\_\_\_.

\*Please make sure students know that it is dangerous to reuse disposable bottles for drinking purposes.

### ELABORATE

Read through the Reuse It! poster with students, so they can learn how less trash means a cleaner Earth. Help them think about ways they can reuse some of the items they might usually throw away. You might also want to have students create planters out of empty cans, as shown on the poster. Gather the items shown and have students follow the steps to start a colorful classroom herb garden. Challenge students to think of other things they could make out of empty cans.

### EVALUATE

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

- **Why is it important to recycle?**
- **What are some ways to reuse plastic bottles or empty cans?**



Name \_\_\_\_\_

Date \_\_\_\_\_

## LANGUAGE ARTS: Message in a Bottle 3-2-1

Follow the directions to write your 3-2-1.

### 3 Things I Learned

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### 2 Interesting Facts

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### 1 Question I Have

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## SCIENCE: Trash to Treasure

Can you turn trash into treasure? Think of something you usually throw away. Design something new you could make from it instead of throwing it away. Write about your design.



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### Objective

- Students will identify reasons an author gives to support points in a text.
- Students will distinguish between information provided by pictures and information provided by text.

### Standard Supported

- **CCSS Reading Informational Text:** Identify the reasons an author gives to support points in a text. (1–8)
- **CCSS Reading Informational Text:** Distinguish between information provided by pictures or other illustrations and information provided by the words in a text. (1–6)

### Resources

- Language Arts Master (page 13)

### Summary

Trees are important. They are homes for some animals, and some people's houses are made of wood, which comes from trees. People and animals eat fruits that grow on trees. Trees make oxygen that is part of the air we breathe. Trees help animals and people live and grow.

## WORD WORK

**Sight Words:** *some, live, from*

## BUILD VOCABULARY AND CONCEPTS

- trees
- fruits
- oxygen
- air

The words above are in the article “We Need Trees.” Do a picture walk through the article to find the words and the pictures that represent them. Post the words on a word wall. Refer to the word wall as you discuss the article. As you read and learn about trees, add more information and pictures to the word wall. As a class, find other pictures or have students draw pictures of different trees and fruit that grows on trees.

## READ AND DISCUSS

Read the article “We Need Trees” 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 18–19 Read the title and the text. Ask: **What do you think the main topic of this article is?** (*Students should be able to respond that the topic is trees.*) **What do you think we'll find out about trees as we read on?** (*why trees are important, or why we need trees*) Have students look at all of the pictures of different trees on these pages. Ask: **What do you notice about these trees? How are they the same, and how are they different?** Take some time to look at the pictures and guide students to notice the similarities and differences. (*All of the trees have trunks/stems, but they look different from one another. Most of the trees have leaves and branches, but again they look different from one another.*) With the class, find other similarities and differences as you look closely at the pictures.

Pages 20–21 Read the text. Say: **The text on these pages gives us reasons why we need trees and why they are important. Turn and talk with a partner to tell the reasons why trees are important.** (*Animals live in trees. Some people live in houses made of wood, which comes from trees. Trees grow fruits that animals and people eat.*) Ask students to look at the pictures and tell about the information in them, and ask them to discuss how the pictures show what the text tells.

Pages 22–23 Read the text. Say: **The text on these pages gives us more reasons why we need trees and why they are important. Turn and talk with a partner to tell the reasons you learned about on these pages.** (*Trees make oxygen; air has oxygen, and we need air to live.*) Tell students the text on page 23 sums up, or summarizes, the reasons why we need trees. Guide students to understand that the information they learned about trees providing homes for animals and people, food to eat, and oxygen in the air are all reasons that explain why trees are important and make our world a better place.

## 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 why we need trees.**
- **Draw or write something you learned about trees.**

## SCIENCE

### Objective

- Students will learn that plants can change their environment.

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

### Resources

- Science Master (page 14)

### Science Background

There are many different types of trees, but they all have similar parts.

- roots that grow underground
- trunk (stem)
- branches
- leaves or needles
- some have flowers and grow fruit or nuts

Like most plants, trees grow from seeds. Trees provide many things for people and animals and are a valuable natural resource.

### ENGAGE

Engage students by having a discussion about trees. You might have them draw a tree and then compare their tree with others' trees. Have pictures of trees available, and let students know what the different parts of a tree are. Ask students to find (or add) those parts on their drawings.

### EXPLORE

If you have trees near your school, you might want to do a nature walk. Have students bring a "science notebook" on the walk so they can draw or write their observations. Spend as much time as you can observing the trees. Students can talk about what they see and notice things such as the shape of the leaves, the trunk and the texture of the bark, if some of the roots are visible above the ground, how tall or how small the tree is compared to other trees, and so on.

### EXPLAIN

Ask students to explain what they learned about why we need trees. Help students make inferences about what they read, based on the text and the pictures in the article. Provide the bulleted information below to students, and guide them in finding the reason from the article that fits with each statement.

### Reasons We Need Trees

- Animals need places to live. (*Some animals, like opossums, live in trees.*)
- People need places to live, too. (*People use the wood that comes from trees to make some houses.*)
- People and animals need food to eat. (*Trees grow food, like fruits.*)
- We need air to live. (*Trees make oxygen, which is part of air.*)

### ELABORATE

As a class, research to find other reasons we need trees or other types of trees that provide food for animals and people. You might also want to plan an Arbor Day celebration, which falls on April 27. Arbor Day is a day to celebrate the importance of trees. There are many ideas online for different ways to celebrate, with activities such as planting trees, creating posters, reading books, writing stories, and taking hikes to identify trees.

### EVALUATE

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

- **What is one reason we need trees?**
- **What is a food that grows on some trees?**

## LANGUAGE ARTS: Word Scramble

Unscramble the words. Then write about trees using at least three of the words.

trees

air

fruit

oxygen

1. genyox \_\_\_\_\_

2. ertes \_\_\_\_\_

3. tiruf \_\_\_\_\_

4. ria \_\_\_\_\_



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## SCIENCE: Observe a Tree

Go outside. Pick a tree. Look at the tree carefully.

Draw a picture of your tree.

Draw a leaf from  
your tree.

Write three words or more that tell about the tree.

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Are there any birds, insects, or other animals in the tree?

Write down the animals. Write what they are doing.

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Are there any flowers, fruits, or nuts on the tree? Write what they look like.

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## ANSWER KEY

### A Cub in the Wild

#### Language Arts: A Panda Cub Grows, page 5

Students should use the chart to answer the questions.

1. 3 months
2. 6 weeks
3. 6 months
4. 3 weeks
5. 6 months
6. when a cub is born

#### Science: A Mother Teaches Her Cub, page 6

Students should draw a panda mother teaching her cub. Then student should write about their drawing

### Message in a Bottle

#### Language Arts: Message in a Bottle 3-2-1, page 9

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

#### Science: Trash to Treasure, page 10

Students should draw a design of something new that they could make out of an item they would usually throw away. Then they should write about their design.

### We Need Trees

#### Language Arts: Word Scramble, page 13

Students should unscramble the words and then use at least three of those words to write about trees.

1. oxygen
2. trees
3. fruit
4. air

#### Science: Observe a Tree, page 14

Students should go outside, pick a tree to observe, and draw and write about their observation.