

Voyager (Grade 1) Vol. 17 No. 4

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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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 "Pulling My Sled."

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.

Pulling My Sled

LANGUAGE ARTS



Objective

- Students will identify the reasons an author gives to support points in a text.

Standard Supported

- **CCSS Reading Informational Text:** Identify the reasons an author gives to support points in a text. (1-8)

Resources

- Language Arts Master (page 5)

Summary

Jade Hameister writes about how she skied and pulled her sled to the North Pole. She used pulls to get ready for her trip. On her trip, she pulled her sled for 11 days and made it to the North Pole. She is the youngest person to ski so far to get there.

WORD WORK

Sight Words: *of, were, over, had, after*

BUILD VOCABULARY AND CONCEPTS

- North Pole
- ski/skied
- sled
- pull/pulls/pulled
- pull-ups

The words above are used in the article and some may be new to students. Read and define the words with students.

READ AND DISCUSS

Read the article “Pulling My Sled” 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 byline. Ask students: **Who is the author of this article?** (*Jade Hameister*) **How do we know Jade Hameister is the author?** (*because it says “by Jade Hameister” after the title*) **The title is “Pulling My Sled.” Who do you think “my” is referring to in the title?** (*Jade*) Have students look at the pictures on pages 2–3 and discuss what they see. They should be able to infer that these are pictures of Jade and that she is a young girl in a cold place.

Read the text on page 3. Ask: **Who is telling us this information I just read?** (*Jade Hameister*) Make sure students understand that Jade is the author of this text. Then ask: **What does Jade tell us she did?** (*She skied to the North Pole and pulled her sled on the way there.*) Let students know that as you continue reading they should listen for information and reasons the author gives to support points in the text.

Pages 4–5 Read the text. Ask: **What did Jade do to get ready before her trip?** (*She pulled a tire on the beach and did pull-ups.*) **What reasons did Jade give for doing these things?** (*These types of pulls helped her get stronger.*) **Jade said she pulled her sled all day, and it was heavy. What reasons does she give for having such a heavy sled?** (*She had her food, tent, and other gear in her sled.*)

Pages 6–7 Read the text. Ask: **What are some different places Jade had to pull her sled?** (*on flat ice and over hills of snow and ice*) **What did Jade finally do?** (*She pulled her sled for 11 days and made it to the North Pole.*) **What might be one of the reasons Jade did this?** (*She is now the youngest person to ski so far to get to the North Pole.*)

EXTEND

Extend Your Thinking

Display the Learning Framework Attitudes and Skills feature on the back cover of the magazine. As a class, discuss the difference between dreams people have at night and dreams—or goals—they have about the future. Tell students that the best way to make a dream come true is to create and follow a plan. That’s what Jade Hameister did, and it got her all the way to the North Pole. Instruct students to think about something they dream of doing. Challenge them to create a plan. Then have students write a short story telling (or draw a picture showing) how they plan to make their dreams come true.

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 Jade.**
- **Draw or write something you learned about Jade.**

Objective

- Students will understand that pulls can have different strengths.

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 6)

Science Background

The North Pole is the northernmost point on Earth. Unlike the South Pole, it is not a land mass. The North Pole is located in the middle of the Arctic Ocean. The waters there are almost always covered with constantly moving ice. In April 2016, Jade Hameister, a young girl from Melbourne, Australia, skied to the North Pole. She was the youngest person to do so from anywhere outside the Last Degree. Jade has been continuing her icy adventures. In June 2017, she traversed the icecap of Greenland, and she is planning a future South Pole expedition. Both of these journeys will be part of an upcoming National Geographic documentary.

ENGAGE

Most students will be familiar with what it means to pull. Have students work with a partner. Ask one partner in each pair to pantomime pulling an empty wagon. Then have the other partner imagine that the wagon is filled with heavy rocks. Ask that partner to pantomime what it would be like to pull the rock-filled wagon. Students can discuss the difference between the pulls needed for each wagon. They should quickly understand that pulls can have different strengths. A weak pull can move something that is not heavy. Moving a heavy object takes a strong pull.

EXPLORE

Have students think about things they pull every day. Write on a board or chart paper all of the pulls they can think of. Here are a few ideas to get started:

- Pulling on clothes to get dressed, such as socks and pants
- Pulling a door open to go outside
- Pulling a drawer open to get something inside of it

EXPLAIN

After reading, have students turn and talk with a partner to tell about the pulls Jade did before and during her trip.

Before Jade's Trip

- She pulled a tire on the beach.
- She did pull-ups.

During Jade's Trip

- She pulled her heavy sled with all of her gear in it.
- She pulled her sled on flat ice.
- Sometimes she pulled her sled over hills of snow and ice.

Then have students look at the pictures in the article and discuss the different strengths of each pull. Which ones need more strength and which need less? Have students explain why each type of pull needs more or less strength.

EVALUATE

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

- **What did Jade pull?**
- **Describe how and why Jade pulled her sled.**

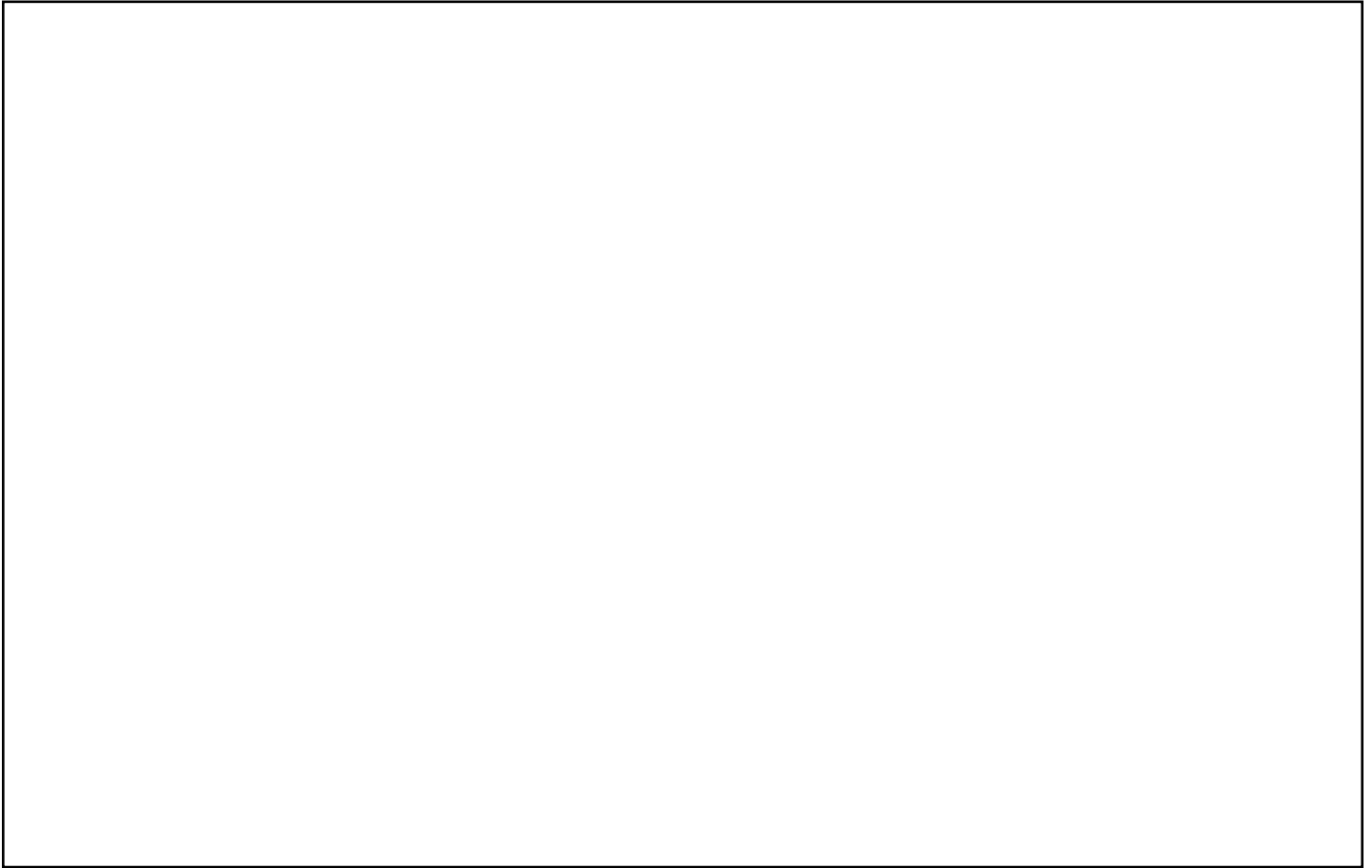
Name _____

Date _____

LANGUAGE ARTS: Something Special

Jade did something special.

Draw something special that you did. Then write about it.



SCIENCE: Weak Pull, Strong Pull

Circle if the pull is weak or strong.



weak strong



weak strong

Write about a strong pull you did.

Objective

- Students will understand the relationship between pictures and text.

Standard Supported

- **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 9)

Summary

Antarctica is a continent. It is the coldest place on Earth. It is too cold for people to live there, but people visit to take pictures and learn about the land and the animals. Ice covers the land and icebergs float in the ocean. Few animals live on land, but sea birds are found there, and whales and seals swim in the ocean around Antarctica.

WORD WORK

Sight Words: *live, some, take, by, of*

BUILD VOCABULARY AND CONCEPTS

- **Antarctica**
- **continent**
- **cold/coldest**
- **ice/icebergs**
- **covers/covered**
- **float**

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, and determine if they know some of the words, such as *cold* and *ice*. Together, come up with student-friendly definitions and pictures or drawings that you can add to the word wall. Let students know they will be reading an article that tells about a very cold place that has lots of ice.

Do a picture walk through the article. Point out the locator map and pictures that will help students understand the words and the place you will be reading about.

READ AND DISCUSS

Read the article “Antarctica” 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. Then point to the map on page 9. Let students know that the map is a flat picture of Earth. Point out where Antarctica is on the map. Then ask: **What did we find out about Antarctica?** (*It is a continent and the coldest place on Earth.*) **How does the picture help us see that Antarctica is a very cold place?** (*There is snow and ice all around.*)

Pages 10–11 Read the text. Ask: **What else did we find out about Antarctica?** (*There are strong winds and is too cold for trees to grow or for people to live there. People only visit.*) **What do people do when they visit?** (*take pictures, learn about the ice and land and animals.*) Ask: **How do the pictures help us understand what the text says?** (*They show people visiting Antarctica. They show them doing things mentioned in the text.*) Point out the labels of the animal names and read them to students as they look at each of the animals.

Pages 12–13 Read the text. Make sure students understand what “covered by a thick layer of ice” means. Point out the label *layer of ice*. Let students know that in this case it means that ice is completely spread over the land, and it is very thick, as shown in the picture. Point out the label *iceberg*. Ask: **What did we find out about icebergs?** (*They are pieces of ice that break off and float in the ocean.*) Ask students to discuss how the pictures help them understand what the text says. (*Students should note how the pictures show how much ice is in Antarctica and how big the icebergs are.*)

Pages 14–15 Read the text. Point out the labels and read them as students look at the pictures. Ask: **What animals live in or near Antarctica?** (*antarctic tern, southern elephant seal, humpback whale, blue-eyed shag*) Ask: **Would you like to visit this icy place? Why or why not?**

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 Antarctica.**
- **Draw or write something you learned about Antarctica.**

Objective

- Students will identify environmental characteristics of places.

Standard Supported

- **D2.Geo.3.K-2.** Use maps, globes, and other simple geographic models to identify cultural and environmental characteristics of places.
- **CCSS Operations and Algebraic Thinking:** Add and subtract within 20. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2). (1.OA.C.5)

Resources

- The Poles poster (Teacher's Edition)
- Social Studies and Math Master (page 10)

Social Studies Background

Both the Arctic and the Antarctic are important to the rest of Earth. They help moderate and stabilize the climate for the rest of the planet. But what are some of the differences between these two cold places?

The Arctic

The Arctic is the area between the Arctic Circle and the North Pole. The Arctic is ocean (the Arctic Ocean) that is surrounded by land. An animal associated with the Arctic is the polar bear.

The Antarctic

Antarctica is where the South Pole is. It is land that is surrounded by ocean. It is the southernmost continent. It is also the coldest place on Earth. It is so dry there that it is considered a desert. An animal associated with the Antarctic is the penguin.

ENGAGE

Ask students to talk about an experience they have had outside when it is cold. Depending on where you live, students will have different tales of what it means to be outside in the cold. Ask them to describe what the weather was like, what their surroundings looked like, and how it felt to be cold.

EXPLORE

With students, explore some outdoor activities that can be done in the cold and what a person would need to wear to survive in cold weather, especially when there is snow and ice on the ground. A few possibilities are listed below.

Activities: skiing, sledding, ice skating

Cold-Weather Clothing: hat, scarf, mittens, snow pants, heavy socks, boots

EXPLAIN

Ask students to explain what they learned about Antarctica in the article "Antarctica." Have them turn and talk with a partner to tell what they've learned. They can use the pictures to guide them.

- Antarctica is a continent. It is the coldest place on Earth.
- Antarctica also has strong winds.
- It is too cold for trees to grow.
- Antarctica is too cold for people to live there, but people visit.
- People can take pictures and learn about the land, ice, and animals.
- The South Pole is in Antarctica.
- The land on Antarctica is covered by a thick layer of ice. The ice also covers some of the ocean.
- Icebergs break off of the ice and float away.
- In Antarctica, almost no animals live on land.
- Sea birds visit and build nests, and seals and whales swim in the waters around Antarctica.

ELABORATE

Read through The Poles poster with students so they can find out where the Arctic and the Antarctic are located and how they are different from each other.

EVALUATE

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

- **Why do people go to Antarctica?**
- **What does Antarctica look like?**

LANGUAGE ARTS: Ice is Nice

Write about Antarctica. Use at least four words from the Word Bank.

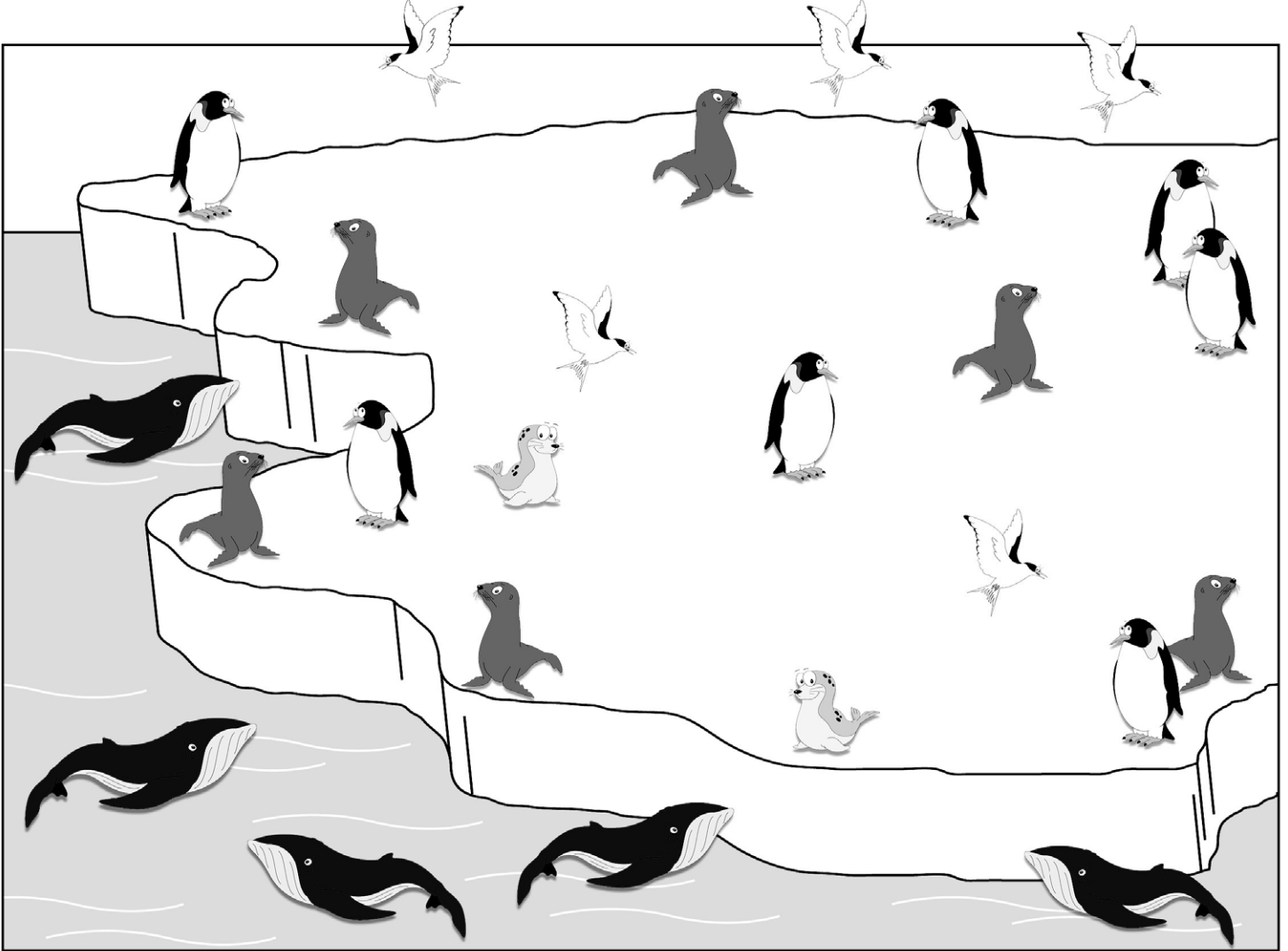
Antarctica	continent	cold	ice	iceberg	covered	float
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Handwriting practice lines consisting of solid top and bottom lines with a dashed middle line, repeated multiple times for writing.



SOCIAL STUDIES AND MATH: How Many?


Count how many of each animal. Write the numbers in the boxes.

Then add the numbers together to solve the problems.



1.  +  = _____ birds

2.  +  = _____ seals

3.  +  = _____ whales

Objective

- Students will use words and phrases acquired through conversations, reading, and responding to texts.

Standard Supported

- **CCSS Language Standards:** Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using frequently occurring conjunctions to signal simple relationships (e.g., *because*). (1-6)

Resources

- Language Arts Master (page 13)

Summary

Penguin parents work together to care for their baby chick before and after it hatches from the egg. They keep it warm and safe and fish for food to feed it. The chick grows feathers for swimming. Then it will learn to fish for its own food.

WORD WORK

Sight Words: *live, take, of, then, give, his, fly, over*

BUILD VOCABULARY AND CONCEPTS

- penguin
- parent
- mother
- father
- egg
- chick

The words above are used in the article “Penguin Parents.” Have pictures available for students to see, or do a picture walk through the article to point out the penguin parents and the chick.

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 penguins, add more information to the word wall.

READ AND DISCUSS

Read the article “Penguin Parents” 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 are these animals?** (*emperor penguins*) Ask: **Where do emperor penguins live?** (*Antarctica*) **What do penguin parents do?** (*They work together and take care of their baby.*)

Pages 18–19 Read the text. Ask: **Who lays one egg?** (*the mother*) **What happens next?** (*The mother gives the egg to the father.*) **What does the father do with the egg?** (*He keeps it safe and warm on top of his feet.*) **What will happen soon?** (*A baby penguin will hatch from the egg.*)

Pages 20–21 Read the text. Ask: **What is a baby penguin called?** (*a chick*) Ask: **Where does the chick stay and why?** (*The chick stays on the feet of one of the parents because it is warm there.*) **The parents take turns caring for the chick. What do they do?** (*One parent keeps the chick warm, and the other parent goes fishing.*) Point out and read the Fast Facts on page 21. Ask students if they knew that penguins cannot fly and that they are great divers.

Pages 22–23 Read the text. Ask: **What else do we learn about the chick and the penguin parents?** (*The parents bring back fish for the chick to eat. Over time it grows, and its feathers change.*) **What are the feathers good for?** (*swimming*) **What happens when the chick learns to swim and fish?** (*It can fish for its own food.*)

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 penguin parents.**
- **Draw or write something you learned about penguin parents.**

Objective

- Students will learn that penguins have young, and both parents help the young survive.

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)

Resources

- Penguins of Antarctica poster (Teacher's Edition)
- Science Master (page 14)

Science Background

Penguins are flightless birds that live primarily in the Southern hemisphere. Penguins spend up to 80 percent of their time in the ocean. They have flippers instead of wings. While penguins waddle upright on land, they are expert swimmers and divers. They are able to swim up to 15 miles per hour. Penguins are carnivores that eat krill, squid, and fish. Their black and white bodies help to camouflage them in the ocean, as they hunt for food. There are 17–19 species of penguins that range in size and coloring. All penguins are primarily black and white, but some species have orange or yellow feathers around their heads or necks.

ENGAGE

Engage students by talking about penguins. Many students will know what penguins look like, and some may have seen them in a zoo.

EXPLORE

Explore more about what students know about penguins. Have students work with a partner to see if they can do one or more of the following:

- Walk like a penguin.
- Use their hands to show how a penguin swims in the ocean.
- Use their hands to show how a penguin slides on the ice.

EXPLAIN

Ask students to explain what they learned about penguin parents and their chick. Ask students to tell what they learned in their own words.

- Emperor penguins live in Antarctica.
- Penguin parents work together to care for their baby.
- The mother penguin lays an egg, and she gives it to the father penguin to take care of it.
- The father keeps the egg warm and safe on top of his feet.
- The baby chick hatches from the egg.
- The parents take turns taking care of the chick. One parent keeps the chick warm while the other goes fishing.
- The parents bring fish for the chick to eat.
- The chick's feathers change as it grows.
- The feathers are good for swimming.
- The chick learns to swim and take care of itself. It can fish for food on its own.

You might have groups of three students act out the different stages of care and development in the article. Two students can be the penguin parents and one can be the chick.

ELABORATE

Let students know there are many different kinds of penguins. Spend time with students reading and looking at the Penguins of Antarctica poster. You might want to make a chart or a Venn diagram and work with students to record how the penguins on the poster are the same and different.

EVALUATE

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

- **What do the penguin parents take turns doing?**
- **How does the chick grow and change?**

LANGUAGE ARTS: Penguin Parent Words



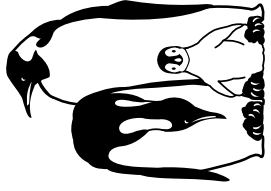


Use this chart to write and draw the words from the Word Bank.

chick	egg	penguin parents
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SCIENCE: A Chick Grows

Look at the chart. Then circle the word that goes in the blank.

1	2	3	4	5
				
The mother lays one egg.	The father keeps the egg safe on his feet.	The chick hatches from the egg. The parents take turns caring for it.	The parents feed the chick fish.	The chick learns to swim. Now it can catch food on its own.

1. The mother lays one _____.

fish egg ice

4. The parents feed the chick _____.

fish ice egg

2. The father keeps the egg safe on his _____.

ice egg feet

5. The chick learns to _____.

swim run fly

3. The _____ hatches from the egg.

father mother chick

ANSWER KEY

Pulling My Sled

Language Arts: Something Special, page 5

Students should draw and write about something special that they did.

Science: Weak Pull, Strong Pull, page 6

1. Students should circle "strong"
2. Students should circle "weak"

Then students should write about a strong pull they did.

Antarctica

Language Arts: Ice is Nice, page 9

Students should write about Antarctica using at least four words from the Word Bank.

Social Studies and Math: How Many?, page 10

Students should count the different animals, write the numbers, and then add them together to solve the addition problems.

1. $7 + 5 = 12$ birds
2. $6 + 2 = 8$ seals
3. $3 + 2 = 5$ whales

Penguin Parents

Language Arts: Penguin Parent Words, page 13

Students should write and draw the words from the Word Bank.

Science: A Chick Grows, page 14

Students should use the chart to help them circle the correct answers.

1. egg
2. feet
3. chick
4. fish
5. swim