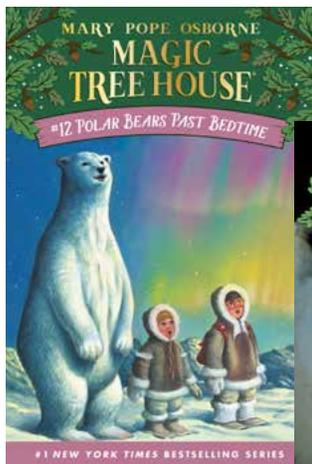


EDUCATORS' GUIDE

MAGIC TREE HOUSE®

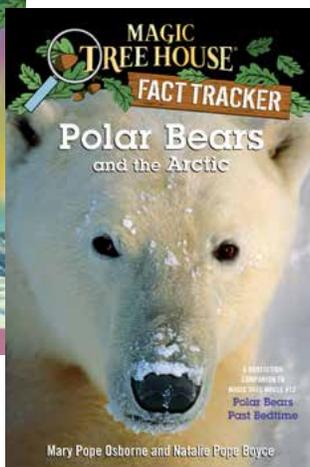
Polar Bears Past Bedtime and ***Polar Bears and the Arctic:*** *A Nonfiction Companion to Polar Bears Past Bedtime*



PB: 978-0-679-88341-8
EL: 978-0-375-89469-5
Grades: 1-4
F&P: M • Lexile: 440L

ABOUT *Polar Bears Past Bedtime*

The Magic Tree House transports Jack and Annie to the freezing Arctic. There, they must solve the final riddle to become master librarians. But it's not going to be easy—especially when they have cracking ice, a seal hunter, and a prodigious polar bear to deal with. Will they be able to solve the riddle before they get iced themselves?



PB: 978-0-375-83222-2
EL: 978-0-307-97534-8
Grades: 2-5
F&P: Q • Lexile: 730L

ABOUT *Polar Bears and the Arctic:*

A Nonfiction Companion to Polar Bears Past Bedtime

WHY IS THE arctic so cold? How do polar bears cross thin ice? How did people learn to survive in that harsh climate? Find out the answers to these questions and more in Jack and Annie's guide to the arctic.

CLASSROOM CONNECTIONS

ACTIVITIES FOR *Polar Bears Past Bedtime*

The Land Before Time

Frostbite in the Arctic or snake bites in the Amazon are but a few of the dangers faced by explorers on journeys to strange and exotic lands. Those not assisted by Morgan's magic, like Jack and Annie, must pack supplies and equipment for "survival." Separate students into five explorer teams, each preparing for a 7-day expedition to one of the habitats visited by Jack and Annie. Have students develop an Expedition Checklist of things to pack, based on animal life and geographic and climatic conditions, including all food, clothes, medical supplies, camping gear and other equipment. Have each team present its checklist to the class and then discuss. Older students can estimate amounts of supplies needed and approximate costs of their expeditions. Don't forget to include travel costs in the absence of Magic Tree House availability!

CURRICULUM: *Science • Math • Geography*

ACTIVITIES FOR *Polar Bears and the Arctic:* ***A Nonfiction Companion to Polar Bears Past Bedtime***

Getting Started

Students benefit from seeing that scientists and researchers start with questions and find answers as well as answer questions that other people give them.

Here are a few questions to use as examples when getting the students started:

What kinds of plants grow in the Arctic?

What nutrients or qualities are needed in soil in order for plants to be able to grow?

Are there ice caps other than the Polar Ice Caps?

How do Arctic animals get the water they need?

Why are the Northern Lights in different colors?

Can we see the Northern Lights where we live?

What materials are worn by native people, researchers, and adventure-seekers around the world to stay warm? Are there any synthetic fabrics that compare to animal skin or fur? What rating scale is used to compare materials? How does your winter jacket fare on the scale?

TIP: *This activity can be done as a class or as independent project.*

How Cold Is Cold?

Use a thermometer to measure the temperature in your school. Then use a number line to compare the temperature at school with the lowest recorded temperature in the Arctic. You can also compare winter and summer temperatures. It is to the students' benefit to see that numbers are organized on vertical and horizontal scales.

It's Dark Outside!

How does the position of the earth/sun change the amount of daylight you have in your community throughout the year? Compare the average amount of daylight your area experiences during each month of the year and the average amount of daylight in the Arctic. Contact your local news/weather station to find information specific to your region.

TIP: *This activity can be done as a class or as independent project.*

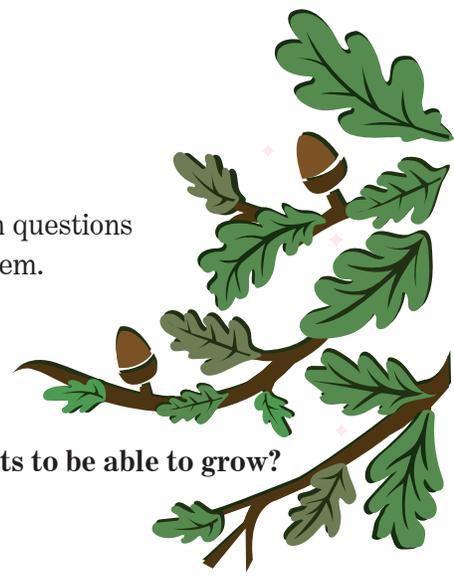
Debunking Myths

The *Polar Bears and the Arctic* Fact Tracker gives the scientific explanation behind many myths we may have believed about the Arctic, its animals, and the people who live there. Have students contrast myths with reality as they read through the nonfiction text. You can distribute the Debunking Myths reproducible activity sheets that will help students organize their thoughts and findings.

One Thing Triggers Another: The Effect of Global Warming on Polar Bears

Have students describe global warming as a newscaster. They should include a visual, such as a poster or flip book, to show the causes and effects of global warming.

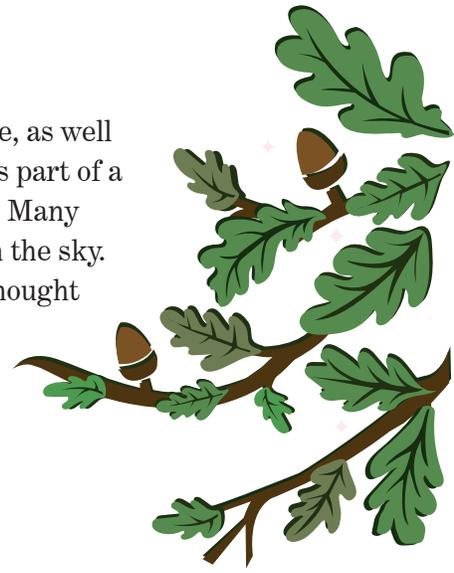
TIP: *This activity can be done as a class or as independent project.*



Behind the Northern Lights

In this Fact Tracker, students learn what the Northern Lights look like, as well as where and when they can be seen. Help them use the information as part of a fictional story about how the lights came to be or what they represent. Many cultures over the years have created myths to explain what they see in the sky. Encourage the students to be creative and tell a tale that no one has thought of yet. Give them specific instructions regarding the quality of writing mechanics you expect according to their developmental levels.

TIP: *This activity can be done as a class or as independent project.*



EXPLORING ADAPTATIONS

Mystery Animal Game

Describe an animal from *Polar Bears and the Arctic* one adaptation at a time. Have students guess the animal you are thinking of.

TO SIMPLIFY:

- Create a list of animals to choose from on the board. As students guess, erase options that have been eliminated.
- Use sentence strips or flashcards to show the adaptations as you announce them to the class; post them on the board for reference.
- Have students take notes from the book according to each animal prior to playing the class review game. As adaptations are announced, they can mark them off in their notebooks.

TO INCREASE DIFFICULTY:

- Choose whether or not to let the students guess as you read the list of adaptations. Make guessing a high-stakes operation. Have each student explain his or her rationale for the answer chosen.

Interactive Bulletin Board

Describe an animal from *Polar Bears and the Arctic* one adaptation at a time. Have students guess the animal you are thinking of.

OPTION 1:

- Post the name of each adaptation discussed in the Fact Tracker on one side of the bulletin board. Post a labeled picture of each animal discussed on the other side. Set students to the task of connecting the animals and adaptations with string. Color-code the string for each animal.

Option 2:

- Post pictures of the animals, and ask students to select prepared adaptation cards (labels) to post near each of the animal pictures.

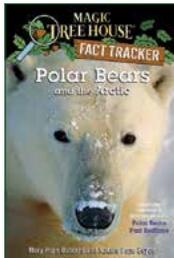
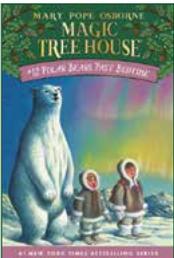
Teaching ideas by Rosemary B. Stimola, Ph.D., former professor of children's literature at City University of New York, and Beth Fawley, the 2006 Magic Tree House Educator of the Year, who is the K-12 Gifted and Talented Coordinator at Columbia Heights Public Schools in Minnesota.



WHO TURNED THE LIGHTS ON?

Directions: Was it the polar bear spirit or charged particles from the sun striking atoms and molecules in the earth's atmosphere that filled the Arctic sky with swirls of red, green, and purple colors? Using crayons, paints, or markers, bring the northern lights to the blank skies shown below.

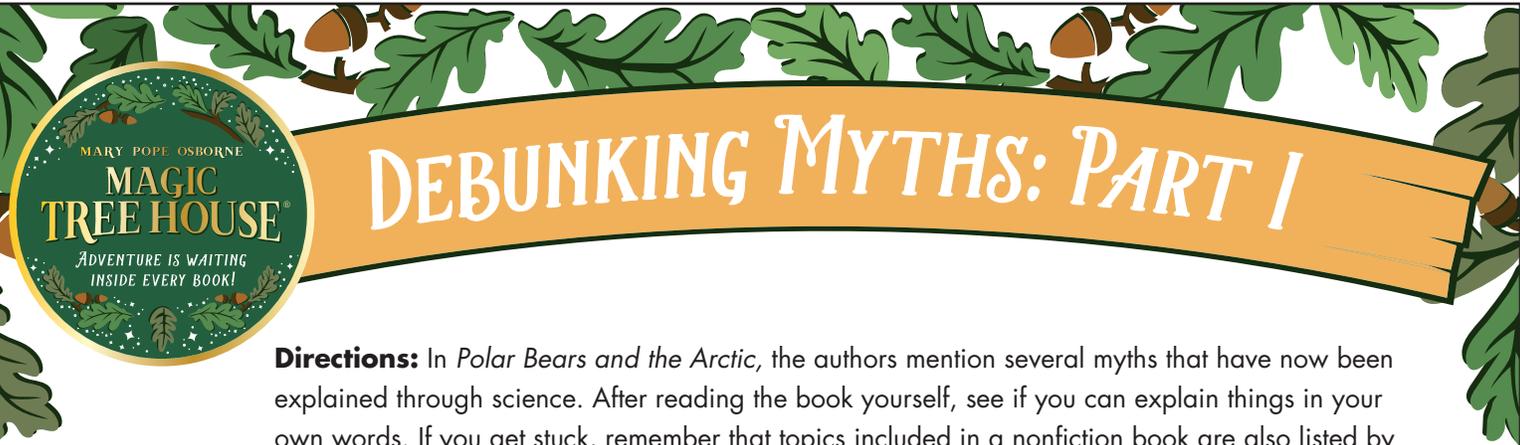
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Activity for *Polar Bears and the Arctic*: A Nonfiction Companion to *Polar Bears Past Bedtime* by Mary Pope Osborne and Natalie Pope Boyce

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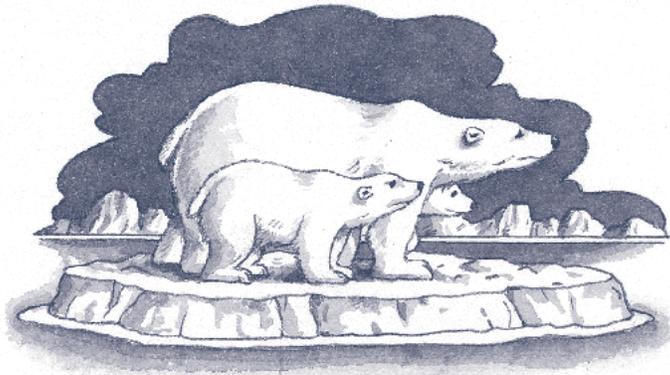
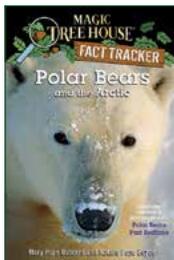
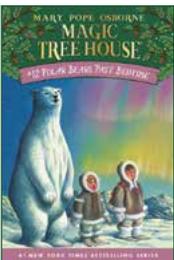


DEBUNKING MYTHS: PART I

Directions: In *Polar Bears and the Arctic*, the authors mention several myths that have now been explained through science. After reading the book yourself, see if you can explain things in your own words. If you get stuck, remember that topics included in a nonfiction book are also listed by page number in the index. Be sure to write the truth in complete sentences

The Myth	The Truth in My Own Words
Polar bears and penguins both live in cold places. You can find them near each other in the wild.	
All land in the Arctic Circle looks the same.	
The North and South Poles are both continents.	
Arctic people prefer to be called Eskimos.	
Long ago, Arctic people lived in igloos year-round.	

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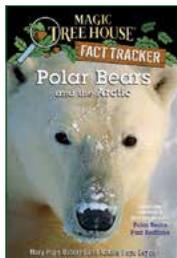
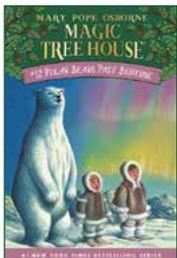
Activity for *Polar Bears and the Arctic*: A Nonfiction Companion to *Polar Bears Past Bedtime* by Mary Pope Osborne and Natalie Pope Boyce

DEBUNKING MYTHS: PART II

Directions: In *Polar Bears and the Arctic*, the authors mention several myths that have now been explained through science. After reading the book yourself, see if you can explain things in your own words. If you get stuck, remember that topics included in a nonfiction book are also listed by page number in the index. Be sure to write the truth in complete sentences

The Myth	The Truth in My Own Words
Native people in the Arctic all follow traditions from the past in the way they dress, travel, and build homes.	
Polar bears in the wild are friendly to humans.	
Polar bears are white.	
Arctic people didn't tell imaginative stories to each other.	
The Northern Lights are magic.	

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EXPLORING ADAPTATIONS

For use with *Polar Bears and the Arctic: A Nonfiction Companion to Polar Bears Past Bedtime*

Teachers: Use these adaptations on your interactive bulletin board.



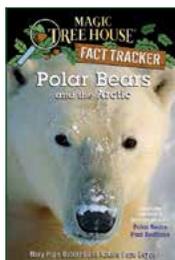
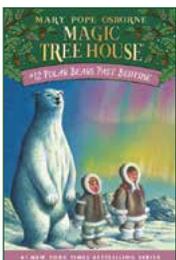
Fur coat



Whiskers



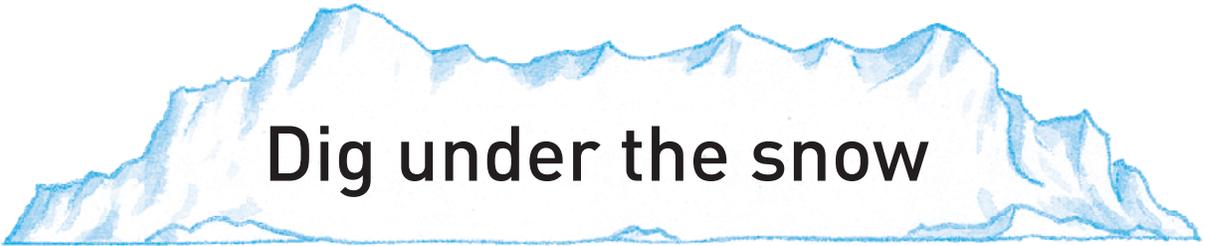
Fur changes color



EXPLORING ADAPTATIONS

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Teachers: Use these adaptations on your interactive bulletin board.



Dig under the snow



Fast runners



Live in groups

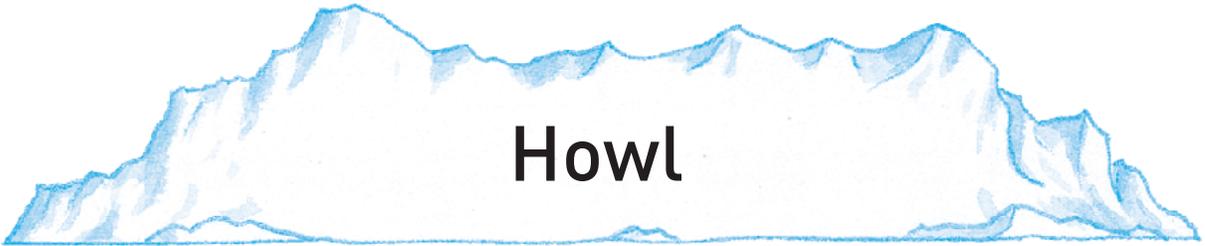


Smelly

EXPLORING ADAPTATIONS

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Howl



Blubber



Eat big meals



Sensitive ears

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Big feet



Great noses



Hibernation

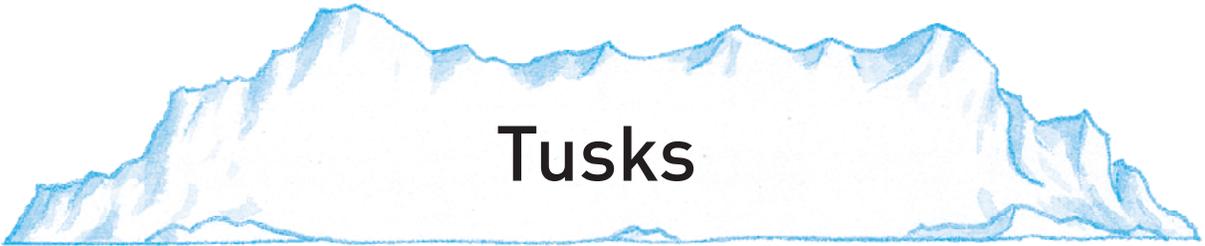


Migration

EXPLORING ADAPTATIONS

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Tusks



Hunt at night



Hunt during the day



Live on land

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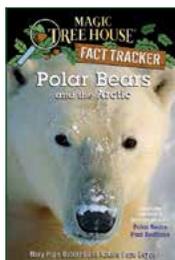
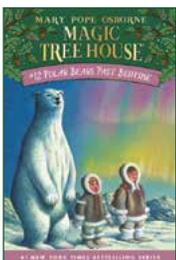
Live in the water



Heartbeat slows



Sit on ice floes

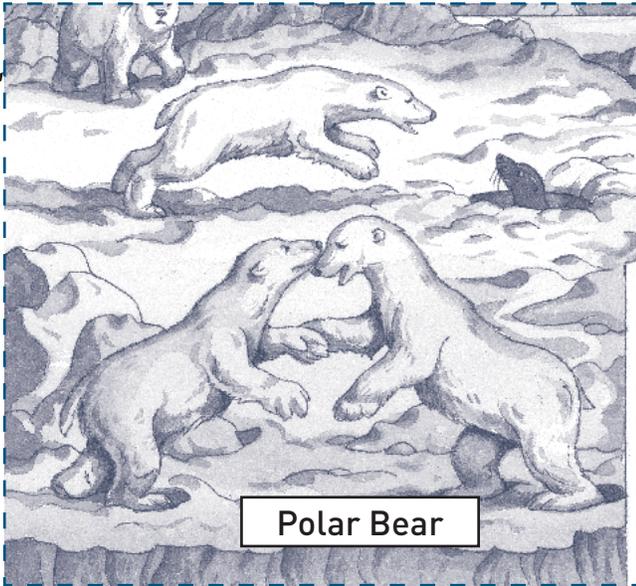




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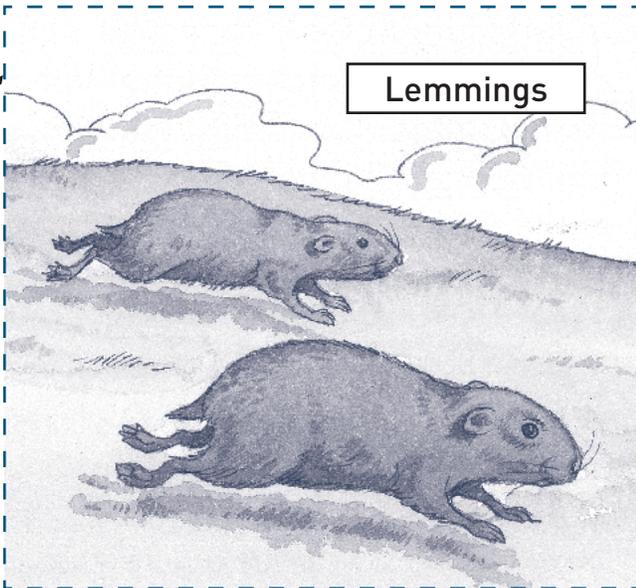
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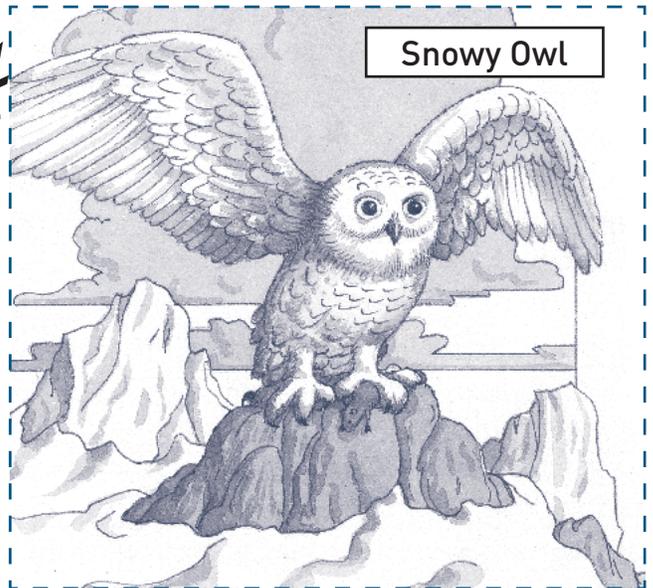
Polar Bear



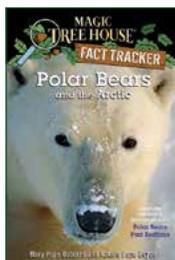
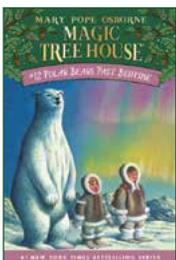
Arctic Hare



Lemmings



Snowy Owl



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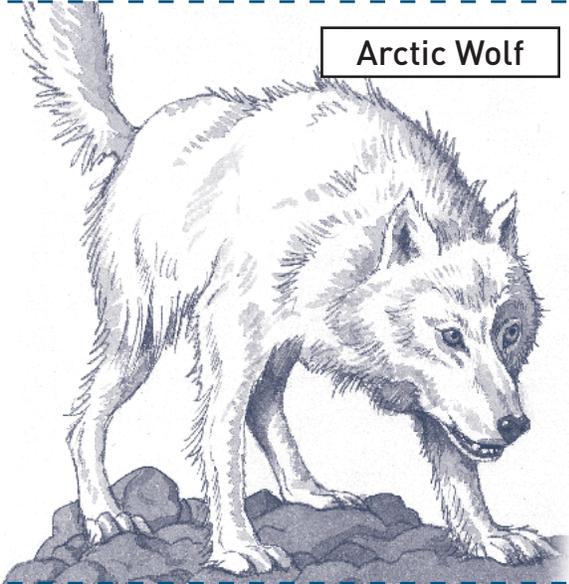


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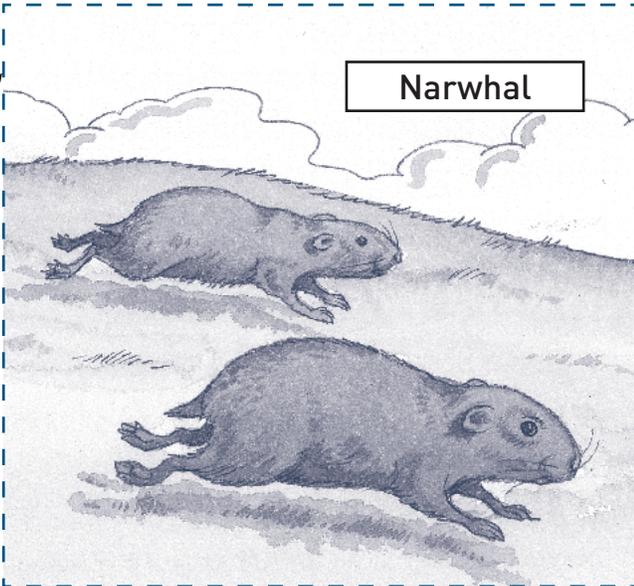
Arctic Wolf



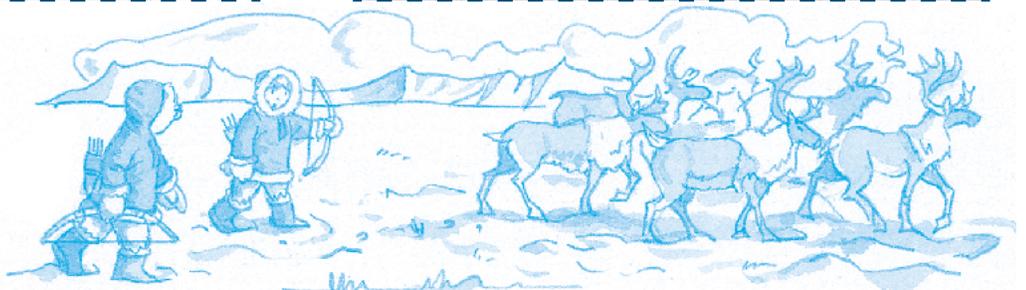
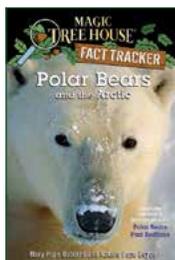
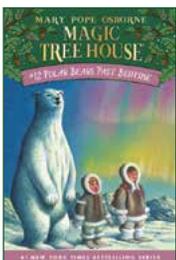
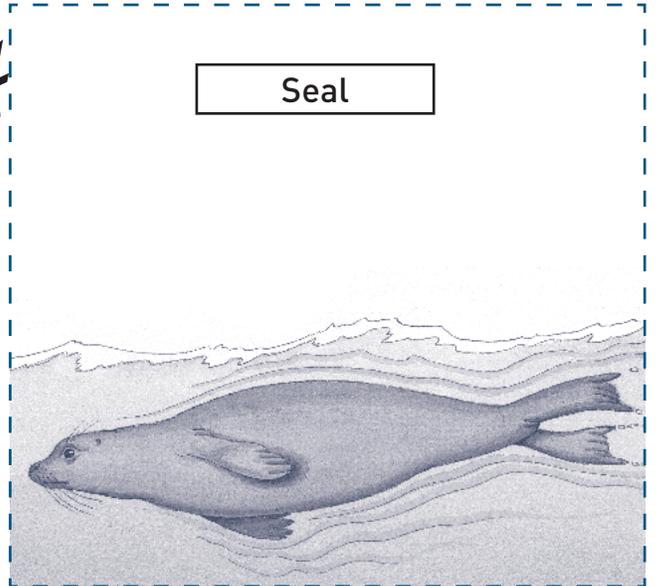
Wolverine



Narwhal



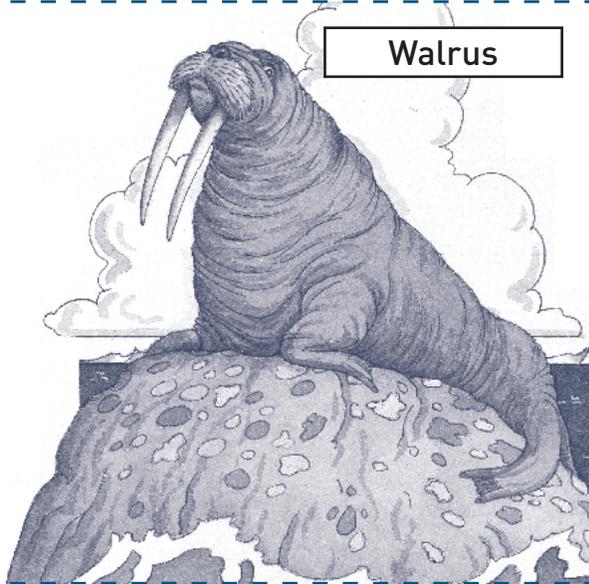
Seal



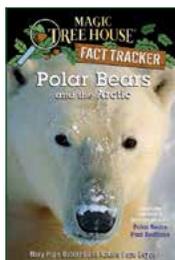
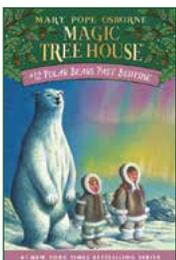
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Walrus



Use the blank boxes for additional animals that you'd like the class to study.