



## **ACTIVITY TWO**

# **READING ABOUT POLAR BEARS**

**Subjects:** Language arts, life science

## **LEARNING OBJECTIVES:**

- Read for information.
- Identify and explain some basic information about polar bears—their life cycle, habitat, and eating habits as well as some physical adaptations that help them survive in the Arctic.
- Explain some potential effects of changes in a polar bear's Arctic habitat.

## **MATERIALS:**

- Photos of the Arctic
- Chart paper
- Markers
- Polar Bears: At Home in the Arctic" student page

## **BACKGROUND:**

Polar bears live on Arctic sea ice and the northernmost coasts of Europe, Asia, and North America. They eat seals, walruses, small mammals, birds, fish, shellfish, and some plants. Polar bears often catch rides on ice floes and snatch seals by surprise when they pop up out of the ocean. A thick layer of blubber and two layers of thick fur keep polar bears warm in their cold Arctic climate. Mothers give birth to one, two, or three cubs at a time (usually to two), and care for them for about two and a half years.

## WHAT YOU DO:

1. Divide students into small groups and give each group a set of photographs of polar bears and the Arctic. Take a few minutes as a class to brainstorm what students already know about polar bears as well as what the photos suggest about the bears. List the students' responses on chart paper.
2. Ask students to help you put their responses into categories. On another sheet of chart paper, organize the categories and their related responses into a web or map (see sample below). Ask a student to summarize the results.
3. Distribute a copy of "Polar Bears: At Home in the Arctic" to each student and have students read the article silently.
4. After students have finished the story, discuss the following questions as a class:
  - How is a polar bear "built" to live in the Arctic?
  - How does a cub change during its first two years of life?
  - How are the first two years of a cub's life like the first two years of a child's?
  - How are they different?
  - What does a cub need to know to survive in the Arctic?
  - What is climate change?
  - How is climate change affecting polar bears?

## ADAPTATIONS:

**For younger students.** Adaptations.

**For older students.** Adaptations



## USEFUL LINKS:

Visit [www.climateclassroomkids.org/galleries](http://www.climateclassroomkids.org/galleries) to find photos of polar bears, plus panoramas of the Arctic.

# STUDENT PAGE

## POLAR BEARS: AT HOME IN THE ARCTIC

Polar bear cubs sure are cute, roly-poly fur balls! Look at some photos of polar bear moms and cubs, and you'll see that these bears love to flop around in the Arctic snow.

You'd think that rolling around in the snow would be—to put it mildly—chilling. But it's not to a polar bear. That's because this bear is "built" just right for life in the frigid Arctic. Its coat has two layers of fur and a layer of thick fat (called blubber) underneath. These keep a bear's body heat in and the cold out—even better than a heavy winter jacket could.

## ON THE PROWL

A polar bear spends months wandering across the frozen surface of the Arctic seas, looking for food. Often it catches a ride on an ice floe and snatches seals when they pop out of the water. Polar bears eat walruses, small mammals, birds, and fish, too. But their favorite food is seals because of their rich blubber. Polar bears will actually wait for hours by a seal's breathing hole to catch one.

A polar bear also spends lots of time in the water, searching for food there or swimming from place to place to find something to eat. A polar bear can swim for hours at a time. It uses its big front paws to paddle through the water and its back feet to steer.

## DEN MOTHERS

In the fall, female polar bears that will soon be mothers make a den. Usually the female finds a hillside near the sea. There, she claws out a cozy home in the snow or cool earth. She crawls in and sleeps through much of the winter. During this time, the mom gives birth, usually to two cubs. Mom and her cubs stay in the den, safe from the brutal winter weather.

Newborn cubs are tiny, toothless, and totally helpless. Each one weighs just over a pound—as much as an adult squirrel. The cubs' eyes are closed, and they have thin hair and no fat. To keep warm, they snuggle up against Mom. Mom nurses her cubs often. By the first month or so, the cubs have opened their eyes. Soon they have teeth and a coat of thick fur.

## GROWING UP IN THE ARCTIC

By early spring, the cubs are ready to leave the den. They weigh about 30 pounds each—around the same as a cocker spaniel. They follow Mom out into the big snowy world, where she keeps a close watch on them.

The little cubs soon discover how to have fun. They chase each other and slide down slopes on their backs. After a while, the cubs stop playing, and Mom lets them nurse. Then it's naptime.

Most cubs stay with their mom for two and a half years. She shows them how to handle thin ice, blizzards, rough seas, and other dangers. She teaches them where and how to hunt. With luck, all that their mom has taught them will help them survive.

## LESS ICE TIME

These days, polar bears face a problem that their mothers have not prepared them for—global climate change. Climate change is something that is happening to the climate of the Earth. It's causing the average temperature to rise around the world. Rising temperatures are causing Arctic ice to melt earlier in the spring and to form later in the fall. Because polar bears depend on ice to find seals and other food, less ice time means they may not get enough to eat. Many scientists are working hard to learn all they can about climate change. They hope to use what they learn to help the bears.