

Ultimate Guide: Bears: Teacher's Guide

Grade Level: 6-8

Curriculum Focus: Animals

Lesson Duration: Two class periods

Program Description

Welcome to the world of bears – polar bears, brown bears, black bears, spectacled bears, sloth bears, giant pandas, Asiatic bears, and sun bears. Track this hardy family from the icy realm of the Arctic Circle to the forests of South America and Southeast Asia. Learn how bears have evolved and been shaped by their varied habitats, and explore the future of these highly adaptable animals.

Onscreen Questions

- What adaptations allow pandas to subsist on a diet of bamboo? (Pandas have a sixth digit, or false thumb, to help them strip leaves from bamboo, along with specialized teeth and a thick stomach for eating bamboo.)
 - How are polar bears able to maintain their body temperature in the Arctic? (To help maintain their body temperature in the Arctic, polar bears have a thick layer of fat, dense underfur, black skin to absorb sunlight, and special external hairs.)
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Lesson Plan

Student Objective

- Research and report on one of the world's eight species of bears.

Materials

- Computer with Internet access
- Library materials
- Large world map
- Paper, pens, markers
- Large index cards
- Pieces of yarn (color-coded, if desired)

- Stick pins

Procedures

1. Review with the class the different species of bears. Have students discuss the characteristics bears have in common despite their differences in habitats and physical appearance.
2. Set aside part of a class bulletin board and place the label Bears of the World on it. Hang the large world map here.
3. Divide the class into eight groups, and assign each group one of the world's bears. Explain that students will research their bear and write up their information on a large index card, which will then be placed on the bulletin board.
4. Tell students to include the following information on their index cards:
 - The bear's common name and its scientific name in Latin
 - Where the bear lives and descriptions of its habitat
 - Physiological and behavioral adaptations that enable the bear to live here
 - What the bear eats
 - Physical adaptations that enable the bear to satisfy its diet
 - Threats to the bear's survival
 - Conservation efforts currently underway
5. Students may use online and print resources for their research. The following Web sites have useful information.
 - <http://www.bearden.org/>
This site provides species-by-species information pages about bears, as well as a Fun & Games section and a Bear Trivia Quiz.
 - <http://www.bears.org>
This site offers information about the different species of bears, as well as myths, essays, and other writings about bears.
 - <http://species.fws.gov/#endangered>
At this U.S. Fish & Wildlife Service site, scroll down to Wildlife Fact Sheets to find information about the American black bear, the grizzly bear (brown bear), and polar bear.
6. When the groups have finished their research and have organized the material on their cards, have them give a report to the class on their bear. Then have them stick their card on the Bears of the World bulletin board and stretch a piece of yarn from the card to the bear's natural environment. (Note: The range of some bears, such as the polar bear and the black bear, is so extensive that students may need to use several pieces of yarn to encompass it.)
7. Ask students to share what they consider the most interesting pieces of information they have learned about bears. Have they gained a newfound respect for these animals:



Assessment

Use the following three-point rubric to evaluate students' work during this lesson.

- **3 points:** Students demonstrated facility in using the Internet and print resources for research; worked cooperatively with group members and contributed to an effective and well-delivered report; participated actively in class discussions.
- **2 points:** Students demonstrated some facility in using the Internet and print resources for research; worked somewhat cooperatively with group members and contributed somewhat to the group's report; participated somewhat in class discussions.
- **1 point:** Students had difficulty using the Internet and print resources for research; showed poor ability to work cooperatively with group members and to contribute to the group's report; did not participate in class discussions

Vocabulary

adaptation

Definition: Adjustment to environmental conditions

Context: Adaptation is the key to survival in a cold climate.

extinct

Definition: No longer existing

Context: The cave bear became extinct.

hibernate

Definition: To be or become inactive or dormant

Context: A female polar bear loses 40 percent of her body weight during a four- to six-month hibernation and the birth of cubs

land bridge

Definition: A natural bridge connecting two pieces of land above water

Context: Two million years ago, the running bears crossed the Panamanian land bridge into South America; the spectacled bear is their sole living descendant.

prehensile

Definition: Adapted for seizing or grasping, especially by wrapping around

Context: Most bear lips are prehensile.

Academic Standards

National Academy of Sciences

The National Science Education Standards provide guidelines for teaching science as well as a coherent vision of what it means to be scientifically literate for students in grades K-12. To view the standards, visit <http://books.nap.edu>.



This lesson plan addresses the following science standards:

- Life Science: Structure and function in living systems, Reproduction and heredity, Regulation and behavior, Populations and ecosystems, Diversity and adaptations of organisms

Mid-continent Research for Education and Learning (McREL)

McREL's Content Knowledge: A Compendium of Standards and Benchmarks for K-12 Education addresses 14 content areas. To view the standards and benchmarks, visit link:

<http://www.mcrel.org/compendium/browse.asp>

This lesson plan addresses the following national standards:

- Science – Life Sciences: Understands the principles of heredity and related concepts, Understands the structure and function of cells and organisms, Understands relationships among organisms and their physical environment, Understands biological evolution and the diversity of life
 - Language Arts – Reading: Uses reading skills and strategies to understand and interpret a variety of informational texts
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Support Materials

Develop custom worksheets, educational puzzles, online quizzes, and more with the free teaching tools offered on the Discoveryschool.com Web site. Create and print support materials, or save them to a Custom Classroom account for future use. To learn more, visit

- <http://school.discovery.com/teachingtools/teachingtools.html>

