

Lesson Plan: Black Bear

Summary

In this episode, Blade talks about black bears as long-lived North American survivors, noting an age of about five and a half million years and a flexible diet. He describes wide coat color variation, the deep changes of hibernation with heart rates dropping to around nine beats per minute, and real speed and climbing ability. He adds that bears spread seeds by roaming, that some chupacabra stories likely came from mangy bears, and that human food causes most conflicts. He closes with a nod to attentive mothers whose cubs stay close for about two years before moving on.

https://www.youtube.com/live/-DXiIV2ffMw?si=OodpbHRQ_cfNa76o

Objective

Students will explain key biological and behavioral traits of American black bears, connect those traits to survival and ecology, and evaluate how human behavior influences wildlife outcomes.

Standards

- NGSS MS-LS2-1, Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.
- NGSS MS-LS1-3, Use argument supported by evidence for how the body is a system of interacting subsystems.
- CCSS.ELA-Literacy.RST.6-8.1, Cite specific textual evidence to support analysis of science texts.
- CCSS.ELA-Literacy.W.6-8.2, Write informative texts to examine a topic and convey ideas.
- C3 D2.Geo.2.6-8, Use maps and other geographic representations to explain spatial patterns.

Materials

- 9 Fun Facts list
- Worksheet
- Optional, projector or screen, paper, pencils, whiteboard, markers

Introduction

Activate prior knowledge by asking students what they know about black bears and where they live. Present the summary and preview that students will use the 9 Fun Facts to explore evolution, hibernation, movement, ecology, and human interactions. Set expectations for respectful discussion about wildlife and safety.

Activity

- 1) Read the 9 Fun Facts silently, then annotate two details that surprised you and one that confirmed what you knew.
- 2) In pairs, create a quick concept map linking evolution, diet, hibernation, movement, seed dispersal, folklore, human impact, and parenting.
- 3) As a class, discuss how each fact shows an adaptation or a human impact.
- 4) Individually, answer the Worksheet sections and write one claim with evidence drawn from the facts.

Assessment

Formative, observation during discussion and review of concept maps. Summative, completed Worksheet with accurate use of facts and clear explanations.

Rubric

Criteria	Excellent (4)	Good (3)	Fair (2)	Poor (1)
Content Understanding	Accurately explains all key traits and connections using multiple facts as evidence	Explains most traits with correct evidence	Explanation is partial, some inaccuracies	Minimal understanding, major inaccuracies
Discussion Participation	Contributes often, builds on peers, cites facts clearly	Contributes and listens with some evidence	Rarely contributes or lacks evidence	Off task or disrupts discussion
Worksheet Completion	All sections complete, accurate, clear reasoning	Mostly complete, minor errors	Partially complete, mixed accuracy	Incomplete, little evidence
Technology Connections	Effectively uses link details and cites source lines	Uses links with minor issues	Limited use of links	No use of links

9 Fun Facts

1. The American black bear evolved in North America after the great short-faced bears disappeared. Fossil records and DNA evidence show that black bears (*Ursus americanus*) split from the ancestral bear line 4 to 7 million years ago, long before brown and polar bears appeared. Their smaller size and flexible diet let them thrive where massive Ice Age predators could not.

<https://www.bearbiology.org/the-eight-bear-species/ursus-americanus-american-black-bear>

2. Black bears are evolutionary success stories that outlasted saber-toothed cats and giant ground sloths. They adapted to changing climates and habitats by eating almost anything—from berries and nuts to carrion and insects—allowing them to survive when other large mammals vanished. Their evolutionary endurance makes them one of North America’s oldest continuing carnivore species.

<https://www.si.edu/stories/what-are-bears>

3. The “black” bear can come in nearly every color except green and purple. Depending on genetics and geography, individuals may be brown, cinnamon, blond, blue-gray, or even white. The rare Kermode or “spirit” bear of British Columbia is a white-furred black bear caused by a recessive gene, and local Indigenous cultures regard it as sacred.

<https://www.nps.gov/articles/000/american-black-bear.htm>

4. Hibernation turns black bears into biological marvels of efficiency. During winter, they enter a den and reduce their heart rate from 55 beats per minute to about 9. They neither eat, drink, urinate, nor defecate for up to five months, yet their organs remain healthy and their muscles don’t waste away—a process scientists hope to apply to long-term space travel and medical recovery.

<https://bear.org/bear-facts/do-black-bears-hibernate>

5. Black bears move with a speed and grace that defy their bulk. Adults can run up to 30 miles per hour, swim across lakes, and climb 100-foot trees in under a minute. Their short, curved claws and strong shoulders make them natural athletes, more likely to flee than fight when startled.

<https://www.nps.gov/articles/species-spotlight-black-bear.htm>

6. Black bears are vital forest farmers that help plants spread and grow. Each summer they eat thousands of berries and nuts, later scattering the undigested seeds miles away through their droppings. This natural replanting helps maintain forest diversity and balances ecosystems in ways no human gardener could match.

<https://www.fs.usda.gov/features/american-black-bear>

7. The infamous Chupacabra may have been a confused look at mangy black bears. In areas of Texas and the Southwest, hairless bears suffering from mange have been mistaken for the legendary “goat-sucker.” Wildlife biologists have confirmed through DNA tests that many supposed Chupacabra corpses were actually sick bears, proving folklore often starts with misunderstood biology.

<https://www.livescience.com/13356-el-chupacabra-mystery-solved.html>

8. Black bear mothers are among the most devoted in the animal kingdom. Cubs are born in the den during midwinter, hairless and blind, and rely completely on their mother’s warmth and milk. She teaches them what to eat, how to climb, and how to avoid danger for nearly two years before sending them out to survive alone.

<https://www.nps.gov/subjects/bears/black-bears.htm>

9. Most bear conflicts are caused by human behavior, not bear aggression. When people leave trash, birdseed, or pet food outdoors, bears quickly learn to associate humans with easy calories. Once a bear becomes “food-conditioned,” it loses fear of humans and often must be relocated or euthanized, turning curiosity into tragedy.

<https://www.nps.gov/articles/000/bear-safety.htm>

Worksheet

Name: _____ **Date:** _____

Review

- 1) According to the facts, when did American black bears split from the ancestral bear line, give the estimated range in millions of years.
- 2) List three different natural foods black bears commonly eat as part of their adaptable diet.

Discussion

- 3) How does coat color variation in black bears challenge assumptions based on their name, give two examples of colors.
- 4) Explain why human behavior is often the cause of conflicts with black bears, include one example from the facts.

Data Analysis

- 5) During hibernation, what change happens to a black bear's heart rate, include starting and lowered rates.
- 6) Use evidence from the facts to describe how black bears help maintain forest biodiversity through seed dispersal.

Reflection

- 7) Which single bear adaptation do you think most helps them survive across North America, explain your choice in two sentences.
- 8) What myth or misunderstanding about wildlife are you willing to rethink after reading these facts, give one sentence explaining why.