

RESOURCE LIBRARY
ACTIVITY : 1 HR

Conservation and Big Cats

Students read a National Geographic Education article, “Big Cats’ Big Problem,” and identify the threats to big cat populations and how the National Geographic Big Cats Initiative is working to address those threats.

GRADES

6 - 8

SUBJECTS

Biology, English Language Arts, Geography, Human Geography, Physical Geography

CONTENTS

2 PDFs, 1 Link

OVERVIEW

Students read a National Geographic Education article, “Big Cats’ Big Problem,” and identify the threats to big cat populations and how the National Geographic Big Cats Initiative is working to address those threats.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/conservation-and-big-cats/>

Program



DIRECTIONS

1. Activate students’ prior knowledge about big cats.

Discuss with students what they think of when they think of “big cats.” Ask: *What images come to mind? What are some types of big cats that you can think of? Where do they live?* Elicit from students that big cats include lions, tigers, leopards, cheetahs, jaguars, ocelots, cougars, and other large predatory cats. The largest of the big cats—lions, tigers, and leopards—live in parts of Africa and Asia. Explain that big cat populations are in decline throughout the world. Most species are either threatened or endangered due to human-cat conflicts. Ask: *What types of human-cat conflicts can you think of? In other words, what human activities or behaviors might threaten the survival of big cats?* Elicit from students that as human populations increase and encroach on big cat habitat, humans and cats are forced to compete for food and space. Additional conflicts include illegal poaching and retaliatory killings when big cats prey on livestock. Due to a loss of habitat and their natural prey, some big cats attack and kill humans.

2. Have students read aloud the article and answer comprehension questions.

Distribute a copy of the worksheet Big Cats Article Comprehension Questions to each student. Read aloud the worksheet directions. As a whole class, have students take turns reading aloud the article. Then have students work independently to answer the comprehension questions in Part 1 of the worksheet. Use the provided answer key to discuss the answers to the questions in Part 1 as a class.

3. Have pairs identify problems and solutions related to big cat populations in Africa.

Divide students into pairs. Read aloud the directions for Part 2 of the worksheet. Explain that students will first work with partners to identify three different problems related to declining big cat populations in Africa. Then partners will identify solutions that researchers and conservationists are using to address those three problems. After pairs have completed Part 2, use the provided answer key to discuss their answers as a whole class.

4. Have students reflect on and discuss what they learned about the decline of big cats.

Using what they learned throughout the activity and from the article, ask students to list on the board at least three ways human-cat conflicts contribute to the decline of big cat populations. Discuss why big cat species are important and should be protected. Elicit from

students that as top predators, big cats are keystone species that keep ecosystems balanced and healthy. Ask students to list on the board two ways researchers and conservationists are working to address human-cat conflicts and protect big cats. Elicit from students that the work of researchers like Dr. Pimm is helping us better understand the problems of habitat loss, livestock kills, and poaching. The work of conservationists and projects like the Big Cats Initiative are helping to find solutions to these human-cat conflicts. Explain that conservation efforts that include education, habitat preservation, legislation, and enforcement measures help protect big cat populations.

5. Encourage students to get involved in National Geographic's Big Cats Initiative.

Display the National Geographic Big Cats Initiative website. Explain that the site includes videos, images, and articles that will teach them more about the project and how they can become involved in halting the decline of big cat species throughout the world. Encourage students to access the site on their own.

Informal Assessment

Review students' completed worksheets to assess their comprehension of the article and the issues surrounding the decline of big cat populations worldwide.

Extending the Learning

Have students use Google Earth to locate the big cat habitats described in the article (Tete Province in Mozambique, Zambia; and Tarangire National Park in Tanzania). Have them try to identify where the habitat looks natural and where it looks like it has been developed or cultivated.

OBJECTIVES

Subjects & Disciplines

Biology

- English Language Arts

Geography

- Human Geography
- Physical Geography

Learning Objectives

Students will:

- identify problems that contribute to the worldwide decline of big cat populations
- correlate big cats problems with solutions proposed by researchers and conservationists aimed at halting the decline of the worldwide populations
- state the purpose of the Big Cats Initiative and become part of the solution

Teaching Approach

- Learning-for-use

Teaching Methods

- Discussions
- Information organization
- Reading
- Writing

Skills Summary

This activity targets the following skills:

- 21st Century Themes
 - Global Awareness
- Critical Thinking Skills
 - Analyzing
 - Understanding
- Geographic Skills
 - Acquiring Geographic Information
 - Answering Geographic Questions

National Standards, Principles, and Practices

NATIONAL GEOGRAPHY STANDARDS

- **Standard 1:**

How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information

- **Standard 14:**

How human actions modify the physical environment

- **Standard 16:**

The changes that occur in the meaning, use, distribution, and importance of resources

- **Standard 3:**

How to analyze the spatial organization of people, places, and environments on Earth's surface

- **Standard 8:**

The characteristics and spatial distribution of ecosystems and biomes on Earth's surface

Preparation

What You'll Need

MATERIALS YOU PROVIDE

- Pencils

PHYSICAL SPACE

- Classroom

GROUPING

- Large-group instruction

OTHER NOTES

Before starting the activity, read the full National Geographic Education article, "[Big Cats' Big Problem.](#)"

BACKGROUND & VOCABULARY

Background Information

The largest of the big cats—lions, tigers, and leopards—live in parts of Africa and Asia where their populations are in decline, mostly due to human threats. As human populations increase and encroach on big cat habitats, humans and cats are forced to compete for food and space. Additional conflicts include illegal poaching and retaliatory killings when big cats prey upon livestock. The work of conservationists and projects like the Big Cats Initiative are helping to find solutions to these human-cat conflicts.

Prior Knowledge

["keystone species"]

Recommended Prior Activities

- None

Vocabulary

Term	Part of Speech	Definition
Big Cats Initiative	<i>noun</i>	National Geographic Society program that supports on-the-ground conservation projects, education, economic incentive efforts, and a global public-awareness campaign to protect big cats and their habitats.
boma	<i>noun</i>	livestock enclosure traditionally made of thorny bushes.
conservation	<i>noun</i>	management of a natural resource to prevent exploitation, destruction, or neglect.
conservation ecology	<i>noun</i>	study of Earth's biodiversity, with the goal of protecting species, habitats, and ecosystems. Also called conservation biology.
crowdsourcing	<i>noun</i>	technique that enlists the general public to assist with a specialized task.
Google Earth	<i>noun</i>	computer and mobile application used to access and explore virtual globes, maps, and other geographic information.
habitat	<i>noun</i>	environment where an organism lives throughout the year or for shorter periods of time.
herbivore	<i>noun</i>	organism that eats mainly plants and other producers.
keystone species	<i>noun</i>	organism that has a major influence on the way its ecosystem works.

Term	Part of Speech	Definition
Landsat	<i>noun</i>	American satellite that circles the Earth around 14 times a day.
livestock	<i>noun</i>	animals raised for human use.
migration corridor	<i>noun</i>	area connecting wildlife habitats disturbed and interrupted by human activity. Also called a green corridor.
national park	<i>noun</i>	geographic area protected by the national government of a country.
predator	<i>noun</i>	animal that hunts other animals for food.
savanna	<i>noun</i>	type of tropical grassland with scattered trees.

For Further Exploration

Websites

- [National Geographic Education: Big Cats' Big Problem](#)
- [Duke University: Nicholson School of the Environment—Faculty: Dr. Stuart Pimm](#)

