

# Geoguide

## LESSON PLAN

# Tigers

### Overview

Geography lies at the heart of the tiger's survival in the wild. Understanding the relationship of tigers to their habitat and to the people who share those lands is crucial if tigers are to be preserved in the wild. Tiger habitat has shrunk drastically and, in some cases, no longer supports the prey tigers need to live. The loss of tiger habitat is graphically clear on the map in "Making Room for Wild Tigers," by Geoffrey C. Ward, in the December 1997 NATIONAL GEOGRAPHIC. This lesson plan is based on that article. (For more activities about tigers, visit Geoguide on the Web at [www.nationalgeographic.com/resources/education/geoguide](http://www.nationalgeographic.com/resources/education/geoguide).)

Why is the tiger in such grave trouble? A growing human population competing for resources pits people against the cats. Populations of prey animals needed by tigers have been reduced by human hunters. Much of tiger habitat has been converted to farmland. The tiger is also a victim of illegal hunting. The demand for tiger bones and other body parts for use in traditional Chinese medicine fuels a grisly poaching trade.

With the cats under these kinds of pressures, says the author of the article, serious science provides the best hope for preserving the world's remaining five subspecies of tigers. It is too late for the three that have already vanished: the Bali, Caspian, and Javan tigers. The fewer than 30 remaining South China tigers are likely to follow the three extinct subspecies into oblivion.

But there is hope for the tiger. Scientists are

learning more and more about the tiger's behavior and needs. Perhaps most important, scientists have learned that an abundant supply of suitable prey is what the cats need most. Armed with new knowledge and plans to protect tigers and the land they require, scientists have already made a difference, most notably in the case of the Siberian, or Amur, tiger.

Use the activities that follow to help your students enter the tiger's world. Through discussion, help them understand the complexities of habitat, resources, and economics that affect tigers. Point out that the problems of the tiger are echoed—although not always to this extreme—wherever the needs of people and animals clash. In places, the survival of the tiger rivals the needs of people who may at present have no other way to earn a living than by taking what they need from tiger habitat. Students may discover that the issues of tiger survival involve philosophy as much as conservation strategy.

### Connection With the Curriculum

Geography, history, language arts, math, social studies

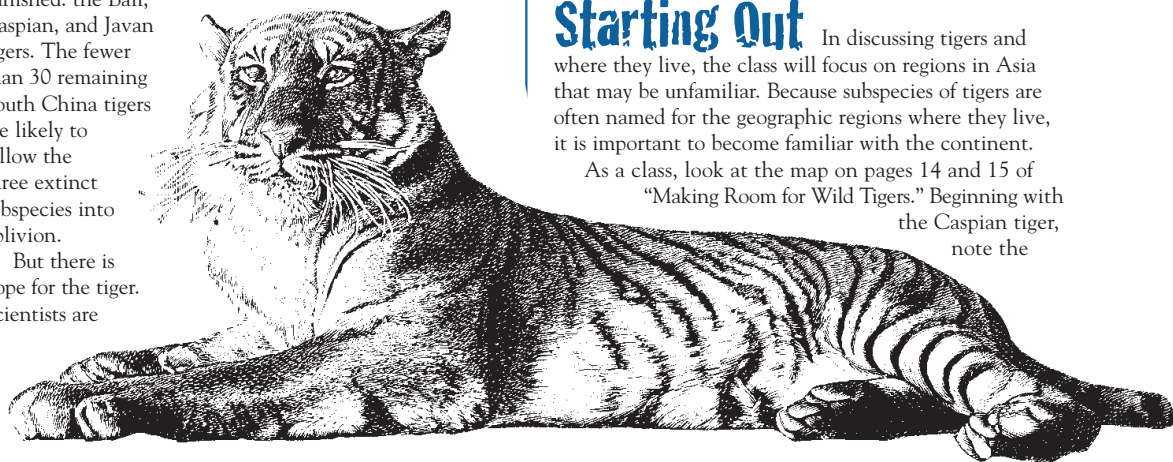
### Teaching Level

Grades 5–9, but adaptable for lower and higher grades

### Starting Out

In discussing tigers and where they live, the class will focus on regions in Asia that may be unfamiliar. Because subspecies of tigers are often named for the geographic regions where they live, it is important to become familiar with the continent.

As a class, look at the map on pages 14 and 15 of "Making Room for Wild Tigers." Beginning with the Caspian tiger, note the



following tiger subspecies and their regions:

- The Caspian tiger, now extinct, used to inhabit lands around the Caspian Sea—west into Europe (off the map) and east across Asia into Kazakhstan and China.
- Most of the lands with the Bengal, or Indian, tiger, which is found in Bangladesh, Bhutan, China, India, Nepal, and Myanmar (Burma), border the Bay of Bengal.
- Indochinese tigers live in Thailand, Laos, Cambodia, Vietnam, Malaysia, and Myanmar.
- In Indonesia, both the Javan and Bali tigers are extinct. Only the Sumatran tiger survives in Indonesia.
- In southeastern China, the extremely rare South China tiger survives in small pockets.
- The Siberian, or Amur, tiger lives in Russia's Far East. A few individuals are thought possibly to live in north-eastern China and North Korea.

One way to familiarize students with the tigers and their regions is to have them trace a copy of the map, outlining each country. (Use an atlas for assistance where country borders are not delineated.) Then have them create a key to the five surviving tiger subspecies. Plot where each subspecies lives, or could potentially live, by tracing around the areas on the map marked "current or potential tiger habitat." Students may find that using a combination of colors and patterns makes it easier to identify each. (Point out that *no* tigers live in Africa.)

- What is the latitude and longitude of the park, in degrees and minutes, determined from a world atlas?
- If you fly in a straight line from your home to the park, how many miles is the trip?
- If your plane flies an average of 520 miles an hour, how long will the flight take, assuming a direct route?
- What language is spoken in the country you visit?
- What is the local currency, and how much is it worth in U.S. dollars?
- You plan to call home to report to a friend. What is the time difference, in hours, between your home and the park? If you want to call your friend when it's 4:30 p.m. on Friday in your home time zone, at what time and on what day of the week must you call from the park?
- What will the weather be like for the trip, and what kinds of clothes should you pack?
- What other considerations are important for your trip? (Passport, camera, sunscreen, learning some crucial words of the local language . . .)
- Are there other places near the park you would like to visit? Why?

Ask students to suggest ways in which their trip is most valuable. Possible answers: What they learn about tigers they can share with friends at home, for a lifetime; what they spend on their visit will help local people value the tiger for its contribution to the local economy.

# Tiger Travels

**Introduction:** Some experts believe that money paid by tourists who want to see tigers in the wild may be the cats' best hope for survival. Students will plan a trip to see tigers, employing various math, map-reading, and investigative skills in the process.

**Materials:** World atlas; travel books covering India, Nepal, and Indonesia

**Geography Standards:** 1. Maps and other geographic tools for information from a spatial perspective. 6. Culture and experience influence perception of places and regions. 10. The nature and complexity of Earth's cultural mosaics. 11. Patterns and networks of economic interdependence.

**Procedure:** Tell students that they are going to Asia to see tigers in the wild. They will leave one month from today. But they must plan their trips to ensure a successful journey. Have them use the map on pages 14 and 15 of the article as a starting point for this activity. Each student should choose a destination from among the six national parks shown on the map (India's Nagarhole, Ranthambhore, Bandhavgarh, and Kaziranga; Nepal's Royal Chitwan; and Indonesia's Way Kambas). Have them answer these questions about their journeys:

# Tiger Bingo

**Introduction:** To the Koreans the tiger is king of beasts. In China, over the ages, the tiger has been considered both a regal creature and a powerful messenger between humans and spirits. The Hindu god Siva is sometimes depicted wearing a tiger skin and riding a tiger. A disciple of Buddha rides a tiger to show that he possesses supernatural powers. In Western culture, the power and beauty of tigers have appeared in a great many ways—in art, literature, folklore, sports, advertising. The Cincinnati Bengals aren't the only team to call upon the tiger's power as a mascot. And who hasn't seen the Exxon tiger running across the gas pump?

By playing a game, students can explore art, literature, folklore, and many aspects of popular culture to learn what parts the tiger plays.

**Materials:** Reference books such as encyclopedias, atlases, books on fine art; a photocopy of the Tiger Bingo card for each team. Students might also be able to use concordances (indexes) of great literary works, such as Shakespeare's plays, for help.

**Geography Standards:** 6. Culture and experience influence perception of places and regions. 10. The nature and complexity of Earth's cultural mosaics.

# TIGER BINGO

William Blake wrote a famous poem called "The Tyger." How does the first line read?

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What artist painted a famous picture that includes a tiger?

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Name a cartoon character that thinks a certain cereal is "gr-r-rreat!"

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In Shakespeare's play *Romeo and Juliet*, what is the quotation that refers to a tiger?

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What is the name of Winnie-the-Pooh's tiger friend?

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What is the cat-related name of a group of World War II military aviators?

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What 13th-century Venetian explorer who visited China described tigers as "... lions... streaked lengthways, with white, black, and red stripes"?

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Name a professional baseball team with a tiger for its mascot (city and team name).

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The next Chinese year of the tiger will be in

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The name of what river in Iraq and southeast Turkey means "tiger"?

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Which wild animal in Central America —not a tiger—is known as *el tigre*?

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Which petroleum company uses a tiger as a mascot?

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Name a folktale about a tiger.

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What is the tiger's name in Rudyard Kipling's *The Jungle Book*?

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What is the name of a kind of decorative stone named for a part of the tiger's anatomy?

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What is the name of a tiger from the comics?

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Photocopy this bingo card to use with the activity at left.

**Procedure:** Divide the class into teams of four or five, and provide each team with a Tiger Bingo card. Explain that this game is different from traditional bingo. Instead of completing just one row on the card, students are to fill in answers in all spaces.

Filling in the information will require the students to search references on art, literature, and popular culture. To encourage thorough research, explain that teams will have to explain their answers and provide sources for them. Let all the teams finish before the class as a whole compares and checks answers. (Some of the squares have several answers that could be correct.) Have the students share passages of poetry or stories about tigers and show photographs of artwork they have found.

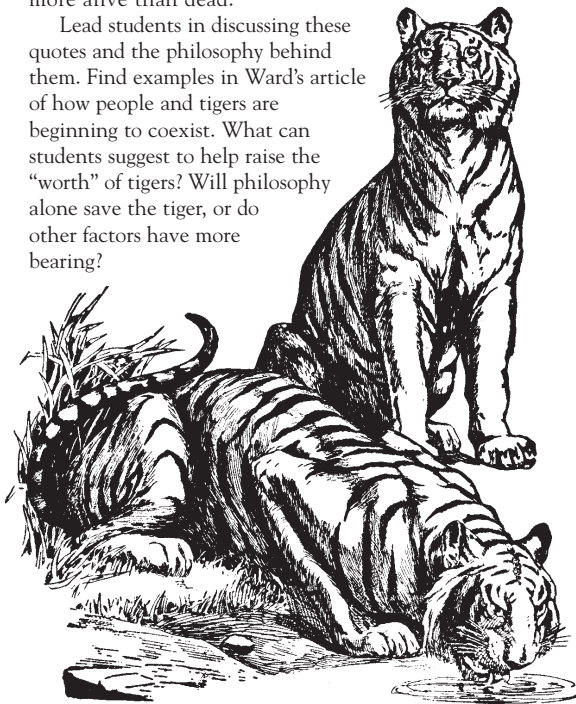
## Follow-up Discussion

Reference is made in the article to a number of quotations that can serve as starting points for discussion by students.

Siberian tiger researcher Dale Miquelle is quoted in the article: "We have to find the magic formula that allows man and tiger to coexist.... Finding it may be the key to man's survival as well. After all, we share the same ecosystem. If we can't save the most magnificent animal on earth, how can we save ourselves? I don't believe the tiger's cause is hopeless. At least it's no more hopeless than our own."

Ecologist and tiger expert John Seidensticker, of the National Zoological Park, in Washington, D.C., says, "Tigers won't ultimately be safe until they're worth more alive than dead."

Lead students in discussing these quotes and the philosophy behind them. Find examples in Ward's article of how people and tigers are beginning to coexist. What can students suggest to help raise the "worth" of tigers? Will philosophy alone save the tiger, or do other factors have more bearing?



On page 28 in the article, an old Malay saying is quoted: "The tiger dies, but his stripes remain." Ask students to interpret the meaning of this saying. What does it mean to *them*? What does it mean to Ron Tilson, who provides the quotation? Do students agree with the interpretation in the article?

## Resources

From the National Geographic Society:

*Endangered Animals: Survivors on the Brink*, a 22-minute video for grades 6–9, © 1997. Product #M52668.

"Asia Political," "China," and "Indonesia Political/Ecological" (maps). Product #'s: Asia, E02812C, © 1996; China, E20057C, © 1997; Indonesia, E02062C, © 1996.

"Eye on the Environment: Vanishing Wildlife," a three-poster set with text, for grades K–12, © 1995. Product #E81917.

Hornocker, Maurice, "Siberian Tigers," NATIONAL GEOGRAPHIC, Feb. 1997: 100–109.

To order from the National Geographic Society, call (800) 368-2728.

Visit the tigers Geoguide Web feature:

[www.nationalgeographic.com/resources/education/geoguide/tigers](http://www.nationalgeographic.com/resources/education/geoguide/tigers).

Seidensticker, John, and Susan Lumpkin, eds., *Great Cats: Majestic Creatures of the Wild*, Rodale Press, Emmaus, Pa., 1991.

Seidensticker, John, *Tigers*, Voyageur Press, Stillwater, Minn., 1996.

Sunquist, Mel, "What I've Learned About Tigers," *International Wildlife*, Nov./Dec. 1997: 12–19.

*Tiger: Lord of the Wild*, a one-hour video for all ages, from ABC/Kane Productions, Washington, D.C. © 1996. Order by calling (800) 650-4ABC.

Save the Tiger Fund, a project of the National Fish and Wildlife Foundation and Exxon, hosts a Web site with extensive information about tigers and conservation efforts for them. Visit the site at [www.5tigers.org](http://www.5tigers.org), and be sure to go to the area "All About Tigers." Under the natural history menu on that Web page is a link to a map showing the historical and current distribution of tigers in Asia. The map is an excellent tool for emphasizing how the tiger's habitat has diminished precipitously over the past century. You can also request a free packet of tiger information by calling 800 5TIGERS.

Underwritten by Compaq Computer Corporation, this lesson plan is published by the National Geographic Society, Gilbert M. Grosvenor, *Chairman of the Board*; Reg Murphy, *President and Chief Executive Officer*. Lisa Creamer, *Project Manager*; Roger B. Hirschland, *Editor*; Lori Davie Price, *Researcher*; Rhonda Lucas Donald, *Writer*; John Seidensticker, National Zoological Park, Smithsonian Institution, *Consultant*. Graphic Design: Herrmann Advertising Design/Communications. Copyright © 1997 National Geographic Society.