

Introduction

Sometimes humans and animals come into conflict with each other. In this lesson, students will explore the impacts humans and animals have on one another and look for ways to resolve or reduce conflict.

Learning Objectives

After the lesson, the students should be able to:

- Better understand human impacts on wildlife
- Identify human-wildlife conflicts
- Offer possible ways of reducing the negative effects of those conflicts.

Key Terms

- human-wildlife conflict
- habitat
- migration
- impact
- ecology

Time Requirement

Minimum 2 class periods (could be on separate days)
With extensions: 3-5 class periods

Grade Level

Grades 6-9

Materials

- A smartboard or laptop and projector
- Access to a computer lab, or a few devices with Internet access
- Optional: printed copies of student handout "Human-Wildlife Conflict Presentation"
- Printed article **How can cheetahs and farmers get along better?** and question handout from *Science Journal for Kids and Teens* (if reading in class)

Lesson Plan

1 GETTING STARTED

- Show students the video **Pronghorn Face Modern Challenges** from Nat Geo Wild
- Discuss why the pronghorn migrate to Grand Teton National Park each year. Ask students to imagine what the migration would have been like hundreds of years ago and then to identify the challenges pronghorn face today in making their journey. (The video points to the hazards of vehicles on roads and the barbed wire that divides fields, but students may also think of other challenges.) Help students think through what the pronghorn need or are looking for (food, safety...) and how that comes into conflict with what people need (moving people and goods quickly, protecting property, preventing livestock from wandering...)
- Start a discussion about local interactions between humans and wildlife. What animals live in your area? How do you know? How do these animals sometimes cause problems for people? (Some ideas include raccoons getting into trash bins, mice or rats eating food inside kitchen cabinets, moles creating burrows and holes in the yard, rabbits eating garden vegetables, **bears walking into yards in search of food**, or deer knocking down fences.) For each of those cases, ask students to identify what the animals are trying to get or do when they cause those problems.
- Then turn it around and ask how we humans cause problems for those animals. (Ideas might include various animals getting hit by cars and trucks, people setting up traps or putting out poison for mice or rats, animals losing their homes when new houses or shops are built, or indirect effects like pollution and global warming affecting the environment). Identify which of these are unintended or accidental and which are responses to conflict.
- Next, encourage students to think of some positive impacts people can have on wildlife in their area. (For example, building birdhouses or putting out birdfeeders, growing butterfly gardens, rescuing injured animals, or creating protected areas or wildlife preserves.)
- Finally, help students think through how we can find ways of reducing or resolving the human-wildlife conflicts. It's not always possible to find solutions that make conflicts disappear, but we can try to reduce the negative effects and look for actions that benefit both sides. Choose a couple of examples that came up during the discussion. For example, if many animals are getting hit on a particular street, people could put up signs warning of animal crossings, lower the speed limit, and maybe even have a wildlife bridge or tunnel built. If birds are building their nests in shop roofs and leaving poop on the walls or in the parking lot, people can combine a deterrent like spikes or high-pitched whistles with a beneficial act like building birdhouses in an area away from the shops and providing feeders with birdseed there.

Duration 25-45 min, depending on grade level

2 READING ASSIGNMENT

- Individually or in groups, have students read the article **How Can Cheetahs and Farmers Get Along Better?** published in *Science Journal for Kids and Teens*.
- Answer the assessment questions at the end of the article (teacher's key available on the same page)
- Discuss as a class. What is the cheetah's habitat? How do they use the land? What do the farmers use the land for? What was the conflict? What should farmers do to avoid problems with cheetahs? How were the researchers able to help find a way for both the cheetahs and the farmers to use the land and get what they needed?

Duration 30-45 min, depending on reading level

3 GROUP PRESENTATION

Divide the class into groups of four or five students. Assign each group a scenario (a human-wildlife conflict and steps taken to resolve it). Some examples are provided below.

Students should do research on the scenario and then prepare a 5-minute presentation for their class that includes all of the following:

- A summary of the conflict
- The background to the conflict: Where did it happen? Which people and animals were involved?
- Information about the animals' side: What was their normal way of life? What was the habitat? Where did they find shelter? Food? How did humans make survival more difficult for them?
- Information about the humans' side: What did people need? How did they come into conflict with the animals?
- Steps taken to resolve the conflict: What was tried first? How was it tested for success? What has been most successful so far?
- Their own thoughts: Has the conflict been resolved? Is there anything else that can be done to improve the situation? What might they have done if they were faced with a similar situation?

Optionally, distribute copies of the student handout "Human-Wildlife Conflict Presentation" and require students to complete it individually or in groups to help prepare for the presentation. If Internet access is limited, consider printing research resources in advance to provide to the groups.

Sample Scenarios:

- In general, bats are very beneficial for us humans. They pollinate important food plants and also eat tons of insects that can either hurt us (like mosquitoes) or eat our crops (like caterpillars). However, they can transmit several dangerous viruses, like the Hendra virus in Australia, which affects both horses and people and can be lethal. As bats lose their natural habitat, they start to come more into contact with people and their horses, and Hendra rates increase. So, making sure that bat habitat is protected and created can help manage the virus (without killing bats!). Helpful resource: [How Can We Manage Hendra Virus in Australia?](#) published by *Science Journal for Kids*.
- Wolves are often killed because they eat farmer's livestock (sheep, chickens, etc.) However, wolves are already at risk by being an apex predator and untimely deaths can destabilize pack structure. Many government organizations have set up funds to provide reimbursement to farmers for the use of nonlethal methods to protect their livestock. Helpful resources: [Guard Dogs Resolving Human and Wolf Conflict](#) from PBS and [Grant Money Now Available to Minnesota Livestock Owners for Prevention of Wolf Attacks](#) in the Voice of Alexandria.
- In a protected area in Laos, there was a problem with poachers illegally hunting wildlife. The government introduced a policy to give local inhabitants money based on how many and what kind of animals ecotourists visiting the area saw. This caused a decline in illegal hunting in the area, so more animals survived, and also helped locals earn money and feel invested in the well-being of the animals. Helpful resource: [How Can We Protect Wildlife Through Ecotourism?](#) published by *Science Journal for Kids*.
- In Nepal, elephants sometimes trample and destroy farmers' crops when moving from place to place. Creating specially preserved areas of wilderness called green corridors has helped: they allow elephants

to make their normal migrations without crossing farms. In addition, educating farmers about elephant behavior has allowed them to create natural deterrents to keep the elephants off their crops or to start growing crops that elephants don't like to eat. Helpful resource: **Easy Border Crossing for Tigers and Elephants** from WWF Nepal.

- Eastern gorillas are critically endangered. For a long time in the Democratic Republic of the Congo (DRC) and its neighbor Rwanda in Central Africa, gorillas were negatively affected by habitat loss and hunting, as local people tried to make a living. Nature reserves helped, because they created protected areas for the gorillas to live and reproduce and also brought in tourist money. However, this was disrupted by local conflicts. Helpful resources: **How Does War Affect Gorillas?** published by *Science Journal for Kids* and **African Biodiversity and Conservation: Mountain Gorillas** by Dr. Tanya Furman and Dr. Laura Guertin at PennState.
- In South Africa, poachers have increasingly hunted and killed South African white rhinoceroses, despite efforts to protect them. Saving them requires combating the international mafias that buy and sell rhino horns as well as developing legal job opportunities for people currently living in poverty near rhinos, so they don't have to resort to poaching for money. Helpful resources: **Can We Save Rhinos from Extinction?** published by *Science Journal for Kids*.

Duration 50-80 min, depending on size of class

Extension: Visual Aid

Have students work together to create a visual aid for their presentation, such as a slideshow, PowerPoint presentation, or poster.

Extension Activity: Conflict Mediation Role-Play

After the presentations are finished, divide students into groups of 3 and assign roles by counting off. The 1s are the representatives of the animals' interests, the 2s are representatives of the humans' interests, and the 3s are mediators. Ask the mediators to come up and pick a slip of paper for their scenario. (It might be wise to instruct students to take notes during their classmates' presentations so they'll be ready for the activity.)

Explain how the debate will work.

1. The mediator will flip a coin to determine who will go first: heads, humans; tails, animals. The mediator will also make sure that each side respects the side that is speaking and does not interrupt.
2. Opening remarks: The representative(s) on the starting side will explain their needs and actions and how they have been wronged by the other side.
3. Opening remarks: The representative(s) on the opposing side will explain their needs and actions and how they have been wronged by the other side.
4. Counter remarks: The representative(s) on the starting side will justify their actions and describe their preferred solution.
5. Counter remarks: The representative(s) on the opposing side will justify their actions and describe their preferred solution.
6. The mediator will try to help the two sides come to an agreement by presenting a solution or steps that will reduce the negative impact on both sides.

Optional: give each group a stopwatch and require 1- or 2-minute speaking turns. Students need to provide enough information to fill their time but not go over it.

Repeat the activity with new roles. For example, 1s mediate, 2s represent the animals, and 3s represent the humans. The new mediators return their original scenario slips and then pick a new one.

Extension Activity: Writing

- 1.** Write to a local council member or state representative. Describe a local human-wildlife conflict. Suggest possible steps to mitigate. End with a request.
- 2.** Do research to find another example of a human-wildlife conflict that has improved thanks to effective mitigation strategies. Describe the conflict and the steps taken to mitigate it. End with your opinion.
- 3.** Research an animal that has become endangered or went extinct due to human activity. Describe the animal, its original habitat, and its needs (food, shelter, etc.) Then explain how humans caused changes that made it difficult or impossible for the animal to survive.

Human-Wildlife Conflict Presentation

NAME: _____

DATE: _____

You will work together with your group to prepare a 5-minute presentation for the rest of the class. Use the table below to organize your research. Don't forget to record your sources!

Summary of topic:

Habitat/environment	Animal needs/actions	Human needs/actions
Conflict	Steps to resolve the conflict	My thoughts

Sources:

(You can use the back of the page to list all your sources)