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SECTION 4
Wildlife Management

Subjects:
geography, government, biology, sociology, economics

Approximate lesson time:
1 hour

Materials:
scenario cards, copies of "National Maps"

Wolf Management Scenarios

Students assemble social and biological factors to predict and address management issues.

LESSON OBJECTIVES:

At the end of this lesson, students will be able to:

1. Explain the role that politics and economics play in wildlife management decision-making.
2. Deduce problems that may arise in management planning.

VOCABULARY:

management • endangered species • habitat • population

TEACHER BACKGROUND:

The United States has had a series of decisions to make about wolves and their management over the past two centuries. These decisions range from bounty hunting and depredation issues to protection and reintroduction issues. Complex as all of those decisions have been, they have all been within the context of a nation that has a relatively stable economy, a strong government and sufficient natural resources to support a wolf population.

Other countries in the world are making decisions about protection or eradication of wolves within very different contexts. Every country has unique economic and political circumstances that influence policies toward wildlife. For example, in Poland, the government and economic stability have wavered in the past several decades. Their policies toward wolves have literally flip-flopped several times between eradication and restoration. The purpose of this activity is to help students realize that a wide variety of national-level factors influence the social and political climate for wolves.

ACTIVITIES:

1. Prepare one full set of scenario cards (it may be helpful to copy each category onto a different color paper). Divide the class into groups of four to five students. Randomly distribute one card from each category to each group of students. Distribute one National Map to each group of students.
2. Put the following instructions up on the chalkboard or overhead projector:
   - Name your country.
   - Make sense of your scenario; what's the situation?
   - List 10 problems you see occurring or you think will soon occur.
   - How will you, as the country's government, solve these problems?

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- What plans do you recommend for managing wolves in your country?

3. Instruct the students to survey their scenario cards, discuss their country's situation, and come up with a wolf management plan for their nation. Remind them to write down their list of problems and ideas for solutions to turn in later.

Example: Let's say a group gets cards that describe a desertlike country where there used to be 100 wolves and today there are about 1,000 wolves. The wolves are eating mainly rodents, wild pigs and rabbits. There are about 10 humans per square mile, and the people have always had a close cultural bond with wolves. The group could interpret that there is a huge influx of wolves possibly due to an overabundance of prey.

If that country also depends on small-animal farming for its main industry, the wolves might also try to catch the domestic animals. The group could recommend an investigation into the prey population size to learn whether they should anticipate depredation. If the group also got the card "very high unemployment," they should think about the main industry (small-animal farming) and make extrapolations about the society and economy based on that. What would a stable, desert, farming society be like? How great can the farming be in a desert? And so on.

4. Each group should appoint a spokesperson to report their situation and decisions to the class.

Discussion Questions:

1. What role do economy and government play in decisions about wildlife management?
2. In what ways did your group insert your own values into your decisions and plans? Could this also happen on a national level?
3. How would your group's interpretations and decisions be different if just one of your parameters had been different? Which parameters matter the most?
4. What would happen if all of these countries were located next door to each other? Would the management plans have clashed in any way?
5. How would this activity have been different if the countries were larger with more diverse habitats and natural resources?
6. What does this activity tell you about the wolf's situation around the world?

ASSESSMENT:

The small-group presentations will reflect student comprehension of the complexity of wolf management. Groups should turn in their list of 10 anticipated problems as well as their ideas for solving the problems.

EXTENSIONS:

Check the International Wolf Center's Web site for updates on wolf populations around the world. Are there any countries whose situation parallels any group's scenario? How are these other countries handling their needs and problems associated with wolves?

National Science Education Standards

Unifying Concepts and Processes

Evidence, models, and explanation

Change, constancy, and measurement

Evolution and equilibrium

Science as Inquiry

Abilities necessary to do scientific inquiry

Understanding about scientific inquiry

Life Science (5–8)

Regulation and behavior

Population and ecosystems

Life Science (9–12)

Interdependence of organisms

Behavior of organisms

Science in Personal and Social Perspectives (5–8)

Populations, resources, and environments

Risks and benefits

For more correlations, please see Appendix IV.

MASTER TABLE OF ALL SCENARIO CARDS

Habitat	Historical Wolf Population	Present Wolf Population	Primary Wolf Food Source	History with Wolves	Human Density	Pressing Political Issues	Major Industry
desert	0 wolves	~ 1,000 wolves	rodents, wild pigs, rabbits	close cultural bond with wolves	average of 10,000 humans per square mile	widespread political corruption	small-animal farming
northern boreal forest	~ 750 wolves	5–10 wolves	human garbage	centuries of competition between wolves and humans	average of 100 humans per square mile	extreme housing shortage	technology
savanna/ scrub woods	~ 2,000 wolves	10,000 wolves	large, wild ungulates	ambivalence toward wolves	average of 1 human per square mile	very high unemploy-ment	manufacturing (e.g., textiles)
mixed hardwood forest	10,000 wolves	0 wolves	livestock	historical reverence for wolves	average of 1,000 humans per square mile	developing country, unstable government	crop farming
northern mountains	~ 100 wolves	~ 100 wolves	small deer	cultural demonization of wolves	average of 10 humans per square mile	extreme environ-mental degredation	large-animal ranching

HABITAT

HABITAT

Your country's main wildlife habitat is desert.
You have few trees, sandy soil, hot daytime temperatures, cool nighttime temperatures, minimal standing water.

HABITAT

Your country's main wildlife habitat is northern boreal forest. You have thick spruce/fir forests, short growing season, cool temperatures, low plant diversity.

HABITAT

Your country's main wildlife habitat is savannah/scrub woods. You have wide open spaces with grasses and some short trees or shrubs.

HABITAT

Your country's main wildlife habitat is mixed hardwood forest. You have deciduous trees such as oaks and maples.

HABITAT

Your country's main wildlife habitat is northern mountains. You have high altitudes, short evergreen trees or aspen meadows, snow year-round at higher elevations.

HISTORICAL WOLF POPULATION

HISTORICAL WOLF POPULATION
Historically, your country never had wolves.

HISTORICAL WOLF POPULATION
Historically, your country had about 750 wolves total.

HISTORICAL WOLF POPULATION
Historically, your country had about 2,000 wolves total.

HISTORICAL WOLF POPULATION
Historically, your country had about 100 wolves total.

HISTORICAL WOLF POPULATION
Historically, your country had about 10,000 wolves total.

PRESENT WOLF POPULATION

PRESENT WOLF POPULATION
Today, your country has no wolves.

PRESENT WOLF POPULATION
Today, your country has a total of about 1,000 wolves.

PRESENT WOLF POPULATION
Today, your country has a total of about 5–10 wolves.

PRESENT WOLF POPULATION
Today, your country has a total of about 10,000 wolves.

PRESENT WOLF POPULATION
Today, your country has a total of about 100 wolves.

PRIMARY FOOD SOURCE FOR WOLVES

PRIMARY FOOD SOURCE FOR WOLVES
In your country, wolves generally eat rodents, wild pigs and rabbits.

PRIMARY FOOD SOURCE FOR WOLVES
In your country, wolves generally eat human garbage.

PRIMARY FOOD SOURCE FOR WOLVES
In your country, wolves generally eat deer, elk and moose.

PRIMARY FOOD SOURCE FOR WOLVES
In your country, wolves generally eat livestock.

PRIMARY FOOD SOURCE FOR WOLVES
In your country, wolves generally eat small deer.

HISTORY WITH WOLVES

HISTORY WITH WOLVES
Historically, people in your country have felt a close cultural bond with wolves.

HISTORY WITH WOLVES
Historically, there have been centuries of competition between wolves and humans in your country.

HISTORY WITH WOLVES
The people of your country are ambivalent toward wolves.

HISTORY WITH WOLVES
Historically, people in your country have had a strong reverence for wolves.

HISTORY WITH WOLVES
Historically, the people of your country have felt a strong cultural demonization of wolves.

HUMAN DENSITY

HUMAN DENSITY
In your country, you have an average of 10,000 humans per square mile.

HUMAN DENSITY
In your country, you have an average of 100 humans per square mile.

HUMAN DENSITY
In your country, you have an average of 1 human per square mile.

HUMAN DENSITY
In your country, you have an average of 1,000 humans per square mile.

HUMAN DENSITY
In your country, you have an average of 10 humans per square mile.

PRESSING POLITICAL ISSUES

PRESSING POLITICAL ISSUES
Your country has widespread political corruption.

PRESSING POLITICAL ISSUES
You have a developing country with an unstable government.

PRESSING POLITICAL ISSUES
Your country is experiencing an extreme housing shortage.
PRESSING POLITICAL ISSUES

Your country has very high rates of unemployment.
PRESSING POLITICAL ISSUES

Your country has extreme environmental degredation.

MAJOR INDUSTRY

MAJOR INDUSTRY
The major industry in your country is small-animal farming.

MAJOR INDUSTRY
The major industry in your country is technology.

MAJOR INDUSTRY
The major industry in your country is manufacturing (e.g., textiles).

MAJOR INDUSTRY
The major industry in your country is crop farming.

MAJOR INDUSTRY
The major industry in your country is large-animal ranching.

NATIONAL MAP