

Lesson C1–1

Exploring the History and the Importance of Wildlife Conservation

Unit C. Animal Wildlife Management

Problem Area I. Introduction to Wildlife

Lesson I. Exploring the History and the Importance of Wildlife Conservation

New Mexico Content Standard:

Pathway Strand: Natural Resources and Environmental Systems

Standard: I: Recognize importance of resource and human interrelations to conduct management activities in natural habitats.

Benchmark: I-A: Identify resource management components to establish relationships in natural resource systems.

Performance Standard: 1. Identify natural resources. 2. Identify organizations and agencies involved in resource management. 3. Identify impacts by humans on natural resources. 4. Describe ecosystem relationships.

Student Learning Objectives. Instruction in this lesson should result in students achieving the following objectives:

1. Explain the history of wildlife conservation.
2. Describe the national policies that impact wildlife conservation.
3. Identify historical people related to wildlife conservation.
4. Describe the values of wildlife.
5. Define wildlife conservation and wildlife management.

List of Resources. The following resources may be useful in teaching this lesson:

Recommended Resources One of the following resources should be selected to accompany the lesson:

Stutzenbaker, Charles D. et al. *Wildlife Management Science and Technology*. 2nd ed. Upper Saddle River, New Jersey: Prentice Hall Interstate, 2003. (Textbook Chapters One and Three)

Other Resources. The following resources will be useful to students and teachers:

Lee, Jasper S. *Natural Resources and Environmental Technology*. Danville, Illinois: Interstate Publishers, Inc., 2000. (Textbook, Chapter Four)

Porter, Lynn, et al. *Environmental Science and Technology*. 2nd ed. Upper Saddle River, New Jersey: Prentice Hall Interstate, 2003. (Textbook and Activity Manual)

List of Equipment, Tools, Supplies, and Facilities

Writing surface
Overhead projector
Transparencies from attached masters
Copies of student lab sheets
Detailed state or U.S. maps (showing national forests, parks, state parks, and wildlife refuges)
Markers or highlighters

Terms. The following terms are presented in this lesson (shown in bold italics):

Aesthetic value
Commercial value
Domestication
Ecological value
Ecology
Endangered Species Act
Exploitation
Forest Service
Game value
Lacey Act
Migratory Bird Conservation Act
Migratory Bird Hunting Stamp Act
National Park Service
Pittman-Robertson Act
Scientific value

Wildlife
Wildlife conservation
Wildlife management
Wildlife Refuge Service

Interest Approach. Use an interest approach that will prepare the students for the lesson. Teachers often develop approaches for their unique class and student situations. A possible approach is included here.

Bring in several copies of your state map or a detailed U.S. map. Split the class up into groups of two or three and give each group a map. Using a marker or highlighter, have the students mark all of the national parks, state parks, wildlife refuges, and forests on the map. Have each group get up in front of the class and show what they marked on the map. Ask each group one or two questions about some of the areas they circled. When finished, explain that today's lesson will cover the history and importance of wildlife conservation. Explain that without a lot of what happened in the past these places probably would not exist.

Summary of Content and Teaching Strategies

Objective I: Explain the history of wildlife conservation.

Anticipated Problem: What is the history of wildlife conservation?

- I. When the Pilgrims arrived in North America in the 1600's, natural resources were plentiful. Nature provided people with resources to build homes and clothe and feed themselves. Eventually, need turned into want and people began to destroy wildlife for sport rather than necessity. This led to exploitation. **Exploitation** is the use of natural resources for profit. It wasn't until the late 1800's that people began to see the need for conservation of our natural resources. It was during this time that the Morrill Act was passed and the Yellowstone National Park was established.
 - A. The Morrill Act was passed in 1862. The purpose of this act was to establish colleges to teach agriculture.
 - B. Yellowstone National Park was established in 1872. This was the first national park to be developed in the world. Its purpose was to preserve the natural resources of the area, including wildlife.

Use TM C1–1A to review the Morrill Act and the Yellowstone National Park. If time permits, allow students to look up information about Yellowstone and report their findings to the class.

Objective 2: Describe the national policies that impact wildlife conservation

Anticipated Problem: What are the national policies that impact wildlife conservation?

- II. Local, state, and federal governments are all responsible for developing and carrying out the laws related to wildlife conservation. Wildlife conservation is also important on the international level. The World Wildlife Fund is an international organization that raises money to fund wildlife conservation.
 - A. Many laws have been enacted at the federal level that help in the conservation of wildlife. In 1916 the National Park Service was established including land set aside which became known as Yellowstone National Park. The **National Park Service** is the federal government agency that is responsible for the care of national parks. As of 2003, the National Park Service was responsible for 330 protected areas. Some of these areas include the Great Smoky Mountains in North Carolina and Carlsbad Caverns in New Mexico. The National Park Service is also responsible for areas on the U.S. Virgin Islands.
 - B. The **Lacey Act** is the 1900 law responsible for regulating the shipment of illegally killed animals. This act also made it illegal to trade protected wildlife on the international level.
 - C. The **Migratory Bird Conservation Act** was passed in 1929. It did not supply money to help protect the animals but it was the first step in protecting migratory birds.
 - D. The **Migratory Bird Hunting Stamp Act** was passed in 1934. People planning to hunt migratory birds are required to buy these special stamps. Since 1934, these stamps have raised \$1 billion for the protection of migratory birds.
 - E. The **Pittman-Robertson Act** was passed in 1937. The purpose of this act was to raise money in the form of taxes on hunting equipment and ammunition. The federal government collects the taxes and returns matching money to the states.
 - F. The **Endangered Species Act** was passed in 1966. The purpose of this act was to identify and manage rare, threatened, and endangered species of wildlife.
 - G. The **Wildlife Refuge System** was a system of wildlife refuges across the U.S. established in 1966. The Wildlife Refuge System is a part of the U.S. Fish and Wildlife Service.
 - H. The **Forest Service** is the part of the U.S.D.A. that manages 156 forests throughout the U.S. This includes over 191 million acres of forest and grasslands.
 - I. State and local governments are also responsible for wildlife conservation. Education programs, setting up wildlife sanctuaries, and maintaining parks and zoos are examples of how state and local governments can provide protection to wildlife.

Use TM C1–1B to review the policies that impact wildlife conservation. If time permits, allow the students to look up more information on the policies covered in this objective.

Objective 3: Identify historical people related to wildlife conservation.

Anticipated Problem: Which historical people are related to wildlife conservation?

- III. There are many people who have had an impact on the wildlife conservation movement over the past few centuries. Some of these people include John James Audubon, John Muir, Theodore Roosevelt, Aldo Leopold, Gifford Pinchot, Hugh Bennett, and Jay Darling.
- A. John James Audubon (1785–1851) was a bird lover. He watched and studied birds and eventually published a book about them. In 1905 the National Audubon Society was formed.
 - B. John Muir (1838–1914) was partly responsible for the development of the Yellowstone and Sequoia National parks. It was through his encouragement that President Theodore Roosevelt established these parks. Muir was also responsible for starting the Sierra Club, whose purpose is to promote conservation. A forest in California was also named for John Muir.
 - C. Theodore Roosevelt (1858–1919) was responsible for passing legislation to help protect our natural resources. Roosevelt is considered the “father of the conservation movement”.
 - D. Aldo Leopold (1886–1948) is noted for applying ecology to wildlife. **Ecology** is the study of how organisms interact with their environment. Leopold believed that people should enjoy nature but not destroy it in the process. His book *Game Management* was used to help educate future wildlife biologists.
 - E. Gifford Pinchot (1865–1946) also authored a book, his was titled *The Fight for Conservation*. Pinchot’s efforts focused on the conservation of forests. He was one of the first leaders of what eventually became known as the U.S. Forest Service.
 - F. Hugh Bennett (1881–1960) was the first person to run the Soil Conservation Service. He is known as the “father of soil conservation.” He promoted the use of scientific investigation in determining soil needs.
 - G. Jay Darling (1876–1962) was the designer of the first migratory bird hunting stamp. He is remembered for his cartoons of wildlife and natural resources. He used his cartoons to make the public aware of the need for natural resource conservation.

Use TM: C1–1C to review the names of historical people involved in the conservation of wildlife. Break the students up into groups to look up additional information about these famous people. LS: C1–1A *Leaders in Wildlife Conservation* can be used as an additional application of this objective.

Objective 4: Describe the values of wildlife

Anticipated Problem: What are the values of wildlife?

- IV. All plants, animals, and living things that have not been domesticated are called **wildlife**. **Domestication** is being under the control of humans. Domestication is important because that is how humans are able to use wildlife for food and other purposes. The way people use

wildlife and other natural resources can be broken up into types, consumptive and non-consumptive. Along with usefulness, wildlife also has value in the lives of people. There are five basic values of wildlife.

- A. The money made from wildlife and fish is called **commercial value**. This includes everything from the sale of seafood and exotic foods in restaurants to the sale of wildlife magazines and tours.
- B. The value of wildlife as game is called **game value**. This includes the hunting and fishing of animals in the wild to the hunting and fishing of plants such as mushrooms and wild berries.
- C. The value of wildlife for its beauty and pleasure is called **aesthetic value**. National parks and forests exist to maintain the aesthetic value of all types of wildlife.
- D. The value placed on the study and research of wildlife is called **scientific value**. Through scientific research, many new drugs and integrated pest management techniques have been developed.
- E. The value placed on the ecology or interaction of wildlife in nature is called **ecological value**. Having an understanding of ecology and ecosystems helps scientists determine the needs of wildlife.

Use TM: C1–1D to review the five values placed on wildlife.

Objective 5: Define wildlife conservation and wildlife management.

Anticipated Problem: What are wildlife conservation and wildlife management?

- V. The wise use of the natural resources in our environment is called **wildlife conservation**. In order for wildlife conservation to be successful all people, or consumers, must make wise decisions. Habitats and food sources must also be maintained. The four important areas of wildlife conservation are research, education, law enforcement, and management.
 - A. Research is important to wildlife conservation because it helps scientists better understand the needs and habitat requirements of wildlife.
 - B. Education is important to wildlife conservation because without it people would not know how to conserve the available wildlife resources.
 - C. Law enforcement is important because it ensures that all laws related to wildlife conservation are followed. These laws were enacted to help keep more species of wildlife from becoming extinct.
 - D. **Wildlife management** is the manipulation of wildlife to achieve a positive goal. Examples of wildlife management techniques include improving wildlife habitats and promoting safe hunting.

Use TM: C1–1E to review the concepts covered in this lesson.

Review/Summary. This lesson provides the basic information needed to start a unit on the history and importance of wildlife conservation. In order to review the objectives, have students take notes and review the terms and anticipated questions provided.

Application. Refer to chapters one and three of the *Wildlife Management Science and Technology* textbook for additional applications of this lesson. LS: C1–1A *Leaders in Wildlife Conservation* can also be used as an additional application of this lesson.

Evaluation. Use the following sample test to evaluate the students' comprehension of the material covered in this lesson.

Answers to Sample Test:

Part One: Matching

1. a
2. e
3. c
4. d
5. f
6. b

Part Two: Completion

1. Ecology
2. Wildlife management
3. Exploitation

Part Three: Short Answer

See Objective four

Test

Lesson C1–1: Exploring the History and the Importance of Wildlife Conservation

Part One: Matching

Instructions. Match the term with the correct response. Write the letter of the term by the definition.

- | | |
|----------------------------|---------------------------|
| a. National Park Service | d. Endangered Species Act |
| b. Wildlife Refuge Service | e. Lacey Act |
| c. Forest Service | f. Pittman-Robertson Act |

- _____ 1. The federal government agency that is responsible for the care of national parks.
- _____ 2. The 1900 law responsible for regulating the shipment of illegally killed animals.
- _____ 3. The part of the USDA that manages 156 forests throughout the U.S.
- _____ 4. The purpose of this act was to identify and manage rare, threatened, and endangered species of wildlife.
- _____ 5. The purpose of this act was to raise money in the form of taxes on hunting equipment and ammunition.
- _____ 6. A system of wildlife refuges across the U.S. established in 1966.

Part Two: Completion

Instructions. Provide the word or words to complete the following statements.

1. _____ is the study of how organisms interact with their environment.
2. _____ is the manipulation of wildlife to achieve a positive goal.
3. _____ is the use of natural resources for profit.

Part Three: Short Answer

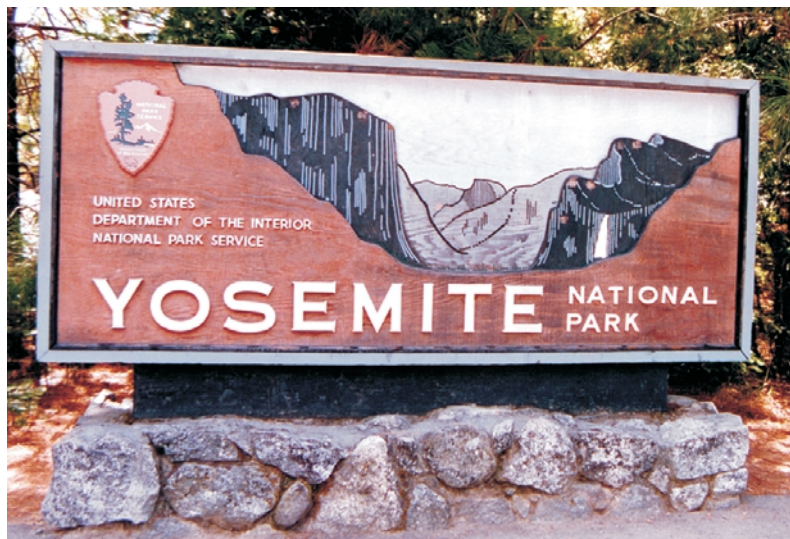
Instructions. Provide information to answer the following questions.

List and explain the five values associated with wildlife conservation.

HISTORY OF WILDLIFE CONSERVATION

- ◆ **The Morrill Act was passed in 1862.**
 - ➔ **The purpose of this act was to establish colleges to teach agriculture.**

- ◆ **Yellowstone National Park was established in 1872.**
 - ➔ **This was the first national park to be developed in the world.**
 - ➔ **Its purpose was to preserve the natural resources of the area.**



TM: CI-IB

- ◆ **National Park Service**
- ◆ **Lacey Act**
- ◆ **Migratory Bird Conservation Act**
- ◆ **Migratory Bird Hunting Stamp Act**
- ◆ **Pittman-Robertson Act**
- ◆ **Endangered Species Act**
- ◆ **Wildlife Refuge System**
- ◆ **Forest Service**

TM: CI-IC

HISTORICAL PEOPLE IN THE WILDLIFE CONSERVATION MOVEMENT

- ◆ John James Audubon
- ◆ John Muir
- ◆ Theodore Roosevelt
- ◆ Aldo Leopold
- ◆ Gifford Pinchot
- ◆ Hugh Bennett
- ◆ Jay Darling



Muir Woods (John Muir)



Theodore Roosevelt



Hugh Bennett

FIVE VALUES OF WILDLIFE

- ◆ **Commercial value**
- ◆ **Game value**
- ◆ **Aesthetic value**
- ◆ **Scientific value**
- ◆ **Ecological value**

FOUR IMPORTANT AREAS OF WILDLIFE CONSERVATION

- ◆ Research
- ◆ Education
- ◆ Law Enforcement
- ◆ Management

Lab Sheet

Leaders in Wildlife Conservation

Instructions:

1. Choose one of the leaders in wildlife conservation from the lesson. Write your choice here _____.
2. Use the resources available to complete a one-page, typed paper about your chosen leader in wildlife conservation.
3. Answer the following questions in your paper:
 - Where was this person born?
 - When were they born?
 - What was their family like (parents, siblings)
 - Where did they get their education?
 - How did they become interested in wildlife conservation?
 - Why are they considered a leader in wildlife conservation?
 - Did they write any books or publish any works?
 - Has anything been named after them?
4. This paper is due _____.