

UNIT V - NATURAL RESOURCES AND CONSERVATION

Lesson 5: Wildlife Management

Competency/Objective: Describe the importance of wildlife management.

Study Questions

1. **What is wildlife management?**
2. **What factors affect wildlife habitat?**
3. **What are agencies involved in wildlife management?**
4. **What are some wildlife management practices?**

References

1. *Exploring Agriculture in America* (Student Reference). University of Missouri-Columbia: Instructional Materials Laboratory, 2000, Unit V.
2. Transparency Masters
TM 5.1 Economic Impacts of Recreation & Wildlife Watching in Missouri 1996
TM 5.2 Wildlife Management Agencies
3. Activity Sheets
AS 5.1 Maintaining Wildlife Habitats
AS 5.2 Oh My Deer

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TEACHING PROCEDURES

A. **Review**

In the previous lesson, the importance of maintaining air quality was discussed. This lesson will discuss wildlife management. Wildlife includes all animals that live in the natural environment without human assistance. Domestic animals require humans to survive and may not survive in nature.

B. **Motivation**

1. Ask students if they know of anyone who has tried to tame a wild animal and keep it for a pet. Have them describe the experiences this person had.
2. Have a Department of Conservation agent speak to the class about the goals of wildlife management.
3. Ask students if they can name any endangered wildlife in their state. Also ask students if they know what is being done in their state to protect these wildlife species.

C. **Assignment**

D. **Supervised Study**

E. **Discussion**

Q1. What is wildlife management?

A1. Wildlife management practices involve caring for wildlife and their environment to ensure the continuation of the species.

Many wildlife management practices have been implemented to ensure the continuation of species nearly destroyed by human progress. Have students perform AS 5.1 and discuss when a wildlife habitat is destroyed, basic needs are endangered.

Q2. What factors affect wildlife habitat?

A2.

- a) **Urbanization**
- b) **Tilling the land for crops and pasture for livestock**
- c) **Manufacturing and industry**
- d) **Mining of land**
- c) **Cutting trees in forests**
- e) **Recreation areas**

Human advancement and habitation often come at the expense of wildlife habitats. It is important to develop methods for humans to advance society while maintaining natural habitats for wildlife. Complete AS 5.1 and discuss ways people can maintain wildlife environments. Wildlife is sustained to some degree through economics. Refer to TM 5.1 to demonstrate the financial impacts of recreation (fishing, hunting, and wildlife watching).

Q3. What agencies are involved in wildlife management?

A3.

- a) **U.S. Fish and Wildlife Service**
- b) **U.S. Department of Agriculture**
- c) **Bureau of Land Management**
- d) **Forest Service**
- e) **Missouri Department of Conservation**
- f) **Missouri Department of Natural Resources**

Wildlife management is a responsibility conducted on a federal, state, local, and even individual level. Use TM 5.2 to describe the organizations responsible for managing and protecting wildlife.

Q4. What are some wildlife management practices?

A4.

- a) **Managing habitat**
- b) **Controlling and preventing the spread of disease**
- c) **Hunting and hunting regulations**
- d) **Artificial stocking**
- e) **Managing funds**

Discuss wildlife management practices that have been implemented by federal and state agencies to ensure the health and growth of wildlife habitat and species. Conduct AS 5.2 to illustrate management practices for wildlife.

F. *Other Activities*

1. Assign students to make posters on different types of wildlife by collecting pictures from magazines.
2. Ask students to clip newspaper articles on wildlife preservation or current events dealing with wildlife.
3. Have a panel debate the pros and cons of regulating hunting and fishing.
4. View one of the following videos available through the Missouri Resource Center for Career & Technical Education (MRCCTE), University of Missouri-Columbia.
 - a) *Guarding Our Living Environment* (Ag Video 128)
 - b) *Time Shadows: Encounters with the Whitetail* (Ag Video 127)
 - c) *Dedicated to Conservation II* (Ag Video 129)
 - d) *Back to the Wild* (Ag Video 250)
5. Take a field trip to a wildlife area.
6. Have students attend a hunter safety course or workshop.

G. *Conclusion*

Wildlife management is an important part of wildlife protection. Everyone must recognize and take responsibility for protecting wildlife resources. Wildlife habitat is affected by several factors resulting from human habitation and advancement. There are several federal and state agencies dedicated to protecting wildlife. Wildlife management practices help ensure the continued health and growth of habitat and species.

H. *Answers to Activity Sheets*

A.S 5.1 Maintaining Wildlife Habitats

Answers will vary.

AS 5.2 Oh My Deer

Answers will vary.

I ***Evaluation***

A unit test is provided at the end of this unit. If a lesson quiz is needed, use questions pertaining to this lesson from the unit test.

Economic Impacts of Recreation & Wildlife Watching in Missouri in 1996

Economic Impact	Anglers		Hunters	
	Residents (millions)	Nonresidents (millions)	Residents (millions)	Nonresidents (millions)
Expenditures	\$594.1	\$208.9	\$521.3	\$290.4
Total business-generated revenue	\$1,166.8	\$410.3	\$1,023.8	\$570.5
Earnings generated from expenditures	\$572.8	\$201.4	\$502.6	\$280.0
State sales tax generated	\$25.1	\$8.8	\$22.0	\$12.3
State income tax generated	\$13.3	\$4.7	\$11.6	\$6.5
Jobs supported	15,340	5,390	13,460	7,500

Economic Impact	Wildlife Watchers		Total		Grand Total All Spenders (Millions)
	Residents (millions)	Nonresidents (millions)	Residents (millions)	Nonresidents (millions)	
Expenditures	\$410.6	\$97.3	\$1,526.0	\$596.6	\$2,122.6
Total business-generated revenue	\$806.5	\$191.2	\$2,997.1	\$1,172.0	\$4169.1
Earnings generated from expenditures	\$395.9	\$93.8	\$1,471.3	\$575.2	\$2046.5
State sales tax generated	\$17.3	\$4.1	\$64.4	\$25.2	\$89.6
State income tax generated	\$9.2	\$2.2	\$34.1	\$13.4	\$47.5
Jobs supported	10,600	2,510	39,400	15,400	54,800

Wildlife Management Agencies

Federal

U.S. Fish and Wildlife Service

U.S. Department of Agriculture

Bureau of Land Management

Forest Service

State

Missouri Department of Conservation

Missouri Department of Natural Resources

Maintaining Wildlife Habitats

Objective: Students will identify factors that contribute to the destruction of wildlife habitats.

Directions: Under each category that contributes to the destruction of wildlife habitats, name a specific practice that destroys the environment for wildlife. Then name a method in which this destruction could be reduced.

Urbanization

Manufacturing

Mining

Cutting trees

Tilling land for crops and pasture for livestock

Recreation

Lesson 5: Wildlife Management

Name _____

Oh My Deer*

Objective: Students will recognize features that affect the size and survival of a deer herd and will describe the influence of hunting and absence of hunting on a deer herd.

Directions: In this board game, participants are managing a deer herd for 6 years.

Note: The address for “Oh My Deer” board game is provided in Lesson 1 of this unit.

Materials:

Flip-chart paper

Colored marking pens (one color for each team)

One “Oh My Deer” board game for every four to six participants.

Procedures:

1. Divide into teams of four to five participants. Select someone to read the directions to the team. Be sure to note that only 14 deer can survive an average winter.
2. Stack the winter cards in each game to ensure that all teams have the same environmental conditions.
3. Use the flip chart to record the information from all teams.
4. Begin playing the game and play six rounds.
5. During the game, team members record the herd size at the end of each year. The final total of bucks and does is recorded in the harvest and nonharvest boxes.
6. Each group enters its data on the flip chart and then shares its results and management strategies with the other groups.
7. After the game is played, answer the following questions in the space provided.

Key Questions:

1. Which group was most successful in managing its deer herd?
2. Was it the group with the most deer?
3. Was it the group with the greatest number of harvested deer?

4. Was it the group with the herd closest to the carrying capacity?
5. How do wildlife regulations affect wildlife?
6. How does winter carrying capacity affect long-run population numbers?
7. Why is it hard to survey herd size and condition?

* This activity was adapted from "Oh My Deer," Investigating Your Environment Wildlife, U.S. Department of Agriculture Forest Service.