

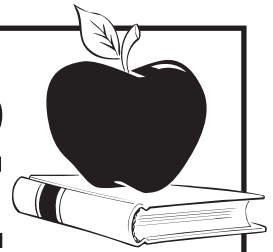
GRADE LEVEL: 3

CORRELATION TO NEXT GENERATION SCIENCE STANDARDS: 3-LS4-3, 3-LS4-4

SKILLS/PROCESSES: observation, data collection & interpretation, analysis, group planning, creativity, application, inference, relationships, organization

OBJECTIVE: Students will: 1) understand the need to conserve and manage natural resources; and 2) learn different ways currently in use to preserve habitat.

TEACHER'S GUIDE



UNIT THREE ■ LESSON TWO

Maintaining Mammals

BACKGROUND

Early settlers in Illinois found a vast array of plants and animals living in the territory's clear streams, wide prairies and extensive forests.

In the 1820s, forests covered about 38 percent of the state; the remainder was mostly tallgrass prairie and wetlands. Today, about 14 percent of the forest and one percent of the original prairie remain. More than nine million acres of natural wetlands have been reduced to less than 500,000 acres.

Such drastic loss of **habitat**—whether the result of modern agricultural practices, urban sprawl, pollution, sedimentation, **habitat fragmentation** or flood-control activities—is the most serious threat to the ultimate survival of Illinois' wild mammals.

Since human activity is the primary cause for this habitat reduction, humans are also responsible for controlling and/or reversing this devastating trend.



The Illinois Department of Natural Resources (IDNR) administers a number of programs which help to maintain current habitats and slow further habitat loss.

Illinois Acres For Wildlife, a voluntary program, involves rural and urban landowners who want to help provide wildlife habitat on their property. The landowners, in cooperation with an IDNR biologist, set goals for their land. Participants receive assistance in conserving or improving habitat and can get free tree and shrub seedlings, food patch seed mixes and help in obtaining financial assistance for habitat improvement.

Hunting and trapping are highly regulated activities in Illinois. Laws limit when, where and how many animals may be taken by hunters and trappers and keep these species from becoming endangered. Fees collected from hunters and trappers for licenses, special stamps and excise taxes go toward conservation programs which benefit all wildlife species.

The Illinois Nature Preserve System includes more than 350 nature preserves across the state, encompassing a total of more than 46,000 acres (as of 2009). These preserves were created to keep unique areas of the state undeveloped for scientific research, education and public enjoyment. These areas provide homes to a wide diversity of biological treasures and harbor many of Illinois' rare and endangered species.

Through education and a commitment to the importance of preserving our natural heritage, we must all strive, both individually and as a society, to learn to share the world with all living things.

PROCEDURE AND DISCUSSION

Review the student information with the class, emphasizing the extent of human responsibility in the reduction of wild mammal habitat and the potential for human intervention in controlling or reversing this trend.

1. What are the most significant contributors to habitat loss?

Modern agricultural practices, urban sprawl, pollution, habitat fragmentation and flood control programs contribute most to habitat destruction.

2. What are three programs that help manage, preserve and restore natural habitats?

Three programs that help manage, preserve or restore habitat are Acres For Wildlife, the Illinois Nature Preserves System and conservation areas purchased and managed with fees and special taxes collected from hunters and trappers.

3. Who is responsible for the conservation and preservation of our natural heritage?

Everyone, both individually and as a society.

CHALLENGE YOURSELF EVALUATION

1. All of the factors increase the rate of habitat loss, either directly or indirectly.
2. You can provide habitat for wildlife and support conservation programs, practices and organizations.

ACTIVITY PAGE EVALUATION

Answers will vary.

VOCABULARY

habitat—the natural environment in which wild animals can thrive

habitat fragmentation—separation of areas of natural habitat by agricultural or urban development

EXTENSIONS

Invite representatives of the Illinois Department of Natural Resources (IDNR) or other conservation organizations to speak to the class about habitat loss.

Order a copy of the *Fur Hunting and Trapping in Illinois* DVD and booklet from the IDNR publications page at <http://www.dnr.illinois.gov/publications>. Show the video to the class and hold a discussion about the use of wildlife management techniques.

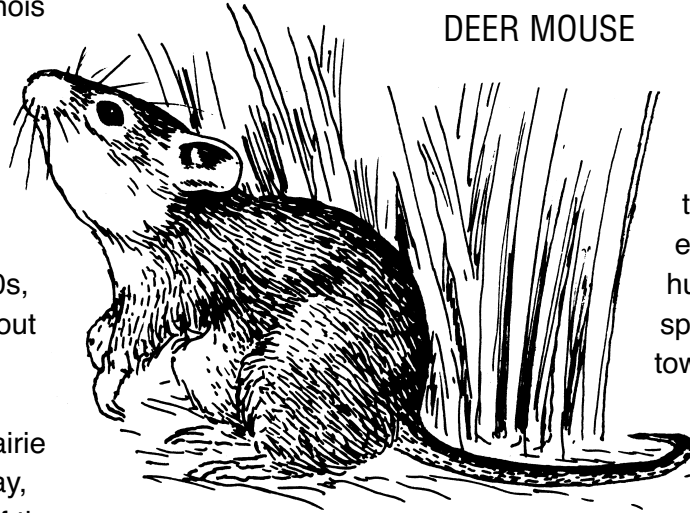
Maintaining Mammals

STUDENT'S GUIDE

Early settlers in Illinois found clear streams, sprawling prairies and vast forests, all inhabited by many kinds of wildlife. In the 1820s, forests covered about 38 percent of the state; the rest was mostly tallgrass prairie and wetlands. Today, about 14 percent of the forest and one percent of the grassland remain. More than nine million acres of wetlands have been reduced to less than 500,000 acres.

These changes mean a drastic loss of **habitat**, or natural environment, for wild mammals. Modern farming practices, urban sprawl, pollution, **habitat fragmentation** (dividing up natural environments by agricultural or urban development) and flood-control activities (which drain wetlands of water) are the most serious threats to the survival of Illinois' wild mammals.

People who have land they want to use to help provide habitat for wildlife can join a program called Illinois Acres For Wildlife. The person who owns the land gets help from a biologist in deciding what to do to make the land a better home for Illinois mammals and other wildlife.



DEER MOUSE

Hunting and trapping are highly regulated activities in Illinois. Laws limit when, where and how many animals may be taken by hunters and trappers and keep these species from becoming endangered. Fees collected from hunters and trappers for licenses, special stamps and excise taxes go toward conservation programs which benefit all wildlife species.

The Illinois Nature Preserve System includes more than 350 nature preserves across the state (as of 2009). These preserves protect special habitats. Many of the state's rare and endangered species live in these preserves.

In addition, there are many other public and private conservation organizations and groups striving to understand, manage and protect our natural environment.

By making a commitment to the importance of preserving our natural heritage and to maintaining a wide range of plants and animals, we can all learn to share the world of living things.

CHALLENGE YOURSELF

1. How do you think each of the following factors affects the loss of natural habitat? Modern farming practices like chemical fertilizers and pesticides; expansion of urban and suburban development; pollution; flood-control programs.
2. What can you do to help maintain wild mammals?

VOCABULARY

habitat
habitat fragmentation

ACTIVITY PAGE: Taking Action

WHAT YOU DO

Make a list of projects that you and your fellow students can do to help the mammals and other wildlife that live in your area. Think about these questions as you make your list.

- What actions could we take at school?
- What actions could we take at home?
- What actions could we take in our community?
- How can we let people know about this issue?
- How can we get other people to help us?
- What will we need to get started?
- What will we need to maintain our project?
- How will wildlife benefit?
- Will any problems be caused by our actions?
- Are there any laws that we should be aware of?

Now that you are prepared, start your action project! You and your classmates can make a positive difference for wildlife!

