



Illinois Envirothon | Wildlife

WILDLIFE LEARNING TOPICS

1. Knowledge of Amphibians, Birds, Mammals and Reptiles

- a. Amphibian, Bird, Mammal and Reptile identification
- b. Natural history of Amphibians, Birds, Mammals and Reptiles
- c. Habitat/ecosystem types and associated wildlife

2. Understanding Wildlife Ecology

- a. Survival requirements of wildlife and how they are met
- b. Ecosystem dynamics:
 - 1. Predator-prey relationships
 - 2. Energy flow-food chain, food web, food pyramid
 - 3. Succession
- c. Adaptations
- d. Population dynamics

3. Conservation and Management of Wildlife

- a. Illinois Conservation & Wildlife Agencies
- b. Hunting and Trapping Regulations
- c. Game and Wildlife Code
- d. Wildlife Management
- e. Improving/managing habitat for wildlife

4. Issues Involving Wildlife and Society

- a. Biodiversity
- b. Endangered and Threatened Species
 - 1. What makes a species more prone to becoming endangered than other species?
 - 2. Responsibility for upholding endangered species act.
 - 3. Terminology: for example, reintroduction, endangered, threatened, extirpated and extinct
 - 4. Endangered and Threatened birds and mammals of Illinois
- c. Habitat Loss and fragmentation
- d. Managing/planning for people and wildlife
- e. Non-native species; invasive species; introduced species
- f. Reintroduction of native species
- g. Current Issue –



Illinois Envirothon | Wildlife

WILDLIFE OBJECTIVES

Envirothon wildlife ecology contestants should be able to:

1. Have knowledge of Wild Amphibians, Birds, Mammals and Reptiles:

- a. Answer questions concerning the natural history of and identify species if given natural history information.
- b. Identify and be able to group animals that would be associated with specific ecosystems.
- c. Evaluate a specific habitat and select or list species most likely to live there.
- d. Describe various roles of amphibians, birds, mammals and reptiles in their ecosystems and be able to cite examples.
- e. Identify wildlife species from mounted specimens, pictures or silhouettes.
- f. Identify wildlife species based on signs including: fur, hair, feathers, pellets, tracks, skulls and scat. (Species will be selected from list C.)
- g. Identify bird calls/songs of bird species found on list. A.

** Species for items a – e will be selected from the Identification, Natural History, Wildlife Biology & Habitat Listing.*

2. Understand Wildlife Ecology

- a. Identify basic needs required by wildlife.
- b. Identify, describe and explain specific anatomical, physiological and/or behavior adaptations of wildlife to the environment and how they help the animal survive. (i.e. migration, hibernation, defense posturing, strong beak, webbed feet, etc.)
- c. Describe predator-pre relationships, discuss physical adaptations of predator vs. prey species, and be able to cite Illinois examples.
- d. Describe and be able to model food chains, food webs, trophic levels – be able to cite Illinois examples.
- e. Describe factors that limit or enhance population growth.
- f. Define and explain terms associated with wildlife biology and wildlife populations (ie. natality, mortality, precocial, altricial, crepuscular, nocturnal, delayed implantation, carnivore, niche, herbivore, insectivore, omnivore, producer, primary consumer, secondary consumer, etc.)
- g. Define and explain basic ecological concepts and terminology (ie. Limiting factor, biological carrying capacity, cultural carrying capacity, territory, home range, populations, community, succession)

3. Conservation and Management of Wildlife

- a. Describe the role of Illinois Department of Natural Resources (IDNR) as the agency responsible for the protection, conservation, and management of wild amphibians, birds, mammals and reptiles of Illinois.
- b. Identify IDNR as the agency responsible for hunting and trapping regulations and upholding the Game and Wildlife Code in the state of Illinois.
- c. Answer questions concerning Illinois hunting, trapping or limit regulations.
- d. Classify birds and mammals as to the Game and Wildlife Code Classifications.



Illinois Envirothon | Wildlife

Conservation and Management of Wildlife, cont'd

- e. Identify and describe methods that can be used to evaluate a habitat.
- f. Identify and describe methods that can be used to determine the abundance and distribution of wildlife.
- g. Identify and describe methods that can be used to determine the specific needs of a species.
- h. Describe methods used to manage and conserve wildlife and wildlife habitat.
- i. Describe ways each person can help with the protection, conservation management and enhancement of wild bird and mammal populations.
- j. Identify state and federal agencies and their roles in protecting, conserving and restoring wildlife habitat.

4. Issues Involving Wildlife and Society

- a. Define biodiversity and provide examples of how biodiversity is important to people and wildlife.
- b. Identify and explain the major causes of loss of biodiversity in our state and worldwide.
- c. Explain the relationship of deer and deer management with biodiversity in our state.
- d. Identify and explain the terms used in endangered and threatened species, for example: extinct, extirpated, endangered, threatened, and reintroduction
- e. Identify wild amphibians, birds, mammals and reptiles that are listed as endangered, extirpated, or threatened. Know natural history and habitat requirements. Describe the main causes that have led to the depleted populations and describe measures being taken to help their recovery.
- f. Identify and explain factors that have led to species becoming endangered and threatened.
- g. Identify and explain factors which can make a species more likely to become endangered and threatened.
- h. Identify and explain methods that are used to save an endangered or threatened species.
- i. Describe major causes of habitat loss in Illinois and how habitat loss affects wildlife.
- j. Explain the role of the Endangered Species Act in helping to conserve endangered and threatened species.



Illinois Envirothon | Wildlife

WILDLIFE RESOURCES

A. material located in packet

Biodiversity of Illinois CD-ROMS from Illinois Department of Resources

- Volume 1: Aquatic Habitat
- Volume 2: Woodland Habitats
- Volume 3: Prairie & Edge Habitats

Newman, Debbie and Warner, Richard and Mankin, Phil. Creating Habitats and Homes for Illinois Wildlife. Illinois. 2003.

Illinois Hunting and Trapping Guide - change annually

Miller, Dorcas. Track Finder - A Guide to mammal Tracks of Eastern North America. Nature Study Guild Publishers, New York. 1981.

McClain, William. Prairie Establishment and Landscaping. Technical Publication#2. Division of Natural Heritage. Illinois Department of Natural Resources. Springfield, IL 1997.

B. pdf files found on CD

Andrews, Kathy. Nothing But the Tooth. Outdoor Illinois. November 2005: 8-9.

Appleby, Nixon, Helm, Kruse and Sharpe. The Emerald Ash Borer: An Eminent Threat to Illinois. The Illinois Steward. 13.1 (2004): 17-18.

Helm, Charles. Entomological Homeland Security. The Illinois Steward. 13.1 (2004): 13-16.

Micetich, Tom. Illinois Deer Management. Outdoor Illinois. September 2006: 25-27.

Outdoor Illinois January 2007. Special Edition - Illinois Endangered and Threatened Species, Remnant, Rare Habitats

Raghu, Post and Wiedenmann. Invasive Exotic Plants in Illinois. Outdoor Illinois. May 2006: 2-5.

Smaglick Johnson, Laurie. The Warbler Way. Outdoor Illinois. May 2006: 6-8.

C. websites

<http://www.birds.cornell.edu/AllAboutBirds/>

www.inhs.uiuc.edu/cbd/collections/AmphReptColln/herp_links/Field%20Guide/TOC.html