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Wildlife Where You Live – Leader/Teacher Guide
Michigan State University Cooperative Extension Service
4-H Club Bulletin
Glenn R. Dudderar, Wildlife
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4-H 1053

Leader/Teacher Guide

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WILDLIFE WHERE YOU LIVE



4-H — Youth Programs
Cooperative Extension Service
Michigan State University

LEADER/TEACHER GUIDE

for

WILDLIFE WHERE YOU LIVE

by

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This guide is a result of the pilot program and evaluations and assistance of the Michigan 4-H
Natural Resources and Environmental Education Development Committee.

LEADER/TEACHER GUIDE FOR WILDLIFE WHERE YOU LIVE

PROJECT HIGHLIGHTS

THIS PROJECT IS:

- designed for youths 9- through 12-years old.
- applicable to urban, suburban, and rural communities.
- adaptable for use in a classroom, in club or group organizations, in subgroups or special-interest groups, or by individual youths.
- divided into sections and options for maximum flexibility. You may present the entire unit or selected sections by a variety of suggested options.
- suitable for use with handicapped youths.
- easy to teach or lead. You do not need to be knowledgeable about wildlife to lead this project. All that you must know is contained in these materials. You only need to enjoy working with boys and girls and be willing to help them learn to discover and enjoy wildlife around their homes.

OVERALL OBJECTIVES

- To help young people learn how to discover, learn about, and enjoy wildlife around their homes.
- To teach young people that wildlife is dependent on food, cover, and water (habitat) for survival.
- To teach young people that different wildlife require different habitats and that habitat can be created or destroyed by both man-made and natural processes.
- To teach young people the rudiments of wildlife conservation.

ORGANIZATION OF THE MEMBER'S GUIDE (4-H 1052)

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ORGANIZING THE PROJECT

First, look over this guide and the member guide. Note that there are several teaching options for each section in the guide. Decide which sections you wish to teach and which teaching options you wish to use. Note that, as the leader, you have the option of teaching the project entirely indoors, entirely outdoors, during one meeting, over the course of many meetings, or in any combination of options.

Choose the teaching options best suited to your situation. For example, if you wish to use this project for a one-day outdoor experience, use Section II along with some additional activities to teach the concepts in Sections I, III, and IV. You may wish to prepare some indoor activities from Sections I, II, IV, and additional activities to use in case of inclement weather.

Also note that the options are provided to give you choices in teaching this project. Use any combination of options you wish, or develop your own.

When choosing an option or activity, note the additional resources that are suggested. If any of the resources are desired, materials should be scheduled at least a month in advance.

CONDUCTING THE PROJECT

Introduction

If you wish, introduce the project by showing the slide-tape set "Wildlife Where You Live." After showing the slide set, ask the young people about the desirability of conducting the project where they live. Ask them what wildlife they think they can find. Ask them how they would begin. Let them talk and share ideas.

If the young people do not respond enthusiastically, try conducting one of the teaching options in Section I. As an alternative, you may wish to use Section I as the introduction.

Feel free to use your imagination. For example, instead of using the tape, narrate the slides yourself, using the script plus your own comments. Let the young people participate by commenting, asking questions, and answering questions. If neither the slide-tape set nor the story in Section I suit you or evoke a response, perhaps a field trip as an introduction would be more effective. Refer to the information on field trips on page 16 of this leader/teacher guide.

SECTION I - YOUTH AND WILDLIFE - THE SECRET FOXES

Purpose

1. To introduce the idea that interesting wildlife and wildlife behavior can be discovered in any community.
2. To introduce some basic ecological concepts as they relate to wildlife.

Concepts

1. Birth, growth, and death are part of and essential to life.
2. Energy and nutrients are combined into food by plants.
3. Energy and nutrients are transferred from animal to animal in a food web.
4. The environmental elements of food, cover, water, and living space are an animal's habitat.
5. Adequate habitat is essential for survival.
6. People and wildlife share and influence the same environment.
7. People are only partially aware of the wildlife about them and of how they influence wildlife habitat.

Teaching Options

1. Skip this section if you think appropriate, and begin with Section II.
2. Read the story aloud to your group and discuss the concepts and option 5.
3. Ask different youths to read parts of the story aloud and discuss the concepts and option 5.
4. Assign the story to be read at home. At the next meeting, discuss the concepts and option 5.
5. If you choose to discuss the story, the following questions will stimulate and guide a discussion.
 - a. Could this story occur in or near your neighborhood?
 - b. What parts of the story could occur in or near your neighborhood?

- c. What other wildlife stories could happen in your neighborhood? Can you tell some stories about things that have already happened?
- d. Would you like to learn how to discover similar happenings?
- e. What are some ideas that can be learned from this story? (Discuss the concepts.)

Follow-Up Activities

1. If the young people enjoy this story approach, consider reading *Westwind Woods* by Tom Huggler (see Additional Materials, page 18). You may wish to read chapters or parts of chapters as sequels at each meeting of the group.
2. Ask the youths to begin looking for wildlife and to be prepared to tell what they discover when you next meet.

SECTION II - DISCOVERING WILDLIFE

Purpose

1. To encourage youths to discover wildlife that lives in and near their neighborhoods through better use of their senses.
2. To help youths learn the basic classification system of animals to facilitate identification.
3. To help youths understand that certain kinds of wildlife live in certain kinds of places - called its habitat.

Concepts

1. Humans and wildlife share the same environment.
2. Wildlife is any animal not under the direct influence of a human being.
3. All animals are either vertebrates (spined) or invertebrates (spineless).
4. The five orders of vertebrates are mammals, birds, fish, reptiles, and amphibians.
5. Wildlife can be detected by both sight and sound.
6. Wildlife is active at all times but most active around sunrise and sunset.

7. Wildlife can be detected in all seasons.
8. Different kinds of wildlife can be detected at different times and seasons by different ways.

Teaching Options

1. If the group has met previously and you asked the youths to look for wildlife, ask them to tell what they discovered. If you are meeting for the first time on this subject and the youths already have some awareness of the wildlife around them, they may be ready to share what they know. Let them talk and share experiences, knowledge, ignorance, false information, failures, successes, and enjoyment. Then proceed with option 3.
2. If you have not read the story, "The Secret Foxes," read it now, aloud or individually. Discuss as previously suggested. Then ask the youths what they would need to do to discover the secrets of the foxes if the story actually occurred in their neighborhoods. Then proceed with option 3.
3. Using Section II in the member's manual as a guide, discuss the following:
 - a. How to look,
 - b. When to look,
 - c. Where to look, and
 - d. What to look for.

Then ask the youths to use these methods to search for wildlife in their neighborhoods. Ask them to record their observations on the record sheet in the guide. At an appropriate meeting, ask them to share the results of their search.

4. Take the group outdoors. Using Section II as a guide, review the following: how to look, when to look, where to look, and what to look for. Define the boundaries of the site you're exploring and ask the youths to stay within the boundaries. Choose a site and time that will offer a chance of detecting wildlife. For example, the middle of a mowed school yard in midspring will have wildlife and signs of wildlife in both spring and winter. The same site at noon in the middle of July or just after a January snowstorm will offer little chance for the young people to detect wildlife.

You may wish to visit several different sites for comparison purposes, such as bare soil, weedy meadow, grassy meadow, mowed meadow, marsh, swamp, bog, edge of a body of water, sand dune, brush field, young forest, old forest, evergreen forest, hardwood forest, orchard, crop field, or around various structures.

Sites such as these may be found along roads, railroad or utility rights-of-way, vacant lots, city and suburban neighborhoods and streets, school yards, cemeteries, local parks, playgrounds, state forests, parks, game areas, national forest parks, and wildlife refuges. If possible, visit some sites early in the morning, late in the evening, and at different seasons. Ask the youths to record their observations on the record sheet in the manual. Remember, they can record what they found by description if identification is unknown. Have the youths share results at the end of the session or at the next meeting.

As an alternative to individual work, use option 5 in a team effort.

5. Review Section II material on looking for wildlife and the record chart. Divide the group into search teams as follows and as appropriate. Have each team search the location assigned and record findings on record charts.
 - a. Sky searchers (or explorers, investigators)
 - b. Tree searchers
 - c. Small tree, shrub, and bush searchers
 - d. Grass and weed (herbaceous plant) searchers
 - e. Ground searchers
 - f. Soil searchers
 - g. Water surface searchers
 - h. Under water searchers
 - i. Under things searchers (under rocks, logs, boards, etc.)
 - j. Building searchers (roof tops, ledges, window sills, foundations)
 - k. Whatever other categories or subdivisions of categories you think appropriate

Using the results of the teams' efforts, compile a site inventory of wildlife. Share the inventory with each youth. Repeat the process as a group or as individuals at different seasons to compile an animal inventory by seasons.

If this activity is well done and thorough, you have created a checklist of local vertebrate fauna. This list, plus a description of how it was obtained, can be used in displays, presentations to groups, or even for publication.

6. If you wish, play a classification game, called "I'm Thinking of a Wild Animal." One boy or girl thinks of a wild animal and the others try to guess what it is, using a classification system based in part on the scientific groups of vertebrates. The youth guessing the animal gets to choose one. If the animal is not guessed and the questioners give up, the chooser announces the animal and selects another. Give each youth a copy of the following chart to guide the questioning.

The first person starts with the statement: "I'm thinking of a wild animal in Michigan" (excluding invertebrates). Each player then asks a question in turn until the animal is guessed.

Q. Is it:

KINDS OF VERTEBRATES

Bird?	Mammal?	Reptile?	Amphibian?	Fish?
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Q. Is it a member of the group:

KINDS OF BIRDS	KINDS OF MAMMALS	KINDS OF REPTILES	KINDS OF AMPHIBIANS	KINDS OF FISH
swimming bird	opossum	turtle	salamander	trout and salmon
predatory bird	mole or shrew	lizard	toad and frog	pike
chicken- like bird	bat	snake		perch
wading bird	bear			bass
perching bird	raccoon			sunfish
song bird	weasel			catfish
	dog			sucker
	cat			sturgeon
	rodent (knew- ing animals)			whitefish
	rabbit or hare			smelt
	deer			minnow

Q. Is it the size of a - sparrow, robin, crow, eagle, mouse, squirrel, beaver, deer?

Q. Does it live in - the forest, field marsh, lake shore, pond, stream, city, edge?

Q. Does it have - red, yellow, blue, white, black, brown, orange, green coloring?

7. At each meeting, have copies of the illustrated guides listed on the following page as well as other items listed under additional materials at the end of this guide. These will be helpful in assisting the youths name the wildlife they could not identify.

Inexpensive publications for beginners:

Great Lakes Nature Guide - Michigan United Conservation Clubs

Michigan Wildlife Sketches - Michigan United Conservation Clubs

Golden Nature Guides (paperback) - most bookstores

Birds Reptiles Amphibians
Mammals Fish

Fifty Birds of Town and City - United States Fish and Wildlife Service

Moderately priced publications for advanced beginners:

Peterson Field Guide Series:

Field Guide to the Birds

Field Guide to the Reptiles and Amphibians

Field Guide to the Mammals

Field Guide to Animal Tracks

See Additional Materials, page 18.

SECTION III - UNDERSTANDING WILDLIFE

Purpose

1. To help youths understand what wildlife requires to survive.
2. To help youths understand how wildlife satisfies the requirements for survival through its life cycle.
3. To encourage youths to use their newly acquired discovery skills to investigate the life cycle of a wild animal.
4. To help youths discover how much is yet to be learned about wildlife.
5. To help youths develop awareness, attitudes, and skills that will reward them now and later.

Concepts

1. Wildlife needs food, cover (shelter), water, and living space to survive.

2. The specific kinds and combinations of food, cover, water, and living space needed by an animal are called its habitat.
3. There are many different kinds of habitats.
4. The life cycle of a wild animal - birth, growth, reproduction, and death - is the process of individual and species survival.
5. These processes are adaptations to the habitat in which the animal lives.
6. The life cycles of different wildlife are interrelated.
7. The life cycles of wildlife and people are interrelated.

Teaching Options

1. Point out to the youths that they are seeing certain animals in certain places. Explain why. The explanation is on page 7 of Section III in the member's guide and in the concepts above. Then ask the youths to match the names of the animals with the pictures of the habitats in Section III, or cut the pictures out yourself and let the group make the decisions as you match the pictures on a display board. Be sure that by the end of the discussion, each member understands the meaning of habitat (the specific combination of food, cover, and water required by a specific animal).

Answers to: Matching Wildlife With its Habitat

pigeon - city, suburbs

redheaded woodpecker - old forest, suburbs (if heavily wooded)

mallard duck - marsh

cottontail rabbit - meadow, suburb, edge of young forest

fox squirrel - old forest, suburbs (if heavily wooded)

woodchuck - meadow, edge of young forest, suburbs

muskrat - marsh

brown bat - old forest, suburbs, city

painted turtle - marsh

garter snake - any, but most numerous in meadow and young forest

chimney swift - city, suburbs, old forest

meadow lark - meadow

bobwhite quail - meadow, edge of young forest

nighthawk - meadow, young forest, city, suburbs

starling - any, but most numerous in city, suburbs, edge of old forest

house sparrow - any, but most numerous in city, suburbs, meadow

wood thrush - old forest, young forest

robin - suburbs, edge of young forest, meadow

turkey - old forest

raccoon - any, but most numerous in marsh and old forest

white-tailed deer - young forest, meadow

bobcat - old forest, young forest

house rat - city, suburbs

ruffed grouse - young forest

meadow mouse - meadow

2. Using the observation records of the youths, develop your own wildlife-habitat matching demonstration, discussion, display, or game.
3. Explain to the youths that, as well as continuing their wildlife searches, they should begin to think about choosing one animal they have discovered and investigate it in detail. Remember that some animals they have been seeing may soon hibernate or migrate, or some they have not yet seen may soon appear, depending on the season and timing of this project. Point out this relationship to the youths so they may plan accordingly. Do not hurry them. They may choose to wait until the season after next or to continue the project beyond the end of scheduled meetings. Hopefully, they will continue the study of selected wildlife.

In order to help the youths understand what a detailed investigation should reveal, have them look over the story about the secret foxes and then answer the questions on page 10 of the member's guide. If you wish, read the questions aloud and have the group answer them. You might also ask how a person would have found the answers to those questions if the fox story were true for his or her neighborhood. This process should make it clear to the young people that this project is best done over a period of time. It may involve literature searches, inquiries to experts, inquiries to local people, and field observations.

4. Instead of asking each youth to investigate the life cycle of a wild animal, try having the group investigate one such animal. Ask teams of two or more youths to answer one or more of the 18 questions at the end of Section III. Remember, answers can be found by individuals or by teams or groups, through visits to a library, interviews with experts, and field trips. Compile the answers to the questions into a life history of the local wild animal. This life history and the story of how it was obtained could be made suitable for display, presentations to groups, or even for publication.

Answers to questions in Section III as applied to the story of "The Secret Foxes":

Name - red or gray fox

Kind - vertebrate, mammal, canine, fox

Body covering - hair and fur

Where seen - answer varies with the observer

Colors - red fox: reddish orange, brown, black, white

- gray fox: gray, black, white, brown

Signs - dens; trails; footprints; droppings; food remains of fur, feathers, bones

Eats - small mammals, birds, reptiles and amphibians, insects, fruits, nuts, seeds

Birthplace - cavity in ground; natural, artificial, or dug by fox or other animal - called a den

When born - spring (April-May)

Number of young - red: 4 to 9; gray: 3 to 5

Sounds - whine, bark

Habitat - fields, forests, and their edges

Others that share habitat - rabbits, pheasants, mice, squirrels, many kinds of songbirds

Migrate - no

Appearance of mate - same

Stay with mate - yes

Helps people - preys on insects and rodents, fun to see, fun to hunt, produces fur

Hurts people - preys on livestock and poultry, sometimes carries disease

SECTION IV - WILDLIFE, HABITAT, AND PEOPLE

Purpose

1. To help youths understand some of the relationships between wildlife and habitat, particularly plant succession.
2. To help youths understand how human activity affects wildlife habitat and wildlife.
3. To help youths begin to understand the concept of change over time as it relates to habitat and wildlife.

Concepts

1. Plant succession is the natural change in plant communities that occurs over time wherever there is sufficient moisture, warmth, and light.
2. As the process of succession changes the plant community, wildlife habitat changes.
3. As habitat is altered, either naturally or by people, the wildlife that lives there changes - some species die out and some become established.
4. People are a major influence on wildlife habitat.
5. If people make use of their knowledge and intelligence, wildlife habitat and human communities can be planned and managed to benefit both people and wildlife.

Teaching Options

1. Introduce the picture game in Section IV. Have the young people cut out their pictures plus the four blank "0-bare soil" pictures from blank paper you or they provide. Enlarge a set of pictures for yourself or order a set from your county Cooperative Extension Service office; and, using tape or flannel, prepare the pictures so that you can use them on a display board. Using your pictures as a model, show the youths how the different games work and the ecology they teach. If you wish, help them answer the questions about the games. As an alternative, divide the group into smaller groups of two's or four's, combine pictures from individual projects, and have each group play the games. After each game, help them answer the questions about each game and relate the answers to the concepts and to your local community.

2. Visit a site where the results of succession can be seen by the youths. Visit an area that has been undisturbed since the time you first saw it. Some examples might be a vacant lot, an abandoned right-of-way or farm field, odd areas between buildings and boundary lines, stopped-up rain gutters on old buildings, last year's garden, a portion of a park that is not mowed, or a stand of trees that has been cut. Explain how the vegetation changed.
3. If you plan to use this project over several years, try the following activity. Obtain a plastic bucket of any convenient size, punch holes in the bottom so water can drain through it, dig a hole somewhere in your yard, place the bucket in the hole level with the ground and fill the bucket with the soil from the hole. Do not add plants, and do not disturb what grows naturally. Take a picture of your work. Then each year thereafter, you can dig up the bucket, show the youths how the plants growing in it changed over time. After each inspection, measurement, and picture taking, return the bucket to the hole.
4. Play the fox and rabbit game which illustrates the concepts of food chain, habitat, carrying capacity, predatory-prey relations, energy levels, energy relations, and life-death relationships. It may be played indoors or outdoors. The only material needed is green paper cut into convenient-sized rectangles. Instructions for the game can be obtained by requesting them from the Wildlife Specialist, Department of Fisheries and Wildlife, Michigan State University, East Lansing, MI 48824.
5. If you wish, introduce the following ideas to supplement the information in the member's manual.
 - a. Adaptation - A species of animal has features or traits that help it survive in its habitat. These characteristics are adaptations to the habitat. For example, a muskrat has a naked tail for steering while swimming and builds lodges of vegetation or digs burrows in banks. A squirrel has a bushy tail for balancing while climbing and builds nests of leaves or gnaws dens in openings in trees. A rabbit has a short, fluffy tail for running through dense vegetation and builds a small nest only for raising young.

To teach adaptations, play the "What am I? - Where do I live?" game. Conduct the game like a spelling bee. For example:

<u>Adaptations</u>	<u>What am I</u>	<u>Where do I live</u>
long ears; big hind feet; short fluffy tail	rabbit	fields and meadows
sharp, retractable claws; spotted fur, bob tail	bobcat	forests
orange-red breast; gray back; yellow bill - like forceps	robin	trees and grass, especially suburbs

Adaptations

What am I

Where do I live

hooked beak; long, sharp talons; big, yellow eyes; fringed feathers

great horned owl

forests

no legs; long slender body; black and yellow stripes

garter snake

fields and forests

body covered in hard green and red shell; short legs and tail; swims in water

painted turtle

marshes and ponds

long hind legs; short front legs; brown, moist, warty skin

toad

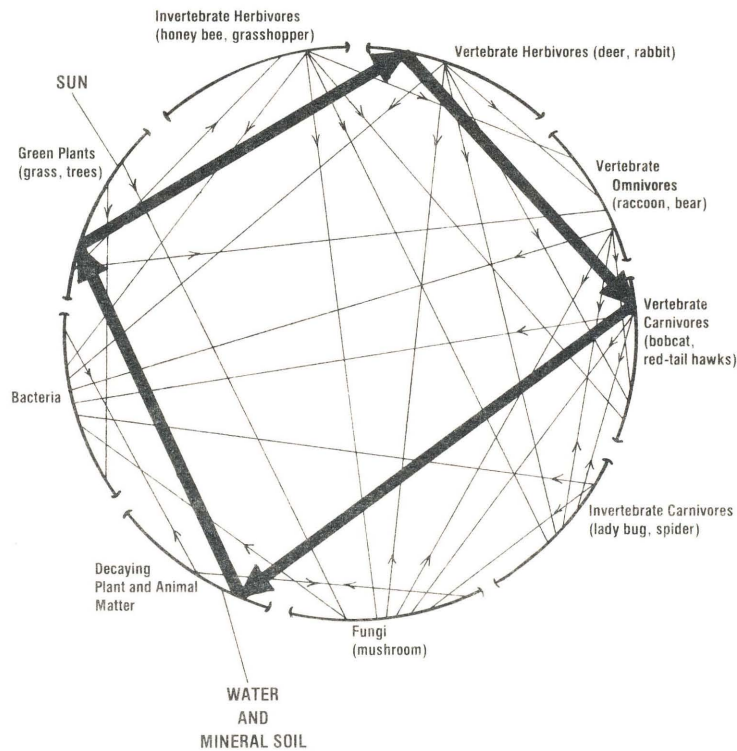
fields near water

long slender body and tail; short legs; moist skin; red strip from head to tail

red-backed salamander

on floor of forest under logs and bark

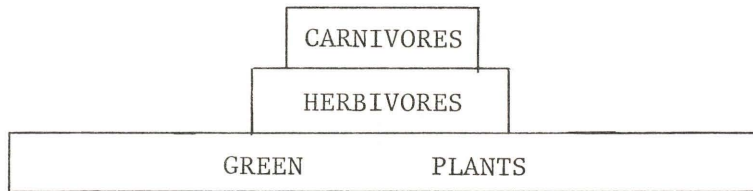
- b. Food webs - The energy and nutrients in the food eaten by animals are passed and recycled through many connected stages. Using the simplified food chain (indicated by the bold arrows) below, help the youths build a food chain that occurs in your area using the names of the plants and animals involved. Be as specific as you can, using one example for each category.



In nature, many food chains are linked together to form a food web. If the young people enjoyed building a food chain, let them try building a food web using the general food web as a guide.

If you are able, build such a web with string and frame. Then demonstrate what happens if individual strings are cut (more and more of the web collapses as each string is cut and the web becomes a few chains). What happens when the last strands are cut?

- c. Energy pyramids - As energy passes through a food web, energy is lost each time it changes stages. Thus, along with any connected series of stages, there is less energy available for the next stage. Consequently, there is less living matter (biomass) in the next stage. Using different-sized rectangles, you can illustrate this relationship to the youths, such as:



Answers to questions in Section IV:

A. Urban Sprawl Game

- a. increased; increased habitat
- b. increased; increased habitat
- c. decreased; decreased habitat
- d. yes, in many areas
- e. cities and suburbs continue to expand with little or no planning to protect and conserve wildlife habitat; habitat destruction on private land
- f. 1) better planning
2) more habitat conservation on private land

B. Natural Change Game

1. stops
2. people keep it from progressing
3. yes, cut it

C. Succession Game

- a. it dies
- b. no
 - 1) it dies
 - 2) mow, or burn it every five to 10 years; to stop tree growth

- D. 1. no
 - 2. yes; deer habitat was created by setting back succession

- E. 1. let it grow or plant in trees; 40 years
 - 2. let it grow or plant in trees; 80 years
 - 3. cut it or burn it; one to two years; 50 to 80 years

- F. 1. young forest-old forest, marsh-meadow, marsh-young forest, suburbs-meadow, suburbs-young forest, suburbs-old forest
 - 2. eats grass in summer, eats bushes in winter, hides in brush, nests in grass
 - 3. nests in bushes and trees, hunts worms in grass
 - 4 & 5. dependent on where youth lives
 - 6. mow, cut, burn, plant; make everything the same by mowing, cutting, planting, or building everything the same way

SECTION V - OTHER THINGS YOU CAN DO

If additional activities are desired, they can be devoted to identifying animals or animal signs the young people have discovered, sharing results of searches and of individual animal investigations, playing games, and conducting the activities listed under Section V, *Other Things You Can Do*. Also note that activities in this section can be incorporated into any section where they are desired.

Field Trips

When taking a field trip to discover wildlife, consider the following suggestions:

- 1. If the weather is cold, wet, and windy, don't go (unless you're going to observe waterfowl). Most wildlife is inactive in cold, windy, wet conditions. Instead, conduct the contingency activity you planned for such an eventuality.
- 2. Make sure you and each youth knows what to look for, how to look, and where to look. To be certain, review Section II.
- 3. As the leader, you go first. Allow the youths to search and explore, but keep the group together. If possible, an assistant should follow and prevent straggling.
- 4. When anyone in the group discovers something, assemble the rest of the group so that everyone can see or hear what has been discovered.

5. Be patient; take your time; look and listen carefully. Remember that this isn't a trip to the zoo, although occasionally you will see and hear as much wildlife sign as you would at a zoo. If you see an animal, watch it for a time. It may flee, remain motionless, or continue its normal activity. Wait and see what it does!
6. Try to arrange at least one field trip in the early morning or in the late evening. Even city streets may contain numerous species of wildlife during those times.
7. If possible, preview the trip by yourself and note signs that you find. Plan the route, preferably a circular one, that takes in these signs. Let the youths find the signs for themselves. Give them hints if necessary. As a last resort, point them out yourself.
8. Make sure you and the youths dress properly: warmly in winter, coolly in summer. Wear heavy shoes, socks, and long pants whenever you will be in field or forest. In warm weather, insect repellent can keep a trip from becoming miserable.

Managing Habitat

Locate some area in your community, perhaps even in your yard or in the yard of a member, and manage it for a wildlife habitat. Plant or let grow food- and cover-producing plants. Build nest boxes and feeders. Erect and maintain them. Some ideas are contained in Extension Bulletin E-759, *Feeding and Attracting Wildlife*.

Other Projects - Combine this project with other projects that relate to it, such as forestry, landscaping, community beautification, horticulture, soil, water, and the environmental conservation projects. Many of the ideas and activities in these projects are complementary. Some activities apply equally well to many projects.

SOURCES OF ADDITIONAL INFORMATION AND TEACHING AIDS

Several references have been mentioned throughout this guide. For your convenience, however, the following references are listed as most applicable to this project. Prices are for your reference only and will increase over time.

1. Michigan United Conservation Clubs (MUCC)
P.O. Box 2235
Lansing, MI 48911
 - a. List of educational resources and order blank (resources include *Great Lake Nature Guide* (\$1), General Education Kit (\$2), *Wildlife Management Packet* (\$1), *Endangered Species Packet* (\$2), Posters (\$4), etc.
 - b. MUCC Film Catalog, (39 cents in stamps) - lists a variety of excellent wildlife films.
 - c. *Tracks* - a monthly wildlife newspaper for leaders/teachers and youths.
 - d. *Westwind Woods* - a story of wildlife and habitat in an urbanizing environment (\$2.50).
2. Hillsdale Educational Publishers, Inc.
P.O. Box 245
Hillsdale, MI 49242
 - a. *Michigan Wildlife Sketches* (\$1.25)
 - b. *Mother Nature's Michigan* (\$3.60)
3. National Wildlife Federation
1412 16th Street, N.W.
Washington, D.C. 20036
 - a. Conservation Education Publications Catalog (free up to 25 copies). Materials include six sets of Wildlife Notes (\$1.25), *Let It Be - Wild and Free* (25 cents), *Wildlife of* (type of habitat) (10 cents), *Endangered Species* (12 cents), *Ranger Rick's Activity Guide*, and many others.
 - b. Special Program Kits that include slide-tape sets, publications, and teaching guides. Examples are *Backyard Wildlife Habitat Program* and *World of Endangered Wildlife*.
 - c. Magazines - *Ranger Rick*, *National Wildlife*, *International Wildlife*.

4. American Wildlife Education Foundation
Rt. 2
Redlands, CA 92373
 - a. Kit that includes color posters, black and white posters that can be colored, decals, iron-on T-shirt transfers, etc. (\$5).
 - b. Bulk orders of any one of the above.
5. Gull Lake Environmental Education Project
Kellogg Bird Sanctuary
Michigan State University
Augusta, MI 49012
 - a. Flash cards of birds and mammals
 - b. Color wall charts of birds and mammals
 - c. Other educational material
6. U.S. Fish and Wildlife Service
Washington, DC 20240
 - a. *We Can Help* Environmental Education Teaching Resources (complete packet \$23) reduced cost for Teacher's Guide plus guide numbers 12, 15, 17, 18, 19, 21, 22, 23, 24. Order from Jenny Publishing Co., Inc., 57 Queen Avenue, S., Minneapolis, MN 55405.
 - b. *50 Birds of Town and Country*, Stock No. 2410-0032 (\$2). Superintendent of Documents, U.S. Government Printing Office, Washington, DC, 20402.
 - c. Other materials and information (film catalogs, brochures, posters, etc.). U.S. Fish and Wildlife Service, Federal Building, Ft. Snelling, Twin Cities, MN 55111.
7. National Audubon Society
Public Information Dept.
950 Third Avenue
New York, NY 10022
 - a. Catalogs which list study programs, bulletins, charts, flash cards, slides, leaflets.
 - b. Magazine
8. Peterson Field Guide Series - Houghton Mifflin Co., Boston.
 - a. *Field Guide to Birds of Eastern North America* - R.T. Peterson (\$5)
 - b. *Field Guide to Mammals* - W.H. Burt and R.P. Grossenheider (\$5)
 - c. *Field Guide to Reptiles and Amphibians* - R. Conant (\$5)

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- 9. Golden Nature Guide Series - Golden Press, NY - Western Publishing Company, Racine, WI
 - a. *Birds* - H. Zim and I. Bahidson (\$2)
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 - c. *Reptiles and Amphibians* - H. Zim and H. Smith (\$2)
 - d. *Fish* - H. Zim and H. Shoemaker (\$2)
- 10. Michigan Department of Natural Resources (DNR)
Information and Education Division
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Lansing, MI 48909
 - a. Wildlife publications
 - b. Film catalog
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