

Name That Habitat

Overview

Students are asked to study material on Illinois habitats, shown photographs of representative examples, and are asked to answer a series of questions regarding some of Illinois habitats.



Title

Name That Habitat

Investigative Question

What are some of the habitats found in Illinois and how do we distinguish among them?

Overview

Students are asked to study material on Illinois habitats, shown photographs of representative examples, and are asked to answer a series of questions regarding some of Illinois habitats.

Objective

Students are exposed to several Illinois habitats and answer a series of habitat questions about them.

Materials

Per student: 1 copy of Student Pages 1, 2, and 3; pencil

Time

One 50-minute class period or use as a take-home assignment

Advance Preparation

Copy needed materials for students.

Introducing the Activity

Begin by presenting this short paragraph to students in a dramatic fashion.

Illinois was not always corn and soybeans, cities and highways.

Unfortunately, we cannot see the state as it was when the first explorers crossed the seemingly limitless prairie on horseback or canoed down the magnificent Illinois River. We can, however, rediscover many of the habitats that were present in pre-settlement times. These habitats are being preserved by law because they support a fascinating

diversity of irreplaceable living things. This activity encourages us to look at Illinois in a more enlightened way and to discover some of the habitats that make up Illinois.

Procedures

1. Distribute Student Page 1-Illinois Habitat Descriptions and allow students to read and study for 15 minutes. Collect the handouts.

2. Distribute copies of Student Page 2-Illinois Habitat Pictures and Student Page 3. Illinois Habitat Questions.

Students refer to the information they studied, the pictures, and draw upon information from any experiences they may have had to answer the questions.

Answers to habitat questions:

1. Savanna—B, woodland—A, tallgrass prairie—D, bog—F, cave—C, cypress swamp—E

2. Cypress swamp

3. Savanna—bur or white oak; woodland—any tree; bog—sphagnum moss, pitcher plant; tallgrass prairie—big bluestem, Indian grass; cave—cave salamander, bat; cypress swamp—cottonmouth, green tree frog

4. E, F

5. Tallgrass prairie

6. A. Bogs are found only in the northeastern corner of Illinois.

7. Bogs

8. Tallgrass prairie

9. A savanna has trees that are widely spaced with sun-loving prairie vegetation underneath; woodlands have a closed canopy with shade-loving species underneath.

10. False. Although the diversity of life in a cave is lower than that of most habitats, a number of organisms are specifically adapted to live in caves (salamanders, fish, crickets), and others

use caves as homes or shelters for part of the year (bats, raccoons, snakes).

11. Marshes, streams, lakes

12. Students justify their answers in a variety of ways. One important justification is that the community of species that finds a home in one habitat may not be found in other habitats. Species are irreplaceable natural resources that cannot be saved unless we save their habitats. Also, the size of a habitat does not necessarily determine its importance in terms of diversity or rarity of species.

Assessing the Activity

Discuss the habitats introduced in this exercise. How many students knew that bogs and swamps differed? How many students were aware that there are bogs and swamps in Illinois? Why are these areas important to preserve? Why have these habitats survived the extensive development that has occurred in Illinois over the past 100 years? Are there any organisms that have become extirpated in Illinois since pre-settlement times? Why? If students need help, suggest the black bear, bison, elk, and passenger pigeon.

Extending the Activity

1. Ask students to bring in photographs from magazines and other sources that illustrate various habitats. Old copies of *National Geographic* would be useful, and photos from family vacations might help students to relate more closely to particular habitats. Include habitats that are not found in Illinois: desert, rainforest, arctic. Display the collection on a bulletin board. Identify and label habitats that might be found in Illinois

and discuss why the others are unlikely to be found in our state.

2. We urge you to take your classes on one field trip (preferably two so that comparisons can be made) to a natural area in Illinois. Because these areas are unique, we suggest that you have a guide or interpreter along to lead your class. Six areas in various regions of the state are suggested below. See map for general locations and a brief description of each site. For additional sites, contact the Illinois Department of Natural Resources, Division of Natural Heritage, 600 North Grand W., Springfield, IL 62701-1787 (phone: 217-785-8774).

References

Jeffords, M.R., S.L. Post, and K.R. Robertson. 1995. *Illinois Wilds*. Phoenix Publishing, Tolono, IL 156 p.

State Goals

11,12 (Objectives 12.4.08, 12.7.32)

Concept

Landscapes are made up of a series of physical conditions that allow certain types of plants and animals to exist in a particular area. Plants and animals that coexist in identifiable aggregations, together with their physical environment, make up what ecologists call *habitats*.

Safety and Disposal

If field trips are a part of this activity, make sure students are alerted to such dangers as poison ivy, poison sumac, ticks, etc.

Student Page 1: Illinois Habitat Types

woodlands—land covered with various kinds of trees, usually with a closed canopy. Only shade-tolerant plants can grow in the understory of a forest. Illinois woodlands are of various types, including oak–hickory and beech–maple. Originally, nearly 14 million acres of Illinois (38%) was forested. Today, Illinois has 4.3 million acres of forest, covering about 12% of the land. Most of the quality wildlife habitat that remains in Illinois is found in woodland settings.

prairies—treeless areas dominated by grasses. Illinois prairies once covered over 21 million acres (60%) of the state. Nearly 500 species of plants grew on the prairies, with grasses like big and little bluestem, cordgrass, Indian grass, and needlegrass being the most prevalent. In addition, hundreds of species of flowering plants made the prairie a virtual wildflower garden throughout most of the growing season.

swamps—trees and shrubs growing on ground covered by water for most of the year. The cypress–tupelo–gum swamps of far southern Illinois are more reminiscent of the Gulf Coast than Illinois. Many southern species of plants and animals, such as the cottonmouth, green tree frog, and red iris, live here.

savannas—widely spaced trees, usually oaks, with prairie vegetation growing beneath them. Savannas and prairies were maintained by fire. Thus, the trees found on a savanna are most often fire-tolerant bur, white, or black oaks. Although this habitat is extremely rare in Illinois today, it was undoubtedly very common in pre-settlement times.

caves—underground cavities, with an opening to the surface, usually formed by water. At least 480 caves are known to exist in Illinois. Some of the interesting organisms that inhabit caves possess highly specialized adaptations that allow them to live in a world of total darkness. Other animals, such as bats, visit caves only to rest or spend the winter.

bogs—wet, spongy ground rich in plant remains, usually acidic and frequently surrounding a body of water. Bogs are found in Illinois only in the northeastern corner. Because of the low nutrient content of the soil, certain bog-inhabiting plants are carnivorous and obtain nitrogen by capturing and digesting insects. Various traps and snares are used to lure and capture unsuspecting prey.



A



B



C



D



E



F

Student Page 3: Illinois Habitat Pictures

Name _____

1. Match the name of an Illinois habitat with the letter of the corresponding photograph from **Illinois Habitat Pictures**.

savanna ____ woodland ____
tallgrass prairie ____ bog ____
cave ____ cypress swamp ____

2. Which of these habitats is found only in the far southern part of the state?

3. Name a plant or animal that you think might be found in each habitat.

savanna _____ woodland _____
bog _____ tallgrass prairie _____
cave _____ cypress swamp _____

4. Which of these habitats are considered wetlands?

5. One of these habitats once covered 60% of Illinois but now covers only 0.01%. Which one is it?

6. Where would a bog be found in Illinois?

- A. near Chicago
- B. in northwestern Illinois
- C. near Danville
- D. in extreme southern Illinois
- E. none are found in Illinois

7. In which habitat would you expect to find carnivorous plants?

8. Which habitat in Illinois has been almost entirely converted to agriculture?

9. Explain the difference between a savanna and a woodland.

10. Caves are lifeless places that have no living organisms in them.

True or False

11. Name two habitats not pictured that are found in Illinois.

12. Is it important to preserve habitats? Give two reasons for your answer.

NORTHERN ILLINOIS

Volo Bog Nature Preserve
620 Brandenburg Road
Ingleside, IL 60041
(815-344-1294)

Edward L. Ryerson Preserve
Ryerson Conservation Area
Deerfield, IL 60015
(708-948-7750)

WEST-CENTRAL ILLINOIS

Sand Prairie–Scrub Oak Preserve
Site Superintendent
Sand Ridge State Forest
Forest City, IL 61532
(309-597-2260)

Forest Park Preserve
Forest Park Nature Center
Gardner Lane and Forest Park Drive
Peoria, IL 61614
(309-688-6413)

EAST– CENTRAL ILLINOIS

Russel M. Duffin Nature Preserve
Vermilion Co. Conservation District
Director of Conservation Education
Forest Glen Forest Preserve
Westville, IL 61883
(217-662-6284)

American Beech Woods Preserve
Lincoln Trail State Park
Site Superintendent
RR #1, Box 117
Marshall, IL 62441
(217-826-2222)

SOUTHERN ILLINOIS

Heron Pond–Little Black Slough
Site Superintendent
Ferne Clyffe State Park
Goreville, IL 62939
(618-995-2411)

Round Bluff Nature Preserve
Site Superintendent
Ferne Clyffe State Park
Goreville, IL 62939
(618-995-2411)

Description and Map of Field Trip Sites

1. Volo Bog is the only bog in Illinois that contains a well-developed tamarack forest and all stages of bog succession. Many unusual plants characteristic of bogs are present, including sphagnum moss, cotton sedge, poison sumac, and pitcher plant. A boardwalk provides easy access.

2. Ryerson Preserve is composed of floodplain and upland forests, some of which are old growth on the drier sites. Many tree species are present, and each spring the forest floor has a spectacular display of wildflowers.

3. Sand Prairie–Scrub Oak Preserve has various types of habitats associated with sand deposits. These include savanna, sand prairie, and dunes, all of which support a flora typical of dry conditions. Prickly pear cactus is abundant here.

4. Forest Park Preserve in Peoria is a ravine forest along the Illinois River. Small hill prairies occur in openings in the oak forest along the rugged bluff tops.

5. Duffin Nature Preserve near Danville supports wet to dry ravine forests along the Vermilion River. The forest has red oak, sugar maple, beech, and tulip trees in the ravines and various oaks and hickories on the ridges. A rich flora of wildflowers is present each spring.

6. American Beech Woods is found in Lincoln Trail State Park and is characterized by steep ravines and flat uplands. The dominant trees are the American beech, sugar maple, and tulip tree. Many unusual plants associated with beech woods, such as squaw root and beech drops, are present.

7. Heron Pond–Little Black Slough is a remnant of the once extensive cypress-tupelo swamps of the Cache River valley. Some of the oldest trees in Illinois are found here. Notable inhabitants are the red iris, green tree frog, and cottonmouth snake. A boardwalk is present.

8. Round Bluff Preserve, in Ferne Clyffe State Park, is a sandstone bluff supporting many rare and unusual plants, including various ferns and wildflowers. Stairs along the trail provide for easy access.