Urban Wildlife Wheel

Subjects: Language Arts & Science

Objectives: Students will be able to read *Wildlife Express* and choose eight facts about urban wildlife and/or animals they have seen in the city.

Materials:

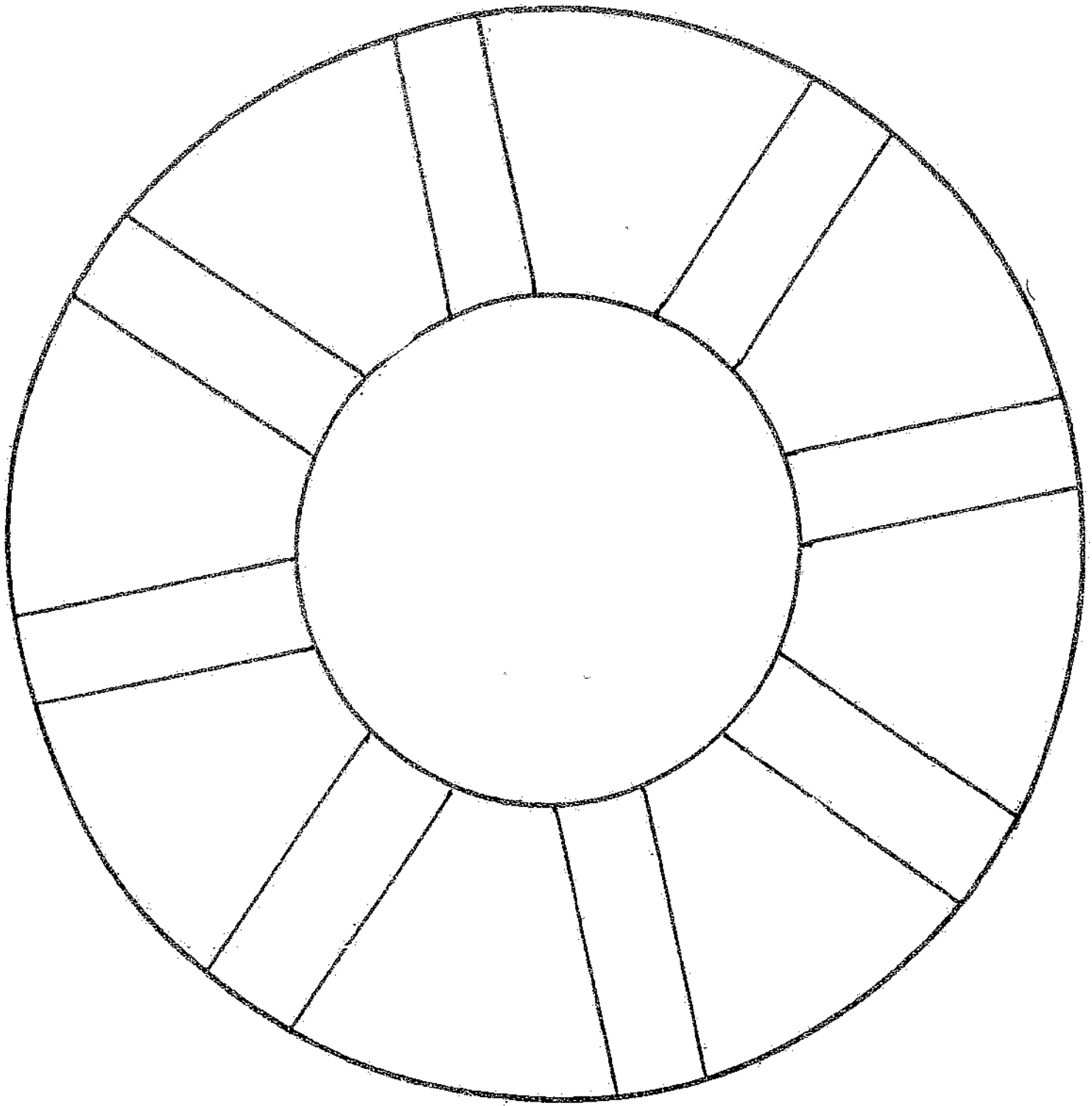
- Research materials / *Wildlife Express*
- Urban Wildlife Wheel worksheet
- Coloring materials
- Construction paper
- Edged scissors (optional for border)

Procedure:

1. Review facts about urban wildlife read in *Wildlife Express*. Have students make a list of important facts. From the list, they should choose eight they would like to highlight on their wheel.
2. Students may also use books to research other significant facts.
3. Hand out the Urban Wildlife Wheel worksheet. Have students write their wildlife facts in the "spokes" of the wheel and illustrate and color the facts in the section above the spoke. The center circle should contain a title (Urban Wildlife Facts, Animals I've Seen in the City, What to Know about City Wildlife, etc.) and their name.
4. When wheels are complete, instruct students to cut out the wheel and mount it to a piece of construction paper. Cut the construction paper a bit out from the wheel to create a border.

Urban Wildlife Wheel

- Place the title of your wheel and your name in the center circle.
- Write one of your eight urban wildlife facts and or animal of your choice in each rectangle. Illustrate each fact or animal in the larger sections. Color!
- Cut out the circle and glue it on a piece of construction paper.
- Cut the construction paper around the original circle to create a border.



"Town Mouse & Country Mouse*" Diorama

*Choose any animal!

Subject: Science

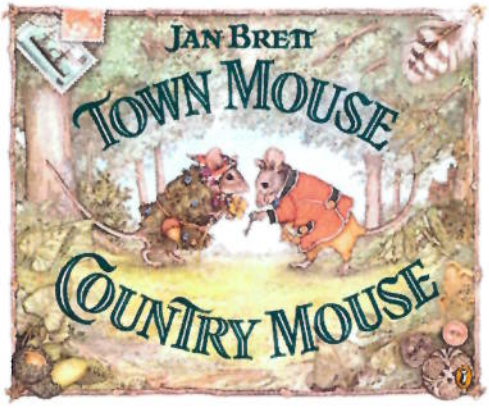
Objectives: Students will be able to compare the differences between the lives of an animal that lives in the city and an animal that lives in a forest, desert or other wild habitat.

Materials:

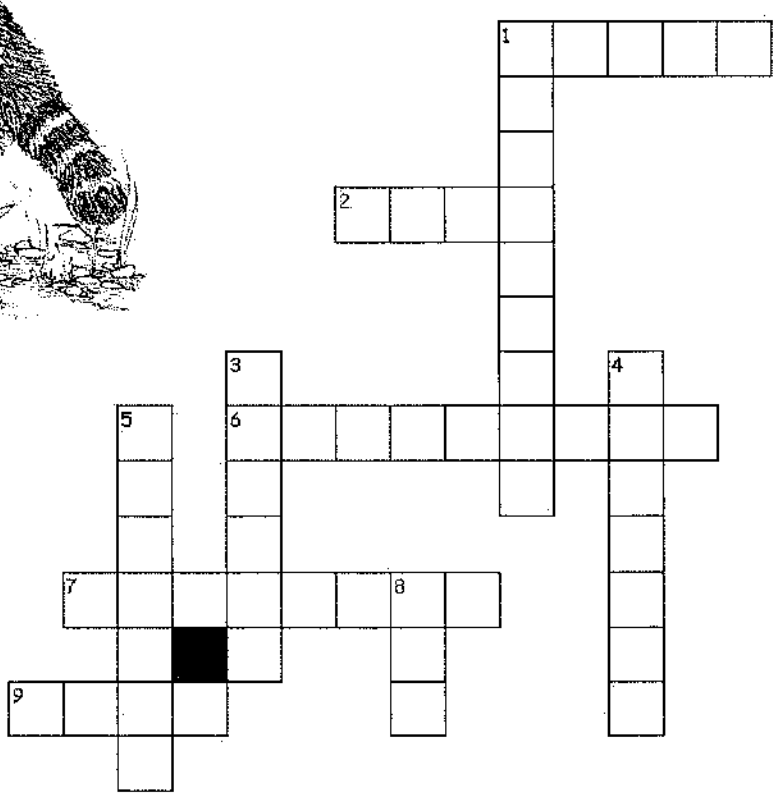
- The book *Town Mouse and Country Mouse* (there are many different authors).
- Shoe box for each student
- Materials students gather to create diorama
- Research materials

Procedure:

1. Read a copy of *Town Mouse and Country Mouse*. Review habitat with students. Ask students to think of an animal that lives in the city and how its habitat needs are met. Then think about the same animal living in a wild habitat. How are the habitats different?
2. Have students work in teams to research different animals that can be found in city habitats and wild habitats. Students should make a list of what might supply the parts of habitat (food, water, shelter) and where the animals would find the parts (pond, fountain, etc.).
3. Students should then create a diorama that has the city habitat on one side and the wild habitat on the other. Students should include a representation of the animal (clay model, drawing, plastic replica, etc.) as well as the food, water and shelter the animal needs and other things found in the habitat.
4. When dioramas are complete, have the teams give a short oral report on their research and dioramas to the class.



City Critter Criss-Cross



Across

1. These offer ducks and geese a nice place to raise their young.
2. Wildlife may come into town when _____ is hard to find in the forest.
6. At night, towns come alive with _____ animals.
7. Sometimes homes are built on _____ habitat.
9. Tracks, _____ and chew marks are signs that wildlife has visited your backyard.

Down

1. In the winter, _____ will sometimes follow deer into a town.
3. Feeding pets _____ will help stop problems that may happen with raccoons and skunks.
4. Feeding _____ in town may cause problems.
5. Wildlife may be found anywhere there is good _____.
8. This wild dog often finds a place to live near humans.

Words

Food
Fox
Habitat
Inside
Mammals
Nocturnal
Ponds
Predators
Scat
Wildlife

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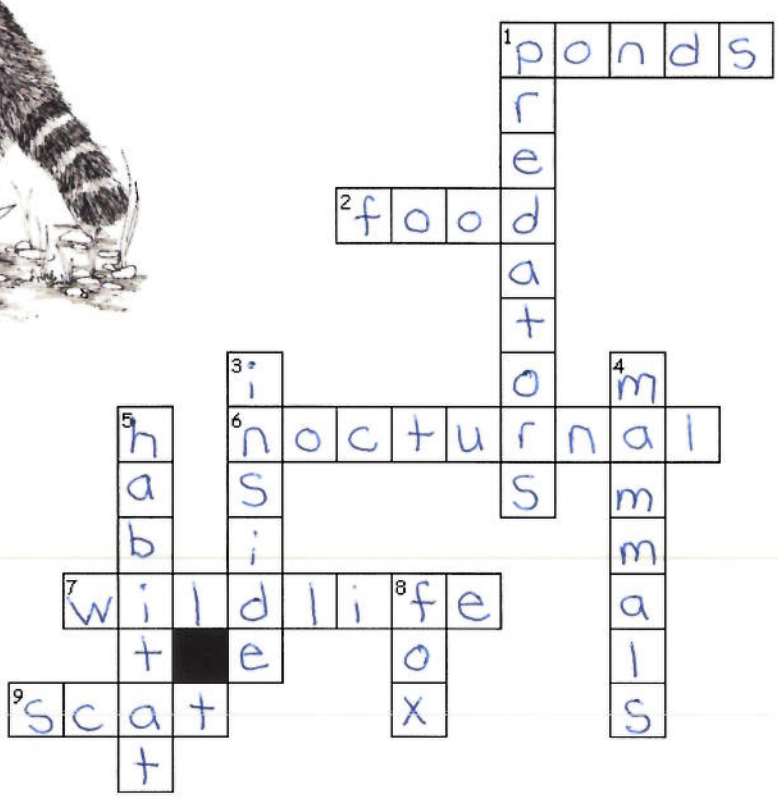

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Urban Nature Search

Objective

Students will: 1) generalize that each habitat has characteristic life forms, and 2) suggest ways that the environment affects the life forms that occupy it.

Method

Students go outside to observe an environment and use a questionnaire to assist in gathering data.

Materials

Questionnaires (designed by educators or students); pencils; notebooks or journals; an outdoor setting to conduct this investigation

Background

For most people, wild birds and other animals are valued and appreciated residents of cities and towns.

Unlike the soil, waterways or other ecological components of the urban environment, wild animals do not create, but rather reflect environmental quality. They are an indicator of a diverse and healthy ecological community, and the positive values they impart to the urban scene must be emphasized through public awareness and education of both old and young concerning the potential richness and quality of their environment.

Every environment has its characteristic organisms (including animals) and the urban setting is no exception. Many urban organisms have adjusted as their habitat has changed from undeveloped to urban. Not only have people altered the environment, the human environment has been shaped by the ecologies within which people live.

The major purpose of this activity is for students to recognize that all environments have characteristic life forms and to identify ways that organisms are adapted for their environment.

Grade Level: 5-8

Subject Areas: Science, Language Arts, Environmental Education

Duration: one 45- to 90-minute session

Group Size: any

Setting: outdoors

Conceptual Framework Topic Reference: HN1B, HN1B1

Key Terms: investigation, observation, environment

Appendices: Outdoors, Field Ethics

Procedure

Before the Activity:

1. Preview and select the route of the nature search. Note stopping places where students can observe and record information.
2. Design a questionnaire to be distributed to the students for use on the "search." The questions and tasks should encourage increased student observation. For example,

many of the following phenomena can be designed into this activity:

- Tally, describe and sketch different kinds of plants growing on the north and south sides of buildings. (The differences may be due to temperature variations, sun and shade-loving species of plants and less evaporation on the north side of building.)
- Look for birds. Tally the numbers of different kinds of birds. If they are migratory, sketch the pattern of their flying formation. Watch the birds. If they are feeding, what do they eat? Where do they nest? Would the birds eat the same food if they lived away from people? Where might they nest in a rural area?
- Look for animals establishing a "territory." Try to map the animals' territory. (During the mating season, birds sometimes can be seen choosing mates; males fighting, strutting and dancing around the female species; and nest building.)
- Look for evidence of predator/prey relationships. If any mammal, bird or insect is seen, attempt to determine what animal is its predator or prey.
- Record evidence of plant disease and insect damage. It is always interesting to see insect galls or bag worms in their natural setting.
- Look for evidence of food chains. For example, if insects are observed, look for partially eaten, damaged or mutilated leaves. Then look for who eats the insects. Draw a food chain and identify the parts.
- Try to observe a bee cross-pollinating flowers while gathering nectar for the production of honey. Note how pollen sticks to the hair on their backs and legs. Observe the specialized organs of the bee, and study them further (from diagrams and photos) back in the classroom.
- Sketch trees and list their contributions to the community. (For example, trees can be observed breaking the velocity or speed of the wind. Reducing wind speed in this way might save energy by reducing the winter heat loss from homes in the surrounding area. Trees also serve as part of the wildlife habitat, increase the oxygen content of the air and have aesthetic value.)
- Who likes lichen? Predict what plants and animals have a direct or indirect relationship with lichens. (Lichens will be found growing on rocks, tree trunks and even on soil. Lichens are really algae and fungi functioning as a partnership in a symbiotic association.)
- Trace water's path in an area—such as on one street, around one tree or down a hillside. (For example, draw the route of any visible erosion.) Look for evidence of freezing and thawing on sidewalks and buildings.
- Find mulch around trees and shrubs. Record any evidence or observation of life forms. Mulch allows the soil to absorb and retain moisture and reduce evaporation. Mulch also reduces temperature extremes and contain earthworms as well as microscopic and other life forms.
- Look for evidence of components of habitat. Students can observe first-hand the basic wildlife needs. Match animals with their habitat needs (food, water, shelter and space in appropriate arrangement). It can be a real challenge for students to determine if all basic needs can be met in the available habitat. Predict

continued

what animals should be able to live in the habitats identified.

The Activity:

1. On the field trip, each student should bring a copy of the questionnaire, a pencil, and a notebook or journal. Remind students not to disturb or destroy any plants or animals they may see.
2. Discuss the diversity of wildlife. Make sure students understand that wildlife includes insects, spiders and other invertebrates as well as birds, fish, reptiles, mammals and amphibians. Also establish that students can identify wildlife species without knowing the animal's formal name. For instance, they can differentiate a black bird with a short tail from one with a long tail. As they conduct their urban nature search, students can invent their own names for the plants and animals they see.
3. What characteristic life forms did the students find that were most surprising? Which organisms might the students find in a rural setting? Do they think the behavior of the animals would be the same in both locations? Why or why not? Do they think the organisms' appearance would be different in the country? Why? How do they think the environment affects the species that live in it? Involve the students in a discussion of their observations, their techniques and their conclusions. Encourage the generalization, warranted by the results of their investigation, that each environment has characteristic life forms.

Extension

Chart the characteristic life forms found on the search according to the environments in which they were found. For each animal listed, identify how its basic needs are met. Describe any animal adaptations that seem well-suited to survival in the urban environment. Note any interdependencies between plants and animals. Discuss ways in which people have altered the natural environment and ways in which natural forces have shaped the human environment.

Aquatic Extensions

1. Make a map to show all the public water areas in your community, if any. Streams, ponds, a lake or river are all possibilities. If there are no such public areas of water in a natural or near-natural environment within your community, look next for water that people have introduced, but which is still accessible to the public. For example, count and map the location of the public water fountains in the community. Next list and tally all the different kinds of wildlife that seem to depend on any single water source you identify. Remember—food, water, shelter and space in a suitable arrangement are the essential components of habitat for any wildlife.
2. Look at urban ponds and lakes in parks and compare those species living in concrete-bottomed ponds with those living in mud-bottomed ponds. What lives where? Where and how do they obtain their food?

Evaluation

1. List and describe ten types of plants found in an urban environment.
2. List and describe ten types of animals found in an urban environment.
3. Select any four animals found in an urban environment and describe how these animals find food, shelter and water in order to survive in the community. If these animals were