

## OVERVIEW

**Coexisting** with wildlife in urban environments requires us to be aware of the species living among us and to alter our behavior accordingly. This activity immerses students in an outdoor setting to discover differences in adjacent urban habitats and raise awareness about the effects of human activity on wildlife behaviors.

## MATERIALS

- Clipboards with paper or nature journals
- Pencils and/or markers
- Animal artifacts and other visuals related to location (optional)



## ACTIVITY

### PREPARATION:

Conduct a pre-activity site visit; choose two exploration areas that have significant differences between managed and natural landscapes (e.g. a playground with a garden versus a wildflower meadow). These will be Locations 1 and 2, where students will make observations and reflect. Download and read “Tips for Successful Learning in the Great Outdoors” from the introduction letter to help guide you in choosing activity locations.

Students will be making observations first and then creating a sound map. Ask students to set up their field notes page before working outside; the front side of the page will be used for Location 1 and the back side for Location 2.

Divide each side in half. The top portion will be used to write wildlife observation notes. The bottom portion will be used to create a sound map. If needed, introduce the field notes page to students inside and practice creating a sound map. Read further for an example and directions to set up the field notes page.

### THEME

Effects human activity can have on wildlife behavior.

### OBJECTIVES

#### *Students will:*

- Recognize that cities are diverse ecosystems that include people and wildlife.
- Collect, organize, and compare data.
- Investigate the positive and negative impacts human activity can have on urban wildlife.
- Explore relationships between noise, human activities, and urban wildlife.

### SUBJECTS

Biodiversity and humans, ecosystem relationships, human impacts on earth systems, adaptations for success in urban environments

### SKILLS

Collection and analyzing data, recognizing cause and effect patterns, spatial drawing, interpreting data and constructing explanations

### ADDITIONAL BACKGROUND MATERIALS

#### *Suggested for facilitator*

- Wildlife Basic Information Packet
- WildlifeNYC website  
[nyc.gov/wildlife](http://nyc.gov/wildlife)

**PART A:**

Begin with students spending a few minutes in a defined exploration area looking around for wildlife or signs of wildlife. Signs can include nests, scat (animal feces), discarded feathers/furs, chewed leaves, log hollows, etc. Allow for 10 minutes of free observation. Students are free to explore and experience, writing observations on the top portion of their field notes page. Remind students to leave the exploration area as they found it.

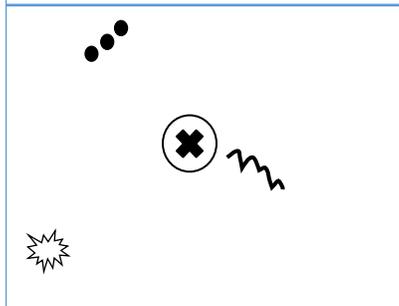
Next gather everyone in a comfortable spot to sit and listen. Students should be given two minutes of listening time. As they listen, students create a sound map on the bottom portion of their field notes page. Everyone should draw a circled “X” in the center of each half to represent themselves. Each time they hear a sound, students will mark its location on the page relative to them. How close is the sound to their position? Is it in front of them or behind them? They should draw a doodle/picture to represent the sound, illustrating feeling and volume intensity. The sound map only has to make sense to the student, who will later explain their map to others.

**SAMPLE Field Notes Page**

**Example of Symbols**

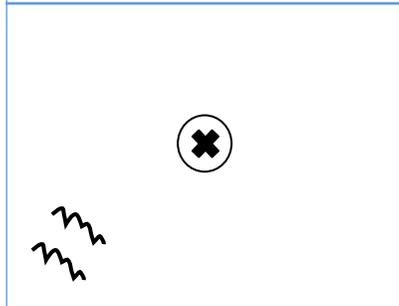
-  - student
-  - robin singing
-  - car horn
-  - motorcycle driving by

Location 1 (Signs of wildlife)  
 - feather  
 - bird poop (scat)  
 - saw a squirrel running



Front Side

Location 2 (signs of wildlife)  
 - bird's nest  
 - holes in tree bark  
 - heard a squirrel barking  
 - heard a bird chirping



Back Side

After the listening time, discuss the sights and sounds students observed, sharing their field notes page and sound map.

**DISCUSSION QUESTIONS:**

- Did you see any wildlife? If so, what animals did you see?
- Did you see any signs of wildlife, like feathers, fur, tracks, or scat?
- What types of sounds did you hear?
- How many sounds were from human-made sources? Examples: sirens, car traffic, human voices, radio. Count how many total.
- How many sounds were from natural sources? Examples: leaves rustling, birds chirping, squirrels barking. Count how many total.
- Could you identify all of the sounds? Do you have guesses for the unidentifiable sounds?
- Were there any sounds you heard related to wildlife sightings?
- Look around and observe; how are people using the park here? Decide how to categorize observations. Examples: helpful for park, harmful for park, or have no effect on park.
- Any additional observations?

**PART B:**

Proceed to Location 2. Give walking instructions and safety information as necessary (e.g. stay on the trail, stay together as a group, or be aware of poison ivy.) Impress upon the students that if they desire to see wildlife, noise needs to be kept to a minimum. Additionally, animal artifacts, like feathers or skulls, can be brought out to share with students along the way. Proceed at a slower pace so students can make observations.

Upon reaching the second location, repeat Part A. Start with students looking around for signs of wildlife in a defined exploration area, and then gather together to create a second sound map. Repeat observational listening in the same manner as in Location 1. Students will use the other side of their field notes page to write down observations and draw their sound map. After the listening time, discuss the sights and sounds students observed in Location 2.

**DISCUSSION QUESTIONS:**

- Did you see any wildlife in this second location? If so, what animals did you see?
- Did you see any signs of wildlife, like feathers, fur, tracks, or scat?
- What types of sounds did you hear?
- Which sounds were from human-made sources? From natural sources? Count how many of each.
- Could you identify all of the sounds? Do you have guesses for the unidentifiable sounds?
- How are people using the park in this second location? Use the same categories as in Part A to organize observations.

The following questions require students to think about all of the data they collected from both locations.

- What sights and sounds were different between Location 1 and Location 2? Discuss why different observations were found at both locations.
- What sights and sounds were the same between Location 1 and Location 2? Discuss what makes it possible for these similarities to exist at both locations?
- Where were people and wildlife using the same areas? From discussion questions in Part A and B, are the ways people use the park affecting wildlife in these areas? How are people and wildlife using (or **coexisting** in) the same space?
- How might noise and human activities in cities affect urban wildlife? Are they be helpful, are they harmful, or do they seem to have no effect?

These discussions conclude the activity, and students can begin their hike back. Keep the pace slow and encourage students to again make observations as they walk.

#### **EXTENSION ACTIVITY:**

Conduct another observation and listening period outside your school building, recess yard, or on a street block. Back in the classroom, ask students to analyze all of their data and create graphs and other mathematical diagrams to visualize all of the data they collected. Students can compare and contrast sounds heard in the different locations, or compare the number of sounds created by human-made or natural sources. Encourage students to create multiple data diagrams using different methods.

Graphs and diagrams are a great way to visually display data for others to understand. Encourage students to share their data diagrams at home and talk to adults about what they observed and discussed together as a class. Ask students to report back to the classroom about their at-home discussion.