



Exploring Biodiversity  
Student Journal

Name \_\_\_\_\_  
School \_\_\_\_\_



Habitat & Biodiversity

I think biodiversity is...  
\_\_\_\_\_

Three examples of the importance of biodiversity are:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

The four habitats I’ll be studying are:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

While exploring in Sapsucker Woods, we’ll use these three characteristics to tell which habitat we’re in:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

The habitat with standing water and trees is: \_\_\_\_\_

The habitat with gaps in the canopy and lots of shrubs is: \_\_\_\_\_

Activity Station 4: Scavenger Hunt in the Bird Discovery Lab

Dive deeper into bird biology in our Bird Discovery Lab.

**Eyes and Senses**

1. Name two ways birds see.  
\_\_\_\_\_

**Bones and Bodies**

2. How does the White-tailed deer leg bone compare to the Tundra Swan leg bone?  
\_\_\_\_\_

**Feathers**

3. What do you notice attached to the tail of the Archaeopteryx specimen on the wall?  
\_\_\_\_\_

**Flight and Migration**

4. Why do we sometimes see Canada Geese flying in a “V” formation?  
\_\_\_\_\_

**Eggs and Nests**

5. Open the drawer labeled “Which of These Is Not Like the Other?”  
Name the species of bird that is a brood parasite: \_\_\_\_\_

6. What bird makes the muddy-looking nest? \_\_\_\_\_

**Sound**

7. At the sound table, find the “Creatures of the Night ” playlist and listen to Barred Owl.  
What does it sound like the owl is saying? \_\_\_\_\_

Activity Station 2: Raven Sound Analysis

We use sound analysis for scientific research called bioacoustics. The Raven software program, developed by engineers at the Cornell Lab of Ornithology lets you see sounds from the natural world. In this activity, you will see and hear a variety of sounds from the natural world.

1. Choose one of the sounds you saw and heard: \_\_\_\_\_
2. Describe it in words: \_\_\_\_\_
3. What does the sound look like? Draw it below:

4. What animal sound did you like the most? \_\_\_\_\_  
Describe that sound in words: \_\_\_\_\_
5. What animal sound did you like the least? \_\_\_\_\_  
Describe that sound in words: \_\_\_\_\_

Activity Station 3: Merlin Sound ID

Birds can also be identified by listening to their sound. Click "Sound ID." Capture the sound of the bird you hear.

1. Describe the sound in words: \_\_\_\_\_
2. What kind of bird did you hear? Write the species name here: \_\_\_\_\_

I know these plants and animals already:	I learned about these new plants and animals in the slide show:
1)	1)
2)	2)
3)	3)
4)	4)
5)	5)
6)	6)
7)	7)

Data Exploration

A) Explore one habitat

1. Look at the two graphs on your group’s graph sheet. According to these data, which plant are you most likely to see in this habitat?  
\_\_\_\_\_
2. Which bird species are you most likely to see? What are the chances you’ll see it?  
\_\_\_\_\_  
\_\_\_\_\_
3. Which other animal (besides birds) are you most likely to see?  
\_\_\_\_\_
4. According to these data, name one species that is uncommon here:  
\_\_\_\_\_
5. Based on the species found here, which habitat do you think it is?  
\_\_\_\_\_

## Data Exploration (cont.)

## B) Compare two habitats

1. Which habitat is represented by the second set of graphs?

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2. Which species do the two habitats have in common?

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3. What do you know about these two habitats that might explain this?

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4. Which species are found in only one of the two habitats? Why might that be?

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### C) Generalists and specialists

1. Name a species found in 3 or more habitats: \_\_\_\_\_

2. Name a species that is found in **only one** habitat. Why do you think that is?

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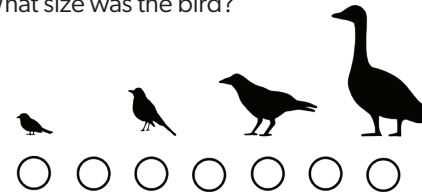
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## Activity Stations

## Activity Station 1: Merlin Bird ID and Participatory Science

Using the binoculars, find a bird outside. Identify it using the Merlin app. Follow the steps on the app and write your observations below.

What size was the bird?



1. What were its main colors?

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2. In what habitat did you see the bird?

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3. What kind of bird did you see? Write the species name here:

4. **Try it again!** Look for birds at the feeding station and at the pond. Record the birds you saw and how many of each.

Species Name	#	ID Tool
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5. At the Globe screen, report one of the birds that you saw today.

6. How many eBird lists have been submitted today? \_\_\_\_\_

7. Is there a location on the globe with very few lists submitted? \_\_\_\_\_

	Any Habitat	Survey Habitat
BIRDS		
American Crow		
American Robin		
Baltimore Oriole		
Black-capped Chickadee		
Blue Jay		
Canada Goose		
Common Grackle		
Downy Woodpecker		
Eastern Phoebe		
Gray Catbird		
Great Blue Heron		
Hairy Woodpecker		
Northern Cardinal		
Northern Flicker		
Ovenbird		
Pileated Woodpecker		
Red-bellied Woodpecker		
Red-eyed Vireo		
Red-winged Blackbird		
Wood Thrush		
Yellow-bellied Sapsucker		

	Any Habitat	Survey Habitat
MAMMALS		
Eastern Chipmunk		
Gray Squirrel		
Red Squirrel		
Mink		
AMPHIBIANS		
American Toad		
Bullfrog		
Green Frog		
Spring Peeper		
REPTILES		
Common Garter Snake		
Northern Water Snake		
Painted Turtle		
Snapping Turtle		
INSECTS		
Bee		
Damselfly		
Mosquito		
Waterstrider		

Physical features of bird diversity

List three examples of bird features that vary between species:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Draw a bird from your field guide:

Get ready for your field trip!

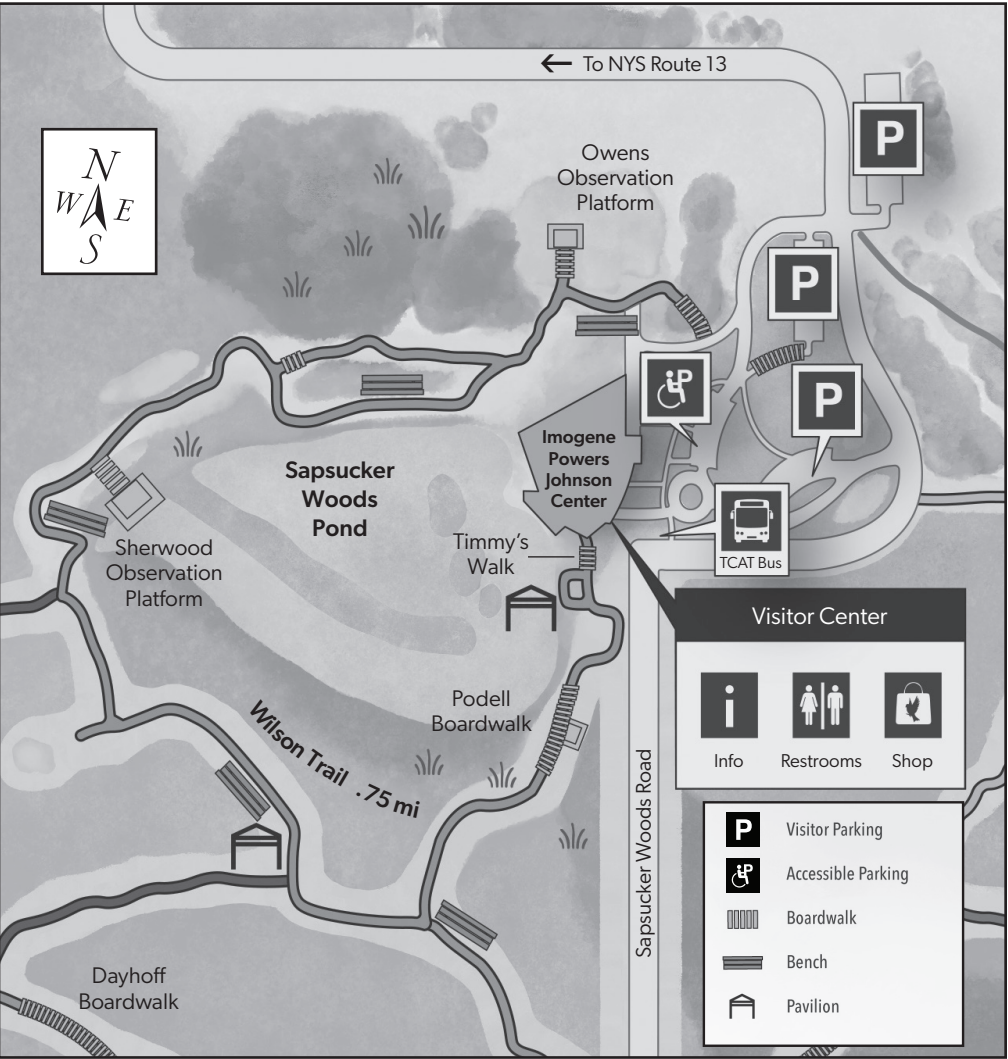
- Review species you hope to see.
- Remember to pack lunch and a water bottle.
- Dress for the weather, bring rain gear if needed.

Getting started

In which habitat will you conduct your Biodiversity Survey?\_\_\_\_\_

Mark the map with the location of your Biodiversity Survey site.

Sapsucker Woods Map



Sapsucker Woods Biodiversity Survey

- 1. While exploring, identify as many plants and animals as you can.
- 2. In the "Any Habitat" column, check off everything you see.
- 3. In the gray "Survey Habitat" column, **only** check off species seen in your group's assigned survey area. Share your results with your group leader.
- 4. If you see something that is not on this checklist, **write it in!**

	Any Habitat	Survey Habitat
TREES		
American Beech		
Black Cherry		
Buckthorn		
Red Maple		
Sugar Maple		
Norway Spruce		
White Oak		
White Ash		

	Any Habitat	Survey Habitat
OTHER PLANTS		
Blueberry		
Cattails		
Duckweed		
False Solomon's Seal		
Fern		
Grape Vine		
Honeysuckle		
Jack-in-the-pulpit		
Lesser Celandine		
Mayapple		
Moss		
Multiflora Rose		
Poison Ivy		
Sedges		
Skunk Cabbage		
Spicebush		
Swamp Rose		
Trillium		
Water Lily		
Wild Strawberry		