Junior Winter Birdfeeder Challenge Pre-Post-Site Materials



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BirdSleuth Explorer's



Correlated State Standards

Identified ELA, Math and Science Standards are detailed below specific to this education program. Source: Forest Preserve District of Will County, the Council of Chief State School Officers (Common Core), and the National Research Council (Next Generation Science Standards)

ELA Standards			
Subject Codes	Grade 3	Grade 4	Grade 5
Reading for Information (RI)	RI.3.3, RI.3.4, RI.3.7	RI.4.3, RI.4.4, RI.4.7	RI.5.3, RI.5.4, RI.5.7
Language (L)	L.3.1, L.3.3, L.3.6	L.4.1, L.4.3, L.4.6	L.5.1, L.5.3, L.5.6
Writing (W)	W.3.2b, W.3.7	W.4.2b, W.4.7	W.5.2b, W.5.7

NGSS Standards			
Disciplinary Idea	Grade 3	Grade 4	Grade 5
Life Science 1, Structures and Process		4.LS1.1	
Life Science, Heredity	3.LS3.2		
Life Science, Evolution	3.LS4.3		





References

Recommended Websites

Cornell Lab of Ornithology's online lesson called "All About Feathers" has great information and illustrations.

http://bit.ly/2pjiJfa

Utah Education Networks' "Bird Watching 101" teaches the basics of bird-watching, finding and interpreting bird clues, and attracting birds to a particular location or habitat.

http://bit.ly/2tNPRP8

• Illinois Department of Natural Resources' Teacher's Guide to "Birds of a Feather" teaches students to distinguish the major classifications of birds and their characteristics.

http://bit.ly/2IoYAuq

Illinois Department of Natural Resources' Teacher's Guide to "Be a Birder" allows students to demonstrate the ability to locate and identify birds.

http://bit.ly/2FAeg0b

Project Learning Tree's Flying Wild student-led activity, "The Birding Beat," lets participants test their skills at identifying birds as they take a stroll along Birding Lane.

http://bit.ly/2tGlf28

 Illinois Department of Natural Resources' complete bird list includes scientific and common names of all the bird species of Illinois.

http://bit.ly/2HtdU83

 Enchanted Learning's resource provides craft ideas, printable sheets and activities on all things birdrelated.

http://bit.ly/2GpD1Jo

The United States Geological Survey offers a bird population studies collections, including large scale surveys on bird monitoring, research and other information about birds.

https://on.doi.gov/2pwn1yn



Activities

Meet a Bird

Overview:

Increase your students' knowledge of common birds by creating bird posters. Researching common birds can help enhance students' learning and experience with the Junior Winter Birdfeeder Challenge Program.

Instructions:

- 1. After some research through a bird book, the Internet or a magazine, students choose a common bird of Illinois.
- 2. Students will research and find the name, voice, color, range and other interesting information about their bird.
- 3. Students will then create a poster with the information they have found.
- 4. Students will stand in front of the class and introduce their bird through the poster.



Pre-program Student Assessment Session

Pre-assessment Program:

Conduct a pre-assessment and discover your students' current knowledge of the common birds that might be seen at their bird feeders.

Overview:

Establish your students' current knowledge of common birds by creating an open dialogue. Discussing common birds can help enhance student learning and experience with the upcoming Junior Winter Birdfeeder Challenge Program.

Instructions:

Ask your students the following questions:

- 1. What makes a bird a bird? Is it feathers, hard eggs, hollow bones, a beak?
- 2. What are some common birds in our area? List them on the board.
- 3. What are some similarities among birds? How about some differences?
- 4. Does anyone in the class bird-watch or know of a bird-watcher?
- 5. Does anyone own a bird feeder?
- 6. Does anyone have a bird story they would like to share?
- 7. Why do you like birds?
- 8. What is your favorite bird?

The**Cornell**Lab of Ornithology BirdSleuth K–12

BirdSleuth Explorer's Guidebook



BECOME AN EXPERT OBSERVER!

Follow this step-by-step guide and use your senses to discover the birds in this national wildlife refuge.



Welcome, BirdSleuth Explorer!

Scientists are explorers.

They search for new discoveries and ideas. You can be a scientist, too. Science starts with curiosity and observation. Keep your ears and eyes open and record what you notice. Using these science skills is a great way to explore this national wildlife refuge.

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Date	



Scientists and explorers make lots of observations and ask tons of questions. If you think of a question that you can't answer, don't worry. Just turn to page 11 of your **BirdSleuth Explorer's Guidebook** and write it there. You can find the answer later.

Wake Up Your Ears

Use your sense of hearing to start exploring the world around you!

Find a quiet spot. Sit and listen for five minutes. Use this space to make a map of what you hear, like the girl in the picture. The **X** on the page marks the spot where you are. Use your own symbols to map the sounds around you (like cars, running water, and birds).

Where are the sounds?





What's a Habitat?

Great job! Now that your ears are listening, look for the four parts of a habitat.

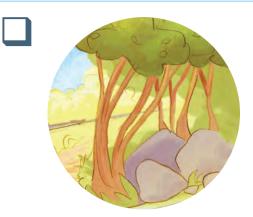
A good habitat has everything a bird needs to survive. There are four parts to a habitat. Put a check next to each part you see: food, water, cover, and space.



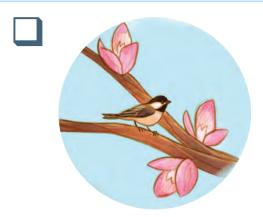
FOOD: Just like you, birds need a healthy diet. Different birds eat different foods, for example seeds, insects, and fruit.



WATER: From a puddle to a pond, or a ripple to a river, birds need clean water for drinking and bathing.



COVER: Birds need safe places to sleep and raise young, and shelter from bad weather and predators. Birds find cover in trees, bushes, and structures made by people.



SPACE: Birds need room to grow and live. They need to be able to find enough food, water, and cover in the place they call "home."

Habitat Scavenger Hunt

Now you've got the hang of it! How many parts of a habitat can you discover?

This national wildlife refuge might have more than one kind of habitat (such as forests, wetlands, grasslands, and deserts). Observe the habitat around you closely. How many things can you find on the list?



- insect
- □ spider
- □ spider web
- place where a bird can hide
- □ plant that is as tall as you
- mammal
- □ leaf bigger than your hand
- animal making noise
- something a bird can eat
- $\hfill\square$ animal track
- □ hole in a tree
- □ rock bigger than a baseball
- □ bird nesting material
- water for animals

 What was the most colorful thing you found?

 What was your favorite thing you observed?

 What would you name the habitat you are in?

Bird Search

Now that you've explored this habitat, let's see if you can find any birds.

You can find out if birds are here by using your eyes and ears. How many items can you check off the list below?



Bird evidence

- □ feather
- □ droppings
- nest

Birds using habitat look for them:

- on a branch
- \Box on a wire or roof
- □ flying or soaring
- on the ground
- □ swimming
- eating
- □ drinking

Variety of birds

- Group of three or more birds
- □ two birds together
- colorful bird
- □ bird that is mostly black
- □ bird with white on its body
- □ bird with a long tail
- □ bird with a short tail



Do not take anything that you find in a national wildlife refuge home with you. Leave everything where you find it so the next explorer can see it, too. Scientists take notes or photos to remember what they see.

Bird Groups

You're really becoming a great observer and explorer! Now that we know that birds are all around us, let's start trying to identify them.

There are many different types of birds. They can be grouped by their shape. Species in each group have similar shapes. Here are just a few bird groups you might see as you explore.



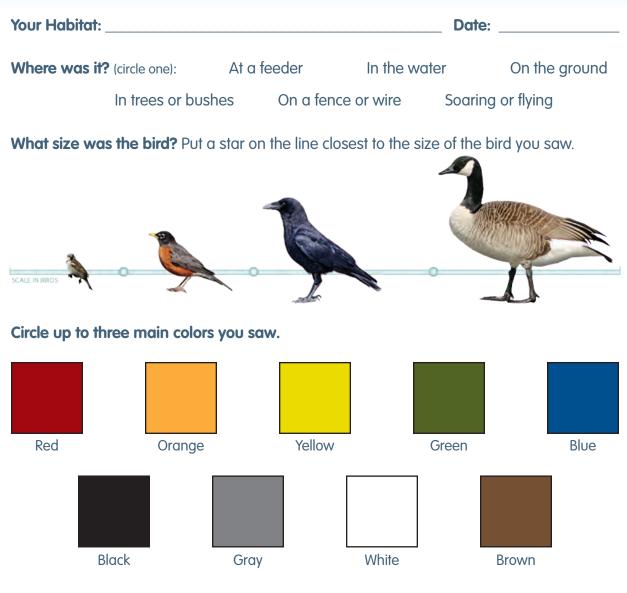
Can you find a bird from any of these groups? Record the group and where in the habitat you saw it.

Group Name (such as owl)	Where You Saw It (such as in a tree)

Identification Clues

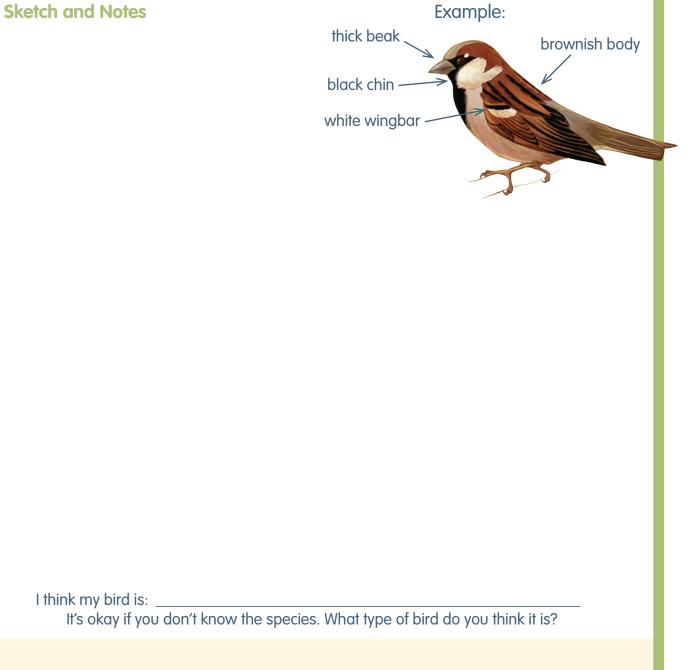
Now that you can use shape to determine a bird's group, let's add more details to help identify a bird by species.

Bird watchers use many clues to identify birds. Knowing the shape, size, and color pattern of a bird, and where and when you saw it, can help you identify the birds you see. Focus on one bird and gather information about it!



The bird size graphic is from the Be a Better Birder tutorial at birds.cornell.edu/courses/home/tutorial @2016 Cornell University

Did you notice any interesting patterns on the bird? Were there stripes on the head or wings? Sketch or make notes about any patterns you observed.



With this information, you have a good chance of identifying your bird. You can use a field guide or app to help you. If you have a smartphone or tablet, the Merlin Bird ID app can give you a list of birds you might have seen. **merlin.allaboutbirds.org**

Bird Count

You've learned a lot about habitat and the birds around you. Use your new skills to count birds and become a citizen scientist!

Find a good spot to look for birds and carefully collect data during a 5- to 10-minute bird count. If you don't know the name of a bird, make notes or a sketch and look it up later.

Location:	Start time:	
Date:	_How long was your count:	

Circle one: Stationary (Did you stay in one place?)

Species	Number seen	

Traveling

(Did you move from one place to another?)

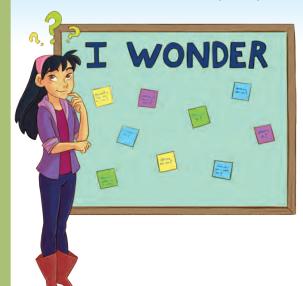
Become a citizen scientist! With the help of an adult, enter your data at **ebird.org** to help scientists learn about the birds you saw!

What is citizen science? Scientists around the world depend on people like you to help collect information, called data. There are lots of different citizen-science projects for studying birds, butterflies, frogs, and more. When you collect data for these projects, you are a citizen scientist!

I Wonder

You've done a great job exploring the national wildlife refuge! Did you discover anything that you want to learn more about?

Exploring nature can leave you with lots of questions. It's OK if you don't know the answers! Write down your questions so you can explore these topics later.







THANKS FOR EXPLORING NATURE WITH BIRDSLEUTH!

Download your **BirdSleuth Explorer's Certificate** at **birdsleuth.org/explorer**. You may also want to explore these Cornell Lab of Ornithology sites:

- Visit allaboutbirds.org to look up the birds you saw today and learn cool facts about them.
- □ You can be a citizen scientist by entering counts for any location into eBird, including your backyard or neighborhood! **ebird.org**
- Download the Merlin Bird ID app or use the photo identification tool online at **merlin.allaboutbirds.org**.

The National Wildlife Refuge System protects a national network of lands and waters that benefits birds and other wildlife for enjoyment by the American public. National wildlife refuges are home to more than 700 species of birds. For information about visitor programs and birdviewing opportunities, please visit **fws.gov/refuges/birding/**.

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