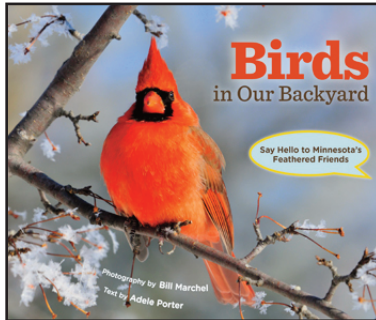


Teacher's Guide for Birds in Our Backyard



Photographs by Bill Marchel • Text by Adele Porter
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“All across this great wild land,
Birds put on a show that’s grand . . .”

Birds in Our Backyard takes readers on an adventure through the lives of birds that call Minnesota home. The rhyming text encourages readers to take a closer look at birds, the seasons, and the wild spaces that make up Minnesota’s big backyard. The informational balloons provide interesting facts about each photo. The book can be used with students of many ages, from kindergartners learning the basics of seasons to older students studying Minnesota’s native wildlife.

Sharing the Book at Story Time

Read the title aloud and show the front cover. Ask students: Do they have a backyard? Does our state of Minnesota have a backyard? We call the shared (public) spaces of parks, forests, waterways, and wildlife refuges Minnesota’s big backyard. Many kinds of wildlife live in this shared space. This book is about the birds that live in Minnesota’s big backyard during just one or two, three, or even all four seasons of the year.

Display the book cover, asking students to identify the season when the cover photo was taken. Review the four seasons with the photos on the back of the book (Blue Jay in a frosty winter setting, Rose-breasted Grosbeak on a spring flowering tree, Mallard drake in bright summer plumage, Bald Eagle on fall migration flight). The life of a bird follows a seasonal pattern, a plan for what it needs to do in each season. Review the four basic needs of birds: food, water, shelter, and a place to nest and raise young. Ask students to listen to the words and look at the photos as you read the rhyming text. Guide them to think about what the birds are doing (their behavior) during each of the four seasons and to listen for suggestions of ways that people can provide for the needs of birds during each season.

The book text was written for an age range. A glossary of higher-level vocabulary words is included at the end of this teacher guide to review with students as necessary.

After you read aloud the rhyming text, review the seasons and behaviors found within each.

EXAMPLE: Winter

What are birds doing during winter in Minnesota?

They are working to survive the cold temperatures, wind, and snow. Some, like Great Horned Owls, are even beginning to nest! Others, like woodpeckers, are getting a head start on finding a mate and partner for nesting season.

How do birds survive the cold and snow of winter in Minnesota?

Some like Spruce and Ruffed Grouse burrow into the snow and out of the cold wind. Snow is like a fluffy blanket that keeps the bird’s heat next to its body. Some like Ruffed and Spruce Grouse grow extra fringes on their feet that spread their weight over a larger area, acting like snowshoes to walk on top of the snow.

Continued EXAMPLE: Winter
How do birds survive the cold and snow of winter in Minnesota?

- Group up or huddle together with other birds of their kind or size in plant cover or tree cavities (holes)
- Store food ahead of time, called caching
- Eat a lot during the day to use as energy to keep warm at night
- Lower their body temperature at night so that they use less body energy
- Grow extra feathers during the fall to help keep them warm in the winter (Boreal and Black-capped Chickadees)
- Fluff up their feathers to keep their body heat close to their body

What species (kinds) of birds stay in Minnesota in the winter?

- Some birds that nest in Canada come south into Minnesota during the winter to find food and (somewhat) warmer temperatures: Snowy Owl, Great Gray Owl, Snow Buntings, Horned Larks, Pine Siskins
- Birds that nest and stay in Minnesota all year include: Great Horned Owl, Eastern Screech Owl, Spruce Grouse, Ruffed Grouse, Ring-necked Pheasants, Boreal and Black-capped Chickadees, Red-breasted and White-breasted Nuthatches, Gray Jays and Blue Jays, Northern Cardinals, Cedar and Bohemian Waxwings, Downy, Hairy, Pileated, Red-headed, and Red-bellied Woodpeckers

What can people do to make the work of surviving the winter in Minnesota easier for birds?

- Plant their favorite food plants in yards and public spaces: shrubs, vines, and trees
- Plant a wildlife garden with food plants like sunflowers
- Leave standing crops like corn in fields for birds to use as food sources and places to find shelter
- Provide bird feeders with a variety of foods like suet, seeds, fruits, and nuts
- Provide open water
- Put out brush piles for cover

Reconnecting Kids with the Outdoors

When Kenneth Ginsburg, MD, gave his address, "No Child Left Inside: Reconnecting Kids with the Outdoors," on behalf of the American Academy of Pediatrics to the Natural Resources subcommittee on National Parks, Forests and Public Lands in 2006, he echoed concerns about the dwindling opportunities for many children to engage in exploratory outdoor play. He promoted play in an outdoor natural setting as supporting

- Children to explore both their world and their own minds with the imagination and engagement of all the senses
- Creativity, curiosity, and the associated developmental advances
- The ability of the child to tailor exercise to his or her own interests and abilities
- Moving children away from passive entertainment into an interactive forum that engages both mind and body
- Opportunities that foster the parent-child relationship

<http://www.aap.org/advocacy/washing/Testimonies-Statements-Petitions/05-24-07-Ginsburg-Play-Testimony.pdf>

Bird Scavenger Hunt: The Basics

Birds have four basic needs that must be met in order to survive: food, water, shelter, and a place to nest and raise their young.

By simply taking your students on a discovery walk around your school block or school grounds you can model the fun and importance of being outdoors in the natural world. Extend this exercise to the home environment by sending home a scavenger hunt item written on an outdoor journal page. The child can then engage her/his family in exploring the outdoor environment. A free journal page is available for download at <http://adeleporter.com/activities/journalpages.html>.

FOOD: Look for insects in the cracks of tree bark and tucked in the cracks and holes of building bricks; lift up flower planters, rocks, and leaves to find insects, seeds, acorns, maple helicopter seeds, and mushrooms. Stop to look closely at flowers and where and how a bird gets nectar. Large birds like owls and hawks eat mice, squirrels, snakes, lizards, frogs, and toads. You just may find a toad or two!

WATER: Rain, dew, puddles, and public fountains.

NESTING: Puddles are places for water and also for the mud that birds like robins need for building their nest. Nesting materials include mud, animal hair and fur, gravel, pebbles and rocks, sticks, twigs, leaves and grass, and even spider web silk. Birds nest on top of buildings, on the side of buildings, in cliffs and caves, in trees and shrubs, and on the ground. Some, like the Killdeer, will even nest in a gravel parking lot!

SHELTER: Birds take shelter in tree hollows, under the eaves of buildings, bridges, and rock ledges, and under leaves and plants.

Providing for the Needs of Birds

Consider the school yard out your classroom window a wildlife area. Place cover (recycled holiday evergreen trees), simple bird feeders such as sock thistle feeders, peanuts, millet, and cracked corn scattered at ground level, and an open water source. Keep track of the birds that use the area and make your own classroom bird journal that includes notes, drawings and photographs.

Getting a Move On: Bird Charades

Every action by a bird, or no action at all, is a behavior. Call out a bird behavior from *Birds in Our Backyard* and have the students imitate the movement. Behaviors from the book include

Settle into a nest and stay there in rain, wind, snow, hot sun (teacher can make the sounds of the weather)
Nestle inside an egg
Chip out of an egg
Learning to fly includes taking off, steering, landing, flapping, gliding, and soaring
Stamp on the ground while going in a circle—courtship behavior
Pull off a berry while standing on a limb
Stand on a log, puff out chest, and flap wings from back to front without the wings touching together
Group flock movement (Snow Buntings rising from an arctic gust like sparkling dust)
Loons swimming (sit on chair with arms bent at elbow and held tight to sides while moving only legs)

Once students have had practice imitating behaviors, divide them into two teams. Secretly give one team a behavior to act out as a group. Can the rest of the group guess the mystery behavior?

The Writer's Toolbox

Word Puzzles

Author Adele Porter loves puzzles. She describes the writing of *Birds in Our Backyard* as like solving a fun puzzle. Introduce your students to the style of writing in couplets in terms of solving a word puzzle. Listen to the sound of these two couplets from *Birds in Our Backyard*:

What's a parent bird to do
Taking care of such a brood?
Bring them insects, bring them bugs,
Frogs and toads and slimy slugs. . .

Is there a rhythm, a beat? Count out the syllables in each line. Couplets are two-line poems that have the same number of syllables in each line and rhyme at the end.

Write a couplet together as a class. Use the puzzle pieces listed below. Then, consider assigning a portion of a larger theme to each pair of students and working each couplet into an entire class poem.

Puzzle Pieces:

Seven syllables per lines—The number of syllables can be more or less than seven, but the count must be the same for every line. There are occasional exceptions as long as the rhythm is maintained.
Two lines per couplet—couplets can be combined into a larger verse of couplets
The last word in each line of the couplet must rhyme
Choose a bird and/or season-related theme as the final puzzle piece

Birds in Our Backyard Across the Curriculum

A Sense of Place: Geography

Birds in Our Backyard provides an introduction to the concept that birds depend on global habitat for their survival. The book sets the stage for students to gain a sense of place.

In general terms, the reader is introduced to the natural habitats found in Minnesota: forest, wetland, lakes, prairies, and marginal habitats like urban parks, yards, and roadsides. Within these habitats birds establish their own territories, spaces that they defend for use in nesting, raising young, and finding food.

In the greater sense of space, the reader embarks on a journey that begins in Canada and follows across Minnesota's north shore of Lake Superior, down the Mississippi River, and as far south as the Gulf of Mexico.

Continued: A Sense of Place: Geography

Orient the students with a map of North America. Ask students to find Minnesota and their town on the map. Locate the border of Minnesota and Canada, where the boreal migrants (birds that move south into Minnesota for the winter and then return to Canada to nest and raise their young) like Great Gray Owls, Snowy Owls, and Snow Buntings live during most of the year.

Find the Minnesota locations identified in *Birds in Our Backyard* that are important to birds' migration:

Lake Superior and Hawk Ridge, Duluth—"Great Lakes shore and sky"
Mississippi River—Mississippi Flyway
Minnesota Valley National Wildlife Refuge, St. Paul

Vocabulary Power!

These words from Birds in Our Backyard may be unfamiliar to some of your listeners. Review them either before or after reading the text.

Birds of prey – Birds that hunt while in flight for animals, including other birds. They have keen eyesight and strong talons for finding and capturing their prey. Eagles, hawks, and falcons are birds of prey.

Bogs – Wet, spongy ground with soil composed of decaying matter

Cackle – A sound that is like a hiccupping quack

Camouflaged – Hidden

Courtship – The behavior of a bird when trying to gain a partner; when males and females pair up

Crystal flakes – Snowflakes are six-sided crystals

Gales – Winds

Intact – To keep in one place or to keep together

Materialize – To appear as if from magic

Nestled – Snuggle into

Prance – To lift the legs in the movement of a dance

Predator – Animals that eat other animals

Rippled – The wrinkles on top of the water made by the wind or movement of the water

Scrumptious – Delicious, yummy

Scurry – to move quickly

Species – The kind of bird. All living things are organized into large groups such as a plant or animal and then into smaller groups. A species of bird is a specific kind of bird: a Black-capped Chickadee is a different species than a Boreal Chickadee.

Vole – A small mammal similar to a mouse but with a very short tail

Waddle – To walk in a side-to-side movement

Wondrous – Wonderful, remarkable, amazing

You and your young readers can discover more about birds in these books

Birds, Nests, and Eggs, by Mel Boring, Cooper Square Publishing, 1998. A take-along guide that will help children identify 15 birds. There is also information on how and where birds build their homes and care for their young.

Cardinals, Robins and Other Birds: A Junior Golden Guide, by George Fichter, Western Publishing Company, Inc., 1993. An early guide to 18 common birds with basic information on bird structure and function incorporated throughout the book.

Wild About Minnesota Birds, by Adele Porter, Adventure Publications, Inc. 2007. Adelegrew up in St. Paul and found meadowlarks along the north edge of the Minnesota State Fair next to the University of Minnesota agricultural fields! She also wrote the text for this book.

About the book's creators

Adele Porter is the author of several bird books, including *Wild About Northeastern Birds* and *Wild About Minnesota Birds*. Check out adeleporter.com for more information on the birds in *Birds in Our Backyard*.

Bill Marchel has earned numerous awards for his wildlife photography, which has appeared in *Audubon*, *Ducks Unlimited*, and many other publications. Visit billmarchel.com to see more of his breathtaking images.