



Western Upper Peninsula Center for Science, Mathematics and Environmental Education

A partnership of

Copper Country & Gogebic-Ontonagon Intermediate School Districts and Michigan Technological University
Serving schools and communities in Houghton, Baraga, Gogebic, Ontonagon and Keweenaw Counties

Winter Birds

Grade 3

Duration: 1-1.5hrs

Summary: How do birds cope with the cold? Some birds migrate out of our area for winter, some migrate in, and some stay here year-round. Students will learn the names of some of our winter birds and a variety of survival techniques they use. Students will also search for signs of birds.

Michigan GLCE's: SCI: S.IP.03.11-14, 16; S.IA.03.11-14; S.RS.03.18; L.OL.03.32; L.EV.03.12; E.ES.03.52. SOC: 3-G5.01-02

Objective: Students will be able to:

1. Identify 10 common birds found in the area during the winter
2. Explain why birds migrate- because their food is not available, not because it's too cold.
3. Explain various winter survival strategies birds use

Materials:

You Eat cards

Stuffed animal Birds (make bird sounds)

ID cards

Bird identification books

Bird ID forms

Winter Bird Survival Strategy laminated roll cards

Clipboards

Optional Activities Materials:

Yard Sticks,

Copies of Migration Maze and Fantasy Island

2 stopwatches

Pre-Activity:

How many different bird species (in the area) can you name? There are over 300 (about 100 that are present in the winter)!

Have the students name different bird species until they get at least 10.

Activities

Why do birds migrate? (5 minutes)

Why do some birds migrate south for the winter? **Food**

- **Cold** inhibits flying insects, so flycatchers, swifts, and warblers must migrate to find flying insects.
- **Snow** covers the ground and makes it difficult for ground-insect eaters to find food. Robins, Thrashers, and Towhees move south where there is less or no snow.

What are some strategies non-migrant birds use for feeding in the winter:

- Wood peckers, seed-eaters, and scavengers don't migrate.
- Scavengers feed on dead animals, which provide birds with an excellent source of calories.
- Seeds are available on conifer trees year round. Birds like chickadees have beaks well adapted for cracking small nuts. Seeds are also high in fat and oil.
- Chickadees eat 20 times more in the winter than in the summer. It must eat 150 seeds a day in mild temperatures, and 250 seeds a day when the temperature drops below zero.

What are some strategies for birds to survive if they don't migrate?

- Become torpid- lower their metabolic rate and body temperatures. Chickadees temperature will drop at night, which causes them to use less energy.
- Birds will shiver to stay warm
- Birds will fluff out their feathers to create air spaces to trap heat next to their bodies.
- Birds will huddle together in coniferous trees to get out of the wind..

Play "You Eat" game (10 minutes)

Pass out the You Eat cards to the students. Have them determine whether their food source is available in the winter and whether they must migrate.

Bird ID (30 minutes)

Pass out stuffed animal birds (22), one per group. Have the students look up the bird in an ID book and fill out the ID data sheet. There are 20 id cards, (doubles of eagle, finch)

Explain the importance of being descriptive. After the students fill out the form, collect them, put the birds together in a central area. Pass the data sheets out again, giving them to different groups. The groups should use the data form to match it up with the bird it belongs to. The more descriptive the data sheet, the easier this will be.

Summary:

Second Half

Bird Observation hike (30 minutes)

Discuss the possible bird signs, or evidence that birds have been in an area (feathers, holes in trees, old nests, tracks, hearing or seeing the actual bird). Take students on a hike looking for signs of birds or actual birds.

Optional: Use data sheets to record findings. Teach students how to use binoculars. Not recommended, since students are snowshoeing, some for the first time.

Winter Survival Strategies (15 minutes)

Divide the children into small groups. Give each group a small card (below). Let all of the groups practice a few minutes. Then introduce the groups one at a time, naming their

winter bird and having them act out their strategy. The rest of the groups watch, and then guess what the strategy is that is being acted out.

- *Grouse dive into snow to keep warm for the night.*
- *Nuthatches look for insects under the bark of trees and spend the night in hollow trees*
- *Blue Jays stash seeds in cracks or holes in trees to eat later*
- *Birds fluff out their feathers to keep warm, slow down heart rate at night “torpor”, flock together, use conifer trees for warmth, etc.*

Summarize

Why do birds migrate? How do birds survive the winter? What are the names of some birds that stay in our area all winter?

Optional Activities (For use when too cold outdoors)

What’s your wingspan (5 Minutes)

Explain to students that birds have different wing spans (the length of their wings from tip to tip when stretched out). Have the students measure each other’s “armspan” with the meter sticks, record the length. Compare theirs to the wingspan of some common birds.

(192 of Flying Wild)

- Ruby Throated Humming bird-4inches
- American Robin-15 inches
- Crow-40 inches
- Bald Eagle-7 feet
- Adean Condor and Marabou Stork- 10 feet
- Wandering Albatross- 12 feet

Ask what’s the largest bird in the world? Ostrich (over 8 ft tall, 300lbs), the smallest? Bee Hummingbird (2 inches long, including bill and tail, weighs as much as a ping pong ball)

Winging It (10 Minutes) (do some arm stretches first)

Winging It: (190 Flying of Wild) Next have students guess how many times they can “flap their wings” in 10 seconds. Have them count the flaps as you time them. Compare the results to the averages of actual birds.

Bird	Wing Beats Every 10 seconds
Crow	20
Pigeon	30
Peregrine Falcon	43
Carolina Chickadee	270
Rufous Hummingbird (winner!)	700

Super Challenge: Ask students how long they can flap their “wings” before they become tired?

A Blackpoll Warbler travels 2,000 miles from New England to Venezuela, in three days! This degree of exertion is equivalent to a person running 4-minute miles for 80 consecutive hours!