

Bird And Habitat Scan



Hook: What's In A Niche?

- List these two animals on the chalkboard: black bear, earthworm. Ask students to call out information on each one: habitat, type of consumer (herbivore, scavenger, predator, omnivore, decomposer), typical food, climate (what it can and cannot tolerate), daily cycle, winter survival strategy, importance of waste:

Black Bear – forest; omnivore/scavenger; eats plant matter, insects, berries, animals, fish; tolerates extreme cold to moderate climate; cannot tolerate extreme heat and dryness; mostly active at dawn and dusk but can be nocturnal; hibernates in winter; no predators; waste disperses seeds.

Earthworm – in soil and decomposing plant material wherever soil is found; decomposer; organic matter in the soil; cannot survive in extreme heat and dryness; active day and night; inactive in winter; eaten by birds, rodents, amphibians; waste is nutrient-rich; dissolved nutrients easily absorbed by plants.

- Explain that when combined, these elements and others comprise the animal's **niche** – that is, how each animal fits into nature.
- Expand on this idea by explaining that, in general, birds fit into an amazing number of niches. However, each species has a unique set of adaptations (behaviours, beak and body shape, feathers and flight patterns) that have evolved over thousands of years to enable it to survive in a certain niche. If a bird's habitat becomes threatened, the species becomes at-risk. If that habitat is mostly destroyed, the species becomes highly at-risk for extinction. Today we are going to investigate the niches of Renfrew County at-risk bird species, so that we can better understand habitat threats and what humans can do to help regenerate these birds species.

Desk Activity: Defining Bird Habitat

- Explain to the class, that in general terms we can sort birds into broad habitat categories:
 - Wetlands: cat tails, pond, creek or swamp, lily pads, dead logs and trees
 - Near Water: sandy or rocky shoreline, near large body of freshwater (lake, river)
 - Forest Edge: abandoned fields with tall grasses, shrubs and scattered trees
 - Mature Deciduous Forest: tall trees, mosses and ferns, hollow tree trunks (snags)
 - High Places: cliffs, hydro poles, tall buildings, chimneys
 - Open Spaces: fields, tundra
- Ask the students to work in pairs to complete the *Defining Bird Habitat* worksheet. They will need to go online and access the Renfrew County Bird Profiles: www.bonnecherepark.on.ca/programs/resources-birds.html
- Students should present their research to the class.
- Have the students go online and play the *Flying to Survive!* migration game: www.bonnecherepark.on.ca/games/game-birds.html
Then ask them to take the *Habitat: There for the Birds!* interactive quiz: www.bonnecherepark.on.ca/games/quiz-birds.html
Remind them to hand in their scores.

Age Range: 10 to 14 years

Time: Two 60 to 90-minute sessions (one indoors, one outdoors)

Themes: Bird and bird habitat identification.

Resources

- Habitat: There for the Birds!* info sheets
- class set of worksheets: *Defining Bird Habitat and Bird Habitat Scan*
- student Internet access
- class access to outdoor wetland, urban woodlot, mature deciduous forest, shoreline or farm field
- clipboards and writing utensils

Learning Outcomes

Students investigate the relationship between birds and their habitats, and why it is important to protect both.

*In order to see birds
it is necessary to become
part of the silence.*

Robert Lynd



Discussion

- What happens if a bird cannot find adequate habitat during migration?
- What happens if a bird cannot find adequate habitat during breeding season?
- What happens if a bird cannot find adequate habitat at its wintering grounds?



Name: _____

Defining Bird Habitat

Complete this form by accessing information online at:
www.bonnecherepark.on.ca/programs/bird-profiles.html



RENFREW COUNTY BIRD SPECIES AT RISK	PREFERRED HABITAT	NICHE INFORMATION	HABITAT THREATS	WHAT WE CAN DO
Name:				
Name:				
Name:				



Outdoor Activity: Bird Habitat Scan

1. Discuss with students that the chances of seeing birds in their natural habitat are slim – especially those that are at risk. But the better we understand their habitats, the more we can do to protect all birds. In the case of songbirds, we hear their melodies as we go about our outdoor adventures, but these birds have chosen a habitat that camouflages their markings and protects them from predators. Their summer breeding habitat also provides food so that they can raise young and accumulate body fat for migration.
2. Take the class outdoors to a wetland, urban woodlot, mature deciduous forest, shoreline or farm field. Each student should have a small book or clipboard to write on and a writing utensil. Provide each student with the *Bird Habitat Scan* worksheet and instruct them on procedure. Stress that proper behaviour is expected and give them an appropriate time limit. Remember: take nothing and leave only footprints.

Discussion

- Did you see many birds?
- Did you hear many birds?
- Were you familiar with the birds you heard or observed?
- Could you differentiate between the different bird songs?
- Could colour help you identify a bird?



Name: _____

Bird Habitat Scan

With thanks to Nature Conservancy and Silence of the Songbirds by Bridget Stutchbury



PART I: Habitat Scan

Answer the following questions to determine the type of habitat you are standing in:

1. Full-Service Hotel

Look around for the following features (check the ones you observe):

- large area of mature deciduous trees (Oak, Maple, Beech)
- sweet fern and moss covering the forest floor
- hollow trees (snags) standing upright with plenty of nesting holes

If you see these features you are in a MATURE DECIDUOUS FOREST habitat.

For non-resident migrant birds this is a high-quality site where they can quickly accumulate body fat and find shelter from predators. Resident birds live here from several weeks to months during the summer breeding season.

2. Full-Service Hotel Resort

Look around for the following features (check the ones you observe):

- large marsh or swamp, natural pond or creek
- tall reeds and other aquatic vegetation (eg: cat tails and lily pads)
- decaying fallen trees

If you see these features you are in a WETLAND habitat.

For non-resident migrant birds this is a high-quality site where they can quickly accumulate body fat and find shelter from predators. Resident birds live here from several weeks to months during the summer breeding season.

3. Convenience Store Stopover

Look around for the following features (check the ones you observe):

- tree stands of various sizes
- farm or open fields nearby
- buildings or industrial sites nearby

If you see these features you are in a FOREST EDGE habitat.

Migrating birds use this area as a stopover place to find food quickly, or move on to find a better site. Resident birds live here from several weeks to months during the summer breeding season.

4. Fire Escape

Look around for the following features (check the ones you observe):

- small woodlot or forest strip along a creek or river
- surrounding open fields
- surrounding buildings and industrial sites

If you see these features you are in an URBAN WOODLOT habitat.

Migrating birds are sometimes forced to stop over in places like this to escape bad weather or because they are stressed by low energy reserves.



DRAW & LABEL: Check which habitat you are in and draw corresponding plants or wildlife.

- MATURE DECIDUOUS FOREST: three different leaf shapes from the trees in this habitat.
- WETLAND: three different aquatic plants that you see in this habitat.
- FOREST EDGE: three different leaves, flowers or grasses that you see in this habitat.
- URBAN WOODLOT: three different leaves, flowers or grasses that you see in this habitat.



PART II: Bird Audit

Can you hear and see birds in this habitat?

1. Birds use calls and songs to communicate with other birds, warn of danger or attract mates.

Listen for bird songs and check off where you can hear birds:

- up high in the sky
- up high in a tree
- on a human-made structure
- down low near the ground
- on water
- in the tall grasses and wild flowers

WRITE PHONETICALLY: one bird song you can hear (use words, letters and dashes, eg: *chick-a-dee-dee-dee*):

2. Birds are very good at spotting movement, but are quick to ignore things that are standing still.

So stand or sit very still and look around. Check off where can you see birds:

- up high in the sky
- up high in a tree
- on a human-made structure
- down low near the ground
- on water
- in the tall grasses and wild flowers

DRAW & LABEL: one bird that you can see.

The longer you look, the more details you will notice and remember about its markings and behaviour.
Start at the top and work down and back: crown, breast, tail.



3. Many birds fly almost continuously until they are mature enough to breed. Watch for flying birds. Even if they are far away, you can often identify the species by the way they flap their wings.

Check the flight pattern that most resembles the birds you see.

- Pigeons and Doves: Fly very fast, level and straight, flapping their wings at all times. They often fly in flocks, especially in winter.
- Finches: Flap their wings in short bursts, which makes them rise and fall as they fly. They fly short distances, landing on the ground.
- Swifts: Fly high in the sky unless they are breeding. They twist and turn at high speed, flap their wings for a few seconds then glide.
- Gulls: Glide on the wind in gentle curves, or hang in the air on a strong breeze.
- Woodpeckers: Some bob up and down as they fly, flapping their wings in bursts then closing them for a second or more. Other varieties fly with slow steady shallow wing beats.

DRAW & LABEL: one flight pattern

(Sample pattern: Chimney Swift)

