

Be a Birdwatcher

All Ages

Rarely does a day go by that we do not see at least one bird flapping around. We are surrounded by these colourful, vocal, intelligent, diverse, flying creatures. It can be a fascinating adventure to get to know birds better.

Why do families watch birds?

- * to connect with nature
- * to feel healthy, walking and hiking in the fresh air
- * to keep their minds sharp by learning and remembering new things
- * to make friends (Birdwatching is the 2nd most popular hobby in the world. Bird-watchers are everywhere. They are friendly and love to share stories and sightings.)
- * they love dinosaurs (Did you know birds are the living relatives of dinosaurs.)

How to Start

A good field guide/bird book or a birding app is essential. A user friendly free app for smart phones or tablets is **Merlin Bird ID** (<https://merlin.allaboutbirds.org/>). Once you have downloaded the app, open it and install a Bird Pack for where you are. This can take some time, so plan ahead. If you do not have a mobile device, you can access Merlin on your computer, as well, at <https://merlinweb.allaboutbirds.org/signup>

There are many different birds right in your neighbourhood. It is best to study one bird at a time - a focus bird. Choosing a bird you see all the time will make it easier to study. Once you learn to identify your focus bird by sight and sound, and it won't take long, you will be ready for another bird you see often. Soon you'll be the neighbourhood bird expert!

You can find a list of birds currently in your area with **eBird** at <https://ebird.org/explore>. Enter your province under *Explore Region*, and then select *Counties*. Select *All Details* to find sightings close to you as reported by your neighbourhood citizen scientists. You may join **eBird** and report your sighting too. View a full-colour photo-list of birds in your area (by date) at <https://www.birdscanada.org/apps/checklist/index.jsp>.

To learn more about each bird and hear their sounds visit <https://www.allaboutbirds.org/guide/>

Binoculars are very helpful but not essential. Practice staying still and quiet. The birds will come to you. Discover how to entice birds closer with our *Pishing for Birds* activity.

Tip: If you see birds every where you go, you are a Birdwatcher. If you go every where to see birds, you are a Birder.

A professional birder is an ornithologist.



Learning to identify the birds in your neighbourhood is simple and fun. **SSSCHH** is a key used by Birdwatchers to help identify birds. Each letter stands for a different trait which helps to narrow the list of possible birds to choose from. It also remind us to be quiet while looking for birds.

Sound, Size, Shape, Colour, Habits, Habitat

We will explore each of these traits in the projects and exercises to follow. Remember, start with a focus bird, a common bird that is easy to find in your area.

Suggestions for a first focus birds: American Robin, Common Grackle, Morning Dove, European Starling

Sound Size Shape Colour Habits Habitat

Often the first indication a bird is nearby is a sound. A song, whistle, chirp, hoot, honk, quack, twitter or other noise. We usually look straight ahead, but we hear in all directions. When birdwatching, your ears tell your eyes where to look to spot a bird. To practice locating sounds, it is fun to make a sound map.

You will need a piece of paper with an **X** marked in the centre, a clip board and a pencil. Find a quiet “sit spot” in nature, in your yard or at your window, where you can sit comfortably. Sit and listen for a few minutes to warm up your nature ears. Use the paper and pencil to make a bird’s-eye-view (looking down from the sky) map of what you hear. The **X** marks where you are sitting. Use any symbols you like to map the sounds of nature all around you.



Sound Map - part two

Choose and identify a focus bird. Listen to the sounds of your focus bird at <https://www.allaboutbirds.org/guide/> by entering the name of your bird. Select “Listen” to hear the most common sounds. Select “Sounds” to hear the various songs, calls and alarm calls individually.

Make a sound map of just the sounds of your focus bird. You will learn to filter out the songs and calls that are different from your focus bird. Mornings and evenings are best for hearing birds.

Over time, with experience and practice, a birdwatcher learns to identify birds just by sound. Bird songs are easier to remember when we see the bird singing. An other trick for remembering a bird’s song is to say it to yourself in words. This is called ‘mnemonics’. This trick can make it a snap to identify a bird. A Chickadee’s song sounds like “Hi Sweetie” or “Cheeseburger” while its call sounds like its name - “chick a dee dee dee.” See what you think at [https://www.allaboutbirds.org/guide/Black-capped Chickadee/sounds](https://www.allaboutbirds.org/guide/Black-capped-Chickadee/sounds)

Here is an infographic with mnemonics and bird sounds to explore.

<https://www.aastateofplay.com/50-bird-species-sounds-they-make/>

And this is just for fun!

<http://volkerpannes.de/portfolio/bird-song-opera/>



TIP: Being aware of bird sounds can prove useful. Their alarm calls warning of predators, alert us to look for a hawk, a fox or perhaps they are talking about us. The mobbing calls of crows or jays may indicate an owl is hiding nearby.

Woodpeckers do not sing songs. They use their beaks to drum loudly against wood or metal. This “drumming” is the woodpecker’s “song”, and is used to attract a mate or defend territory. When a woodpecker is feeding, it makes very little noise, even when it’s digging vigorously into a tree.

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Sound **Size** Shape Colour Habits Habitat

Considering the size of a bird reduces the number of species to choose from when identifying birds. To begin with, think of birds as fitting into the categories of small, medium, and large. Associating each categories with familiar objects, a pencil, a 30 cm ruler, a loaf of bread, provides a point of reference. Compare the bird you see to a familiar object. It won't be long before your judgment of a bird's size is automatic. The length of a bird is measured from the tip of its bill to the end of its tail.



Merlin Bird ID App

Birdwatchers use a bird familiar to most people as a standard for comparison. For example, most Canadians are familiar with the American robin and the size of the robin. It is easy then to decide if a bird large or smaller than a the robin. As you begin birdwatching, you will compare the birds you see to your first focus bird (see *Be a Birdwatcher*). As you become familiar with more birds determining size will become natural to you.

It is helpful to watch a bird for a few minutes when judging the size. The length and bulk of bird appears different as it goes about its activities. Birds feeding on the ground, stooped over and picking up seeds, appear shorter and fatter than the same birds perched on a wire. Startled birds will stretch their necks (to see what is going on), making them look considerably longer than when they are relaxed. Birds appear more or less plump as they change how they are holding their feathers. They look round and fat when they fluff out their feather in cold weather. They appear thin when the feathers are held close to their bodies. You will learn to recognize these differences with experience.

<https://www.allaboutbirds.org/news/build-your-bird-id-skills-size-shape/>

Great video lesson on identifying birds by size and shape at

<https://academy.allaboutbirds.org/inside-birding-size-shape/>

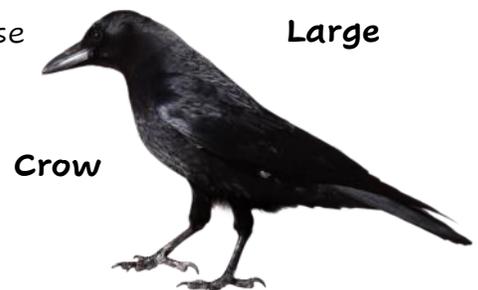
Size Survey

Use the tally sheet below to survey, by size, the birds in your yard or neighborhood or on a walk. Before beginning guess what the most popular bird size you expect to see. You could gather data over several days and graph the results.

Use the data collected to explore concepts such as estimating, predicting, educated guessing, ratios, tally counting, counting by 5's, variables, controls, bar graph, line graph, pie chart and so on.



TIP: Notice when using a field guide/bird book that the large birds are found in front half and the small birds are in last half.



Crow

Large



American Robin

Medium



House Sparrow

Small

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My Bird Survey by Size

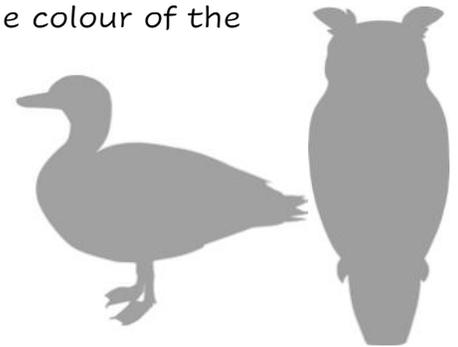
Date:	Time:	Area Surveyed:
Name:	Weather:	
My prediction	My results	
Small Birds Sparrow 	Medium birds Robin 	Large birds Crow 
Total	Total	Total

My Bird Survey by

Date:	Time:	Area Surveyed
Name:	Weather:	
My prediction	My results	
Total	Total	Total

Sound Size **S**hape Colour Habits Habitat

When you spot a bird, the first thing you might notice is the colour of the bird. But bird experts recommend looking at the shape first. The shape of a bird is really important (especially when the size is similar). It can help you figure out if you are seeing a duck or an owl, as an example.

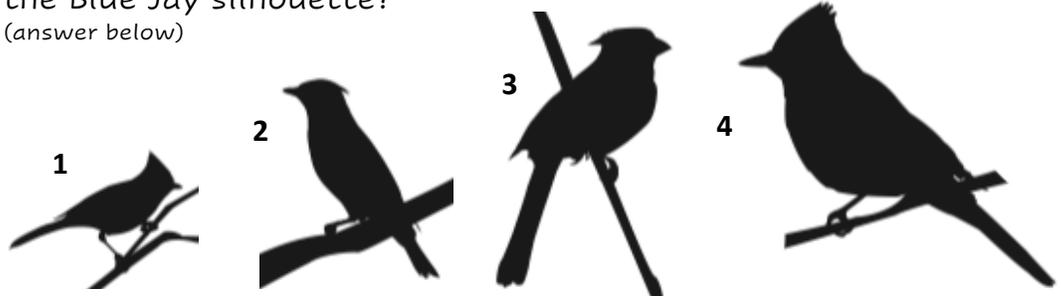


Try thinking of a bird's shape like its shadow (silhouette). Then you can really focus on the shape of its body. This can help you figure out what type of bird you're looking at – is it a songbird or a duck or an owl?

Once you know the type of bird (duck), it's a lot easier to identify the species (Ruddy).

Take a look at the shape of the Blue Jay in the photograph. It has a crest, a relatively long and thin beak, and a round belly. Using those clues, (and remembering to consider size too) can you find the Blue Jay silhouette?

(answer below)



Birds are all about variety. The way they evolved has resulted in different shapes for all parts of a bird. Wings, necks, legs, tails, bodies, heads and beaks are shaped differently from one bird species to the next. These varied shapes give insight into the bird's lifestyle and help to narrow down the list of possible birds.

In our silhouette exercise above there were other "shape" clues:

- #1 - the beak is too short (and the bird too small) - this one is a Tufted Titmouse
- #2 - the body was too thin and the tail too short - this one is a Cedar Waxwing
- #3 - the tail is too long and beak is thick and wedge-shaped - a Northern Cardinal
- #4 - the fit is just right - this one is the Blue jay

Studying the shape of different parts of your focus bird will help you discover more about how and where it lives.

Use our blank **Bird Survey** (pg. 4) to record the numbers of birds in your neighbourhood based on shapes, long neck vs. short, thick beak vs. narrow etc.

Play a **Bird Beak Matching Game** on the next page (the answers are there too).



Tip: Craft your own bird with the bits and piece in our *Build a Bird* activity. Mix up the shapes and invent a new bird.

Silhouette/Shadow Art!

Create all sorts of silhouettes. Colour them, paint them, cut them out! Make a wildlife mural.



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Match a Beak to Food Birds Eat

Different bird species eat different foods. Because the resources in the environment are shared, more species can survive if they do not eat the same foods. The shape of a bird's beak determines its ability to find food in a particular habitat (environment). Bird beaks come in many different sizes and shapes. Each beak is specialized to help that species get and eat their food. What beaks are better suited to types of foods? See how many you can connect below.

Draw a line from the bird beak to the food.

All sorts of food (multi-purpose)
 Fish, frogs (spearing)
 Seeds, snails (cracking)
 Insects, fruit (narrow, pointy)
 Nectar, tiny insects (sipping)
 Flying insects (short, wide)
 Meat (tearing)
 Hidden insects (drilling)
 Small water plants (dabbling filtering)

Top left to bottom right - Hummingbird - sipping, Crow/Blue Jay - Multi-purpose, Woodpecker - Drilling, Duck - dabbling, filtering, Meadowlark/Robin - Insects/fruit, Grosbeak/Finch - cracking, Hawk - tearing, Heron - spearing, Phoebe/Swallow - short, wide

Next time you see a bird, look at its beak and now see if you can tell what like to eats!

Looking at the food items in the *Match the Beak Game* one at a time, explore them by asking the following questions for each food type :

- Where would you find this kind of food?
- What are the challenges to getting this food for a bird?
- Do you know a bird that may eat this food? [How is that bird's beak shaped to make it easier to get and eat its food? (Example: seed-eating birds have large, thick beaks to crush seeds while other birds have narrow, pointed beaks to catch insects. A bird with a seed cracking beak can eat insects and insect eating bird can eat seeds, but it is often more work for the bird.)]

Observe birds eating by visiting the Cornell Lab feeder camera found at <https://www.allaboutbirds.org/cams/ontario-feederwatch/>

See some cool beaks a <http://www.vtaide.com/png/bird-adaptations3.htm>

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Identify the Silhouettes



Match the number to each bird's name

1	7	13	19
2	8	14	20
3	9	15	21
4	10	16	22
5	11	17	23
6	12	18	24

24 Duck
23 Red-wing Blackbird
22 Great Blue Heron
21 Catbird
20 Robin
19 Killdeer

18 Woodpecker
17 Wren
16 Crow
15 Great Horned Owl
14 Sparrow
13 Gull

12 Hummingbird
11 Blue Jay
10 Nuthatch
9 Sapsucker
8 Warbler
7 Grackle

1 Goose
2 Hawk
3 Swallow
4 Purple Martin
5 Mourning Dove
6 Starling

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Answers

Sound Size Shape **Colour** Habits Habitat

Birds are quick. Sometimes all we have is a brief glimpse. Colour is one of a bird's most obvious features. For some birds, like the Blue Jay or the Northern Cardinal, all we need is flash of their splendid colour to recognize them.

Many bird species have more than one colour. It is the pattern or placement of the colours that help to make an identification. Noticing which colours are where is important.

Look at these three birds. If a friend said they saw a black and white bird with a little bit of red, they might mean any one of these birds.

But if your friend told you where the red colour was on the bird then you could tell them which one it was - ① on the chest - Rose-breasted Grosbeak, ② on the back of the head- Downy Woodpecker, or ③ a red crest - Piliated Woodpecker. What other differences do you notice in the color patterns of these birds?

Compare the heads, wings, backs, chest and even their tails.

Concentrating on the easy-to-see parts of a bird, the head and wings helps when starting out. Look for a cap or crown, stripe(s), an eye-ring, eyebrow, or a cheek patch on the head. Notice if the wings have bars like the Downy Woodpecker and the Grosbeak, or are solid like the Piliated Woodpecker.

Watch identifying birds with the head and wings in action at <https://academy.allaboutbirds.org/inside-birding-color-pattern/>



Birding-Eye Artist

You have been looking carefully at our three black and white birds. Pick one you like and, without looking at the photograph, draw the bird on a blank piece of paper. Include as many details and markings as you can remember. Make a list of the markings or features you were not sure about. Compare your picture to the photograph. Try drawing it again. With practice, noticing details gets easier and easier.

Draw your focus bird. Compare your picture to the real bird outside or to a photograph.

Share your drawing and see if someone else can identify the bird from your picture.

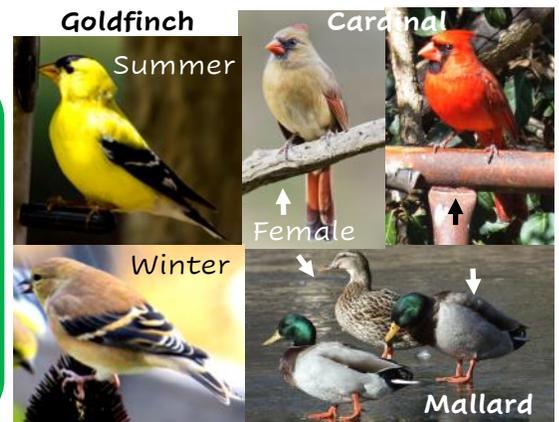
Describe a bird while someone else draws it. Switch and draw while they describe a bird.

Illustrate your own bird book. Add information you have discovered about each bird.

See our **Drawing Birds for Everyone** activity for more ideas and fun.



Feathers can fool you. They fade, wear out and are replaced (molting). Some birds, like the American Goldfinch, change colour based on the season. For other species, the male and female are different colours. The Mallard Duck and Northern Cardinal are example of this, which is called sexual dimorphism: di means "two", and morph means "form". So there are "two forms". How would colour changes help birds survive?



Markings Match Mayhem

So many little sparrows, each one with different markings on its head.
Can you match each photograph to the correct drawing?

1 

2 

3 

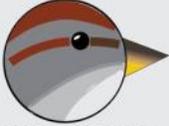
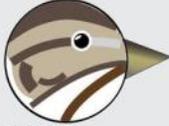
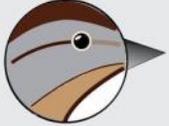
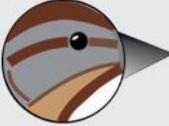
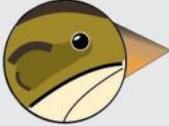
4 

5 

6 



Eastern Sparrows

 AMERICAN TREE	 FIELD	 VESPER	 SAVANNAH
 FOX	 SWAMP	 LINCOLN'S	 SONG
 GRASSHOPPER	 HENSLOW'S	 LECONTE'S	 NELSON'S
 WHITE-CROWNED	 WHITE-THROATED	 HARRIS'S	 LARK

© Greg Neise

14 

13 

12 

11 

Sparrow photographs by
Powdermill Nature Reserve Avian
Research Center,
<https://powdermillarc.org/>

- Answers**
- 1. White-throated
 - 2. White-crowned
 - 3. Grasshopper
 - 4. Lincoln's
 - 5. Savannah
 - 6. Fox
 - 7. Clay-colored
 - 8. Song
 - 9. Henslow
 - 10. Vesper
 - 11. Tree
 - 12. Field
 - 13. Swamp
 - 14. Chipping

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Sound Size Shape Colour **H**abits **H**abitat

Habits are behaviors (things we do) regularly, often without thinking about it. We brush our teeth regularly and in the same way every time, this is a habit.

Many bird species have unique habits or behaviors that helps us identify them. They act in a special way when they fly, walk, perch, or forage for food. Some behaviors are so specific we use it to name the species.; woodpecker, gnatcatcher, creeper, flycatcher, sapsucker, turnstone, for example.

Behaviors are easily recognized even in poor light or from far away, when other characteristics are hard to see. Spend time just watching what a particular bird is actually doing. Is it hopping on the ground, flitting through the trees, sitting straight up and very still, or is it climbing on a tree trunk? Very soon, with just a glance, you will be able to identify that bird species by its behavior. Watch the pros do this at <https://academy.allaboutbirds.org/inside-birding-behavior/>

Bird Behavior Basics

Sometimes we think we know something so we don't pay attention. We know birds fly, but do they all fly the same way? We know they perch or sit on things. Do they all perch the same way? Taking time to really watch what a bird is doing is the first step to making good observations. Being a good observer is an excellent life skill. Being observant will help you think carefully and make good decisions. Birdwatching makes you smarter. Get started with a *30 Second Bird Study*. You will need a note book or our chart on the next page and pencil.

First

- ◇ Go find your focus bird, or an other bird, and spend a 30 seconds watching it.
- ◇ Make as many observations about that bird as you can.
- ◇ Put 100% of your attention on very carefully watching that bird.

Second - when the 30 seconds is up, stop watching the bird and test your memory

- ◆ Jot down or draw in your notebook, or on our chart, as many details as you can remember about what your bird was doing. Writing, "I saw a bird on the lawn" may be true, but you need to look closer, there was more going on.
- ◆ Describe all the little details of that bird including it's posture, where was it, how was it moving, what sounds did it make, was it active or still, etc.
- ◆ Practice using your memory to recall details instead of what you think you saw.

Repeat this as often as you like. You can make the time you observe longer as you improve.

This exercise helps you in two ways.

- * You can tell your memory is improving. At first there will be things you can't remember. With practice you will get better and soon you will recognize things you have seen before in a flash.
- * Writing or drawing things helps you to remember them. For example, if you have written about a few different ways birds fly, when you see a bird flying and you recognize the flight pattern you will easily remember what the type of bird it is.

See interesting bird behavior beautifully captured in photographs at this Audubon website

<https://www.audubon.org/news/12-fascinating-bird-behaviors-2018-audubon-photography-awards>



Play Bird Behavior Charades. Take turns acting out a bird behavior and challenging your family members to identify it.

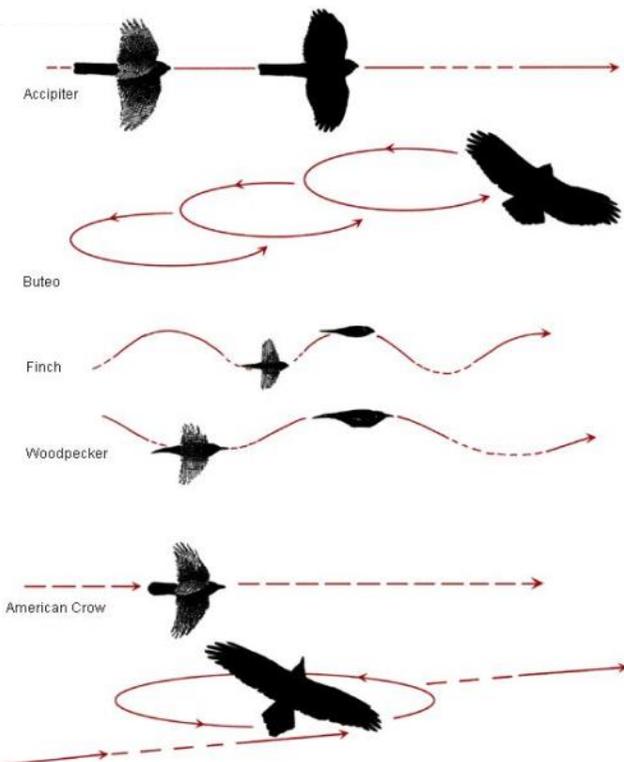
Go on a bird behavior walk in your neighborhood or a local park. Look for birds foraging, preening, moving in a flock, or hiding from predators.

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My 30 Second Bird Studies

Bird Species				
Perching posture 				
Walking/moving (hop, waddle, stride, head bob)				
Flying see samples below				
Foraging for food See sample below				
Special behavior				

Flight Patterns



www.birds.cornell.edu

Foraging for Food

Ground feeding Stop and listen Pick here and there	Aerial Feeding Swooping, Hovering
Canopy/treetop feeding Seeds and fruits Insects	Water Feeding Wading, stabbing Dabbling, diving
Bark Feeding Picking in cracks Pecking holes	Hawking Perch and wait Soar and dive

Search your backyard or local park for foods you think a bird might eat, like berries, seeds, and insects. How many different kinds of food can you find?

Stretch out on a blanket near some trees and watch the birds fly by. How many different shapes, sizes or flight patterns do you see. Make up and tell each other stories about where the birds are going or where they are coming from. What would it be like to ride a bird?

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Sound Size Shape Colour Habits Habitat

The place where a bird likes to live is called its habitat. Habitats are made up of plants, animals, fungi, rocks, mud and water. A habitat must provide a bird with its basic needs for survival: air, water, food, and shelter. Birds can be choosy about their habitats. They need just the right combination of plants, cover (safe place to hide), water and other animals to thrive. For example, a woodpecker would be unhappy in a meadow with no trees. It would be hard for it to survive without the insects it finds living under the tree bark.

Thinking about habitat can help you identify birds. A pigeon sized bird in the forest is not likely a pigeon. You expect to see a pigeon in a city or town, but not in the middle of a forest. Perhaps it is a grouse. Noticing the habitat you are in helps you form a hunch about what bird species you might see there. The different types of habitats such as meadow, forest, open forest, backyard/lawn, swamp and so on, are often named for the types of plants that grow there.

There are a lot of sparrows (see page 9), several with rusty heads, but you can use habitat to narrow down the choices. You spot a rusty capped sparrow . . .



hiding in reeds in a wetland.
Likely a Swamp Sparrow



sitting on fence by a meadow.
Likely a Field Sparrow



hopping around the bottom of pine trees.
Likely a Chipping Sparrow

Many bird species, with different food and nesting needs, may live in the same habitat. For example, in a backyard habitat, a robin eats worms and builds a grass and mud nest while a hummingbird eats nectar and builds a lichen and spiderweb nest. They share the habitat's resources by using them differently.

Migratory birds, are birds that change their habitat seasonally. Some traveling hundreds or thousand of kilometers between two different habitats. Others look for similar habitats in a different place at different times of the year. Non-migratory birds stay in the same habitat all year-round. They may have to change their behaviors, such as changing their food to suit the different seasons.

Think about your focus bird and what it eats and how it finds its food. What sort of plants provide food for your bird, for example, berries, seed, insects, worms. Think about where your bird likes to build its nest. Some bird species need trees or bushes, others buildings. Make a 3D model or triorama (see *Try a Triorama* activity sheet) of your bird's habitat.



TIP: Birdwatchers also look at a bird's range, the area in the world where that bird is found. A range map will show where the bird lives year round or where it breeds (raises a family), winters, or where you only see it during migration.

A dark-throated hummingbird spotted at the green star on this map is not likely a Black-chinned Hummingbird. The star is too far from the home ranges shown on the map for the Black-chinned Hummingbird.

Black-chinned Hummingbird Range



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Where could this bird live?

Think about the habitats pictured below. Remember that each bird needs the right kind of food, the right kind of cover and the right place to build a nest. Some birds have learned to live in human-made habitats but also live in their natural habitat. Draw a line from each bird to the habitat or habitats where it would survive.



Crow

All sorts of food (multi-purpose)



Woodpecker

Hidden insects (drilling)



Heron

Fish, frogs (spearing)



Meadowlark

Robin

Insects, fruit (narrow, pointy)



Forest Habitat



Pond or Wetland Habitat



Meadow Habitat



Urban (city or town) Habitat



Hummingbird

Nectar, tiny insects (sipping)



Grosbeak

Seeds, snails (cracking)



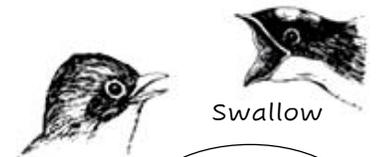
Hawk

Meat (tearing)



Duck

Small water plants (dabbling filtering)



Phoebe

Swallow

Flying insects (short, wide)

Answers:
Forest - crow, woodpecker, robin, hummingbird, grosbeak, some hawks, phoebe
Pond or wetland - heron, duck, some swallows
Meadow - crow, meadowlark, some hawks, some swallows
Urban - crow, some woodpeckers, robin, hummingbird, grosbeak, some hawks, some swallows

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