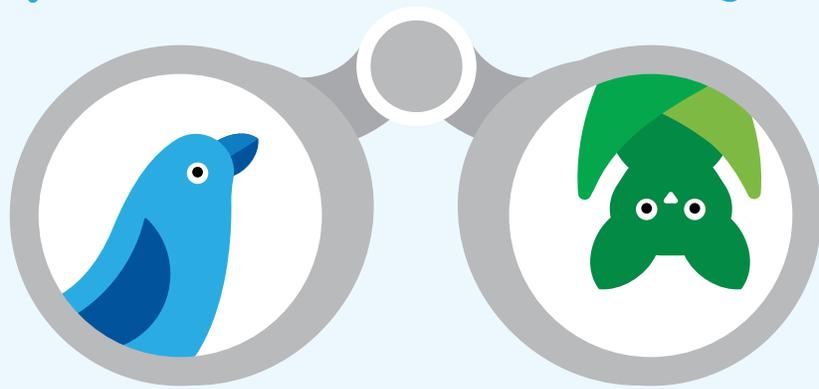


Find Your 4-H Wings



Activity  
Book





# Acknowledgements

Find Your 4-H Wings encourages 4-H'ers to learn about and protect native birds and bats. This unique program would not be possible without the commitment of TransCanada Corporation, a North American energy infrastructure company that has supported 4-H for over a decade. For more information about TransCanada, please visit [csrreport.transcanada.com](https://www.transcanada.com/csrreport).



We would also like to thank Nature Canada for their expertise and support to ensure the quality and relevancy of the materials contained in this activity guide. For more information about Nature Canada, the country's oldest national conservation organization, go to [www.naturecanada.ca](https://www.naturecanada.ca).





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# Introduction



Dear 4-H Leader(s),

Thank you for joining us as we launch Find Your 4-H Wings! This three-year campaign, made possible by the generous support of TransCanada, will allow your group to get active outdoors and learn about our winged friends.

In 2015, we focus on birds. Birds are everywhere, and getting to know them by sight and sound is like getting to know your neighbours. Birds, as a species, are great indicators of the health of a habitat and ecosystem. Bird species can range widely across borders, but they all play an important role in pollination, seed dispersal and pest control. With so many around, they are an excellent subject for watchable wildlife.

This year's campaign objectives include:

- Learning about birds native to your community and neighbourhood
- Identifying ways you can support birds and natural bird habitats
- Sharing lessons with your community, and helping people to understand the importance of birds and the role they play within ecosystems

In addition to this activity guide, your Find Your 4-H Wings Bird Bundle Kit includes several other tools to help your group learn about the birds in your ecosystem:

- A *Birds of Canada* book that includes all the reference information you need to start learning about birds.
- A pair of Bushnell binoculars to help your club see far into the horizon, and high up in the trees.
- Find Your 4-H Wings Bird Watching Passports to help your club become familiar with some of the common birds in Canada and record bird sightings.
- A USB key, which includes a short introductory PowerPoint presentation that you can give to your members before heading outdoors!

When it comes to learning about our winged friends, the sky is the limit...literally! We hope you and your club enjoy this opportunity to Find Your 4-H Wings!

Thanks again for your participation, and stay tuned for more winged fun in years 2016 and 2017!



# Bird Identification 101

## How does bird watching work? It's simple. All you need to do is *stop, look, and listen.*

When searching for birds to identify, keep in mind that birds can blend into their surroundings very well. Be patient and look carefully. Start by examining the sky and then move your eye down the horizon. Look for birds on roofs and in trees and bushes. Watch for movements out of the corner of your eye. Listen closely. Tune out normal noises like the wind and cars.

Do you hear birds singing?

- Birds can blend into their surroundings very well, so be patient and look carefully.
- Start by looking at the sky, and then move down the horizon.
- Watch for movements out of the corner of your eye.
- Do you hear birds singing?

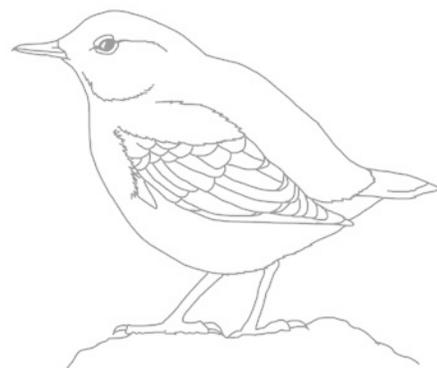
Once you've successfully spotted birds, use your *Birds of Canada* book to start identifying them. You will learn to identify birds using your eyes AND your ears. You will be able to share your knowledge with others and describe what a bird looks or sounds like.

**And don't forget to record the birds you have seen and identified in your *Find Your 4-H Wings Bird Watching Passport.***

## What you need to bring along for birdwatching:

### **\*All items can be found in your *Bird Bundle Kit***

- *Birds of Canada* book
- *Find Your 4-H Wings Bird Passport*
- Bushnell binoculars
- The handy Bird Identification Questionnaire (which is coming up next in this Activity Book)





## Bird Identification Questionnaire

When identifying birds, it is often better to get an overall impression of the bird rather than trying to concentrate on one particular feature. However, the questions below can help you narrow your search! Once you have taken note of some of the characteristics of your mystery bird, use your *Birds of Canada* book to identify the species!

We suggest bringing this questionnaire with you on your first few sightings to help with your bird identification process.

Remember, once you find and identify a bird, be sure to mark it as “found” in your 4-H Wings Bird Watching Passport, using the stickers provided in your kits. And if you find a bird that isn’t listed in your passport, be sure to add it in the “I spied with my little eye” section at the back of the passport.

### What size is the bird?

- It is good to use basic size differences to separate species. Create a list of examples from common bird species that you can easily picture in your mind, starting smallest to largest. For example: hummingbird, sparrow, robin, pigeon, crow, eagle.
- This will make it easier to compare the bird’s size to another bird you know. Is it bigger, smaller, or around the same size as one of the common birds you are already familiar with?

### What shape is the bird’s body?

- Get your team to come up with simple words to describe the bird’s shape! For example: plump, round, slender, stocky, pointy.
- Visual learners can feel free to use the *Birds of Canada* book to match descriptive words with the overall look of a bird. For example, Doves and White-throated Sparrows are good examples of plump birds, while Herons and Catbirds tend to look slender.
- The size of a bird’s tail is another good descriptor to use. Examples of long tail birds include Magpies and Tanagers. Short-tailed birds include Ducks and Warblers.



## What shape is the bird's bill?

- Short and narrow? (Examples: Chickadee, Warbler)
- Short and stout? (Examples: Sparrow, Finch)
- Long and sharp-pointed? (Examples: Woodpecker, Shorebird)
- Strong hook at tip? (Examples: Hawk, Owl)

## What are the markings or colours on the bird?

- Overall body colour?
- Wing bars or not?
- Eye rings or stripes?
- Crown patch, throat patch, wing patch, rump patch, or cheek patch?
- Stripes or spots on breast?
- Crest?

**TIP: The Introduction section of your *Birds of Canada* book has a section on bird markings that describes these types of markings and includes pictures.**

## What is its flight pattern? How does it fly?

Examples:

- Finches have a steep, roller-coaster flight pattern
- Woodpeckers fly in a pattern that has slow rises and falls
- Hawks soar holding their wings out to the side

**TIP: Watch your bird fly, then try to match its flight pattern to one of the examples listed in your *Birds of Canada* book. If you have already identified a bird, but haven't actually seen it fly, it's still a good idea to look up its flight pattern. That way, if you see it fly in the future, but aren't close enough for a good look, you could still identify it based on its flight pattern.**

## Where do you see the bird?

- Is it by the water? What kind of water? (Examples: lake, creek, ocean)
- Is it in the woods? Are they dense or open woods?
- Is it out in open fields?
- Is it in your backyard, in a hedge, or foraging on the ground?
- Is it in the city?



## What is the bird doing?

- Is it feeding, flying, or perching?
- Is it alone or in a flock?
- Is it on the ground, in the water, in a bush or tree, or clinging to the bark of a tree?
- Is it at a bird feeder? If yes, what is it eating (Examples: seeds, suet, fruit)?
- Is it eating "on the wing"? (Example: swooping at bugs in the air)

## What sounds does the bird make?

- Does it sing a pretty song repeatedly?
- Is it quiet, making no sounds at all?
- Does it only make noise when frightened?
- Does it make a high-pitched crying sound?

**TIP: There are lots of mobile applications and online resources dedicated to helping to identify bird songs and sounds. Check them out!**

## What time of day is it?

- Different bird species can be active at different times of the day. (Example: owls are nocturnal and tend to start coming out to hunt at sunset)

## What season is it?

- Since some birds migrate, you may see different types of birds at different times of the year.
- During fall or spring, there is a chance of seeing migrant birds that are just passing through on their way to summer or winter homes.

### Other Bird ID Resources:

Want additional help in identifying birds? There's plenty of resources available out there, including:

- Mobile applications (Example: The Cornell Lab of Ornithology "Merlin Bird ID" app) [www.allaboutbirds.org](http://www.allaboutbirds.org)



# Activities

## **ACTIVITY: Make A Midwinter Tree for Birds**

The Black-capped Chickadee remains in Canada all winter long. This small yet hardy bird, whose name comes from its distinct call (“chick-a-dee-dee-dee”), is a master at finding food during the cold winter months.

Finding food during winter can require a lot of work for birds, and high-fat food (which is essential for staying toasty during the cold winter months) can be hard to come by. That’s where you come in! You may find that bird activity slows down in the winter and there may be fewer species to see. But, this is the time when they can use you the most! Winter is the perfect chance for you to get hands-on and help our feathered friends.

In this activity, you will use a variety of foods to make a bird’s midwinter tree. This pretty and tasty snack will bring in local birds and maybe even a few from farther afield.

Follow the recipe below, or feel free to research other foods winter birds like to snack on, and mix up the recipe for your own unique midwinter tree. Experiment throughout the winter to see what ingredients draw the most species!

### **Midwinter Tree Recipe**

Ingredients:

- Raisins
- 1 apple
- 1 kiwi
- 1 orange
- 1 jar of sugar-free peanut butter.
- Popcorn (air-popped only, no butter or salt; don’t use microwave popcorn)

You will also need:

- Several pinecones
- Some kind of birdseed (black oil sunflower seeds work well)
- 2 shallow cookie trays
- Heavy cotton thread
- A knife
- A needle
- Twine



## What to do:

Using the ingredients above, you can make three different kinds of edible decorations for your Midwinter Tree that the birds will love. Pick your favourite edible decoration, or try out and pile on all three!

## Fruit Garland:

- Start by cutting up the fruit into chunks.
- Once your fruit is ready, thread the needle with the cotton thread, and tie a big knot in the end.
- Next, start to string together the raisins, apple chunks, kiwi chunks, and orange slices. Try different colour combinations.
- When you're finished, set your finished fruit garland strand aside and repeat the process to make another one, or try out the next decoration.

## Peanut Butter Pinecones:

These can be a big hit with lots of different species. Peanut butter is high in fat and keeps little bird furnaces roaring throughout the winter.

- Start by pouring your birdseed into a shallow cookie tray and lay a clean cookie tray beside it.
- Now loop some twine around the top of your pinecones so that they can be hung up.
- Next, apply a thin layer of peanut butter onto the cones - just enough to help the birdseed stick. Too much peanut butter can be dangerous for some birds, not just because of the potential sugar and salt content, but because it is sticky and can hinder movement.
- Push the peanut butter deep into the cracks of the pinecone with a spoon or your fingers (the handle end of the spoon works great for smaller spaces).
- Once you're satisfied with the amount of peanut butter on your cones, roll them in the birdseed to coat all of the peanut butter with seeds.
- Now place the rolled pinecone into the clean cookie tray. Repeat the process with as many pinecones as you'd like.



## Popcorn Garland:

This one is a nice contrast to your colourful fruit garland, and it is made in much the same way.

- Start by air popping some popcorn (don't add any butter or salt).
  - Thread the cotton thread through your needle, and tie a big knot at the end.
  - Carefully string the popcorn with the needle and thread. It may take several tries to get the pressure right so the popcorn doesn't break. Be patient. The birds will thank you!
- Once you have a few strands of pretty popcorn garland, you're ready to decorate your midwinter tree!

## Final Step: Decorate Your Midwinter Tree

Take your finished creations and head outside with fellow club members, family, or friends.

Make it an event!

- Pick a tree (or multiple trees).
- Wrap your fruit and/or popcorn garland around branches.
- Hang up your peanut butter pinecones on branches.
- Keep decorating until you're happy with the way your tree looks.
- Now grab a seat near a window and watch the birds feast on your Midwinter Tree!

### Questions for Club discussion:

- What other ingredients were tried?
  - o Did new ingredients have the same effect?
  - o Did any ingredients seem to stand out as a favourite for the birds?
- What have you learned about the winter birds that live in your area?
  - o What kind of birds are they?
  - o Where do they live?
  - o What do they eat?
  - o Why don't they migrate?
- What did the birds that come to eat at your Midwinter Tree look like?
  - o Do they look thin or chubby?
  - o What did they do?
  - o How did they behave?
- What non-bird species did you see at your Midwinter Tree?
  - o Were they animals that can harmoniously co-exist with birds, or were there potential threats?



## **ACTIVITY: Build Your Own Bird Nest**

Have you ever watched people building a house or an office building? It can take a long time and involve a lot of people and machines. In cities, you can often see large cranes constructing tall skyscrapers, and it can take years before they're finished.

Although bird nests may seem small and simple to us, they are often complex and built using a variety of materials.

The creation of nests is even more impressive when you think that birds really only have two tools available to them: their beak, and their feet! And when migratory birds arrive back home in the spring, they only have a few weeks to build a perfect home. Imagine if you had to build your house with only your mouth and feet. It would likely take a lot longer than a few weeks!

When building their nests, birds have to find the perfect location, which means hidden away from predators, and close to food. Next, they need to find materials to build a warm and safe nest that's big enough for their whole family.

In this activity, you will build your own nest from available material and gain an appreciation for just how hard nest building can be!

**DID YOU KNOW? Birds make their nests as a part of their courtship!**

### **What you need:**

- Clothing suitable for outdoor activity
- A bag to collect stuff

### **What to do:**

It's time to go exploring! You're on the hunt to find an abandoned nest. The winter is the best time of year to find abandoned nests.

***\*Keep in mind that birds sometimes use abandoned nests instead of making new ones, so try not to take too many! Stick to collecting one or two nests to bring back to your group and share.***



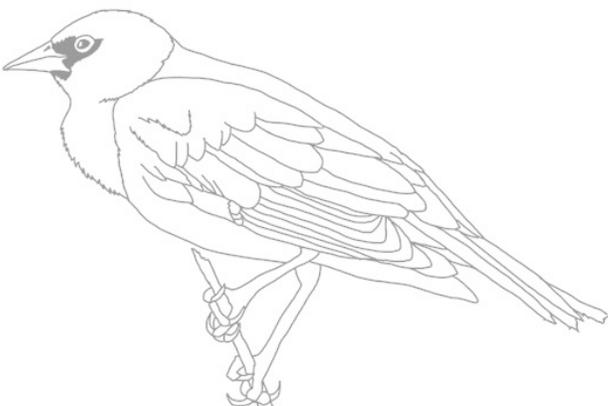
Now you're ready to start building your own nest!

- Look at your nest and try to figure out what it's made out of. There are a variety of materials birds use, like sticks, mud, leaves, and grass.
- Make a list and go outside in your backyard or to a local park and try to gather as many of those materials as you can find (if available - otherwise get creative and see what you can find!)
- Now it's time to get to work! Start assembling your materials and try to match your abandoned nest.
- When you're finished with your nest creation, place it in a tree at roughly the same height you found your abandoned nest, and make sure it's secure. Maybe a bird will move in!

**DID YOU KNOW:** There are many different kinds of nests: cup, hanging, cavity, stick, and ground nests are just some of them. What do you think each of these different nests look like? Keep them in mind when you're out looking for nests, and research them afterward to see if you correctly guessed what kind of nests you found!

**Questions for Club Discussion:**

- What sorts of places did you look for the abandoned nest?
- Where did you actually find an abandoned nest?
- Can you guess, based on where you found the nest and what it looks like, what kind of bird may have lived there?
- If you were a bird, would you want to sleep in your handmade nest?
- What materials did you choose to make your nest with? What made it different from some of your fellow club members' nests?
- How long did it take to make a nest that looked like your abandoned nest?
- Was it difficult? Did you get frustrated? Do you have a new appreciation for how time consuming and challenging it can be for birds to build their nests?





## **ACTIVITY: Club Field Trip - Visit a Naturalist**

There are many people who have dedicated their lives to studying and conserving birds. You can learn a lot from these people, and they are often very happy to share their knowledge with you.

Nature Canada is the oldest national nature conservation charity in Canada. Over the past 75 years, Nature Canada has helped protect over 63 million acres of parks and wildlife areas in Canada and countless species that depend on this habitat. Today, Nature Canada represents a network comprised of over 45,000 members and supporters, and more than 350 nature organizations across the country. Many of these are small clubs with tremendous knowledge about nature. There may even be a club in your area with tons of knowledge about local birds!

**Want help finding experts in your area? Nature Canada has teamed up with 4-H Canada for Find Your 4-H Wings to help clubs connect with naturalists in their community.**

### **What to do:**

- If you are interested in meeting with a bird enthusiast in your area, contact the 4-H Canada office by emailing [fundsdevelopment@4-h-canada.ca](mailto:fundsdevelopment@4-h-canada.ca).
- Together, 4-H Canada and Nature Canada will work to try to find a naturalist club in your area who will meet with your club to explain what they do, where they work, and the birds they come into contact with.
- The expert may want to come to your club house to give a presentation, or may want to take you out to check out a habitat in your community.
- Be sure to show your guest respect by listening closely, staying engaged, and keeping an open mind for learning.

### **Questions for Club Discussion:**

- What type of activities do naturalists enjoy doing?
- Did you learn a lot? What was the coolest thing you learned from the naturalist?
- Some naturalists volunteer to be "caretakers" of special places for birds called "Important Bird Areas" (IBAs). What sort of tasks would these caretakers do for IBAs?



## **ACTIVITY: Explore Bird Habitats**

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Birds are everywhere! In fact, in almost every type of habitat on earth, you can find a thriving bird species. How cool is that?

In this activity, you will learn about different habitats and the birds that thrive there.

Here are some examples of different types of habitats:

- Woodlands and forests
- Open fields or meadows
- City parks and gardens
- Lake and ocean beaches
- Barns, urban spaces – even your back yard!

### **What you need:**

- Binoculars
- Compass
- *Birds of Canada* book
- *Find Your 4-H Wings Bird Watching Passport*

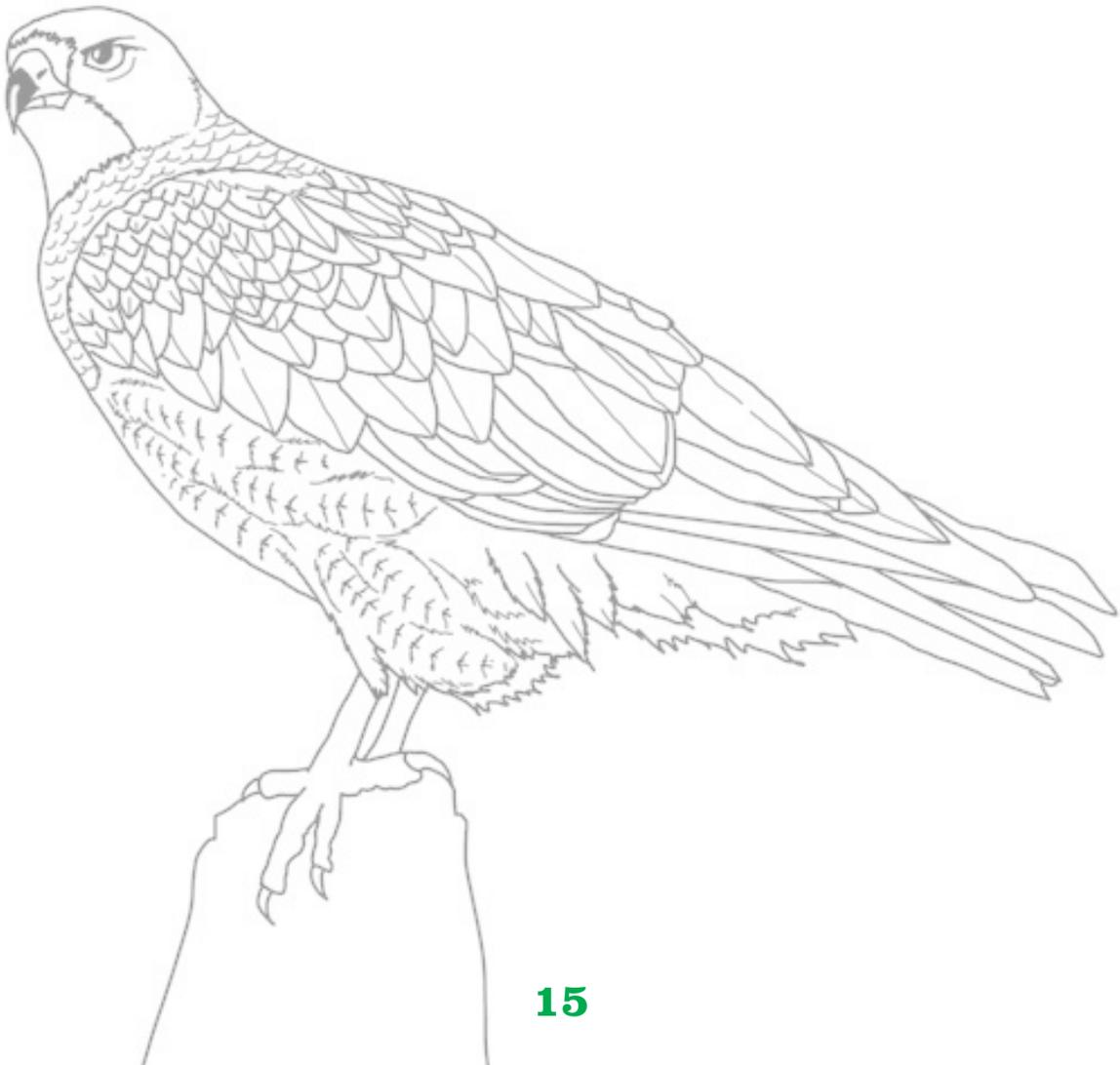
### **What to do:**

- Pick three different kinds of habitats that are accessible from your home.
- Gather up the supplies listed above from your Bird Bundle Kit, and head out to a habitat!  
**\*We suggest visiting at least three different habitats, but you don't need to visit all of them in one day. This activity can be broken out over multiple days.\***
- Take the time to really explore the habitat.
- Draw a map of the habitat, including all of the environmental features. (Examples: ponds, rocks, fence posts, trees, buildings, roads, people, etc.)
- Keep track of any birds you see in your *Find Your 4-H Bird Watching Passport*. Use the *Birds of Canada* book to help identify bird species.
- Once you have visited three different habitats, spend some time discussing your discoveries about the different habitats and the birds you found there.



**Questions for Club Discussion:**

- Did you see the same species of bird in more than one type of habitat? Why do you think that is?
- Make a list of the birds that you identified in each of the habitats, from most common to least common.
- How many different species of birds did you find sharing one habitat?
  - o Did they have any traits in common?
- Can you think of any other birds in the *Birds of Canada* book that share similar traits to the birds you found in any of the three habitats?
  - o Do you think these birds could also live in the habitats you explored? If so, why would they belong there?





## **ACTIVITY: Eat Like a Bird**

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Do you know the saying, “they eat like a bird”? Chances are, you’ve probably heard it when someone has been referring to a person who doesn’t eat very much.

But, guess what? It’s not actually a very accurate statement, because birds eat a lot for their size!

When you watch a bird, you’ll notice how quickly they move, and how vigilant they are about keeping a lookout for predators. It takes a lot of energy to move around that much, not to mention fly! But birds aren’t like us; they don’t sit down to three meals a day. They spread their food out across the whole day, which can add up to many hundreds of mouthfuls!

In this activity you’ll learn what it feels like to actually “eat like a bird”!

### **What you need:**

- Allotted time to experiment with what you eat and when you eat it. This activity is probably best done over a weekend.

### **Instructions:**

If you really want to get into this project, you could try eating insects and seeds all day, but I’ll bet you’d rather not, right?

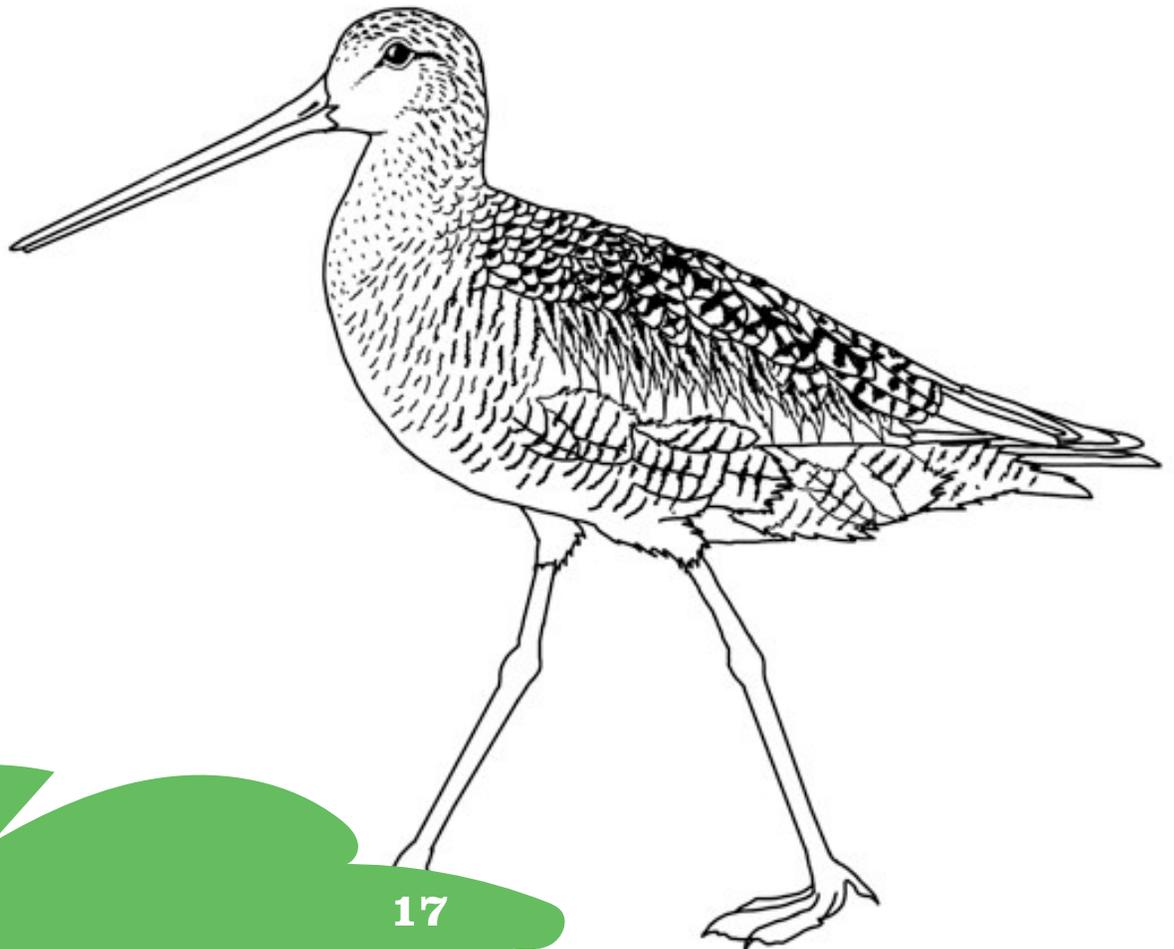
Well you can still try out the concept of eating like a bird without having to actually eat the specific foods that birds eat.

- Instead of eating your normal three meals of breakfast, lunch, and dinner - spread your meals out into several dozen little bite-sized meals.
- Try to eat just a mouthful or two about every 15 minutes. It sounds like it will be time consuming, but if you plan ahead, you can prepare your food in advance and have it ready to go. That way, even if you have to go out, you can bring your tiny snacks with you and keep to the eating schedule.
- At the end of the day, think about the experience of eating like a bird. What was it like? Did you enjoy it?



Questions for Club Discussion:

- How did you feel when you were eating like a bird?
  - o Did you like eating in small amounts, or do you prefer normal-sized portions spaced out over three meals?
- What were your energy levels like?
  - o Did you feel more sleepy than usual?
  - o Did you feel more energetic than usual?
- Were you hungry all day or did eating every 15 minutes keep your hunger at bay?
- Was it hard to plan what you would be eating all day?
- What do you think this kind of eating pattern means for a bird?
  - o Do all birds eat like this?
  - o Are there any birds that eat much more at one sitting?





## **ACTIVITY: Beak Physique**

---

Beaks are one of the main tools that birds have to use. Each beak is different, and they help specific birds eat specific foods.

This is your chance to experiment with “beaks” and test out what types of food are best for different types of beaks.

### **What you need:**

#### ***Food-based Supplies:***

##### **Ingredient**

Cooked macaroni  
Goldfish crackers  
Gummy worms  
Sprinkles  
Peanuts, seeds, raisins  
Mini marshmallows  
Cereal  
Fruit juice

##### **Type of bird food the item mimics**

Small animals  
Fish  
Earth worms  
Ants  
Peanuts, seeds, raisins  
Grubs  
Insects  
Nectar

#### ***Additional Supplies:***

Each of these supplies represents a different type of bird beak:

- Clothespin
- Toothpick
- Straw
- Small plastic spoon
- Tweezers
- Small scissors

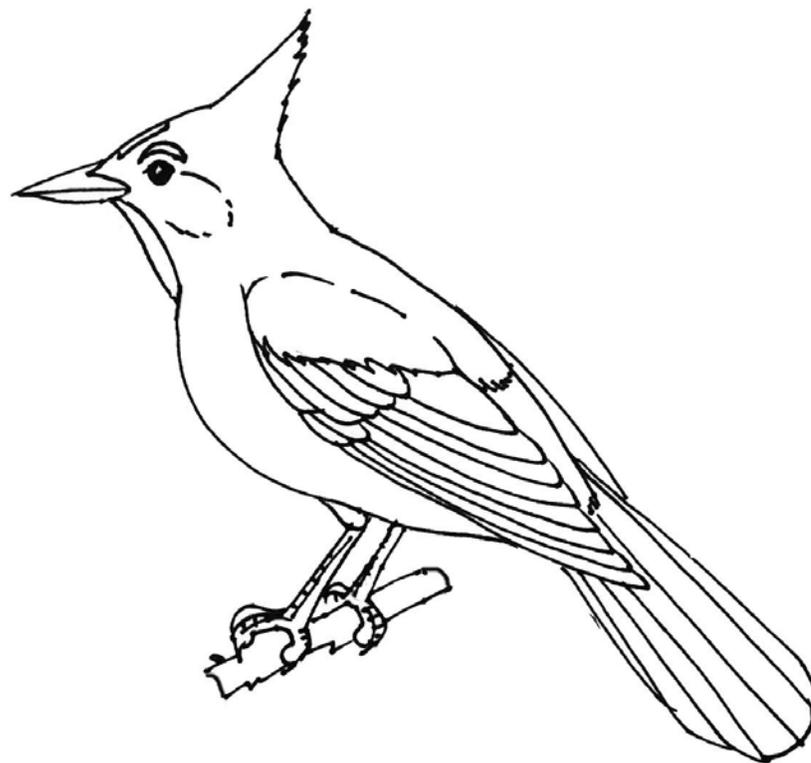


### What to do:

- Hold one type of "beak" in one hand and keep the other hand behind your back.
- Choose one of the food ingredients and try to gather as much food as possible in 15 seconds.
- Keep in mind: your survival depends on your ability to gather food! After 15 seconds is up, swap out your "beak" for a different one and try gathering your ingredient for another 15 seconds. Repeat the activity with each type of beak.

### Questions for Club Discussion:

- What ingredient did you choose?
- Which beak was most successful in gathering your ingredient?
- What are the differences between the beaks and how they can be used to gather food?
- Can you tell by the beak, what type of food that bird may eat?





## **ACTIVITY: Habitat Building**

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By participating in Find Your 4-H Wings, you have learned that birds have all kinds of habitat requirements. And, that while there are many organizations that try to protect bird habitats, humans are responsible for a lot of bird habitat degradation and destruction.

### **What can you do to help? A lot! You can even build a bird sanctuary right in your own backyard!**

This is a big activity, but with a little research into bird-friendly plants and shrubs, and some careful planning, you can build a habitat in which birds can thrive, complete with edible plants, insect-attracting flowers, water for bathing and drinking, and plenty of cover for safety (You can even incorporate the feeders and baths you have already created in this project).

Once your habitat has been built, you will have a lovely natural space that will attract a variety of birds. Maintain it well and you should see birds all year long!

### **What you need:**

- An outdoor space where you can create a bird habitat
  - o If no one within your club has a suitable space they are willing to use, try asking a local community hall or school.
- Shovels
- Work gloves
- Bird-friendly plants, shrubs, and trees
  - o Try asking a local greenhouse, nursery, or gardener about native plants to use
- Bird feeders
- Bird baths

### **What to do:**

Have the club plan out the design of the habitat as a group.

All you need to think about when building your bird sanctuary are four basic elements:

- Food
- Water
- Shelter
- Places to raise young



Start with a pen and paper, and use the suggestions below to brainstorm ideas for your bird sanctuary that cover all four basic elements of food, water, shelter, and places to raise young. Next, draw out the design for your bird sanctuary.

- You can find examples of designs and helpful hints and tips online, or even ask a local gardener or arborist for advice.
- Be sure not to fight the natural space you're working with. Use the unique elements of the space to your advantage!
- Keep in mind that all of the suggestions below can be incorporated into your own yard too!

### **Food:**

- Consider planting shrubs and trees that produce seeds, fruits and nuts throughout the year.
- For hummingbirds and butterflies, consider nectar-producing plants like flowers.
- Ask a local greenhouse, nursery, or gardener about suggestions for native plants to use.
- Add a bird feeder to a good, safe spot. And be sure to avoid placing the bird feeder close to windows, which can cause birds to collide with the glass!

### **Water:**

- Consider offering several sources of water, such as:
  - A pedestal fountain
  - A shallow water dish at ground level
  - A small pond with varying depths for both drinking and bathing
  - You can even simply attach a plastic container to a post
- You may find dragonflies, frogs, and other aquatic life moving in. And, this is a great thing because biodiversity is the name of the game!
- Be sure to check and change the water regularly to keep it fresh. Still water can become unhygienic for both birds and people.

### **Shelter:**

- Birds are pretty vigilant animals. Always on the lookout, they tend to stick to the cover of trees, bushes, and thick grass and only go out into the open when necessary—and even then for very short periods.
- Shelter will be very important in making your bird sanctuary a comfortable and safe place for birds to frequent.
- Consider planting native evergreen trees or dense shrubs to provide year-round cover



from weather and predators. Deciduous trees provide nice nesting sites. Rocks, logs, and mulch piles offer good cover for small animals like reptiles and insects (which birds like to eat).

- Try placing a dead or decaying stump in your space to act as a great source of both food and shelter for many creatures. Your old Christmas tree can become a good addition to the habitat, providing shelter during the cold months before you compost it in the summer.

### ***Places to raise young:***

- Planting trees and shrubs at a variety of heights will encourage birds to nest in your habitat.
- Roaming cats are one of the biggest threats to bird. Avoid making the habitat a cat-friendly place.
- Be sure to welcome birds with functional nest boxes, which you can build on your own, or buy from most greenhouse and tree nurseries.
- Provide nesting material in the form of twigs, leaves, and sticks.

## **MAINTENANCE OF YOUR BIRD HABITAT**

In order to maintain a successful habitat, you will need to regularly refill feeders and change water baths.

However, other than that, your ecosystem should be free to function and grow on its own.

Don't worry about cleaning up the space too much. There's a reason natural forests tend to have a lot of debris. Many animals thrive in decaying roots and stumps, and they can be a source of nesting material, food, and shelter for birds.

Avoid the use of pesticides in your bird habitat, and at home too; insects are a large part of many birds' diets and they will thank you for it!



## **ACTIVITY: YardMapping!**

Once your bird habitat is built, you have the chance to use it to help scientists!

Nature Canada is encouraging bird enthusiasts to take part in Cornell Lab's "Yardmapping" program.

YardMap provides new web technology to the public and invites them to use it to construct maps of their bird habitats using real satellite images.

YardMap is a citizen science project, which means it welcomes scientific study and observations from amateur scientists. By using the YardMap program, you can upload your group's observations onto YardMap and help cultivate a better understanding of how different habitats support birds.

Visit [www.yardmap.org](http://www.yardmap.org) to sign up, and access tips on how to build your habitat and make a home for birds in the area.

## **ACTIVITY: Achievement Day!**

Look at all you have accomplished in building a bird habitat! Consider holding an achievement day at your club's new bird sanctuary to promote the welfare of birds and celebrate all your hard work and dedication!

### **Questions for Club Discussion:**

- Did you learn about which kinds of plants birds prefer?
- What did you learn about your native shrubs and trees?
- What kinds of plants did you include in your bird habitat, and why?
- What kinds of features did you include in your bird habitat, and why?
- Did you notice birds coming to check out your sanctuary right away, or did it take a few days/weeks?
- As you continue to observe the habitat, does it remain a safe and secure home for your birds?



## Glossary

**Aerial insectivores** - Birds who feed on flying insects that they catch in their wing, while still flying.

**Bio-diversity** - Term used to describe the variety of life. This includes ecosystems, genetic and culture diversity, and the connections between species.

**Bird** - Birds are warm-blooded, egg-laying vertebrates, distinguished by the possession of feathers, wings, and a beak. Many birds are able to fly.

**Birding** - A popular recreational activity of observing wild birds.

**Citizen science** - is scientific research conducted, in whole or in part, by amateur or nonprofessional scientists.

**Gizzard** - instead of having a mouth full of heavy teeth, birds have a 'gizzard'. The gizzard is part of their digestive tract which helps to grind up the food a bird eats.

**Habitat** - A special place where a plant or animal lives. Different animals need different habitats, but all animals need food, water, shelter, air, and a safe place to raise their young.

**Field Marks** - Field marks are the distinctive stripes, spots, patterns, colors, and highlights that birds have in such abundance and variety. Birds developed these patterns for many reasons - can you think of some?

**Mnemonics** - A trick to help with memory, mnemonics are commonly used by birders who are trying to remember distinct bird calls. Mnemonics seek to mimic the rhythm and pattern of a bird's call, and make it easier to differentiate and recall birds for identification purposes.

**Naturalist** - A student of natural history.

**Raptors** - Birds of prey.

**Waterfowl** - Birds that love to swim.

**Whole Bird Approach** - Where the field mark approach identifies individual parts of a bird's features, the whole bird approach looks at how all the features come together to identify a bird.