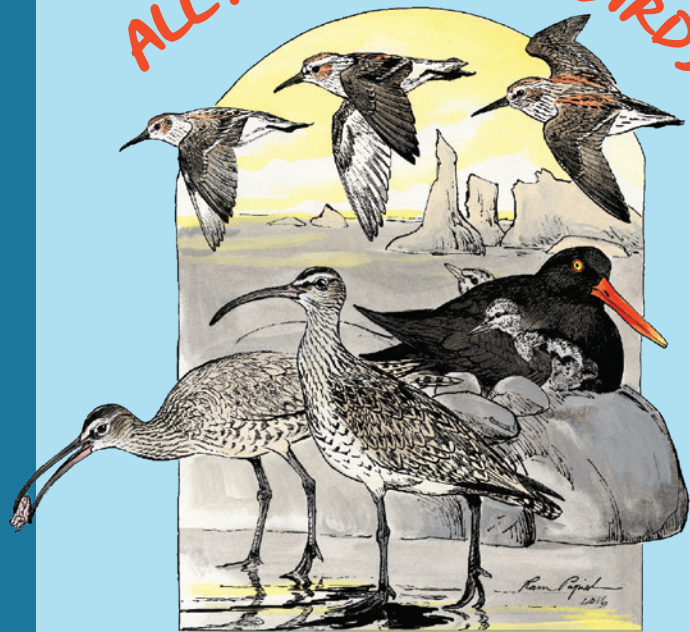


JUNIOR BIRDER

JOURNAL

& ACTIVITY BOOK

ALL ABOUT SHOREBIRDS



.....
[YOUR NAME]

BIRDWATCHERS

CODE OF ETHICS

Birdwatchers must respect wildlife and their environment by following the Birdwatcher's Code of Ethics. When you sign your name below, you agree to observe birds in a way that will not harm them or their habitats.

- 1. I will help to protect birds and their environment.** I will not disturb birds, their nests, feeding sites, or other places they need to survive.
- 2. I will ask permission to view birds on private property.**
- 3. I will check my birdfeeders and my yard to be sure they are safe for birds.**
- 4. When I am outdoors with others, I will be a role model.** I will share my knowledge of birds and ask others to follow this Code of Ethics.

***"I pledge to follow the Birdwatchers
Code of Ethics."***

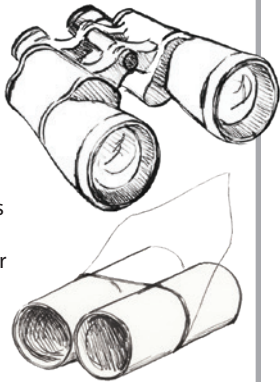
[SIGN YOUR NAME HERE]

[DATE]

A CLOSER LOOK AT BIRDS: USING BINOCULARS

Binoculars are a helpful birdwatching tool. Make your own using two empty toilet paper rolls. Tape them together, add a strap, and decorate them. Using binoculars takes practice. Follow these tips when learning to use yours:

- 1. Always put the binocular strap around your neck.** This will keep them off the ground and save them from being dropped.
- 2. Locate birds with your eyes first.** Then raise the binoculars to your eyes without moving your head or eyes. It is hard to spot birds just by using your binoculars.
- 3. Adjust the nose piece position of the binoculars.** If you see black on the outside edges of your view, you can move the two lenses of the binoculars apart. If you see two different views out of each eye, move the binocular lenses closer to one another until you see one image.
- 4. Once you have the object in your view, adjust the focus until the object is clear.** Use your index finger to move the round knob between the two lenses to get the object as clear as possible.
- 5. Do not use your binoculars while walking!**
- 6. Do not look directly into the sun while using your binoculars!**



WHAT IS A SHOREBIRD?

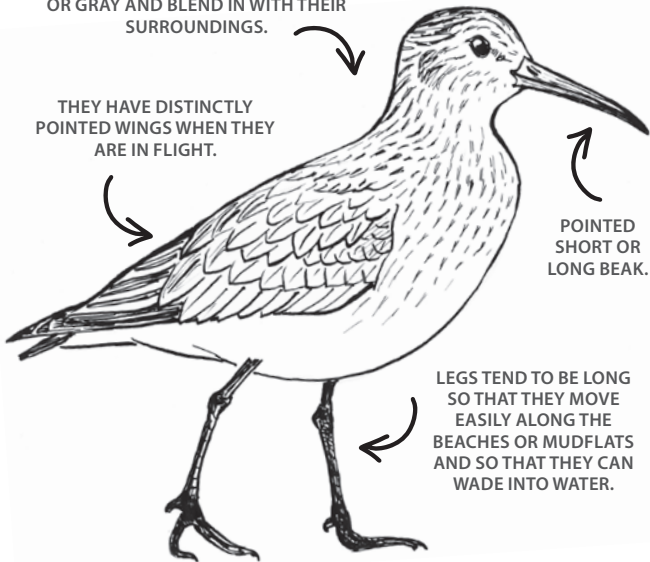
Shorebirds are a very diverse group of birds that we observe most often along the shores of the ocean, lakes and rivers although some live in other habitats such as marshes, swamps or grasslands.

SHOREBIRDS ARE USUALLY BROWN OR GRAY AND BLEND IN WITH THEIR SURROUNDINGS.

THEY HAVE DISTINCTLY POINTED WINGS WHEN THEY ARE IN FLIGHT.

POINTED SHORT OR LONG BEAK.

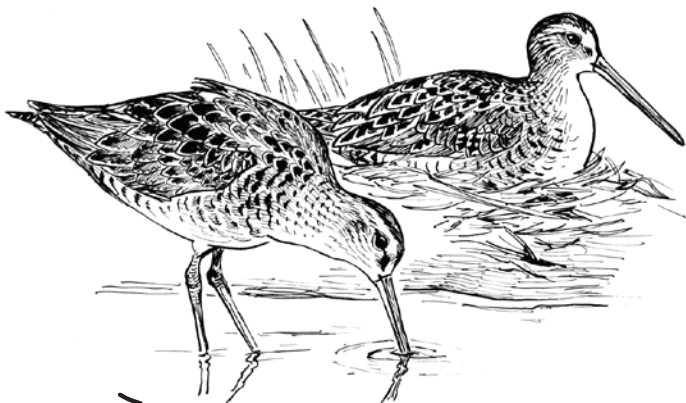
LEGS TEND TO BE LONG SO THAT THEY MOVE EASILY ALONG THE BEACHES OR MUDFLATS AND SO THAT THEY CAN WADE INTO WATER.



Use a field guide to discover other characteristics of shorebirds, such as the range of beak sizes and shapes!

Each species of shorebird has different habitat preferences for nesting. While a few nest on beaches, many more nest in grasslands, in rocky areas and on tundra in the arctic. There is only one of the 30+ species in Canada that nests in trees. **Do you know what species it is?** (See bottom of page for answer)

SHOREBIRD BEAKS VARY IN LENGTH. LONG BEAKS ARE BETTER FOR REACHING FOOD BURIED DEEP IN THE SOIL LIKE SMALL CLAMS OR SEA WORMS.



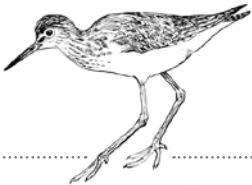
SHOREBIRD LEGS VARY IN SIZE. LONG LEGS ARE GREAT FOR WADING ALONG THE SHORE IN SEARCH OF FOOD.

SHOREBIRD FAMILIES

Shorebirds are divided into different groups or families that look and act similarly. Read more about four different shorebird families below.



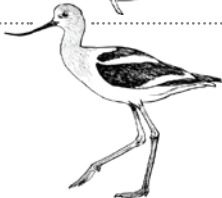
PLOVERS are small to medium-sized shorebirds with relatively short legs, larger heads in comparison with their bodies and stout bills. They eat from the surface of the sand or mud.



SANDPIPERS in general have longer bills and legs than plovers. They often walk a few steps and then stop to eat, repeating this pattern.



OYSTERCATCHERS are found along the ocean coast in parts of British Columbia and parts of Atlantic Canada. They are chunky birds with long, flattened, red-orange bills. They use their strong bills to open clam shells or oysters.



AVOCETS and **STILTS** have long lanky legs and sleek slender bills, that vary from slightly to very upturned.

SHOREBIRD ACTIVITY

Draw a line to match the correct beak to the correct shorebird.

1



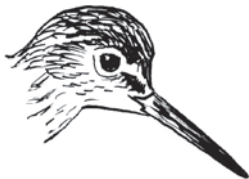
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a



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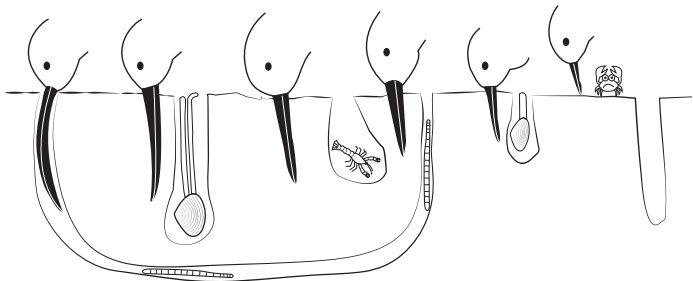
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d



SHOREBIRD BEAKS: ALL SIZES AND SHAPES



Like shorebird legs, their beaks also vary in length.

Different beak lengths allow the birds to find food at different soil depths.

With so many different kinds of beaks, shorebirds do not need to compete for food.

**DID YOU
KNOW...**

that some shorebirds can manipulate the end of their beak to help catch food? The scientific term for this ability is **Rhynchokinesis**.

WHICH FAMILY IS MINE?

A shorebird's silhouette provides clues about which family it belongs to. Using what you learned about bill shape and size and leg length, in which family do you think each of these birds belongs?



RAISING THEIR YOUNG



American Oystercatchers build their nests near the shore in a variety of habitats from sand to marshy islands, or on top of large rocks. Even though there is very little vegetation to hide their nests, they are hard to find.

Can you find the nesting shorebird in this drawing?

RAISING YOUNG IS A LOT OF WORK!

Nesting shorebirds need all of their energy to gather food for themselves and their young. Every time they leave to defend their nest they are unable to care for their young or themselves. Exposed eggs can overheat and are vulnerable to predation.

Circle the activities that might disturb this Killdeer while feeding or nesting.

**DID YOU
KNOW...**

shorebirds are precocial, meaning that they leave the nest shortly after the eggs hatch?



MIGRATION

Many shorebirds breed in the arctic and subarctic regions of Canada and Alaska, but spend their non-breeding season in South America. **The dashed lines mark common routes shorebirds use to migrate in the spring and fall.** Along the way, shorebirds stop to feed, rest, or even nest. Shorebirds can be found in many different locations across the Americas. The dots represent shorebird hotspots where shorebirds are often found.

Find where you live on the map. Do you live along one of the paths the shorebirds take during migration? Do you live close to one of the shorebird hotspots?

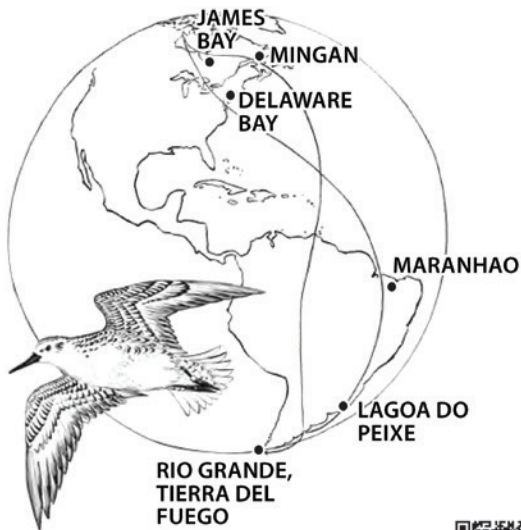
DID YOU KNOW...

Shorebirds migrate at night and that lights distract them from their migratory route? You can help birds migrate by reducing light pollution!



MIGRATION: THE REDKNOT

Shorebirds are amazing travelers. Many species annually migrate back and forth between the Canadian Arctic and South America. Moon bird, a superstar Red Knot, also known as B95, lived at least 20 years, and flew over 600,000 kilometres in its lifetime, comparable to going to the Moon and half way back! Shorebird stopover habitats need protection from pollution, and human disturbance.



Read *A Year in the Life of a Red Knot* here!



ADAPTATIONS:

SHOREBIRDS

Shorebirds are perfectly suited to their shoreline habitat; long beaks to probe deep in mud and sand, long legs to wade into water, long wings for long migratory flights, and flocking behaviour to help detect enemies and find food. Most shorebirds rely on special sites to rest and feed during long migrations. **Many shorebird species are declining.** Pollution and disturbance are two reasons for these declines. **Can you think of other reasons? What can be done to stop the decline?**



THE CONVENTION FOR THE PROTECTION OF MIGRATORY BIRDS IN CANADA AND THE UNITED STATES

In the late 1800s, some species of birds like the Great Auk and the Labrador Duck became extinct. Then, in 1914, the bird species that was once the most abundant in North America, the Passenger Pigeon, also became extinct.

By the late 19th century, North Americans started to realize that the market demand for birds was driving some species to extinction. **Out of this realization grew a bird conservation movement that led to the signing of the Convention for the Protection of Migratory Birds, signed between Canada and the United States in 1916.** Canada turned the convention into domestic law in 1917, leading its international partners by passing legislation related to the protection of migratory birds.

A convention is an agreement that is signed between one or more countries. Canada has signed three conventions that help protect birds:

- The Convention for the Protection of Migratory Birds in the United States and Canada (1916)
- The Convention on International Trade in Endangered Species (CITES, 1975)
- The Convention on Biological Diversity (CBD, 1992)



ACTIVITY:

HOW YOU CAN HELP MIGRATORY SHOREBIRDS

About 80 percent of the bird species we enjoy here in Canada migrate beyond our borders each summer and fall to countries mainly to the south of us in the Americas. Since the Migratory Birds Convention is an agreement that involves only Canada, the USA and Mexico, birds that go beyond Mexico or stay on islands in the Caribbean lack the same legal protection they have here, making them more vulnerable to hunting, trapping, capture, and other forms of harm.

Scenario: You are the Prime Minister of Canada, and you can choose to add more countries to the Migratory Birds Convention. **By looking at the range map on the following page, which countries would you invite to sign the Convention to ensure that the Hudsonian Godwit is protected by law throughout its entire migratory journey?**

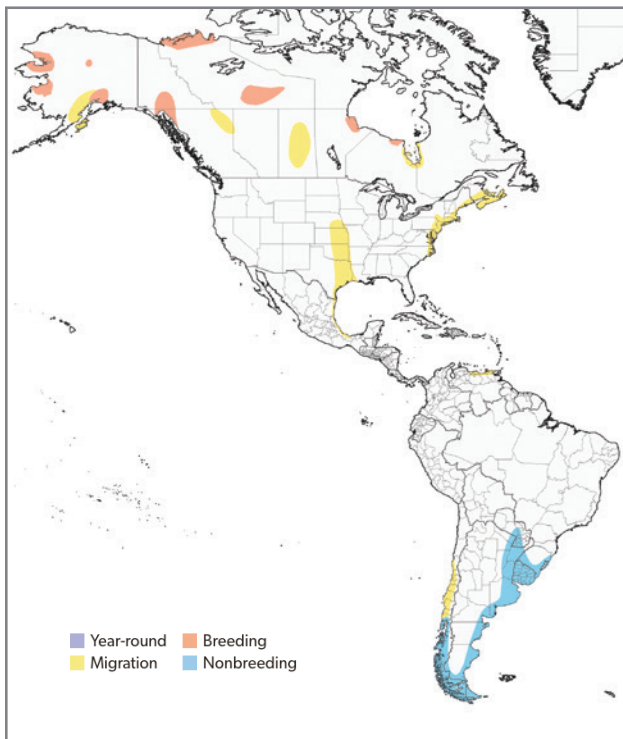
Helpful tip: Consult a map or an atlas to find the names of the countries you would like to see added to the Convention!



**Read the
Story of Bico
here!**



DISTRIBUTION MAP OF THE HUDSONIAN GODWIT



BirdLife International and Cornell Lab of Ornithology (in review)
Distribution map of the Hudsonian Godwit

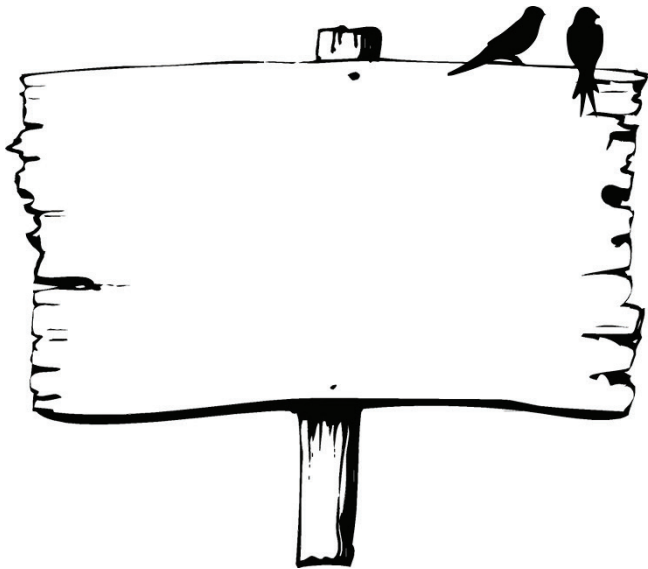
ACTIVITY:

MIGRATORY BIRDS CONVENTION ACT

In Canada, most birds are protected by the law under the Migratory Birds Convention Act, which prohibits handling, hunting, taking eggs or nests, as well as being in possession of migratory birds, whether dead or alive.

The Act also sets the bag limits for hunting game birds in Canada.

If you had to create a sign for your neighbourhood to let everyone know that it's against the law to harm migratory birds, what would you put on the sign?



PROTECTED AREAS AND YOU

In Canada, there are hundreds of protected areas that are important for birds, including Migratory Bird Sanctuaries, National Wildlife Areas, and National and Provincial Parks.

Protected areas are identified as crucial habitats for many reasons, as they are important nesting areas and serve as a rest and refueling stop for migratory birds on their journey to and from overwintering grounds. The area might also be important for one or more endangered species.



Why are some sites designated as protected areas while others are not?

They have been recognized as providing crucial habitat to a diversity of native species.

STOP & LISTEN

An important part of collecting data is incorporating all of your senses. **Find a place outdoors and sit for five minutes observing what you see, smell, feel, and hear.**

A large circle divided into four equal quadrants by a vertical and a horizontal line. Each quadrant is labeled with a sense in a curved font along the outer edge: the top-left quadrant is labeled "I SMELL", the top-right is "I SEE", the bottom-right is "I HEAR", and the bottom-left is "I FEEL". The interior of each quadrant is blank, providing space for handwritten observations.

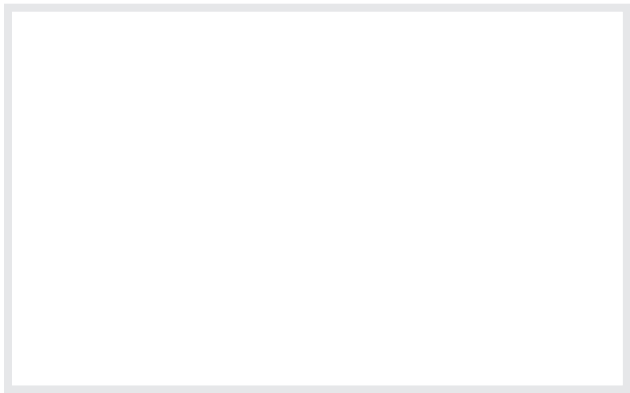
SHOREBIRD ACTIVITY:

MAP YOUR AREA

Biologists define their survey area so they can identify where the survey was completed in case they need to gather more information about the site in the future. Survey areas should be accessible to the biologist and shorebirds should be easy to observe.

Find a survey area near you and draw it below. Consider the following when drawing your survey area;

- What landmarks will define the start and end points of your survey?
- What route will you take during your survey?
- Do you see anything that might harm or help the shorebirds?
- Are you surveying in high or low tide?



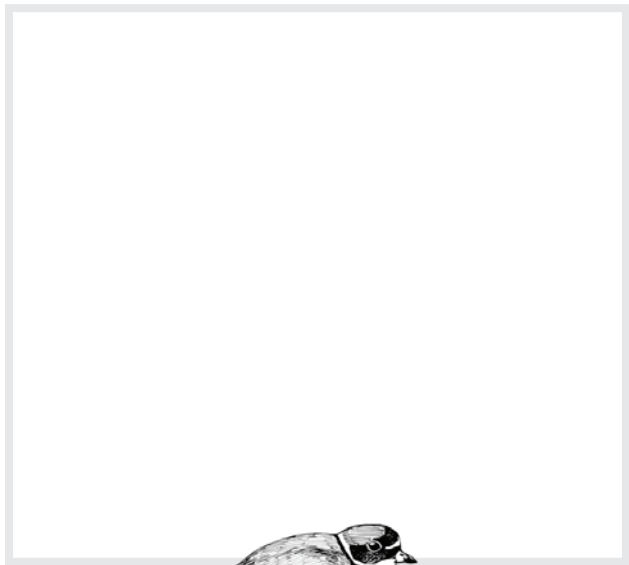
Tip: Include notes or clues that another person could use to find the survey area again.

SHOREBIRD STUDY

WHAT ARE THEY EATING?

Consider the bird you are observing. How can you figure out what the shorebirds are eating?

Draw some of the food items you see / believe are at your site.



SHOREBIRD SURVEY:

BIRD CLUES!

While surveying shorebirds you might observe birds that are nesting, flying, running along the shore in search of food, eating, or trying to scare off predators. These behaviors tell biologists about the bird's health and the safety of the bird habitat. **Record any behaviors you observed during your survey.**

TYPE OF BIRD	BEHAVIOUR



Add your observations to ebird!

TAKE ACTION FOR BIRDS:

USE LESS PLASTIC!

Shorebirds can mistake plastic for food and eat the plastic or for certain types of plastic, become tangled in it.

You can use less plastic by....

- Using a reusable cloth grocery bag.
- Replacing your disposable plastic water bottle with a refillable metal water bottle.
- Packing your snacks and lunches in reusable containers instead of plastic sandwich bags.



ACTIVITY: Go through your house or classroom, and identify items with limited lifespans. How many of those items could be replaced by reusable options, or aren't really needed at all?



TAKE ACTION FOR BIRDS: MAKE YOUR CITY BIRD FRIENDLY

Did you know that there were three billion fewer birds in 2020 in North America than in 1970? Most of these losses are caused by human activities. We do things and make things that hurt and kill birds. Birds play an essential role in maintaining healthy and resilient ecosystems in our communities and our planet. By taking simple actions you can help save bird lives. (Answers below)

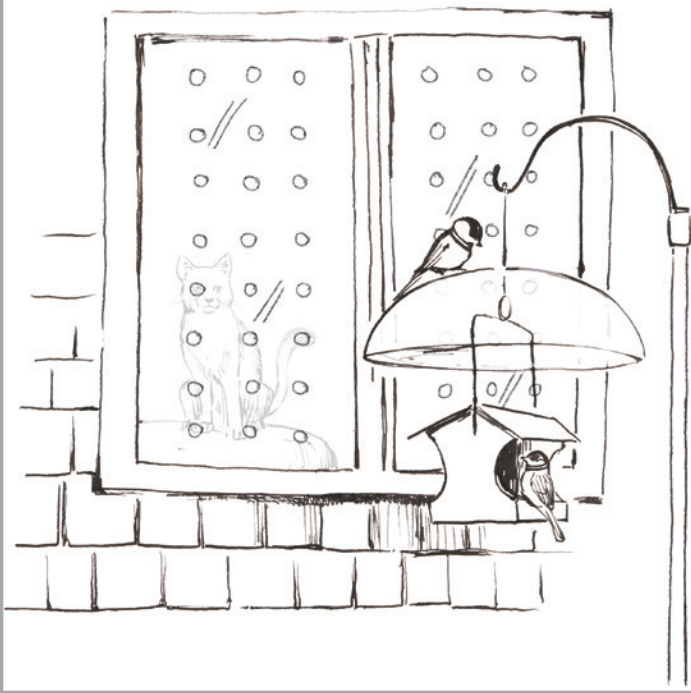
Circle the practices below that help make your city bird-friendly.



Incorrect Answers: Mow your Lawn, Plant Tropical Plants, Let Your Cat Roam Wild

TAKE ACTION FOR BIRDS: KEEP CATS INDOORS

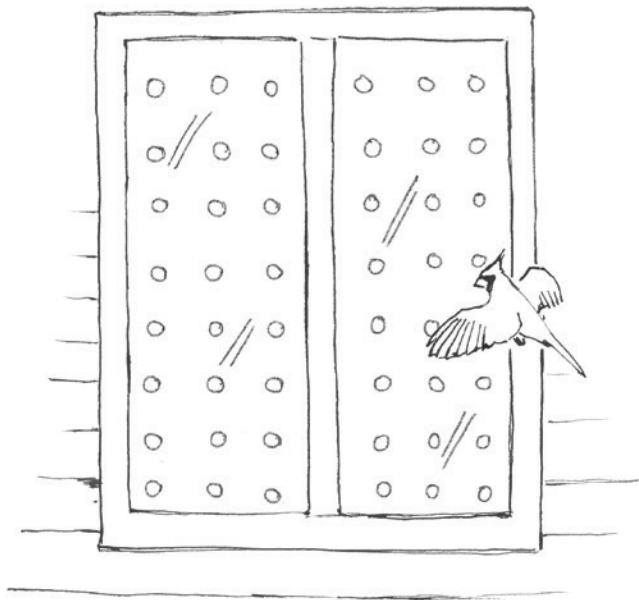
Cats are great pets, but they also hunt birds, killing hundreds of millions every year. If you own a cat, help protect birds by keeping your cat indoors or watching your cat while it is outside to be sure it doesn't hunt birds and other wildlife.



TAKE ACTION FOR BIRDS:

STOP WINDOW COLLISIONS

Glass is often invisible to birds, and if it reflects the trees, bushes or sky, a bird may fly into it. Take a walk outside your house, cottage or building. **Is it hard to see any of the windows?** Make your home safe for birds: add dots 5 cm apart or coloured flagging tape outside problem windows to alert birds by breaking up the reflections they are seeing. **Ask your teacher to try this at school!**



TEST YOUR KNOWLEDGE!

HOW CAN YOU HELP PROTECT SHOREBIRDS?

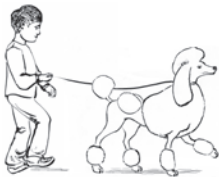
Answer the questions about helping shorebirds and check any actions you already take to help shorebirds.

1. Why is it important to watch where you walk?

- ☐ a) Shorebirds often nest on the beach.
- ☐ b) Shorebirds and their eggs blend in with their surroundings and are hard to see.
- ☐ c) Disturbing nesting shorebirds decreases their ability to successfully raise young.
- ☐ d) All of the above.



**WATCH YOUR
STEP WHEN ON
THE BEACH!**



**KEEP DOGS ON LEASH
IN SHOREBIRD HABITAT**

2. Why should you keep your dogs on a leash and in designated areas?

- ☐ a) Dog paw prints on the sand can scare shorebirds.
- ☐ b) Dogs chase and scare shorebirds and do not pay attention to where they are walking.
- ☐ c) Dogs dig in the sand.
- ☐ d) All of the above.

3. Why should you keep your beach free of pollution?

- ☐ a) Trash attracts people to the beach.
- ☐ b) Trash gets blown into people's faces when it is windy.
- ☐ c) Birds mistake wrappers as food and eat or get tangled in the trash.
- ☐ d) All of the above.



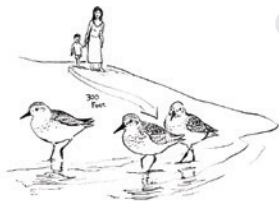
**STAY CLEAR OF AREAS
WHERE BIRDS NEST**

4. Why is it bad for people to feed wildlife by hand?

- ☐ a) Human food is not good for wildlife.
- ☐ b) Wildlife lose their natural fear of people and may get hurt or become a nuisance towards people.
- ☐ c) Animals may fight and injure each other when competing for food from humans.
- ☐ d) All of the above.



TAKE EXTRA FOOD AND TRASH WITH YOU WHEN YOU LEAVE THE BEACH



WATCH WILDLIFE FROM A SAFE DISTANCE

5. When you keep your distance from shorebirds, you help them:

- ☐ a) Have time to find food
- ☐ b) Nest and raise young
- ☐ c) Save more energy to survive
- ☐ d) All of the above



TURN OFF LIGHTS OR PUT DOWN YOUR SHADES TO KEEP THE NIGHT SKY DARK FOR MIGRATING SHOREBIRDS

6. Why do lights hinder migrating shorebirds?

- ☐ a) Shorebirds migrate at night and lights distract them from their migratory route.
- ☐ b) Birds have better night vision than daytime vision.
- ☐ c) Insects are drawn to your lights.
- ☐ d) All of the above.

RESOURCES

Are you looking for more resources to support learning outcomes while youth explore nearby nature?

Check out our online archive for resources, guides, and activities designed to support learning outcomes while exploring nearby nature.



World Migratory Bird Day in Canada: *birdday.ca*

Find a local event and learn more about how you can help welcome birds back to Canada.

World Migratory Bird Day Headquarters: *migratorybirdday.org*

This site is a treasure trove of resources.

Local junior naturalist club: *naturecanada.ca/naturenetwork*

Local clubs offer outings all year.

Cornell Laboratory of Ornithology's All About Birds:

allaboutbirds.org/guide/search

Comprehensive information on North American bird species.

WHSRN, the Western Hemisphere Shorebird Reserve Network:

A science-based, partnership-driven, conservation initiative for protecting the ecological integrity of critical habitats for shorebirds throughout the Americas. To learn more about WHSRN and the various certified shorebirds sites, check out the links below:

www.whsrn.org

www.whsrn.org/whsrn-sites/map-of-sites



INTERESTED IN LEARNING MORE
ABOUT SHOREBIRDS? CHECK OUT
THIS CURRICULUM RESOURCE!



The Canadian Edition of the Junior Shorebird Journal is published in Canada by **Nature Canada**. Nature Canada is Canada's oldest national charitable organization dedicated to nature conservation. Our mission is to protect wildlife and habitats through public outreach and nature advocacy.



The Junior Shorebird Journal and Activity Booklet is a project of **Environment for the Americas**, home of World Migratory Bird day with Support from the **Bureau of Land Management**.



Environment and
Climate Change Canada

Environnement et
Changement climatique Canada



FirstLine
FOUNDATION

Interested in learning more? Check out these links!

www.naturecanada.ca

www.naturecanada.ca/naturehood/resources

www.environmentamericas.org

www.migratorybirdday.org