

# Habitat Conservation Area

*A Self-Guided Interactive Tour Activities*





## Building a Wormery

**Materials:** 2-3 level container, Red Wiggler worms, compost/kitchen waste, drill, plastic faucet and nut, plastic bottle.

To observe soil creatures in action, such as earthworms, you can build your own wormery! Wormeries turn kitchen waste into nutrient dense fertilizer by combining compostable material with earth worms. Wormeries are made of two compartments, usually vertically on top of each other. The top compartment is where the worms live and where you put the kitchen scraps. The bottom compartment will hold the liquid waste, which can be drained and used as liquid feed for your plants.

To assemble the wormery, purchase a plastic storage container with at least two levels. At the top of the compartment, drill quarter inch holes approximately every two inches. This will allow liquid to drip to the bottom. These holes will also improve air flow, which will create a better environment for your worms. If your storage container has three levels, drill holes in both the top and middle levels. For the bottom tray, drill a hole on the front side near the bottom of the tray and attach a plastic faucet. Screw it in tightly and attach a nut to the back to avoid leaking. This will make it easier to drain the liquid out of the bottom container.

Once the plastic storage container has been altered, it's time to add the worms! The best species of worms to use for composting are, "Red Wigglers." To find these worms search your local Kijiji listings, PetSmart, or by googling where to find them in your area.

After purchasing your worm friends, the first step is to lay down a 3" layer of compost as bedding material in the top compartment. If the compost is dry, try adding water, as worms enjoy a warm, moist environment. Once the worms are added to the bedding material, add some kitchen waste (no more than 5") on top. This will give the worms plenty of nutrients to survive off. Give the worms some time to break down the compost before adding more kitchen waste and try to avoid adding too much food at one time. If your storage container has three levels, you can swap the middle and top containers once the top becomes too full. After adding kitchen waste to the empty top container, the worms can migrate through the holes to get to the food.

Although most kitchen waste can be put into the wormery, there are some foods that should be limited/avoided. You should avoid adding meats or animal products (eg. cheese) as it could attract flies. You should also limit adding too many citrus peels and alliums (eg. onion, garlic, chives). These fruits/vegetables might create an environment that is too acidic for your worms to survive.



When choosing a place to keep your wormery, ensure it is in an area that is warm and moist, but not too hot or cold. To maintain the preferred temperature, be sure to place the wormery in the shade throughout the summer months and moved indoors in the winter.

Once you have allowed your worms to do a bit of work, a liquid known as worm tea will compile in the bottom tray. This liquid is dense with nutrients and adding it to plants will maximize its growth. Mix one part of the worm tea into ten parts water before adding it to plants.

## Create-A-Plant

**Materials:** Paper, pens/pencils/pencil crayons, book on plant parts/functions (optional).

A great activity that showcases plant anatomy and their functions is our, "Create-a-Plant Activity!" All you need is a piece of paper, writing utensil and imagination to create your own fictional plant. Choose a wetland or grassland habitat and a special adaptation that helps the plant thrive in that particular environment. The sky is the limit when choosing the plants name, adaptation or appearance!

To create a plant, fold paper into three sections on the long side of the paper. The piece of paper will have folds that resemble a brochure. Each section on the piece of paper will represent a part of the plant - top (flower, fruit, seed), middle (stem, trunk, body of plant in any form), and bottom (roots). The class or group will be divided into groups of 3 with each person drawing one of the sections. They can choose to work together or create that section on their own. Use a book that outlines the different types of plant parts and their functions. Once the plant has been created, assess the plant and determine three things: a name for the plant, one adaptation this plant has for survival, and the habitat where it will live. Remember this plant is fictional, so use your imagination to make the most interesting plant ever created!

## The Crab Spider Pollination Game

**Materials:** pollen (eg. popsicle sticks, balls, pieces of paper), running shoes.

The crab spider game is an exciting way to highlight the predator/prey dynamic between pollinators and crab spiders, as well as the process of cross pollination. Crab spiders camouflage very nicely with flowers, so they tend to rest on the flower tops waiting for their prey, such as butterflies (pollinator), to come along. Since they blend in with the petals, the butterfly may not see the spider and come down for a tasty treat of nectar. Little do they know that they are the tasty treat for the crab spider!



In this game, you will be crab spiders resting on flowers looking for food. Depending on how big your group is, you will need 1-4 volunteers to be crab spiders. The rest of your group are going to be pollinators in search of pollen. They will have to grab pollen (eg. popsicle sticks, balls, pieces of paper) from the base of the flower, which is at the base of the spider's feet. The crab spider will not be able to move their feet or leave their flower, and can only tag the pollinator using their hands. Should a pollinator be tagged, they immediately lose all the pollen they have gathered and die a dramatic death! This is the pollinator's (persons' chance to act out their best death scene. The pollinators will then become a crab spider once they have been tagged. The game is over when all pollen has been collected, or if all pollinators have been tagged.

## Construct A Pollinator Garden

Materials: Native plants, shovel, water.

Due to human interference, native pollinators, such as bees and insects, are disappearing at an alarming rate. One of the best ways to help prevent the extinction of pollinators is to plant a pollinator garden! Not only will it help the struggling pollinator species in your area, it will also make your garden/backyard a native plant sanctuary!

The first, and most important step when making a pollinator garden, is to carefully select what native plants to use. When choosing plants, it is beneficial to the pollinators to provide plants with different sizes. Since pollinators come in a variety of shapes and sizes, a combination of small and large flowers will allow a broader range of pollinators to visit your garden. Visiting a local nursery and asking for suggestions on what native plants to include in your garden could save you additional research.

When deciding what to plant your native flowers in, you will have a couple different options. The first and easiest option is to plant your flowers in bare soil. This allows maximum sunlight to reach your plant. Another option is to lay mulch or wood chips over the soil, allowing moisture to stay in the soil longer. Both are good options, and choosing the best option for your garden depends on how much sunlight the area receives. If your garden is in an area that receives lots of sunlight, mulch or wood chips might be beneficial for your garden as the moisture will stay in the soil longer.

Lastly, insects are vulnerable to chemicals, so be sure to avoid the use of pesticides or insecticides in your garden. An alternative to using pesticides is to use compost to strengthen the plants. This method is both beneficial to the plants and pollinators, as the plants will get an abundance of nutrients, and the pollinators will not be injured or killed by unwanted chemical. Below are two resources that can assist you in your selection of native plants.



<https://cwf-fcf.org/en/resources/encyclopedias/native-plant-encyclopedia/?src=menu>

<https://cwf-fcf.org/en/explore/gardening-for-wildlife/plants/buy/native-plant-suppliers/>

## Spring Migratory Bird Scavenger Hunt

**Materials:** Migratory bird checklist (attached), pencil/pen, binoculars (optional), camera (optional).

One of the best ways to learn about migratory birds is to visit the Wascana Lake Migratory Bird Sanctuary! Throughout the year, over 115 migratory bird species will call Wascana Lake home, whether this is for a couple hours, a few days, or for all the summer months. Spring is a particularly exciting time to look for migratory birds, as many are returning for breeding after spending the winter in a southern, warmer climate.

An exciting way to identify and learn about the migratory birds visiting Wascana Lake is by completing our Spring Migratory Bird Scavenger Hunt! All you will need is a copy of the scavenger hunt and a pen/pencil. If possible, you could also bring binoculars and a camera, as this will make it easier to identify the species. The scavenger hunt is split into two categories, wetland and grassland/forest migratory birds, so make sure you are looking in the water as well as the grassland surrounding the lake. Go out and visit the Wascana Lake Migratory Bird Sanctuary and see if you can find and identify all ten of our frequent spring migratory visitors!

## Create Your Own Spring Migratory Birds Map

**Materials:** A map of North America (attached), 10 different coloured pens/pencil crayons, book highlighting migratory bird paths (optional), an online migratory bird resource (optional).

In the spring, the Wascana marsh is always an exciting destination as the Wascana Centre falls along a popular migratory bird route. Whether the birds are stopping for a couple hours, days or months, the marsh is a buzz with new and different bird species each day!

A fun activity to do in combination with the Spring Migratory Bird Scavenger Hunt, is to create your own migratory bird map! All you need for this activity is the attached map of North America and ten different coloured pens/pencil crayons. For each of the following species, draw a line from where the species starts and ends its migration (hint: all species can be found at Wascana Lake in the spring). This activity illustrates the diversity of migratory birds that will visit Wascana Lake, as well as demonstrates how far some migratory bird species will travel before making an appearance at



## Wetland

Mallard Duck- one of the most abundant visitors to Wascana park. Mallards are large ducks with large bodies, round heads, and flat bills. Male mallards have a dark green head, while the females and juveniles are brown with orange beaks. During most of the year they will reside in the Mid-West United States and may move further south during wintering, often as far south as Alabama or even Mexico! In the spring, many Mallard Ducks will enter Canada for breeding. An interesting fact about Mallard Ducks is that they can fly up to 110km/h and can take off in a vertical direction from the water if needed!

American Black Duck- The main difference between a black duck and a mallard duck is the colour. Male black ducks have a dark brown body and a pale brown head with a yellow bill. Females have a dark brown body with a light brown head and a dull brown bill. Black ducks reside on the east coast of North America but can come as far as Wascana Lake in the spring for breeding. I know you are thinking “why are they called black ducks if they aren’t black?” Well that is because they look black from a distance! An interesting fact about black ducks is that they can live for a very long time, and the current record is believed to be 26.5 years!

Mute Swan- An adult Mute Swan is identified by its large white body, long neck, bright yellow bill, and black skin around the face. The immature Mute Swans have a smaller body, and a paler, pinkish bill. Mute Swans winter in the Southern USA and spend their summer breeding months as far north as the North-West territories! This means they are only making a pit stop in Wascana before continuing their migration. An interesting fact about mute Swans is that they are very territorial. They pose with their neck curved back and their wings half raised, a position known as busking, which is often used to scare off predators!

Common Merganser- A male Common Merganser is a large duck with a long body and a straight orange bill. It is mostly white, with a green head. A female is identified by its white/brown body and red head with long red hairs extending behind its head. Common mergansers spend most of their time in the northern continental USA and will move north for breeding. For the most part, common mergansers will not breed in the southern prairie provinces and will continue north. This means Wascana lake is a quick stop for common mergansers on their migratory route.

Lesser Yellowlegs- a marsh piper that reside in shallow wetlands across North America. They are identified by their bright yellow legs and thin bill. Lesser Yellowlegs spend their nonbreeding time in the southern USA and can go as far south as Central America. They travel a very long-distance



during migration, as they make their way as far north as Yukon and the North-West Territories for breeding. If you see Lesser Yellowlegs at Wascana, odds are it is just stopping for a short amount of time before it continues its journey north. An interesting fact is that the young Lesser Yellowlegs are precocial, meaning that they are hatched in an advanced state and can start walking and feeding itself immediately.

## Grassland/Forest

Bobolink- small birds that are often seen perched on a grass stem. Bobolinks are identified by their white back and black body, along with a yellow patch on the back of their heads. Bobolinks are known as a long-distance migrant, and travel over 20,000km's during a year. Bobolinks are known to breed in the grasslands around Wascana Lake, but when they are not breeding, they can travel as far as South America! An interesting fact about Bobolinks is that they can orientate themselves with the earth's magnetic fields, using the iron oxide in its nose and in the tissues around the olfactory bulb in its brain.

Yellow Warbler- one of 50 species of warblers in North America. Adult male Yellow Warblers are small, bright yellow birds with a round head and a beady black eye. Females are also small with a black eye but can be distinguished by its yellow/green back. Yellow Warblers are long distance migrators, as they spend their non-breeding time as far south as Central America and visit Wascana Lake in the spring for breeding. An interesting fact is that the nests of Yellow Warblers are often parasitized by the Brown-headed cowbird. To combat this, Yellow Warblers will build a new nest directly on top of their old nest and their nest towers can become six tiers tall!

Baltimore Oriole- The males can be identified by their black heads and back, and their bright orange bodies. The females have more of a brown/yellow head and body with a brown back. Baltimore Orioles are considered medium to long distance migrants. They spend their non-breeding time in Mexico/Central America and migrate to Wascana for their breeding season. An interesting fact is that their diet consists of fruits and berries, and they sometimes practice an unusual eating method known as gaping. They will insert their beak into the berry, and then spread their beak apart, creating a tunnel and using their tongue to consume the juices.

Cedar Waxwing - one of the most popular birds to look for at the Habitat Conservation Area at Wascana Lake. The adults have a smooth, multicolored appearance with brown heads and backs with yellow bodies. One of the best ways to identify a Cedar Waxwing is by looking at for a single red droplet on their wings. The purpose of this red droplet is unknown, but it may be to attract a partner. The Cedar Waxwing has a unique migratory pattern as they can often overwinter around Wascana Lake, or



move further north for breeding, and move further south for its non-breeding season. An interesting fact is that Cedar Waxwings love fruit, and often can survive on only fruit for several consecutive months!

Western Meadowlark- known for its high pitched, flutelike whistle. The adult Western Meadowlark can be identified by its bright yellow bodies that run up to their face, and a light/dark brown neck and back. The Western Meadowlark is considered a medium-distance migrant, as it will spend its non-breeding time on the Pacific Coast of the USA before coming to Wascana Lake for breeding. An interesting fact about the Western Meadowlark is they occasionally make their nest with a partially covered roof made from grass and a long entrance tunnel that can stretch several feet!

## Make Your Own Food Chain

Materials: Pen/pencil, white board (optional), paper (optional).

All organisms on earth need energy to survive. Whether it is a plant receiving energy from the sun, or an animal gaining energy by eating a plant/animal, all organisms need to continuously consume energy to ensure their survival. In an ecosystem, plants and animals rely on each other for survival. The interactions between different organisms in an ecosystem are often referred to as a food chains.

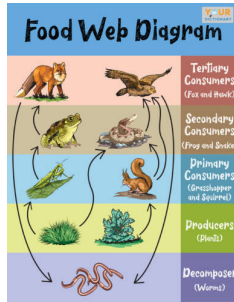
A food chain describes how different organisms eat each other, usually starting with the plants and ending with animals. Each organism in a food chain can be put into one of three categories: producer, consumer, or decomposer. A producer is an organism that provides energy for an ecosystem. An example of this is plants! Plants absorb light from the sun and nutrients from the soil, and are often consumed by other organisms (consumers) in the ecosystem as a food source. A consumer is an organism that can't produce its own energy but relies on eating other organisms to gain energy. Animals are consumers since they cannot produce their own energy. Primary consumers are animals that eat plants, secondary consumers are animals that eat other animals, and tertiary consumers are animals that eat both primary and secondary consumers. Decomposers eat decaying material, such as dead plants and animals, and put nutrients back in the soil for plants to consume. Examples of common decomposers include worms, fungi, and bacteria.

A fun activity to test your understanding of a food chain is to make your own! All you need for this activity is a group of people, the more people the better, and a white board/large piece of paper. Randomly assign everyone into one of five groups: producers, primary consumers, secondary





consumers, tertiary consumers, or decomposers. Each individual will brainstorm a plant or animal based on the category they are assigned to. Starting with decomposers and working your way up to tertiary consumers, get everyone to draw a picture of their plant/animal and where they think it lies on the food chain. Next, draw an arrow towards what the animal/plant consumes to gain energy. Add as many organisms to the food chain as possible, as this will highlight the complexity of an ecosystem! Example:



<https://examples.yourdictionary.com/simple-food-web-examples-for-kids.html>



## Spring Migratory Bird Checklist

### Wetland Birds

### Grassland/Forest Birds

Mallard Duck



Bobolink



American Black Duck



Yellow Warblers



Mute Swan



Baltimore Oriole



Common Merganser



Cedar Waxwing



Lesser Yellowlegs



Western Meadowlark





## Spring Migratory Birds Map

