Blog

Planting Your Own Pollinator Garden

MARCH 22, 2022 BY MONICA SEIDEL LEAVE A COMMENT

by Samantha Cunningham

One of the best things about creating a pollinator garden is the diversity of beauty that can be included! However, not all pollinator gardens welcome the same diversity of species. Bees are the most important and common pollinator type, with over 800 species in Canada! Luckily everyone's favourite gentle friend the bumblebee is not only cute, but a native species as well. Be sure to respectfully admire the females who can sting multiple times unlike the non-native honeybee.

Bees typically prefer open flowers with easily accessible pollen. A good choice of wildflower to support your local bee population is a native Vervain species, such as Blue vervain or Hoary vervain. These wildflowers have beautiful slender purple buds and purple flowers that are favoured by bees and butterflies alike throughout the summer months.

Blue Vervain (Getty Images).

Similar to bees, butterflies and some moths are highly attracted to purple and cool-toned flowers. Unlike bees, butterflies have a tongue that allows them to access deeper flowers, and nectar. In addition to these needs, butterflies also require certain wildflower species to host their caterpillars. You hve probably heard about Monarch butterflies and Milkweed – Milkweed species, such as

Common Milkweed and Butterfly Milkweed provide important habitat and food for many butterflies and moths. They are also low maintenance, flower into beautiful pink-toned bells throughout the summer, and keep unwanted bugs at bay! Make sure not to let anyone but the butterflies ingest it as it is both unpleasant to taste and toxic in large quantities.

Moving over to the largest pollinators in Canada, let us talk about hummingbirds! They are another example of fascinating tongue history as the length is so long it has to coil around their skull. Due to this long tongue, hummingbird species prefer flowers with depth, such as bell and trumpet shapes. A great wildflower family for this is Columbines, including Yellow Mountain Columbine, Western Columbine, and Wild Columbine. Other native species such as Harbell Campanula is a great option for bees and hummingbirds, as well as looking just lovely all summer and into early fall.


Columbines (Getty Images Signature).

When planning your pollinator garden, try to make your flower choices as diverse as possible. Choosing differing heights, colours, shapes, size flowers, and bloom time will help ensure there is something for every pollinator who needs it! Regardless of diversity, all the native wildflower species you plant in your garden will help to support your local pollinator populations. Check with your local eco-region guide for information on native species and suggested plantings. You can also use our Native Plant Database to show you the wide diversity of native plant species well suited for your area, including wildflowers.

Another important way to support pollinators is through maintaining a healthy environment past the garden boundary. Pollinators are incredibly sensitive to the use of pesticides, herbicides, insecticides, and other outdoor chemicals. Beyond pollinators, these chemicals are often harmful for aquatic species and bird species. Methods like companion planting can help control unwanted insect species. Where more environmentally-friendly options are not possible, please ensure to use and store your lawn care products responsibly.

Additional Resources

Pollinator Garden sketch infographic

Wildlife Garden Guide

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This blog post is part of an education and engagement series that is generously funded by the RBC Foundation through RBC Tech for Nature, a global, multi-year commitment to support new ideas, technologies, and partnerships to address our most complex environmental challenges. To learn more about Watersheds Canada's project that is funded through RBC Tech for Nature, please read this media release.

Blog

Get to Know your Pollinators

FEBRUARY 28, 2022 BY MONICA SEIDEL

LEAVE A COMMENT

by Samantha Cunningham

We often talk a lot about pollinators as a general grouping of insects we see in our gardens and hear about on the news. Recently, there are major concerns about the health of honeybee populations in North America and how a decline in pollinators has many severe implications. Aside from honeybees, there are about 800 other species of bees in Canada, and as well as countless other species of butterflies, moths, beetles, and hummingbirds that are considered pollinators. Today we want to get to know some of Canada's lesser-known pollinators!

But first, an important side note. Bats are a critically important pollinator in North America, but not present in Canada as a pollinator. Supporting Canadian bat species is still important to maintaining a well balanced ecosystem. However, if you like tequila or mizcal, you should especially care about bats as pollinators in other countries!

Bees

As bees are the most common and important pollinator (with over 800 species in Canada), let us get to know a native species found across Canada. The Mining Bee does indeed mine, or burrow, into the ground to make a nest and raise its young. These bees are only active in the springtime, which is why historically they were believed to be the original primary pollinator of native fruit trees and other food sources. Typically, they are a fuzzy rust colour, and they are docile with their sting being too weak to penetrate human skin. In addition to being an important pollinator, these bees also help to aerate the soil through their nesting activities.

Butterfly

The Canadian Tiger Swallowtail present from the bottom tip of Ontario, across the country, and up past the Arctic circle. You can often find males huddled around puddles to get nutrients and water. They are a very common, and beautiful, pollinator species found in Canada. With a wingspan of up to 8cm they have a large wingspan to transport pollen! Swallowtail presence in your garden can also help to deter predators like birds and lizards.

Canadian Tiger Swallowtail (Simon Lunn).

Bird

Ruby-Throated Hummingbird is another species spread across virtually all Canadian provinces. Its presence is only in the warm months as these hummingbirds spend the winters in Central America. It has been proven that these hummingbirds fly the 800km over the Gulf of Mexico in a day and they do not hitchhike on the backs of other birds as previously thought! Another curious feature of these cool little creatures is their ability to remember the placement of food sources from the previous summer. If you are looking to attract some hummingbirds to your property, pick tubular shaped flowers, or use a hummingbird feeder and keep it in the same area of your property year to year. Make sure to keep the food source away from windows, and keep the space dedicated to hummingbirds and not near other bird feeders or food sources. This is because hummingbirds are very defensive over their food! Make sure to regularly clean your hummingbird feeder, too. While being beautiful and a great pollinator, ruby-throated hummingbirds also consume smaller insects like spiders and aphids, making them a great defence for your garden.

Male Ruby-throated Hummingbird (Simon Lunn).

There are over 1,000 species of pollinators in Canada that support our agricultural industries and who are critical for general ecosystem health. Not only do these species complete the important task of pollination, they also fill other ecological niches in their environments. Supporting pollinators is a key component of promoting a well-balanced ecosystem on your property and beyond!

Pollinators are primarily threatened by habitat loss and degradation, and pesticide use. As individuals, we can all do our part by avoiding the usage of harsh lawn chemicals and by planting native flowering plants wherever possible. A great place to start to naturalize your shoreline property is our Natural Edge Program, including the Wildflower Garden Guide, and Native Plant Database where you can see what native plant species are best suited for your eco-zone. Whether you create a designated pollinator garden or just add some wildflowers among your normal plants, every little bit helps to support these important creatures.

For everything pollinator-related, be sure to check out the Pollinator Partnership.

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10 Ways to Enjoy Nature this Winter

JANUARY 27, 2022 BY MONICA SEIDEL LEAVE A COMMENT

by Nicole Davy

While Ontario winters can be cold and dark, there are still many ways you can enjoy the outdoors and spend time in nature. This list of ten ways to enjoy nature this winter will inspire you to get outside, help local species, try a new activity, and appreciate local nature with your whole family!

1. Build a Winter Shelter

The word 'quinzee' or 'quinzhee' is of Athabaskan origin. A quinzee is a Canadian winter shelter made of snow that is shaped and hollowed out. They can be built for survival purposes, winter camping, or for fun! Make your own quinzee with your family this winter using our step-by-step instructions:

How to Build a Quinzee

History

The word 'quinzee' or 'quinzhee' is of Athabaskan origin. A quinzee is a Canadian winter shelter which is made from snow that is shaped and hollowed. They can be built for survival purposes, winter camping, or for fun!

Instructions

Step 1: Make a Pile of Snow

Shovel a pile of snow that is about 5-7 feet tall and 6-10 feet in diameter

Step 2: Shape the Snow

Shape the snow into a rounded mound

Step 3: Let it 'Sinter'

'Sintering' your shelter is the process of hardening the snow through heat and pressure so that it refreezes stronger. Simply let your quinzee sit for 1.5- 2 hours and take some time to warm up with a hot chocolate!

Step 4: Hollow Out your Shelter

Carve out the inside of your shelter. Start by making an entrance on the downhill side of the pile. Then, remove the snow from the inside of the dome and make sure your ceilings are no thinner than 12 inches. Some people poke sticks through the top of the quinzee to help create an even thickness.

Step 5: Add the Final Touches

Add a hole on the top of your quinzee for ventilation. Take time to to make your quinzee feel like home by building a sleeping platform and adding decorations. Inspect your quinzee to make sure it is safe before using it.

Step 6: Enjoy!

Photos by Marc Dufresne

Watersheds CANADA

Watersheds Canada's how to build a quinzee PDF instructions

2. Study a Snowflake

Did you know the temperature and humidity of a cloud affects the shape of snowflake crystals? Take time to admire the unique beauty of nature this winter by catching a snowflake on your mitt and then studying it! Once you get back inside, draw out the snowflakes you saw or make paper snowflakes and hang them around the house.

3. Make a Winter Home for Pollinators

The work of pollinators, like bees, ensures successful harvests of crops and contributes to healthy plants everywhere! That's because pollinators visit flowers and move pollen around, ensuring plants like wildflowers and crops are fertilized. About 1 out of every 3 bites of food you eat is possible because of our precious pollinators. Help them this winter by building a "bee hotel" that they can find shelter in.

4. Try out a New Winter Sport

Strap on your snowshoes or a pair of cross country skis! Many community groups rent out equipment and trail maps, making this an accessible option for families. Winter is a great time to try new activities that help you stay active and enjoy time outdoors. If you are already a pro, find a friend or family member to teach so that you can spend time in nature together!

5. Listen to the Sounds of Nature

Spend 5 minutes listening to the sounds of nature to create a peaceful moment in your day. How many unique sounds can you hear? Consider starting a nature journal as a way for you to remember and organize what you see, smell, and hear while outside. You will collect your observations and questions about your nearby nature using words, drawings, and data. Remember, you do not need to be an artist to get started! What is important is that you take time to listen to nature and meet some of the species that live in your neighbourhood.

6. Go on a Nature Scavenger Hunt

Head outside and take part in a winter scavenger hunt! Icicles, pinecones, and birds are just a few of the items for you to find during this fun activity. Make it a competition or work together as a family to check off as many items as possible.

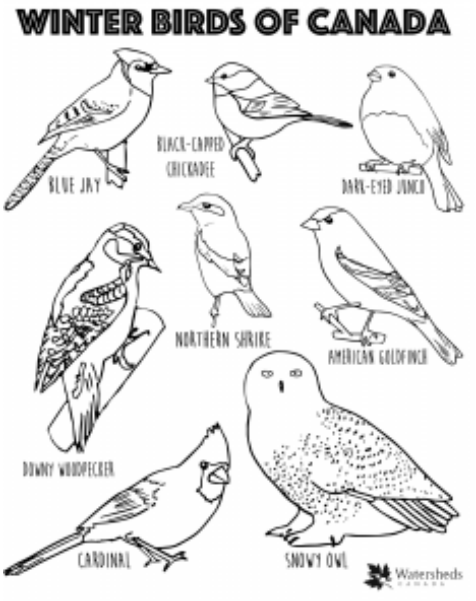
Watersheds Canada's winter scavenger hunt PDF download

7. Go for a Hike

Connect to nature this winter by going on a hike! Research shows that exposure to nature can positively affect your mental health and physical wellbeing. Be sure to follow all posted signs and boundaries on trails and leave only footprints so others can enjoy trails and hiking areas after you leave.

8. Search for Winter Birds

Just like us, some animals stick around for the winter! Head outside and see how many species of birds you can find. Looking to get your little one out for their first bird watching adventure? Use our winter birds colouring sheet which highlights common Ontario winter resident bird species! Spot something that's not on our colouring sheet? That's what the blank back of the sheet is for – draw away!



Watersheds Canada's winter birds of Canada colouring sheet PDF download

9. Find Animal Tracks

Become a detective and use animal tracks as clues to find out who has been in your own backyard! If you visit a natural area that gets a lot of foot traffic, be sure to look off the trail – people's boot prints will make it hard for you to find animal tracks. If you have never tracked an animal before, a good way to get started is to watch an animal make a track and then go look at the track right away. How does it compare to your boot print?

10. Warm Up Next to a Campfire

Campfires are a great way for people of all ages to enjoy the outdoors. Connect with your friends and family around a campfire this winter! Share stories, make s'mores, or see how many animals you can make in the shadows using your hands. Be sure to monitor your campfire at all times and go over fire safety with any young ones.

Thank you for reading this article! It was written by staff at Watersheds Canada, a national non-profit charitable organization that works with landowners, students, community groups, and organizations to enhance and protect their lakes, rivers, and shorelines. Watersheds Canada envisions people across the country caring for their waters, resulting in clean, healthy lakes and rivers to support humans and wildlife for years to come.

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Know, and love, your lake!

NOVEMBER 2, 2021 BY MONICA SEIDEL LEAVE A COMMENT

by Mario Garavito

In its simple definition, a lake is a body of water that is surrounded by land. A lake can be found in every continent around the world, varying greatly in size and in depth. It could be small enough to fit in your backyard – like a pond – or so big that it is known as sea – the Caspian Sea is the world's largest inland lake, measuring over 371,000 km^2 in size!

Canada is exceptionally fortunate when it comes to lakes. According to different studies, our country is home to the largest number of lakes in the world, with about 7.6% of Canada's nearly 10 million km^2 being covered by freshwater. Therefore, despite an apparent abundance, the freshwater resource must be managed carefully. We have a responsibility of protecting these important bodies of water!

Lake-side adventures (photo: Mario Garavito).

Why are lakes important?

Lakes are ecosystems: areas where biological energy flows through a food chain that is used by many different types of organisms like birds, mammals, plants, and insects. In other words, a lake is a community where living organisms live and interact. Its health is vital for maintaining the equilibrium, or balance, of the whole system.

***Did you know**: Some scientists believe the first living organisms on Earth developed in lakes?*

Likewise, lakes are important in preserving and maintaining wildlife populations. These freshwater areas serve as migration stops and breeding grounds for many birds and as refuges for a wide variety of other animals. For people, lakes are valuable resources in a variety of ways. For example:

- Farmers use lake water to irrigate crops;
- Lakes supply many communities with water; and,
- Because they are often very beautiful, lakes are popular recreation and vacation spots, and, for some fortunate ones, their permanent homes.

Is my lake healthy?

We are completely sure that if you are reading this article, you care about Canada's lakes. Because of that, you probably wonder if the lake where you live or which you constantly visit is in good health. The answer is not as simple, as not all lakes are alike, but there are some common aspects that can help to make a first evaluation:

- **Healthy characteristics:**
  - **Life**! If you see fish and plants, it is a good sign;
  - **Turbidity**: the less, the better;
  - **Wildlife**: have you seen deer or other animals drinking water from the lake?
  - **Water circulation**: allows oxygen to be spread throughout the lake and is an essential part of keeping the lake alive.

Pied-billed Grebe with baby (photo: Simon Lunn).

- **UNhealthy aspects:**
  - **Eutrophication:** when a lake gets too many nutrients, it causes blue-green algae growth;

- **Blue-green algae** (cyanobacteria): It stays on the surface of the water and forms a sort of mat. When the conditions are just right, the algae multiply quickly. This is called an algal bloom and is harmful to lakes, animals, plants, and people; and
- **Invasive species**: can change the natural habitat of the lake and are known as biological pollutants when this happens.

Algae bloom (photo: Barbara King).

What can I do for my lake?

There are many actions that you can take to protect and take care of your lake. At Watersheds Canada, we have been working all over the country alongside local community groups and individuals with the mission to protect and restore freshwater. One of them is **Love Your Lake,** a shoreline evaluation and stewardship program that provides individuals with a property specific report outlining voluntary actions that can improve the health of your lake and shoreline property.

The Love Your Lake Program has successfully assessed more than 150 lakes across Canada which includes almost 40,000 shoreline properties. You can learn more about the Program at loveyourlake.ca

Also, we would love to know which is your favourite lake in Canada and what you are doing to protect it. We invite you to write it in the comments and share this article with some friends or family that **love the lakes as much as you**. You can also fill in this short survey to let us know what you love about your lake: loveyourlake.ca/survey

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Using Benthic Macro-invertebrates as a Way to Assess Aquatic Pollution Levels

AUGUST 24, 2021 BY MONICA SEIDEL LEAVE A COMMENT

by Ian Grist

If you are a property owner with a river, creek, or stream nearby, you may be concerned or curious about the health and pollution levels in the water. There are ways you can find out the contaminate levels present in your water by what aquatic organisms you observe. In particular, benthic macro-invertebrates are excellent bio-indicators of freshwater health. Macro-invertebrates do not have a backbone and are visible to the naked eye. They live on the bottom of a water body, often in the substrate. Since they spend large parts of their lifecycle in the water, they are very sensitive to different levels of pollution they encounter over their lifetime.

Researchers use macro-invertebrates as bio-indicators, or "living indicators", because of their short life-cycle, the fact that they are all genetically similar, and because of their sensitivity to a broad range of contaminants and pollution. In each aquatic ecosystem, there are tons of different macro-invertebrate species present and every species has different tolerance levels to pollution. For example, *Daphnia sp.* (pictured below), also known as water flea, is very sensitive to contaminants. Finding these species in your stream is a good sign of a healthy ecosystem. The presence or absence of zooplankton is also a good indicator of a polluted stream or river.

Some of the low tolerance macro-invertebrates include caddisflies, dragonflies, water pennies, stoneflies, and mayflies. Finding these means the ecosystem is healthy. If, however, you only find any black flies, aquatic worms, or midges, this may indicate your stream or river is contaminated as these species are all tolerant to higher levels of pollution.

I encourage you next time you are out on the water to bring a net and some small containers to see what species of benthic macro-invertebrates are in your local stream or river. Not only will you discover a bit more about the health of your local aquatic ecosystem, but you can also submit your findings to an online citizen science platform like iNaturalist. Happy adventuring!

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Finding Optimism this International Youth Day

AUGUST 12, 2021 BY MONICA SEIDEL 1 COMMENT

by Nathaniel Holloway

From the point of view of a twenty-one year old student, the future seems uncertain. While I am an optimistic person, it is hard to ignore the constant flow of warnings from scientists. These warnings make me worry for the survival of our lifestyle and—much more importantly—future generations. However, humans have historically developed technology to meet demands which were previously thought insatiable (e.g., the green revolution which attempted to intensify and perfect agriculture methods to increase yields of crops for a growing population). The optimist in me believes that humans will find ways to reverse the damage done to Earth's ecosystems, but I am also a realist in that I understand that remediating change is happening slowly and the Earth is only experiencing more ecosystem damage, species loss and warming at a faster pace.

These realisations can often have a negative impact on my mental health as a feeling of hopelessness and, to some degree, nihilism set in. During these times, I try to remember that nature can be resilient, that environmental awareness and activism is gaining traction, and that society's views and habits have changed and will continue to change at a faster pace. What I find most important is to not give into the bitterness and lose interest in becoming part of the solution—instead becoming part of the problem.

Photo credit: Ransan, 2012.

All of this said, I often come back to: "what can I do in this moment with the resources at my disposal?" While I cannot do much as I am still in my studies with minimal income, I do look to correct my own habits. I attempt to refrain from wasting electricity and water, purchasing products packaged in or made out of plastic as well as "impulse" buys and other unnecessary items. I carpool and refrain from driving whenever possible and only utilize air-conditioning when it is absolutely necessary. I also avoid the consumption of animal products and "problematic" resources (e.g., palm oil) due to the environmental impacts related to their cultivation. All of these actions can benefit the planet and lessen my Ecological Footprint.

While these actions may seem trivial when compared to the problems being tackled worldwide, I find it important to remember that I am only one person. Though I may not be able to change the world just yet, I *can* change what I think and do. I may not have much of an impact on the world, Canada, or even my hometown, but I *can* sure make a difference in my house, backyard, and perhaps with lots of hard work, my neighbourhood and local forests and waterbodies. That is what I hold onto this International Youth Day, August 12th.

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Blog

Happy World Snake Day!

JULY 16, 2021 BY MONICA SEIDEL LEAVE A COMMENT

by Samantha Cunningham

While we think of snakes primarily as predators, they are both predators and prey! This makes them a key component of a healthy, balanced ecosystem. These slithery serpents help keep pest populations under control by eating insects, rodents, and small mammals. They are nature's pest control and they are particularly good at protecting gardens from slugs and other nuisances! Snakes are also preyed upon by birds and larger mammals.

Fun Fact: Snakes, while typically thought of as solitary animals have been shown to develop and enjoy companionship with other serpents of the same species!
Source: Pennisi, 2020.

The most common and widely distributed snake in Canada is the harmless Garter snake. There are six types of Garter snake which can be found across the country from coast-to-coast and even up into the Northwest Territories. Including the Garter snake, there are 25 different snake species in Canada. Exterminating snakes is prohibited due to their minimal risk to humans and large ecological benefits. Some species are also listed as Species at Risk in Canada and individual provinces.

Garter snake. Photo: Monica Seidel.

According to the Canadian Wildlife Federation, there are currently only three species of venomous snakes in all of Canada. All three are registered Species at Risk. The first species is the Western Rattlesnake which has a small population in British Columbia in the Okanagan region. The second is the Prairie Rattlesnake which is found in southern Saskatchewan and Alberta. The final one is the Eastern Massasauga which is only found in central and southern Ontario.

The greatest threat to all snake species is humans. From habitat development to road mortality to targeted persecution by people, these snakes have much more to fear from us than we do them. In fact, snakes tend to be very avoidant of humans and will give warnings before defending themselves when cornered or threatened. What is far more likely to happen is for a startled snake to disappear in the blink of an eye to get away from you! If you get to see a snake sitting still, you can use Apps such as SnakeSnap and iNaturalist to help identify snakes from photographs in real-time! You will most likely see them sunning themselves on a rock, so keep your distance, use your camera's zoom, and learn something new!

Did you know? You are more likely to be hit by lightning than bit by a snake in Canada! There are less than a dozen snake bites reported each year.
Source: Cottage Life, 2018.

Smooth Green Snake. Photo: Simon Lunn.

There are many things you can do to stay safe around snakes, venomous or not! The first and best rule is to leave the snake alone. If you come across one, especially if venomous, stop and back away slowly. Do not approach or try to handle or touch them. Most

snakes do not want to see people and will leave or hide when confronted. Here are some other ways the Canadian Wildlife Federation suggests to keep some distance between you and our serpent friends:

- Wear long pants and closed-toed shoes when walking in rocky areas or long grasses (also good for tick protection);
- Have a light when walking at night;
- Do not stick your hands where you can't see. Shine a light, use sticks or other materials to check under plants or rocks, or better yet, leave it be; and
- Keep your pets on a leash and on the trail.

If you ever find yourself threatened by one of these venomous snakes contact your local provincial wildlife department to intervene.

The best policy to co-exist with these important creatures is to mutually ignore each other. Leaving areas natural or reintroducing naturalized areas to your property can help encourage snakes to remain in that habitat and away from other areas of your property. Check out the free Natural Edge Native Plant Database for more information about suitable native plant species for any eco-zone found in Canada.

While not all of us have pleasant relationships with snakes, it is important to remember co-existing provides numerous benefits for humans and snakes alike.

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- Canadian Herpetology Society: http://canadianherpetology.ca/

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Happy Earth Day! 3 Free and Easy Ways to Create Wildlife Habitat

APRIL 22, 2020 BY MONICA SEIDEL LEAVE A COMMENT

Many of our native wildlife populations are declining due to urban development and the removal of natural habitat features. However, there are many ways that landowners can preserve and create habitat on their property so that we can co-exist with these species. Celebrate Earth Day by protecting sensitive shoreline habitats and the wildlife that live there.

In many cases, creating wildlife habitat is as easy as doing nothing! Allowing vegetation to grow naturally to create "no mow" areas, leaving aquatic and terrestrial logs in place, or removing leaf litter are all examples of how you can preserve wildlife habitat by doing nothing.

Create a "No Mow" Zone

Creating a "no mow" zone can be a good way for shoreline landowners to start adding wildlife habitat to their property. Manicured, mowed lawns that are missing natural features like trees, logs, or leaves create a very poor habitat because there is no shelter or food sources available. One exception is Canadian Geese who are known to be attracted to mowed lawns along the water because they prefer open visibility and easy access to spot and escape from predators.

Leave Aquatic Logs

Fallen trees and woody debris that settle along your shoreline, partially or fully in the water, provide crucial habitat for fish, birds, and reptiles like turtles. Fish use woody debris as a shelter from predators, a place to lay their eggs, and to find invertebrates to eat. Turtles need these habitat features to bask in the sun because as reptiles, they receive energy from the sun's warm temperatures. Waterfowl like ducks and herons use partially emerged logs as resting spots, as well as a place to look for food.

Leave Terrestrial Logs and Leaf Litter

Terrestrial logs, old stumps, fallen branches, woody debris, and leaf litter are essential habitat for small mammals, birds, toads, salamanders, and an abundance of insects. As the log rots, reptiles and amphibians lay their eggs in the moist wood. A decaying log is home to many insects like beetles and ants that burrow under the bark. These insects provide valuable and nutritious food for many other wildlife species. Additionally, these structures provide valuable shelter and protection from predators. In the fall, the leaves that drop off nearby trees add insulation and shelter before the winter as well as adding decaying organic matter and nutrients to the soil.

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Wildlife like fish, birds, mammals, amphibians, and reptiles are the citizens of the natural world. They maintain the environment through actions like pollination and nutrient cycling while also amazing us with their natural beauty. Using these simple and free methods, you can help protect critical habitat areas and food sources on your property for wildlife for years to come.

To learn more about creating shoreline habitat on your property, visit http://naturaledge.watersheds.ca

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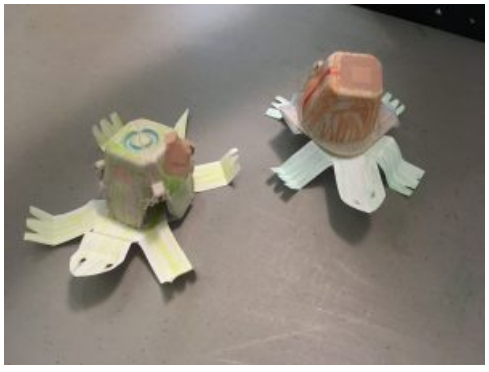
7 Free Educational Resources to Help You Teach about Nature at Home

APRIL 3, 2020 BY MONICA SEIDEL LEAVE A COMMENT



Helping with homework and trying to maintain a schedule for children during these challenging times is something we understand many parents are struggling with at this time. Now, with the likelihood of extended school closures, parents and educators are scrambling to find educational and free resources to keep their children occupied while at home. Here are 7 free educational and curriculum-linked resources to keep children of all ages (and adults too!) occupied, learning about nature, and having fun:

1. National Geographic Learn at Home Resource Library (K-12)

With schools and after-school programming being cancelled across the world, National Geographic is stepping in to make sure learning doesn't stop. Their large, curated resource libraries have lessons, activities, games, and crafts for children in kindergarten all the way to grade 12. These lessons require few supplies and offer extensive online footage and content to keep every student engaged.

2. Canadian Geographic Online Classroom (K-"grey")

For more northern examples and case studies, educators, parents, and students can look to the new Canadian Geographic Online Classroom. With new activities, lessons, and resources being posted every day for kindergarten to grade "grey" (learning is for

everyone!), students can already look forward to lessons about the Anthropocene, plastic pollution, and backyard biodiversity, to name a few.

3. Ranger Rick Resources (all ages)

Ranger Rick is a raccoon character from the National Wildlife Federation, America's largest conservation organization that gives a voice to wildlife. Because of schools being shut down, the Ranger Rick website is offering their paid subscription content for free until June 2020. This includes free access to educator guides, parent reading guides, free digital subscriptions to various *Ranger Rick* magazines, crafts, games, recipes, videos, jokes, and a photo contest just for kids.

4. Cornell Lab K-12 Education (K-12)

The Cornell Lab of Ornithology is a leader in bird conservation, research, and education focused on birds. They offer many citizen science programs such as Project FeederWatch and eBird which allows individuals to report their bird sightings to a large database. This data can then be used in policy decisions and academic literature, all while fostering a love of birds in your child. Their K-12 Education library includes lessons, activities, species identification tools. Resources are available in English and often Spanish too.

5. Ocean Wise Activity Centre & Learning Resources (ages 2-18)

Ocean Wise is a non-profit organization that is headquartered at the Vancouver Aquarium in British Columbia, Canada. Ocean Wise wants to make people "ocean wise" by providing educational workshops and online resources about marine animals and habitats, contributing to research, and leading shoreline cleanups. Their education site includes animal webcams, live streams and virtual classes, crafts, recipes, and complete education kits for educators and parents to use.

6. Audubon for Kids (all ages)

The National Audubon Society uses science and education to help protect birds and their habitats across the Americas. Perhaps you've heard of John J. Audubon and his foundational illustration work in the ornithology (bird) field. Through the Audubon for Kids page, parents can find curriculum-linked lessons, DIY activities, games, art tutorials, and more.

7. TED-Ed @ Home (elementary school to university level)

You may recognize TEDx for their viral 6-12-minute talks on YouTube, but the organization also has an education initiative called TED-Ed. With their recently launched TED-Ed @ Home website, parents, children, and educators can get new video-based lessons, series, and blogs every day, covering topics like literature and language, the arts, mathematics, and social studies. Educators and students can also create and share video-based lessons on the TED-Ed site.

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With so much uncertainty about the current academic schoolyear, homeschooling can feel overwhelming. Remember that you are not alone and there are family members, friends, and organizations all looking to pool resources and knowledge to help every student, parent, caregiver, and educator succeed.

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Blog

Meet Your Butterfly Neighbours

MARCH 12, 2020 BY MONICA SEIDEL LEAVE A COMMENT

By Monica Seidel

Did you know that there are over 300 butterfly species in Canada, with 150 in Ontario alone? While most people are familiar with the iconic monarch and swallowtail butterflies, there are many other species fluttering around that would love to meet you.

Great spangled fritillary

You may have seen this butterfly on a large native plant, like milkweed or spotted Joe-Pye weed. Great spangled fritillaries are found from British Columbia to Nova Scotia, living in marshes, damp meadows, clearings and sometimes along roadsides. They are very active and have wingspans up to 88 millimetres wide! Caterpillars crawl under leaves to hibernate soon after hatching over the fall and awake in the spring to feed on violets. Since fritillary species are very similar to each other, they must rely on pheromones and smell to find a mate of their own species.

Question mark

This is the largest butterfly in the angelwing family and has a wingspan of 45 to 68 millimetres. They are easily recognized by their distinctive wing shape, brown-orange colour and silver question mark shape found on their underside. They can be found in woodlands or urban areas, looking for animal droppings or sap from trees and rotting fruit to eat. This butterfly is thought to migrate to the U.S. for the winter and breed in Canada during the summer, though their migration is not well known.

White admiral

Adult white admirals are usually seen in June and July in Canada in upland hardwood forests, clearings and barnyards, as they are attracted to the strong smell and moisture in poop! White admirals drink nectar from flowers and sap from rotting plants and have a wingspan of 50 to 80 millimetres. The caterpillars feed on willow, aspen and poplar, and other subspecies feed on birch, cherry and oak trees.

More than meets the eye

Butterflies are beautiful, but they also provide an incredible service to the planet. As pollinators, they move pollen from one plant to another, which allows the plant to become fertilized. Pollinators fertilize fruit-producing plants like blueberries, strawberries and pumpkins.

Threats

Butterflies' critical food sources and habitat are impacted by heavy herbicide and pesticide use. Caterpillars often feed on one species of plant, which may be considered a "pest" or an unattractive species that people then mow or pull.

Another threat to butterflies, as with many wildlife species, is habitat loss and fragmentation. As human development replaces natural areas, butterflies are forced to ditches and roadsides where lack of appropriate habitat threatens the viability of caterpillars, and adults are often struck by oncoming traffic. Since butterflies migrate far distances, having suitable habitat across their entire range is not always easy.

How can I help?

You can help butterflies by providing water for them to drink from and bathe in. Natural areas with uncut grass, thistles and milkweed provide food and habitat. Leaf litter and tree debris on your property can provide a hibernation site for caterpillars. You can also plant a butterfly garden that features gorgeous native trees, shrubs and wildflowers.

Make sure to report your sightings to a database like eButterfly, Journey North or iNaturalist. By doing so, you will contribute to conservation research, meet other butterfly enthusiasts and grow your knowledge of local species.

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This article was originally submitted as a guest blog contribution to the Nature Conservancy of Canada's Landlines blog.

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Blog

Canada Prepares to Ban Single-Use Plastics

AUGUST 8, 2019 BY MONICA SEIDEL LEAVE A COMMENT

by Abbey Unsworth, Summer Student – Natural Edge and Love Your Lake

Canada has recently announced a ban on single-use plastics as part of a strategy to combat plastic pollution. The ban is set to take effect by 2021 and will most likely include items such as plastic bags, straws, cutlery, and take-out containers, but the specifics have not yet been determined. The strategy also focuses on companies that manufacture or sell plastic products, putting a responsibility on them for the management and recycling of their plastic waste. Fishing industries will also be included in the strategy with efforts focused on preventing and retrieving discarded fishing gear, known as ghost gear, which contributes to ocean plastic pollution and endangers wildlife (Pope, 2019).

Plastic pollution is a mounting global issue. In Canada, 3.2 million tonnes of plastic waste is produced each year, and only 9 percent of this is recycled. The rest is thrown away, overwhelming landfills and littering our streets, parks, and watersheds. The most commonly found items that are littering North America's coastline are food wrappers, bottle caps, beverage bottles, plastic bags, straws, and stir sticks ("Environmental Impact," 2019). Plastic is not biodegradable and it is widely used for its durability and cheap production costs which causes its persistence in the environment.

While this government ban is a step in the right direction in the fight against plastic pollution, as consumers we need to help by working to reduce our own plastic footprint. There are many simple ways which we can all participate, such as:

- Bringing a refillable water bottle or travel mug for coffee
- Request no straw when ordering drinks, and bring your own reusable straw made from metal or bamboo
- Avoid plastic stir sticks and using a metal spoon instead
- Bring your own reusable cutlery when grabbing lunch on-the-go
- Buy in bulk using reusable containers where possible
- Shop with reusable bags instead of single-use plastic ones
- Look for products that use less plastic in their packaging
- Switch to reusable beeswax or cheesecloth instead of plastic wrap
- Use reusable containers rather than plastic baggies
- Donate or trade unwanted clothing
- Learn proper recycling techniques

When learning about how to reduce your impact, don't get overwhelmed. The world doesn't need a few people doing this perfectly, it needs everyone trying to help imperfectly. Every change counts.

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Blog

The Many Health Benefits of Nature

APRIL 28, 2017 BY JORDEN KEELEY 2 COMMENTS

Written by: Chlöe Lajoie, 2017

Spring is here! That means that it's time to start spending more of your days outdoors. Have you ever noticed how you feel better, both mentally and physically, when you spend some time in nature? There's a reason for that: there are many health benefits related to being outside.

Vitamin D

Vitamin D is an essential vitamin that your body requires to function properly; without it, you're at risk of muscle weakness, increased blood pressure, cardiovascular disease, autoimmune disorders, and even cancer. Vitamin D is unique because its main natural source is the sun. In order to get your daily dose of vitamin D, it is recommended to get 10-30 mins of sun exposure. Spending this short amount of time in the sun is well worth it!

Mental Health

Being outdoors has a number of positive effects on your mental health. It aids in lowering depression, reducing stress, and increasing your focus.

With current increases in depression and anxiety related illnesses, studies show that simply walking outside in nature can reduce stress and increase positivity which, in turn, reduces feelings of depression. Vitamin D, which we know comes from the sun, has been linked to depression levels; low vitamin D levels = a higher chance of depression. So get outside on your lunch break to give yourself a mental boost for the afternoon.

Eye Health

Myopia, more commonly known as nearsightedness, is a refractive error of the eye which causes one to have trouble seeing objects in the distance. It's marked by having difficulty seeing road signs or reading from a chalkboard; however, reading objects up close, such as a computer screen or book, is perfectly clear. Doctors feel it is partly the result of increased computer and TV time and according to a study by the National Eye Institute, myopia has increased from 25% to 41.6% between 1971 and 2004.

Being outside gives your eyes a rest from the strain of looking at a computer or watching television, so remember to take breaks at work and head outside to help keep your eyes healthy.

Air Quality – Clean Air

After being stuck inside all day, there's nothing better than a breath of fresh air! It seems to give you that extra boost of energy just when you need it, and there's a reason for that. Simply put, there is a higher concentration of pollutants present in indoor air compared to outdoor air, largely due to poor ventilation.

Outdoor air contains fewer pollutants since gases and particulate matter are diluted due to the larger area they have to spread out. In addition, trees, shrubs and other vegetation provide clean air through absorption of gases and deposition of particulates onto leaves. Air pollutants such as gases (ozone, and oxides of both nitrogen and sulfur) and particulate matter can have negative effects on our health. They can affect our respiratory systems by causing asthma, bronchitis, and emphysema. Therefore, it's best to spend as much time as you can outside to reduce the amount of pollutants you breathe in.

Exercise

It's common knowledge that eating healthy plus exercising regularly improves our overall health. A great way to accomplish this is by getting outdoors. It's easier to exercise when you step outside. Whether it's walking, hiking, kayaking, biking, or swimming you are exerting some form of energy. Furthermore, a study published in 2013 in Extreme Physiology and Medicine concluded that exercising outdoors is more effective than exercising indoors as you will increase your physical activity levels without realizing the amount of energy exerted. Exercising outdoors involves terrain challenges which you don't perceive to be as hard and tiring as when you increase the resistance or speed on a cardio machine.

So take the time to get out and enjoy nature with all the benefits it has to offer!!

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Roy | September 27, 2017 3:19 am
amazing post with great info
google

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Junayedseo | August 1, 2017 5:52 am
Nice information, valuable and excellent design, as share good stuff with good ideas and concepts, lots of great information and inspiration, both of which I need, thanks to offer such a helpful information here

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