Biodiversity Leadership Challenge

A girl-led challenge to raise awareness, leadership, and ambition to kick off 2021, the United Nations Decade of Ecosystem Restoration

A Challenge for Pathfinders and Rangers on behalf of
the IUCN WCPA Beyond the Aichi Targets Task Force & Girl Guides of Ontario

Girl Guides
Ontario Council
For Guiding in Ontario and Nunavut

Written by Alissa Sallans, IUCN WCPA Beyond the Aichi Targets Task Force
Edited by Marie-Eve Marchand, IUCN WCPA Beyond the Aichi Targets Task Force and Johannah Bernstein, Post 2020 Pavilion Manager
Proofread by Kathleen ffolliott
Content contributions by IUCN WCPA Beyond the Aichi Targets Task Force Youth Advisors: Sarah Cumming & Chloe Hahn
Designed by Jamie Gallupe Design

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ABOUT THE CHALLENGE

Context:

Biodiversity broadly refers to the huge variety of life systems and processes on Earth, including not only plants, animals, fungi and bacteria, but also water, mountains, forests, and so much more. There are around 8.7 million species of plants and animals that we know to exist, with new species being discovered every year. You can discover biodiversity by travelling the world or simply by taking a magnifying glass out to your backyard.

Unfortunately, as United Nations Secretary General António Guterres expressed in December 2020, “the state of the planet is broken.” Biodiversity is collapsing. There are over 1 million species at risk of extinction globally. Each year we lose 10 million hectares of forest. Oceans are warming and coral reefs are dying. Biodiversity loss and ecosystem collapse rank as one of the top five threats that humanity will face in the next ten years. It is for this reason that we need to recognize the value of biodiversity locally, nationally, and globally, and prioritize action to conserve the natural world.

About the IUCN WCPA Beyond the Aichi Targets Task Force

The world had set goals called the Aichi Biodiversity Targets at the meeting of the Convention on Biological Diversity in 2010, to save biodiversity and enhance its benefits for people by 2020. Unfortunately, none of these targets were fully met at an international level. The IUCN WCPA Beyond the Aichi Targets Task Force has been tasked to help parties to the Convention on Biological Diversity consider what the new global conservation targets should be, in order to halt and reverse biodiversity loss beyond 2020.

Challenge Overview:

The Biodiversity Leadership Challenge is designed for Pathfinders and Rangers to increase knowledge about biodiversity and conservation at local, national, and global levels. It is hoped that this challenge will raise ambition for action to protect biodiversity, develop leadership skills in the conservation realm, and provide a platform for Canadian youth to share why conserving biodiversity is important to them. Completing the Biodiversity Leadership Challenge will involve applying what has been learned from each activity and sharing this knowledge with your community.

Challenge Requirements:

Pathfinders & Rangers:

1. Complete at least 8 activities from the Biodiversity Leadership Challenge, with at least one activity from each of the first three Sections.
2. In addition, complete the "Be a Biodiversity Leader" Section by sharing what you have learned with younger Units, your peers, or your community.

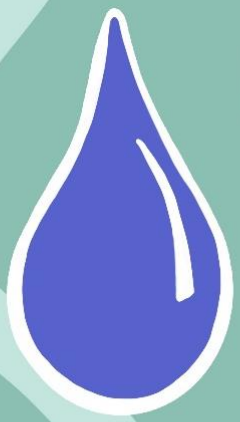
Once you complete the Challenge, fill out the Google Form for your Unit to receive a certificate of participation from the IUCN WCPA Beyond the Aichi Targets Task Force and then order your crests from the Girl Guides of Ontario online store.

Program Connections:

The Girls First Platform is a digital platform that intends to put you (the girl!) in charge of your own Guiding experience. We encourage you to explore how the activities that you complete throughout this challenge apply to the Program Areas and Themes listed on the Digital Platform.

For example, several of the Challenge activities might fit into one of the following Program Areas:

Local Biodiversity



Section 1

Ecosystem Exploration

An *ecosystem* is a bubble of life, where *biotic* and *abiotic* features co-exist interdependently. Biotic features are things like plants and animals whereas abiotic features are part of the landscape like soil and rocks. All of the features of an ecosystem and their interactions make up its *biodiversity*. This video shows us the importance of biodiversity and how ecosystems are interconnected.

Purpose of the Activity:

This activity will have you learn about what ecosystems exist in your community, what life exists within them, and the relationships that exist in that ecosystem.

Directions:

1. **Identify Ecosystem Features and Connections**
   Reflect on ecosystems in your community. Are there forests? Grassy areas? Ponds? Lakes? What life do they support? As a group, choose an ecosystem and in 60 seconds, write down as many biotic and abiotic features of this ecosystem, see who can list the most. Now draw arrows to connect these features together. Does the worm need soil? Do the birds need trees? See how many relationships you can map out.
2. **Consider the Impact of Change**
   Remove any one of these items from your list, and draw how the ecosystem would change. For example, take away the sunlight from a forest or the algae from a lake and consider how the loss of this relationship will impact the whole ecosystem.
3. **Identify Threats**
   Discuss what threats exist to nearby ecosystems in your community (e.g. housing developments, deforestation, invasive species, climate change…).
4. **Brainstorm Actions**
   Brainstorm some actions your community could take to protect the ecosystems you value (e.g., Connect with scientists to learn how to identify and report trees infected with Emerald Ash Borers).

Go to one of the ecosystems that you identified as a group and see what features of the ecosystem you may have missed. Using string, make a “quadrant” (a square on the ground) that is 1 meter on each side, and look for details. Do you notice anything new?

Become a Restoration Ecologist

2021 kicks off the United Nations Decade on Ecosystem Restoration, so let's think about what this means and what *ecological restoration* looks like in your community. It is always better to conserve an ecosystem rather than restore it, but that is not always possible. Ecological restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed by human activity. But once an ecosystem has changed, it can be hard to bring it back to its original function! Planting trees in deforested areas is one example of what a restoration ecologist might do, but you need the right tree in the right place… so how will you go about it?

Purpose of the Activity:

This activity will have you put yourself in the shoes of a restoration ecologist to create a course of action for the recovery of a damaged ecosystem.

Directions:

1. **Understand Ecosystem Impacts**
   Print off two copies of the damaged ecosystem image and imagine this ecosystem is in your community. What do you think happened to this ecosystem? What damage, destruction, or degradation do you see? What could have caused this? On the first copy of the image, circle and label the obvious harms to the ecosystem and jot down any notes about the ecosystem and what may have happened to it.
2. **Restore Degraded Ecosystems**
   Brainstorm some ways you could restore this ecosystem. What could you add to allow the ecosystem to return to its natural state? What could you remove? On the second picture of the ecosystem, use a pencil to draw on the measures to restore the ecosystem and use coloured pencils to bring the ecosystem back to life. Remember, if you are going to plant anything new, make sure you consider only native species. Learn about native tree species in Ontario here.
3. **Measure the Impact of your Ecosystem Restoration Actions**
   Now, reflect upon the two ecosystem photos. Did your restoration address all of the impacts you circled on the first photo? Did you do enough to restore the ecosystem? Does the ecosystem look similar to what you can imagine it looked like before? Can you see the ecosystem now being able to provide a healthy habitat?

Take a look at some of the different types of restoration projects that the Toronto Region Conservation Area has undertaken. What do you notice about these restoration projects?

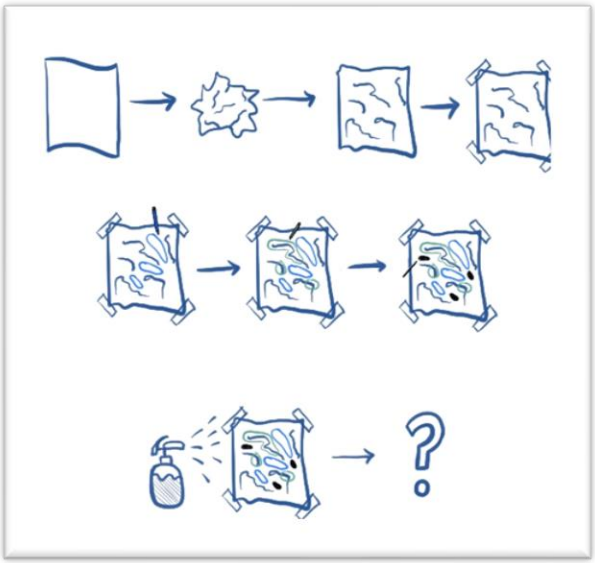
What's in a Watershed?

A *watershed* is an area of land connected by rivers, streams, wetlands, or groundwater that channels water from rain and snowmelt to one specific place, such as a lake or the ocean. Sometimes a watershed is called a catchment or a drainage basin. This video gives an overview of what a watershed looks like.

What we put into water does not disappear. Plastic, chemicals, and salt end up in our waterways and accumulate, causing even bigger problems. This is important to consider because the Great Lakes Basin holds about ⅕ of world's fresh water, so we must work hard to protect it.

Purpose of the Activity:

This activity will make you think about where water goes.



Directions:

1. **Make a Model Watershed**
   Start by making a model watershed. Crumple up a piece of paper, then slightly unfold it: this will be your watershed. Tape the corners of the paper to a piece of cardboard. Using a blue marker, trace the lowest points of your piece of paper, where you think the water in your watershed would be. Using a green marker, colour the areas of land, and using a black marker, draw some sources of pollution anywhere in your watershed. Take your spray bottle and lightly cover your watershed with water. Watch where the water travels and how the sources of pollution move. Discuss the importance of maintaining a healthy watershed.
2. **Identify Your Watershed**
   In Ontario, there are three primary watersheds: the Great Lakes Basin, the Nelson River Basin, and the Southwestern Hudson Bay Basin. By using the Ontario Watershed Boundaries map, figure out which watershed you live in, and think about the water bodies around you that might feed into this watershed.
3. **Assess the Health of Your Watershed**
   Consider the following questions: What organization(s) works to protect this watershed? How healthy is the watershed? What threats does it face? What unique species are found in this watershed? If there are any invasive species, how did they come in?

Visit a body of water near you and complete a shoreline cleanup to help protect your watershed from pollution. Visit https://www.shorelinecleanup.ca/ to learn how to conduct a shoreline cleanup while contributing to citizen science.

Citizen Science

You do not need to be an expert to be a citizen scientist. By sharing your observations of the species that you see, you can help researchers identify the location and habitat for biodiversity in your region. There are several apps that you can use to record the species you see, such as iNaturalist. Watch this video to learn about the iNaturalist app and how to use it.

Purpose of the Activity:

This activity will enable you to become a citizen scientist!

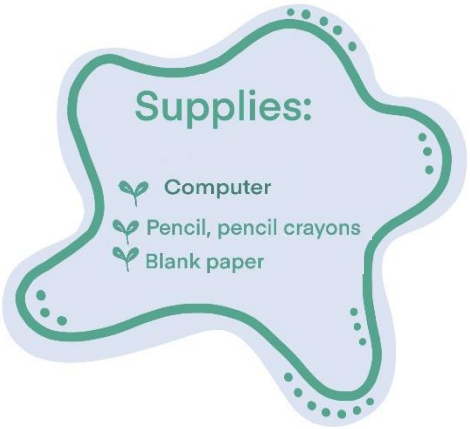
Directions:

1. **Observe Biodiversity**
   On your own or with your Unit, go for a short walk in a nearby location where you might see some biodiversity. Take pictures or write down any living species you see (trees, birds, moss, lichens, mammals, etc.). It is okay if you do not know exactly what you are seeing, as iNaturalist will give you suggestions. If you cannot take a picture, be as descriptive as possible when writing down your observations.
2. **Share Your Observations**
   Visit https://inaturalist.ca/ and make an account or download the "iNaturalist" app. This will allow you to upload the species you saw on your walk. Upload information and a photo of the species you observed on your walk to iNaturalist, and you have contributed to citizen science in your community! Note: If you have data on your phone, you can upload pictures you take on your walk instantly through the iNaturalist app.
3. **Reflect on the Importance of Citizen Science**
   Discuss why it is important for as many people as possible to contribute to citizen science. How can it contribute to research and conservation?

Visit https://www.pbs.org/wnet/nature/blog/citizen-science-at-home/ to explore other ways to contribute to citizen science.

Indigenous Knowledge

In Canada, Indigenous Peoples are either First Nations, Inuit, or Métis, each divided into different groups with their own unique culture, history, language and beliefs. There are over 70 different Indigenous languages divided into 12 language groups in Canada. Indigenous Peoples in what is now Canada as well as around the world have been stewards of the land for centuries and continue to protect *biodiversity* today. Up to 80% of global biodiversity is currently on Indigenous land.



Nature has a cultural and spiritual significance that cannot be overlooked, and *Traditional Ecological Knowledge* (TEK) is the land or sea-based knowledge that is passed on through generations, about the relationships of living beings in their environment. By learning about the work being done by Indigenous land and water protectors, we can begin to think about our relationship with Mother Earth differently.

Purpose of Activity:

This reflective activity will have you think about different ways of knowing and relating to the natural world.

Directions:

1. **Learn About the Traditional Territory You Live On**
   Find out what Traditional Territory you live on. You can do this by asking a leader, parent, or by searching your location in: https://native-land.ca/. Discuss why it is important to know what Traditional Territory you live on.
2. **Think About your Relationship with Mother Earth**
   Individually or as a group, on a blank piece of paper spend a few minutes drawing what water means to you.
3. **Listen to Indigenous Water Protectors**
   Watch the following short videos about two Indigenous Water Protectors in Ontario: Josephine Mandamin and Autumn Peltier.

   → Water Ethic: Curt Meine in Conversation with Josephine Mandamin
   → Water protector Autumn Peltier speaks at UN

4. **Reflect the Traditional Ecological Knowledge Shared**
   Autumn Peltier spoke about how her ancestors (including her grandmother Josephine Mandamin) have passed on Traditional oral Knowledge about water. Reflecting on both videos, discuss some examples that Autumn and Josephine provided about their Knowledge surrounding water.

5. **Revisit your Relationship with Mother Earth**
   Take a look at your drawing about what water means to you. Based on what you learned from Water Protectors Josephine Mandamin and Autumn Peltier, is there anything that you would add to or change about your drawing, to reflect some of the Traditional Knowledge about water that they shared?

Indigenous peoples across Canada and the world have been and continue to be leaders in protecting Mother Earth. There are countless examples of this leadership here in Canada. “Indigenous Climate Action” (ICA) is an Indigenous-led organization guided by a diverse group of Indigenous knowledge keepers, water protectors and land defenders from communities and regions across the country. You can tune into the ICA podcast to learn more about the organization and hear stories and teachings about the land and water: https://www.indigenousclimateaction.com/podcast

National Biodiversity

Section 2

Protected Areas in Canada

The *Aichi Biodiversity Targets* were a set of 20 ambitious targets laid out in 2010 at meeting of the Convention on Biological Diversity, calling on countries to address *biodiversity* loss and safeguard ecosystems by 2020. “Canada Target 1” was the plan to achieve Canada’s international Aichi Biodiversity Target commitment to conserve at least 17% of land and inland water by 2020. However, by 2019 Canada had only met 11.4% of its target.

In early 2021, Canada and over 60 other countries, committed to adopt a new target to protect 30% of land and ocean by 2030 at the next meeting of the Convention on Biological Diversity. This ambitious goal aims to halt biodiversity loss while addressing the climate crisis and the emergence of pandemics. Canada has also committed to an intermediary target of protecting 25% of land and ocean by 2025. To meet this new target, the Canadian government will be using “*The Three Conditions*” framework to help identify priority areas for protection.

Purpose of the Activity:

This activity will introduce you to the “The Three Conditions” and have you explore maps that may help governments decide what land needs protecting in each “condition.”

Directions:

1. **Explore the Maps**
   Open the two maps below. The first is a map of The Three Conditions, that breaks land up into three categories; the second map explores the different elements of the benefits that people get from nature. Answer the following questions:

- What “condition” do you live in? See Map #1.
- What benefits can we get from nature? See Map #2.
- What locations in Canada seem most ecologically important to protect? Do you know of a place that people are working towards its protection?
- Which stakeholders to be involved in the conversation for protection? What are the obstacles to protect these areas?
- If your Unit could place the next protected area, where would it be and why?

Map #1 (Locke et al. 2019): The Three Conditions Framework
Map #2 (Mitchell et al. 2021): Ecosystem Services Across Canada

This map will help you examine some different elements of biodiversity conservation. Additionally, not all protected areas look the same. For example, Indigenous Protected and Conserved Areas are managed or co-managed by Indigenous Peoples.

Connective Habitats

Biodiversity is significantly threatened by human development which *fragments* land, and although protected areas are a great way to protect habitats, connecting habitats makes conservation much more effective.

Ecological connectivity is the unimpeded movement of species and the flow of natural processes that sustain life on Earth. This might take the form of overpasses on roads for instance. Connectivity allows animals to move and migrate while protecting them from road mortality while being part of a functioning ecosystem. Connectivity also helps with seed dispersal, pollination, and gene flow. This video outlines some of the benefits of ecological connectivity.

Purpose of the Activity:

This activity will have you think about why ecological connectivity is important to biodiversity, and what this looks like in your backyard.

Directions:

1. **Understand the Importance of Ecological Connectivity**
   Watch this video about how wildlife crossings can help connect habitats. Think about why ecological connectivity is important to one of the three species below. List as many reasons as you can think of.

   - Blanding's Turtle
   - Gray Wolf
   - Rusty Patched Bumblebee

2. **Understand How Human Development Impacts Connectivity**
   Look at a map of your community. How much space is there for animals to move around without being blocked by some form of human development (roads, homes, etc.)? Are there any species that might struggle long-term because of this?

One example of ecological connectivity is the Yellowstone to Yukon Initiative, one of the largest wildlife connectivity initiatives in the world, spanning 3,200 kilometres from Yellowstone National Park in the United States, through the Rocky Mountains and to the Yukon.

Algonquin to Adirondacks is an example of a connectivity initiative in Ontario that was modelled on the Yellowstone to Yukon Initiative.

Nature-Based Solutions

Tackling *climate change*, preventing natural disasters, establishing food and water security, ensuring human health and promoting socio-economic growth all have one thing in common: they all depend on *nature-based solutions*. This video gives an overview of what nature-based solutions can look like.

Nature-based solutions are actions we can take to protect and restore *ecosystems* in order to address environmental or social problems while supporting human well-being. There are also *"nature-derived" solutions*, meaning they come from the natural world (like wind and solar energy) and *"nature inspired" solutions*, which are innovative designs that mimic the natural world (like sticky gloves for climbing walls like geckos).

Purpose of the activity:

This activity will have you identify a community and economic issue that could benefit from a nature-based solution.

Directions:

1. **Design Nature-Based Solutions**
   Think about different land-use challenges in your region and discuss some potential nature-based solutions to these issues. Who would you approach about putting these nature-based solutions into action?
2. **Raise Your Voice**
   Practise your persuasive writing skills by researching a local issue and writing a letter to a community leader or elected official to propose your nature-based solution. Need some ideas? Below are some examples of nature-based solutions:

   - A hydropower company planting trees along a river to prevent erosion of the banks and siltation downstream;
   - A farmer planting trees between crops to provide shade, retainin water and provide habitat for wild species;
   - A city manager installing trees and grasses along steep slopes to stabilize the earth and prevent landslides;
   - A community organization that educates on the importance of protecting fringing reef around an island to maintain it as a natural barrier against high waves; or
   - An advocacy group protecting a marsh or wetland that filters contaminated water near a community.

You can learn more about nature-based solutions and how they benefit both people and the planet by visiting the IUCN website.

Human Health

Biodiversity is not separate from humans; in fact, our health and well-being is dependent on the *ecosystem* we live in. For example, many of our most commonly prescribed medicines were originally made from plants or other natural products available to us. And spending time in nature can help decrease stress while improving sleep, productivity, and self-esteem. This video provides an overview of some of the ways that our health is dependent on biodiversity.

Purpose of the Activity:

This activity will get you thinking about where the benefits of nature come from and how our well-being is connected to nature.

Directions:

1. **Understand Health Benefits from Nature**
   Brainstorm some of the health benefits humans might get from nature. Why do you think high levels of biodiversity are important for this?
2. **Think About These Health Benefits**
   Download the *Health Benefits Game* card deck and cut out each of the health benefits from nature. Some of the cards will have images of potential benefits we get from nature and other cards will have images with examples of how a healthy environment can improve our health and well-being. Cut each image out and shuffle all the cards together. Have everyone pick a card and draw or act out for the group what benefit you have, in order for everyone to guess what the health benefit is.
3. **Reflect on the Connection Between Health and Biodiversity**
   Once everyone has had a turn, discuss how each card is tied to biodiversity. For example, how does biodiversity improve nutrition? Talk about how you can protect these health benefits by protecting nature.

Take a look at the Ontario Parks Healthy Parks Healthy People resource page to learn more about how our health and well-being is connected to nature.

Endangered Species

The World Wildlife Foundation says that an *endangered species* can be an animal, tree, coral, insect, or other form of life that is at risk of becoming extinct. Each species that lives on Earth plays a role in the ecosystem it lives in, and yet there are currently 1 million species at risk of extinction globally. The Red List, managed by the International Union for the Conservation of Nature, tells us what species are at risk of extinction globally. In Canada, the Species at Risk Act (SARA) is in place to protect species that are disappearing nationally. There are 5 main designations of species that SARA tries to protect.

Extinct: The species has completely disappeared from the Earth
Extirpated: The species no longer exists in a specific location, but might live elsewhere
Endangered: The species is at very high risk of extirpation from the wild
Threatened: The species is likely to become endangered if nothing is done
Special Concern: The species is at risk of becoming threatened or endangered

Purpose of the Activity:

To understand the importance of protecting endangered species and to learn how difficult decisions are made when determining how to protect them.

Directions:

1. **Learn About Endangered Species**
   Everyone will get one *Endangered Species ID card* with some facts about the status of their species in Canada. Read your ID card; this will be the species you must advocate for. Of all the species held by your group, imagine that you only have the resources to protect two of them. Debate amongst yourselves and come to a consensus about which two species will collectively be protected—remember you want to try to include your species! Important things to consider are each species' ecological importance, medical uses, agricultural significance and aesthetic value.
2. **Reflect on Your Decisions**
   Once a decision is made, discuss why the 2 final species were chosen for protection and why the rest were not. What is in common between the species that you are protecting? What is in common with the species you are not protecting? How does this change the way you think about protecting endangered species?

Explore and learn about some of the species at risk in Ontario.

Global Biodiversity

Section 3

Living in Harmony with Nature

The Convention on Biological Diversity has a vision that by 2050, we will be "*Living in Harmony with Nature*." This is described as making sure that by 2050 "biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people"—what a mouthful! But what will this look like?

Purpose of the Activity:

This activity will probe conversation and thought into the meaning of the vision of "Living in Harmony with Nature" and allow you to express your creativity.

Directions:

1. **Understanding the Concept of Living in Harmony with Nature**
   With your Unit, talk about what you think "Living in Harmony with Nature" means and compare how this might be different from "Living in Harmony **in** Nature." What should a harmonious world look like here in Canada?
2. **Express What This Means to You**
   Gather any art supplies you have lying around (markers, crayons, paint, magazines, clay, etc.) and, with your Unit or on your own, create a piece of art that expresses what "Living in Harmony with Nature" means to you.

If you are comfortable, take pictures of your art creation and submit it to alissa@y2y.net when you complete this challenge. These art pieces will be brought forward at future global conferences to visually show what youth picture for the 2050 vision.

You can read more about the 2050 vision on biodiversity here.

Equity in Action

To be done effectively, protecting and conserving *biodiversity* must be done *equitably*. This means that Indigenous Peoples, local communities, women, and youth (to name a few) must be included in the solutions and actions taken to protect biodiversity.

Around the world, women are instrumental wildlife guardians, conservationists, activists, and scientists who protect the natural world and will continue to be leaders in this field. This video expands on the important role of women in biodiversity conservation.

Purpose of the Activity:

This activity will explore the successes and leadership qualities of female biodiversity leaders around the world.

Directions:

1. **Understand Equity**
   Discuss amongst your Unit what "equity" is, and why it is so important to protect biodiversity.
2. **Learn About Inspiring Female Leaders**
   Go through the *Biodiversity Leaders card deck*, and as you read through the 8 female biodiversity leaders, think about which leader stands out to you and why. Have you heard of any of these women before?
3. **See What You Remember**
   After everyone has read through the card deck, see how many of these leaders you remember by playing a rapid version of 20 Questions. Each of you will take a turn being the question master, and will think of one of the 8 women in their head. Everyone else will need to ask "yes" or "no" questions to try and determine which leader the question master is thinking of. If you are completing this activity on your own, see how many of these women you can memorize!
4. **Reflect on Leadership Skills**
   Once you have had time to reflect on the accomplishments of these women in protecting biodiversity, with your Unit, draw out a vision board of what leadership qualities these women have, and think about how you could develop skills like these.

Here is a great article to read about the role, influence and impact of women in biodiversity conservation, and another about four climate activists explaining why the climate-justice movement needs feminism.

Climate Change

Human-induced *climate change* causes long-term change in weather caused by *greenhouse gases* (like carbon dioxide from your car or methane from manure) that accumulate in our atmosphere and trap more and more heat. This leads to abnormal weather events like wildfires, droughts, and floods, loss of glacial ice, rising sea levels, and so much more.

It is impossible to protect *biodiversity* without addressing climate change. Climate change puts pressure on ecosystems and is currently responsible for between 11% and 16% of biodiversity loss, but biodiversity itself can help reduce these threats by providing ⅓ of the cost-effective climate change *mitigation* solutions. Nature sequesters and stores carbon and is an ally for both mitigation and *adaptation* to climate change.

This short video, How Can Restoring Nature Help Tackle Climate Change, gives us some insight into why biodiversity and climate are two sides of the same coin.

Purpose of the Activity:

This activity will encourage you to think about the impacts of climate change on biodiversity across Canada, and how biodiversity can help to mitigate climate change.

Directions:

1. **Reflect on Your Carbon Footprint**
   Spend a few minutes thinking about your carbon footprint—the amount of greenhouse gases you are responsible for releasing in your day. What are your personal contributions to greenhouse gas emissions? A great online tool to help you think about this can be found at: https://www.footprintcalculator.org/.
2. **Test your Knowledge about Climate Change**
   Print off and cut out the *Spin the Wheel Biodiversity Trivia set* and assemble it following the instructions on the first page. Take turns spinning the arrow and answering a trivia question about how that ecosystem is impacted by climate change. Whoever answers 4 questions correctly first wins! If you need help, answers are on the last page of the Trivia set.

Learn more about how climate change impacts biodiversity through this animated video by the Khan Academy.

Beyond the Aichi Targets

In 2010 at the meeting of the Convention on Biological Diversity, 20 ambitious targets called the *Aichi Biodiversity Targets*, adopted in Aichi, Japan, were set to address biodiversity loss and safeguard ecosystems by 2020. Well, it is 2021 and none of these targets have been fully met at an international level. So, what now?

It is time to think beyond the Aichi Biodiversity Targets. Countries are currently in the process of creating a "Post-2020 Global Biodiversity Framework" to learn from our mistakes with the Aichi Targets, and come up with new targets so that by 2030 we are "*Nature-Positive*" (we have more nature, not less, by 2030) and by 2050 we are "Living in Harmony with Nature."

Purpose of the Activity:

This activity will strengthen your goal-setting skills and introduce a new way of thinking about how we can set global conservation targets.

Directions:

1. **Identify Biodiversity Threats**
   Setting targets and goals is a big job! Think about a threat to biodiversity in your community. Are wetlands disappearing? Are there invasive species in the area?
2. **Create Biodiversity Targets**
   Once you have chosen your threat, come up with a SMART goal to address this threat. You can watch this video on SMART Goals for more details.
3. **Understand the Impacts of Biodiversity Targets**
   Reflect on the goal you just set—could it be applied to every single country in the world, regardless of size, economy, population density, natural resources, or culture? Does every country even have this issue? Setting targets and goals at an international level that apply to every single country is an even bigger job, so how do you think the world can make sure that the "Post-2020 Global Biodiversity Framework" will work for every country?

Learn more about each of the 20 Aichi Biodiversity Targets and what they were trying to achieve here: https://www.cbd.int/sp/targets/

Marine Protected Areas

Although the world's oceans make up 70% of the Earth's surface, only about 7.5% of them are protected. Canada touches the Pacific, Arctic, and Atlantic oceans, and yet only about 14% of our marine and coastal areas are protected.

But how do you protect the ocean and water? *Marine Protected Areas* (MPAs) are an internationally agreed-upon approach. The video "What Are Marine Protected Areas?" by Oceana will give you an overview of what MPAs are.

The International Union for the Conservation of Nature (IUCN) defines a Marine Protected Area as: "A clearly defined geographical space recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values."

Purpose of the Activity:

This activity will dive into what a Marine Protected Area is and what that looks like in Canada.

Directions:

1. **Learn About Marine Protected Areas**
   As a group, visit Canadian Geographic's Canada's National Marine Protected Areas Map and choose one Marine Protected Area (MPA) on the map to learn about. Discuss what specific features you think this MPA was created to protect.

   Some reasons MPAs might be designated include:
   - To conserve fishery resources
   - To protect endangered or threatened species
   - To protect unique habitats
   - To sustain areas of high biodiversity
   - To conserve cultural heritage

2. **Plan Out the Next Marine Protected Area**
   If your unit was asked to select where Canada's next Marine Protected Area should go, where would you put it and why? Sketch out what this might look like.

Learn more about Marine Protected Areas on a global scale by visiting Protected Planet's Interactive Map.

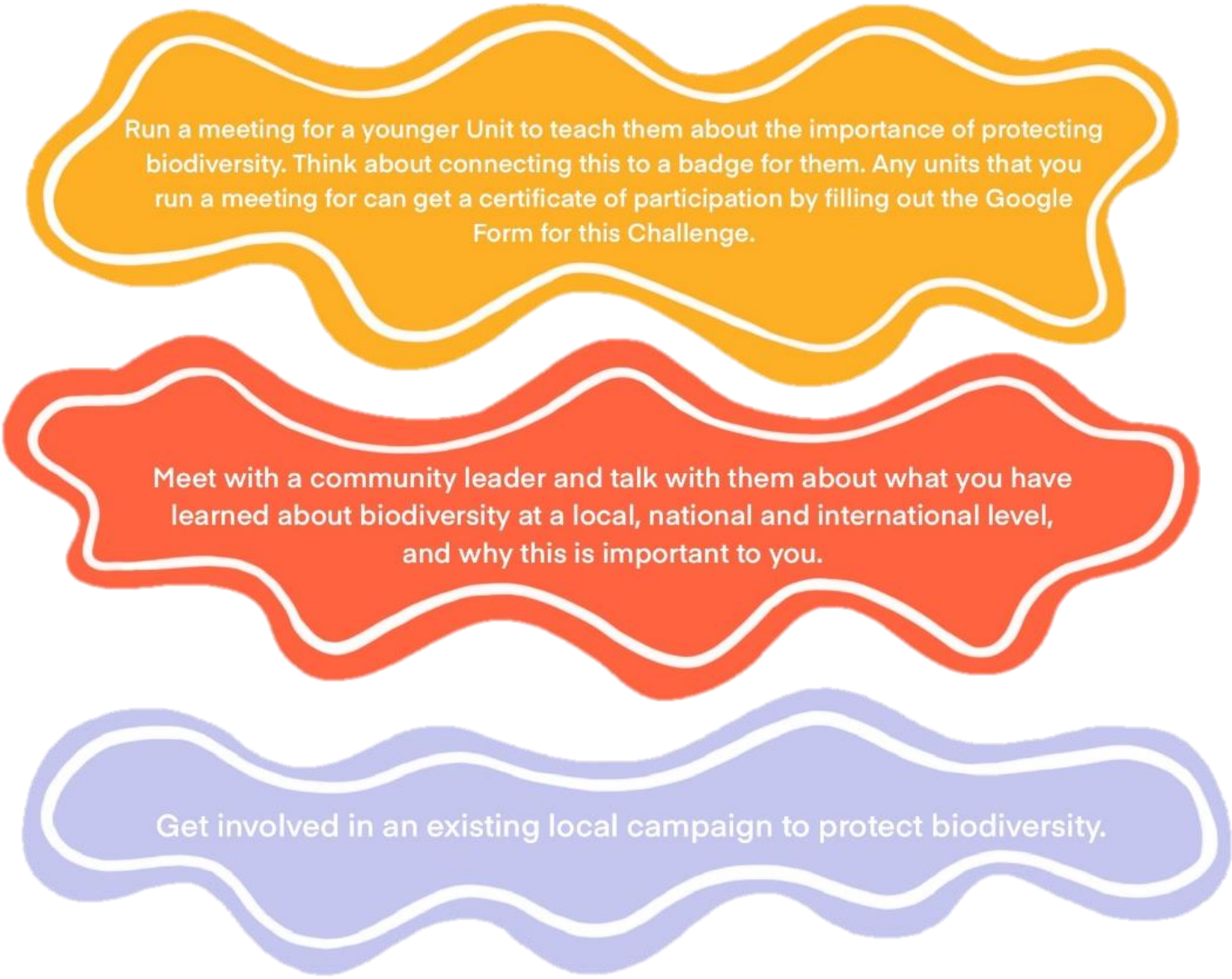
Be a Biodiversity Leader

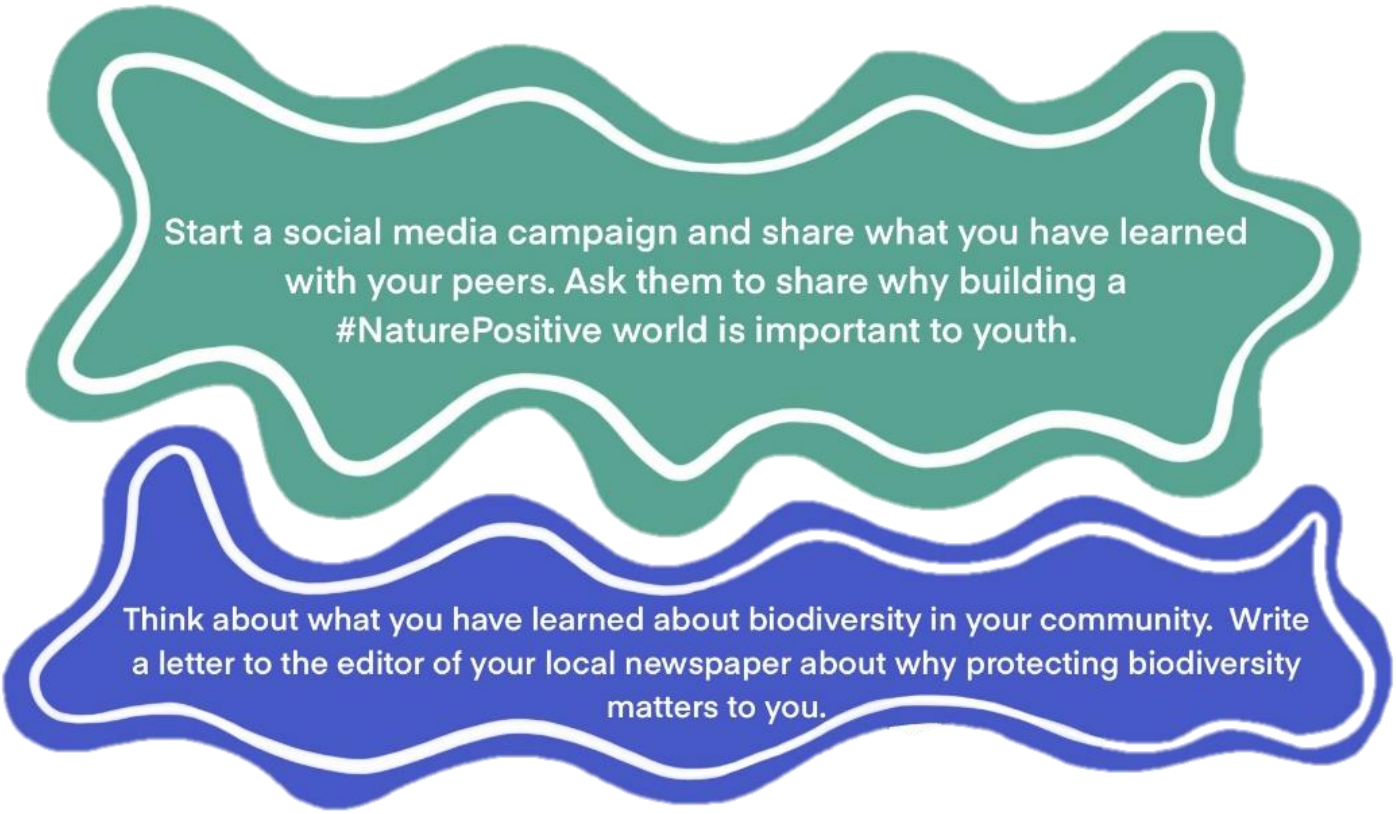
Section 4

Put Your Leadership Skills into Action

Now that you have learned about local, national, and global biodiversity, you are tasked with sharing what you have learned with others. You can focus on whatever you connected with most in this activity pack and be as creative as you like. Your leadership project can be done virtually or in person, as restrictions allow. Below are a few ideas to get you started.

Be sure to keep track of the number of people you engage in your leadership project, as you will be asked this when filling out the final form to submit to get your crest and certificate.




Start a social media campaign and share what you have learned with your peers. Ask them to share why building a #NaturePositive world is important to youth.
Think about what you have learned about biodiversity in your community. Write a letter to the editor of your local newspaper about why protecting biodiversity matters to you.

Appendix A: Key Definitions

Term	Definition
Abiotic	A non-living feature of an ecosystem.
Adapt	To adjust to new conditions.
Aichi Biodiversity Targets	A set of 20 global targets from 2011 to 2020 to save biodiversity and enhance its benefits for people.
Biodiversity	The variety of species on Earth.
Biotic	A living feature of an ecosystem.
Climate Change	The long-term change in the average weather patterns that define Earth's regional and global climate, driven primarily by humans.
Degraded	To be reduced in quality over a long period of time.
Ecological Connectivity	The degree to which parts of a landscape, such as habitats, are interconnected so that plants and animals can move.
Ecological Restoration	A human-led process to help an ecosystem recover following damage, degradation, or destruction.
Ecosystem	A dynamic community of plants, animals, and microorganisms interacting with their physical environment.
Endangered	A classification of species that are at a very high risk of disappearing from the wild.
Equity	The fairness of treatment and opportunity regardless of gender, age, race, income, or any other characteristics.
Extinct	A classification of species that have completely disappeared from Earth.
Extirpated	A classification of species that no longer exist in a specific location, but might live elsewhere.
Fragment	The process of being broken into smaller sections or parts.
Greenhouse Gases	Any gas released into the atmosphere that absorbs infrared radiation (energy from the sun).
Living in Harmony with Nature	The Convention on Biological Diversity's vision for 2050 as to the state of biodiversity.
Marine Protected Area	A clearly defined area of water that is recognized, dedicated, and managed through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.
Mitigate	To reduce the impacts or intensity of something.
Nature-Based Solution	Actions to protect, sustainably manage, and restore natural or modified ecosystems that address societal challenges effectively and adaptively, while also providing human well-being and biodiversity benefits.
Nature-Derived Solution	Solutions to a given problem that come from the natural world but are not directly based on functioning ecosystems.
Nature-Inspired Solution	Innovative design and production of materials, structures, and systems modelled on or inspired by biological processes.

Nature-Positive	The target to have more nature than we do now by 2030, through improvements in the health, abundance, diversity and resilience of species, populations, and ecosystems.
Special Concern	A classification of species that are at risk of becoming threatened or endangered.
Threatened	A classification of species that are likely to become endangered if nothing is done.
Three Conditions	Three Global Conditions for Biodiversity divides land use into three categories, or "conditions." Condition 1 is "cities and farms," Condition 2 is "shared lands," and Condition 3 is "large wilderness areas."
Traditional Ecological Knowledge	A newer term used in Western science and literature to convey Indigenous and other Traditional Knowledge of living beings and their environments, passed on through generations.
Watershed	An area of land that collects precipitation (rainfall and snowmelt) and drains into a body of water (such as a reservoir, lake, or ocean).

Appendix B: Acronyms

Acronym	What It Stands for
CBD	Convention on Biological Diversity
IPCA	Indigenous Protected and Conserved Area
IUCN	International Union for the Conservation of Nature
MPA	Marine Protected Area
SARA	Species at Risk Act, Canada
UN	United Nations
WCPA	World Commission on Protected Areas