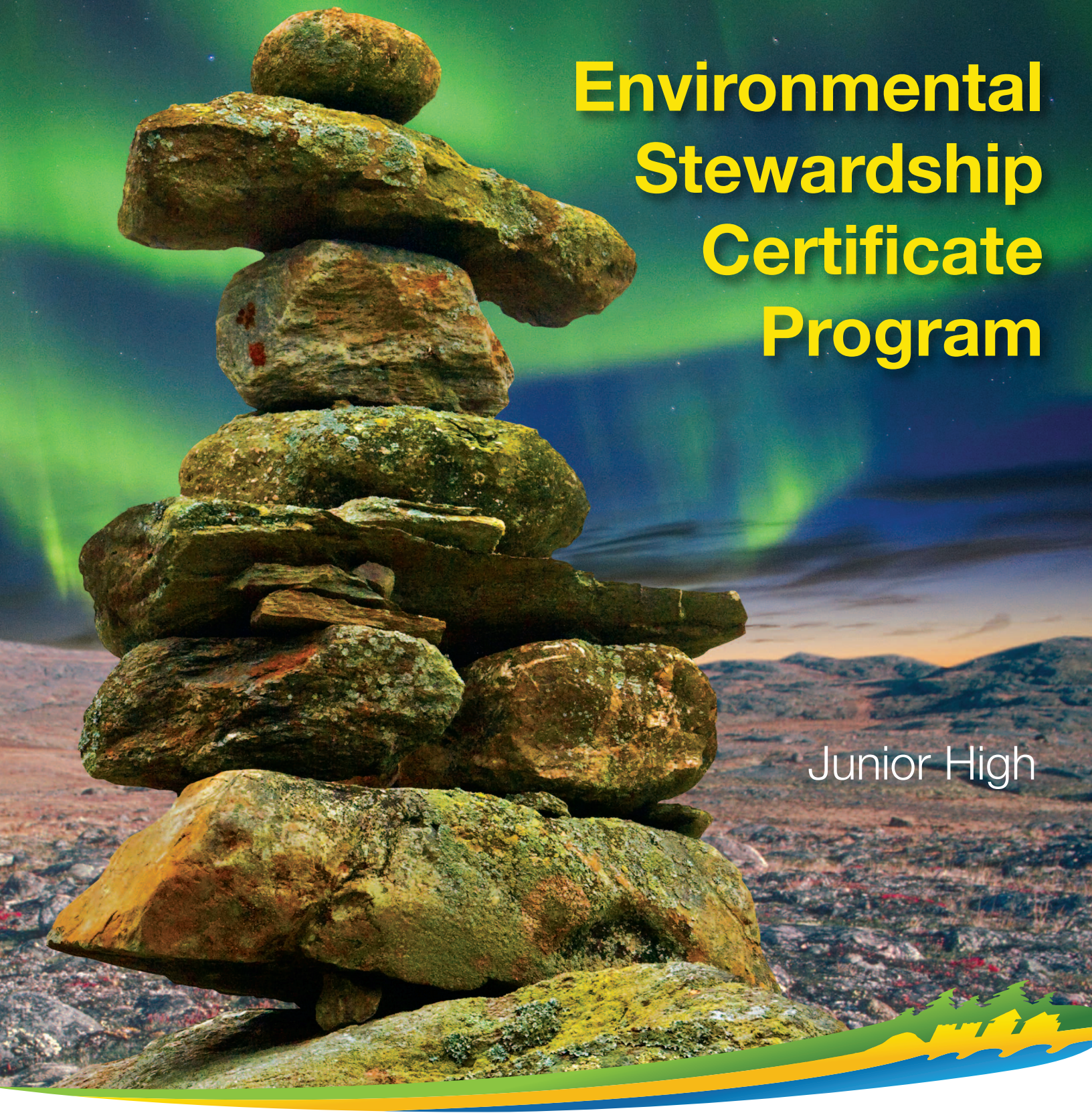
Parks Canada
in Nunavut
parkscanada.gc.ca

Parcs Canada
de Nunavut
parcscanada.gc.ca



Environmental Stewardship Certificate Program

Junior High

Parks Canada Parcs Canada

Bringing you Canada's natural and historic treasures
Mettant à votre portée les trésors naturels et historiques du Canada

Canada

Environmental Stewardship Certificate Program

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ENVIRONMENTAL STEWARDSHIP CERTIFICATE PROGRAM (2009)

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Table of Contents

This resource introduces to students the concept of environmental stewardship and the role of Parks Canada. The module not only teaches the concepts but encourages students to make changes in their own lives. Students who make a commitment and act upon their commitment will receive a Parks Canada certificate and will be considered environmental stewards.

This program is designed for grade 7-9 students in Nunavut and is to be delivered by classrom teachers in conjunction with the Diversity and Earth Sciences modules produced by the Department of Education.

Unit 1: "What's that? Habitat" fits with the learning competencies taught in Unit 9: Canadian Ecozones and Unit 10: Abiotic and Biotic Factors of Diversity.

Unit 2: Environmental Stewards and Unit 3: "Becoming an Environmental Steward" could be taught in tandem with Unit 1 or could be included in the Earth Sciences Module.

Each unit will require 2 to 3, one hour periods to complete except Unit 3, which will take longer.

If the teacher decides to do the full energy audit contained in Unit 3 it will require longer term planning. Options are provided for teachers to design their own program.

What's that? Habitat!

AUYUITTUQ NATIONAL PARK

Learning Competencies

Students will investigate the National Parks in Nunavut and across the north; the species at risk within those parks and demonstrate their understanding of habitat and ecozones.

Language Development

Students will be comfortable with the following vocabulary;

- **Contaminated Sites:** An area where development has occurred and pollution has been introduced and left behind. Pollution could take the form of chemical substances or be energy such as: noise, heat or light energy.
- **Development:** In the context of the land, development refers to changes to the land such as in mining, oil and gas exploration, housing, gravel pits, airstrip, etc. When the land is changed from its natural state it is said to be 'developed'.
- **Ecozones:** an area where organisms and their physical environment endure as a system. Canada has 20 major ecozones: 15 terrestrial and five marine ecozones. They are large areas of a particular climate, landform and vegetation.
- **Endangered:** A wildlife or plant species facing imminent extirpation or extinction. Wildlife that is low in number and close to being extirpated.
- **Extinct:** A wildlife or plant species that no longer exist in the world.
- **Extirpated:** A wildlife or plant species that no longer exists in Canada, but continues to exist naturally in other parts of the world or as breeding populations in zoos and wildlife refuges.

- **Habitat:** The natural home of an animal is called 'habitat'. All the animal's basic needs are met: food, water, air, shelter and space.
- **Limiting Factors:** Chemical and physical factors that limit the existence, growth, abundance or distribution of an organisms, species or population. When one or more of these factors exceed the limit of tolerance of an individual, species or population, it becomes a limiting factor. Or if a limiting factor affects the well being of an individual, species or population, it may result in death.
- **Marine:** A sea water environment.
- **Protection:** To protect the land means to limit the amount and type of human activity on an area of land and to prevent damage to the land. Land is protected to safeguard its special natural and cultural values. Traditional activities can still be maintained.
- **Species:** A group of living things in a defined area that can interbreed.
- **Species at Risk Act (SARA):** The act is a law that specifically prohibits wilful harm to endangered species that are listed under the Act and the wilful destruction of, or interference with, their habitat.
- **Species at Risk:** The term refers to wild plants and animals that have been assessed by an independent body, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), and found to be at some risk of disappearing from the wild in Canada.
- **Terrestrial:** A land environment.
- **Threatened:** A wildlife or plant species likely to become endangered if limiting factors are not reversed. Wildlife that is low in number but with enough population to bounce back if corrective action is taken.

Background

Students should be familiar with the concept of habitat. Traditionally, everything Inuit needed to survive came from the land and the sea. There is a strong belief among the Inuit that living things (wildlife, plants and humans) and the land is one unit and they rely upon each other for survival. For this reason, Inuit value, respect and want to protect the land and sea. If the habitat is treated well, it will provide food, shelter, air and space for all living things. If the environment is not respected, it will not support life with basic survival needs. As Elders have said — bad weather, poor plant growth, illness or other disasters could follow if the environment is not respected.

There are four national parks in Nunavut

Canada's National Parks are a country-wide system of representative natural areas of Canadian significance. The country has been divided up into 39 natural regions by Parks Canada biologists. The goal is to set aside areas

as national parks so we have a representative protected area in each of these 39 natural regions. Canada's national parks system began in 1885 with the creation of Banff National Park, and has since expanded to represent many of Canada's unique landscapes.

There is a long history of protecting valuable or unique areas in the North too. The North's first protected area was established in 1918 when Victoria Island was designated as an Inuit hunting reserve. The first National Park in Nunavut was Auyuittuq, which was established in 1976. Ukkusiksalik National Park is the newest national park in Nunavut and was signed into existence on August 23, 2003.

There are currently 42 national parks and national park reserves, and 3 national marine conservation areas in Canada.

There are four national parks in Nunavut:

- **Auyuittuq National Park:** Located on Baffin Island with landscapes including the northern extremity of the Canadian Shield.
- **Quttinirpaaq National Park (on Ellesmere Island):** The most remote, fragile, rugged and northerly lands in North America.
- **Sirmilik National Park:** Located on Northern Baffin Island including the Eastern Arctic Lowlands natural area and Lancaster Sound.
- **Ukkusiksalik National Park:** Located west of the community of Repulse Bay and near the Arctic Circle.

For the national park system to be complete, each of the 39 natural regions in Canada has to have at least 1 national park. Currently, 28 of the 39 natural regions are represented. The national park system currently encompasses approximately 274 000 km2 or approximately 2.4% of Canada's land mass. When the system is complete, it will cover just over 3% of Canada. As of 2005, 10.5% of Canada was set aside as protected areas including 0.5% in natural parks and marine protected areas, provincial and territorial parks, reserves, and bird sanctuaries.

Materials

- MP3 music files and lyrics to the songs by Remy Rodden from the CD called, **Think About the Planet**. "What's That, Habitat" and "Biodiversity".
- The National Parks of Canada and Terrestrial Ecozones Map — electronic files — can be printed onto 8 ½ X 11 paper or projected onto a whiteboard.
- Nunavut National Parks Fact Sheets — electronic file.
- Handout: What Amount Would You Protect?
- Power point presentation on Species at Risk — electronic file.
- Power point presentation of the National Parks in the North — electronic file.
- Ecozone Fact Sheets — PDF

Opener

Protection and Development, What's the Balance?

The mandate of Parks Canada is to 'protect and present nationally significant examples of Canada's natural and cultural heritage'. There are many reasons to protect areas of our natural and cultural heritage, such as the need for critical habitat.

To get students thinking about protection, development and contaminated sites complete the following:

1. Ask the class what they think the word '*protect*' means. There are different uses of the word depending on the context. Ask them in the context of protection of land.

To protect the land means to limit the amount and type of human activity on an area of land and to prevent damage to the land. Land is protected to safeguard its special natural and cultural values. Traditional activities can still be maintained.

*You could also do the Connector at this time.

2. Ask the class what the word 'development' means. Again, there are many ways to use this term. It could refer to the changes that occur when a child grows from a baby to an adult, or the way their local town has changed.

In the context of the land, development refers to change on the land caused by human activity such as mining, oil and gas exploration, building houses, housing, gravel pits, air strips etc. When the land is changed from its natural state it is said to be 'developed'.

Make a list of advantages and disadvantages of development.

3. Explain the definition of contamination or pollution. Ask the students what they think the major pollutants are in the north. Examples include: gas, oil spills, chemicals, garbage, sewage, acid rain or greenhouse gases.

An area where development has occurred and pollution has been introduced and left behind. Pollution could take the form of a chemical substance or an energy such as: noise, heat or light.

4. Once students understand the terms protection, development and contaminated complete the following:
   - Have the class form pairs.
   - Hand out a piece of paper to each pair. Tell them the paper represents all the land and water in Nunavut (100% of it). Ask them to discuss what percentage of the land and water should be protected and what percentage should be left 'open' to be developed? After their discussion, have them rip the paper into two pieces and label one piece 'overall protected' and one piece 'overall open for development'.
   - Use the handout *What Amount Would You Protect?* to illustrate.
   - Ask the class to estimate what amount they think is currently protected (as of 2008). The following diagram below represents the percentage of Nunavut currently

protected. As of 2005 Nunavut has set aside 11.1%. Rip approximately 11.1 % off a piece of paper and hold up the two pieces. Together they represent all of Nunavut and the small piece is what is protected. Discuss what they think of this amount. How does it compare to what they thought should be protected. More or less? Discuss that just because an area is not protected does not necessarily mean that it will be developed. Many unprotected areas will never be threatened by development.

- Nunavut ranks behind the Yukon which has protected 13.3% of their territory and the NWT which has protected 15.3%. Collectively, Canada has protected 10.5 % of our land. Note that these figures include National Parks, territorial parks, provincial parks, wilderness preserves, conservation zones, and bird sanctuaries.

Collectively, Canada has protected 10.5 % of our land.

Connector

What should we protect?

There are many different reasons why we may want to protect an area. In groups have students brainstorm a list of features of the land or reasons why an area would be a good candidate for protection.

See list below of possible answers:

- traditional meeting place
- grave site
- spiritual area
- rare vegetation
- rare geological feature (i.e. pingo)
- source of drinking water
- natural beauty
- protected land for future generations
- historical areas
- wetland
- bird nesting area
- caribou calving grounds
- caribou migration route
- habitat for animals
- traditional hunting area
- unique soil type
- recreation areas
- fishing grounds

Have the students share their list and discuss the many reasons an area might be an ideal candidate for protection. Remind the students that in Nunavut, large areas have still remained relatively unchanged by human activities; however, with increased exploration and resource development, it's a good time to look into the future and protect areas before it is too late.

Discussion: Effect

This activity will make the students think about the effects of contaminants in the ecosystem. As mentioned before, the students should pick 6 of the contaminants from the list on the board. Here are the steps to take:

- Ask the students to name the parts of the ecosystem. Pick 6 main suggestions. List twice on 2 separate sheets of paper. Post one piece of paper on the wall. Cut up the second list of 6 parts of the ecosystem. Place in a hat.
- Place the list of 6 contaminants twice on 2 separate sheets of paper. Post one list on the wall. Cut up the second list of 6 contaminants. Place in a hat.
- Divide the students into 6 groups.
- Each group will pick one each of an ecosystem part and a contaminant from the hats.
- Ask the group what the effects would be of the contaminants they chose on the ecosystem part they selected.
- If the students group cannot answer their questions, pass it on to another pair of students to try.

This exercise is designed to get the students to think about contaminants in the arctic, and how they affect the north. Next, ask students how the contaminated sites could be cleaned up. Depending upon where the students live, they may have heard about the clean up of DEW line sites (Distant Early Warning Sites) across the north. This is one of the many steps organizations have taken to try to clean up contaminated sites.

Activity

The National Parks of Canada and Terrestrial Ecozones

In the Diversity Module, Unit 9: Canadian Ecozones and Local Plant Communities, students learn about the various Canadian ecozones, as well as the local plant habitat and associated communities. In this unit students will expand their knowledge of Ecozones. There are 15 land and 5 marine Ecozones in Canada. These Ecozones are broken down further into 39 natural regions. Parks Canada's goal is to have at least one national park located in each of Canada's 39 natural regions.

1. Display the map, *The National Parks of Canada and Terrestrial Ecozones*. Looking at the map, have the students identify the location of Nunavut. Point out the different national parks across Canada I would take this off, as they may only have the 8x10 black and white). There are currently 42 national parks and 3 national marine conservation areas. Have the students notice the different sizes of national parks. Some are very large such as Wood Buffalo National Park (NWT/ Alberta border), while others are relatively small such as Point Peelee National Park (southern tip of Ontario). Ask the students if any of them have been to a national park. If so, see if students can locate the park on the map.
2. Discuss with the students how the different coloured areas on the map represent the

different terrestrial ecozones. Ecozones are large areas of a particular climate, landform and vegetation. Have the students use the map to identify which ecozone they live in. Canada is divided into 15 terrestrial ecozones. Ask the students if they can locate the ecozones that do not have a national park located within it. Some people think that there should be a national park within each ecozone as a way to represent the different parts of Canada. Discuss with the students if they agree and why this may or may not be a good idea.

3. As mentioned, there are 15 terrestrial and 5 marine Ecozones divided into 39 natural regions in Canada. Just like a political boundary, natural regions are not static. Nunavut only became Nunavut in 1999. People determine where to draw a boundary on a map. This is the same with the natural regions. People have set out guidelines based on geology, physiography (the appearance of the land) and vegetation.
4. Again, using the map, *The National Parks of Canada and Terrestrial Ecozones*, and the Natural Regions of Canada map as well as the Environment Canada website http://www.ec.gc.ca/soer-ree/English/vignettes/default.cfm have students work through the Handout: **Ecozones and Natural Regions of Nunavut**.
    - If you do not have the time to go on the internet, it is possible to print the three main northern ecozones, print out the wildlife and plant section of the handout.

Reflection

Species at Risk

Parks Canada helps to protect the land, wildlife and water in an area. This includes different species that are or maybe at risk of becoming extinct. These are the same goals Inuit have always had.

The Species at Risk Act (SARA) is a federal law with three main goals:

- to prevent endangered or threatened species from becoming extinct or extirpated;
- to help the recovery of endangered, threatened and extirpated species; and
- to manage species of special concern to prevent them from becoming endangered or threatened.

SARA can be controversial and species numbers may differ from area to area. Decisions on whether or not to list species under SARA are made by the Government of Canada and are based on scientific assessments, traditional knowledge and public consultation. Find out from local people about any issues in the community. What do they think about SARA? Invite the local wildlife officer into the classroom to discuss issues of wildlife management with the class.

SARA identifies how governments, organizations and individuals can work together to achieve its goals. The Government of Canada encourages stewardship as a means to protect species at risk and help them recover. Stewardship means taking care of the land, air, water, plants, animals and culture in such a way that they can be passed on to future generations.

In Canada, a species is considered 'at risk' when it may disappear entirely from Canada or the world if nothing is done to improve its status.

Species are assigned to one of the following five categories:

1. **Extinct:** A wildlife or plant species that no longer exists in the world.
2. **Extirpated:** A wildlife or plant species no longer existing in Canada, but continues to exist elsewhere.
3. **Endangered:** A wildlife or plant species facing imminent extirpation or extinction. A species that is low in number and close to being extirpated.
4. **Threatened:** A wildlife or plant species likely to become endangered if limiting factors are not reversed. A species that is low in number but with enough population to be able to bounce back. A species that may become endangered unless action is taken to preserve the species.
5. **Special Concern:** A wildlife species that may become a threatened or endangered because at a combination of biological characteristics and identified threats. A species that may become threatened because of physical conditions and known risks.

Conservation of wildlife and the environment has always been part of Inuit values. It is something that is rooted in Inuit culture.

Conservation of wildlife and the environment has always been part of Inuit values.

Since Inuit relied on the wildlife for survival, there is a strong value to protect wildlife and environment.

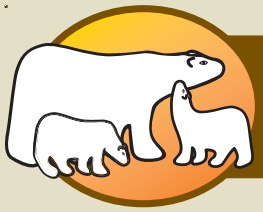
Some Inuit practices include:

- Protecting wildlife: do not hunt the first whales that migrate north as they are the ones leading the migration.
- Respecting wildlife in an area so that they will return to the same area again and again.
- Hunting only what you need so that the species endures.
- If a species is low in number, do not hunt them until the species recovers. They will eventually return in larger numbers.
- Do not try to control wildlife, as they have their mind set and behaviours. When there is disagreement about wildlife, that particular wildlife will go away. This shows disrespect for the wildlife.

Species at Risk Presentation

Most species at risk are in southern Canada where human activity is extensive and intensive. As of May 2002, 30 animal and plant species disappeared in Canada. Eleven of these species are no longer found anywhere on earth. For most species their greatest threat is the alteration of habitat and/or their essential growing conditions.

Content: Ask the students to take a few moments and write in their journals about what different animals mean to them and how they would feel if a particular species became extirpated from Nunavut or extinct. With permission, share the students' work with the rest of the class.
Social: Students should reflect on the importance to society that special areas protected for future generations provide. Students should think about how they would rate the importance of funding Parks Canada in relation to other funding priorities such as health care, education or the military. Remember, there are no right or wrong answers but students should be able to defend their position.
Personal: Artistic students could draw or write a poem or song about a particular species.



Classroom Reinforcement

On the CD accompanying this resource, there is a PowerPoint presentation titled, "Northern National Parks". Refer to the ecozone map to locate each of the national parks. If you have discussed the ecozones, you may want to have students comment on the types of landforms and vegetation found in different parks within their respective ecozones.

You could also;

- Decorate the classroom with the posters and other materials about national parks.
- Post the words on your 'word wall' from the language development list. Put all the words in a container of some sort and when students have time they can go and pull the words out and test themselves on the meanings. Have a key available with the answers.
- Select one or two exemplary student 'reflections' and write them out on large paper and post.
- Play the environmental song MP3 files by Remy Rodden from the CD, *Thinking About the Planet*.

Accommodating Diversity

For the assessment, predetermine the groups to ensure students who need support are in groups with stronger students.

Assessment

Group Presentation

Puzzled Grouping:

Split the class into four groups using a puzzle group activity. Using a picture from one of the National Parks, cut the picture into the number of pieces required for your class. For example, if there are 20 students in your class and you need 4 groups, each puzzle will need to be cut into 5 pieces. Mix all the puzzle pieces together and have each student select one piece. To find their group and the National Park they will be researching have the class mingle until they have put the puzzles together.

Research Activity:

In their groups, have the students' research and create an oral, poster, power point, and pamphlet presentation on one of the National Parks in the Nunavut. Students should select how they want to present the information. Research can be done through the Parks Canada website (http://www.pc.gc.ca). There are fact sheets included in this guide or they are also available on the Parks Canada website.

Follow up Activities

What's that? Habitat!

Northerner and singer/songwriter Remy Rodden knows the environmental challenges in the north very well. He is an environmental steward by his own actions and by the messages he brings to people everywhere.

Singing or listening to a song is a good way to introduce a topic. The song, *What's that? Habitat!* is a great way to introduce the concept of protecting 'spaces', which is a major purpose of the national parks system.

To fully appreciate the song, complete the following;

1. Listen to the song without interruption.
2. Ask the students what they think the song means. Ask the students the components of habitat (food, water, shelter and space). (This concept was taught in Unit 3 of Diversity).
3. The words can be found at the end of this unit. Photocopy a class set or use an overhead projector to help them to sing along. Do this only after they have listened to the song once without the words.
4. Teach the French words, c'est quoi…which is the same thing as saying, "what's that"? Ask the students what it would be in Inuktitut or Inuinnaqtun and see if that can fit into the song. Sing it with the Inuktitut word for "what's that"? The Inuktitut word is "sunauvvat" (soo-nao-vvat).
5. There are actions for this song. During the chorus when Remy is singing 'Food, Water, Shelter, Space' the students could be repeating the words right after him and doing the actions. This will reinforce the learning for the four components.
   - when Remy sings Food…put your hands over your stomach,
   - when he sings Water, put your hands over your mouth,
   - when he sings Shelter put your hands over your head like a little tent, and
   - when he sings Space hold your arms out wide with your hands held up to the sky… big as you can to represent all that space.

Some youth may be reluctant to do the actions at this age, however, if you have fun and get into it they will follow along and laugh despite themselves (really, junior high students can have fun with this). Have fun!

6. Invite interested students to write another verse for a different species.

OR

Bio-diversity

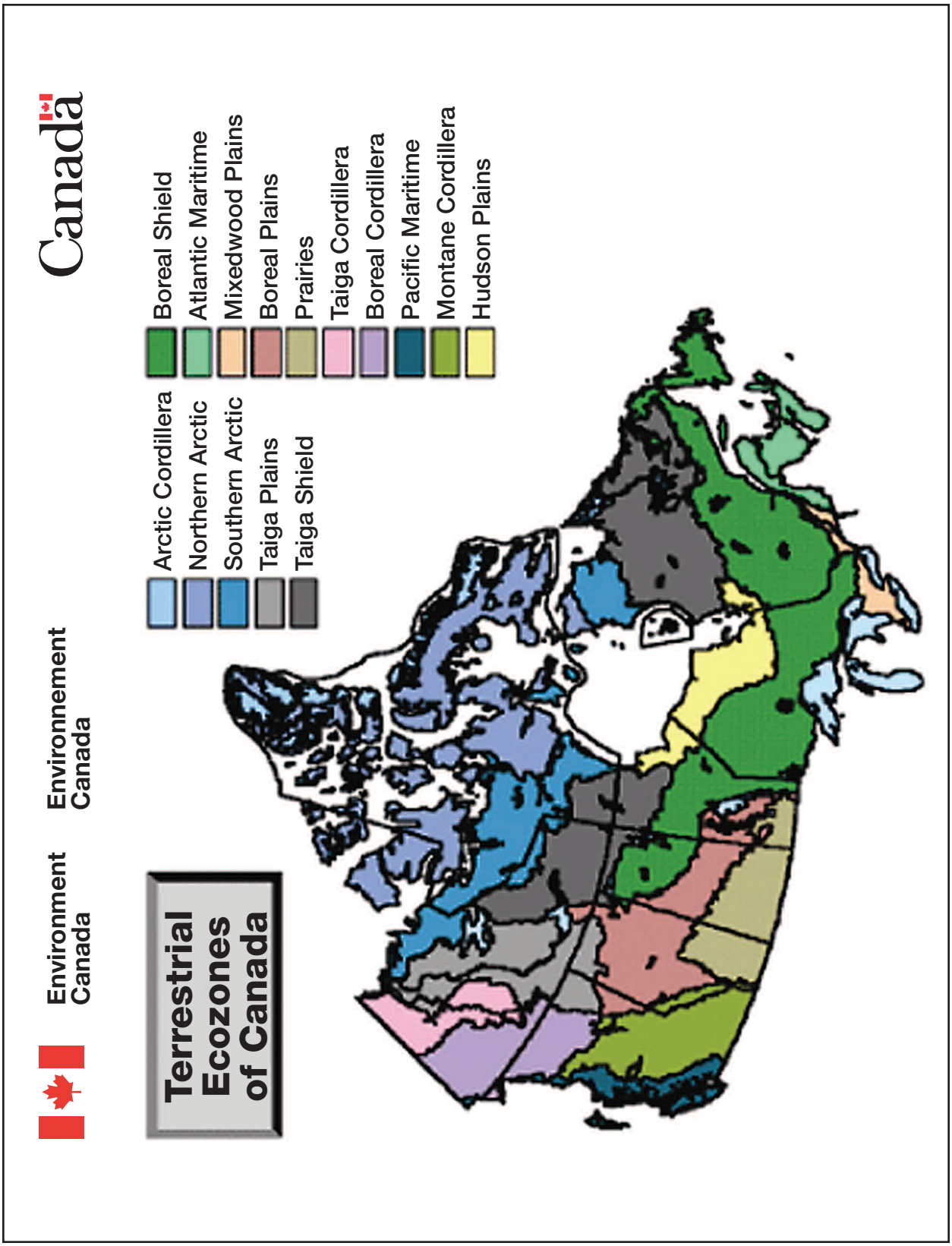
To conclude the lesson, listen to another of Remy Rodden's environmental songs called, *Bio-Diversity*. This song is directly related to the topic as it highlights the fact that the preservation of global and local biodiversity is one of the most fundamental environmental challenges of our times. Remy sings two verses with two sets of species. The first set of species in the song is from the Canadian list of 'species at risk' and the second is from the Convention on International Trade in Endangered Species (CITES) list.

After listening to the song have students select one of the species from each list to research briefly and share with rest of the class their status on each list. Encourage the students to pick something they don't know and something that is not from Nunavut.

Printable and Support Materials

What Amount Would You Protect?

Canadian Terrestrial Ecozones



Ecozones and Natural Regions of Nunavut

Name: _____ Date: _____

Using the maps, *The National Parks of Canada and Terrestrial Ecozones* map to answer the following;

1. How many terrestrial ecozones are there in Canada? _____
2. How many terrestrial ecozones in northern Canada? _____
3. Name 2 ecozones in Nunavut. _____
4. Looking at the map, which ecozone do you live in? _____
5. Pick one of the larger Northern ecozones, research using the internet and complete the following table:

   Chosen ecozone: _____

There may be some animals that are not listed in the website, but think about what type of animals there may be in that chosen area.

COMPONENT	DESCRIPTION
Other Name	
Wildlife — name one type of terrestrial species found in this area	
Wildlife — name one type of bird found in this area	
Wildlife — name one type of marine (sea) animal found in this area	
Name one way a plant adapts to this area	

Teachers Answers — Ecozones and Natural Regions of Nunavut

Using the maps, *The National Parks of Canada and Terrestrial Ecozones* and the *Natural Regions of Canada* and the site http://www.ec.gc.ca/soerree/English/vignettes/Terrestrial/terr.cfm to answer the following;

1. How many terrestrial ecozones are there in Canada? **15**

2. How many terrestrial ecozones in northern Canada? **7**

3. Name 2 ecozones in Nunavut. **Arctic Cordillera, Northern Arctic, Southern Arctic and little bit of Taiga Shield**

4. Looking at the map, which ecozone do you live in? _____

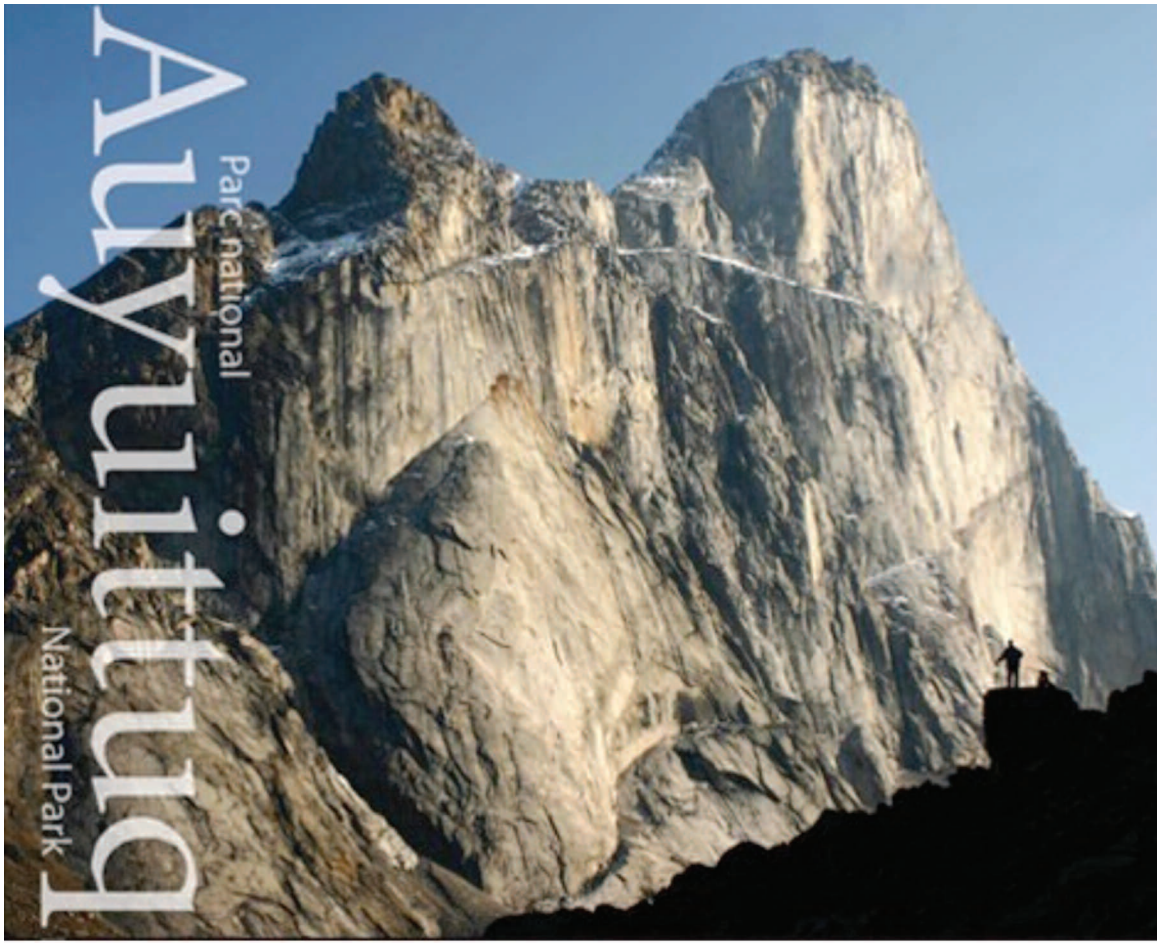
5. Pick one of the larger Northern ecozones, research using the internet and complete the following table:

   Chosen ecozone: _____

There may be some animals that are not listed in the website, but think about what type of animals there may be in that chosen area.

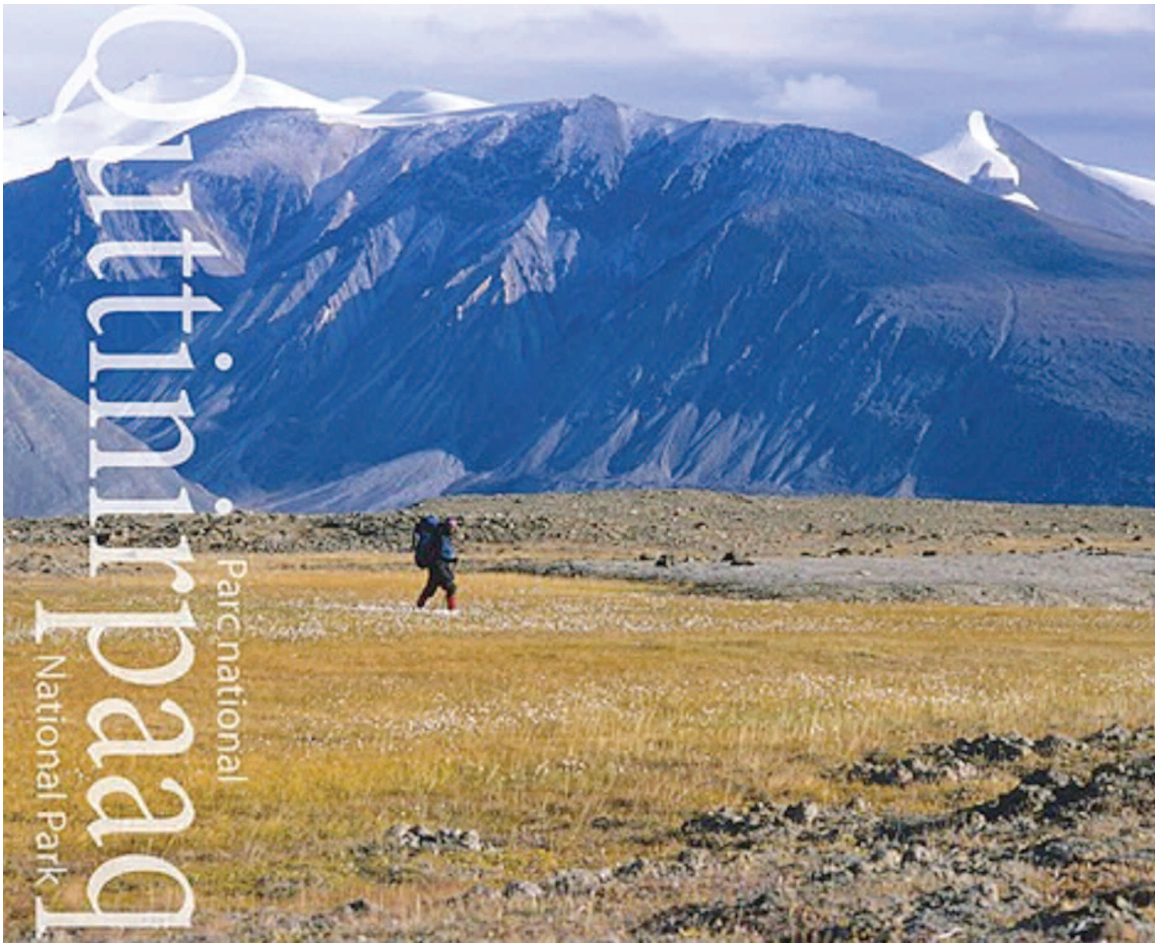
COMPONENT	ARCTIC CORDILLERA	NORTHERN ARCTIC	SOUTHERN ARCTIC
Other Name	Arctic Rockies	Far North	Treeless North
Wildlife — name one type of terrestrial species found in this area	Arctic hare, Arctic fox, ermine, lemmings, Peary caribou, musk ox, polar bear, wolves	Polar bear, musk ox, caribou, lemming, wolves, fox, ermine	Caribou, musk ox, moose, wolverine, squirrel, lemming, grizzly bear, polar bear, wolves, fox
Wildlife — name one type of bird found in this area	Hoary redpoll, plover, snow bunting, sea gulls, goose, jaegers, falcons, thick billed murres, fulmar, redpoll, eiders ducks, kittiwakes, black guillemot	Jaegers, Glaucous gull, horned lark, plover, ruddy turnstone, oldsquaw, brant, snow goose, snowy owl, king eider, red throated loon, gyrfalcon, shorebirds	Hawk, swan, sparrow, ptarmigan, plovers, oldsquaw, gyrfalcon, Canada goose, ducks, loons
Wildlife — name one type of marine (sea) animal found in this area	Beluga, walrus, ring seal, narwhal, bowhead	seals, whales, fish, sculpins, cods, walrus	seals, whales, fish, sculpins, cods, walrus
Name one way a plant adapts to this area	Hug the ground, protection beneath the snow, grow in dense mats or cushions where it is warmer, covered in hair	Perennials, very short, grow in dense cushions and following the sun	Grow in sheltered areas, less than a meter high (short) and grow in cushions

Pictures of National Parks of Nunavut



AUYUITTUQ NATIONAL PARK

Pictures of National Parks of Nunavut

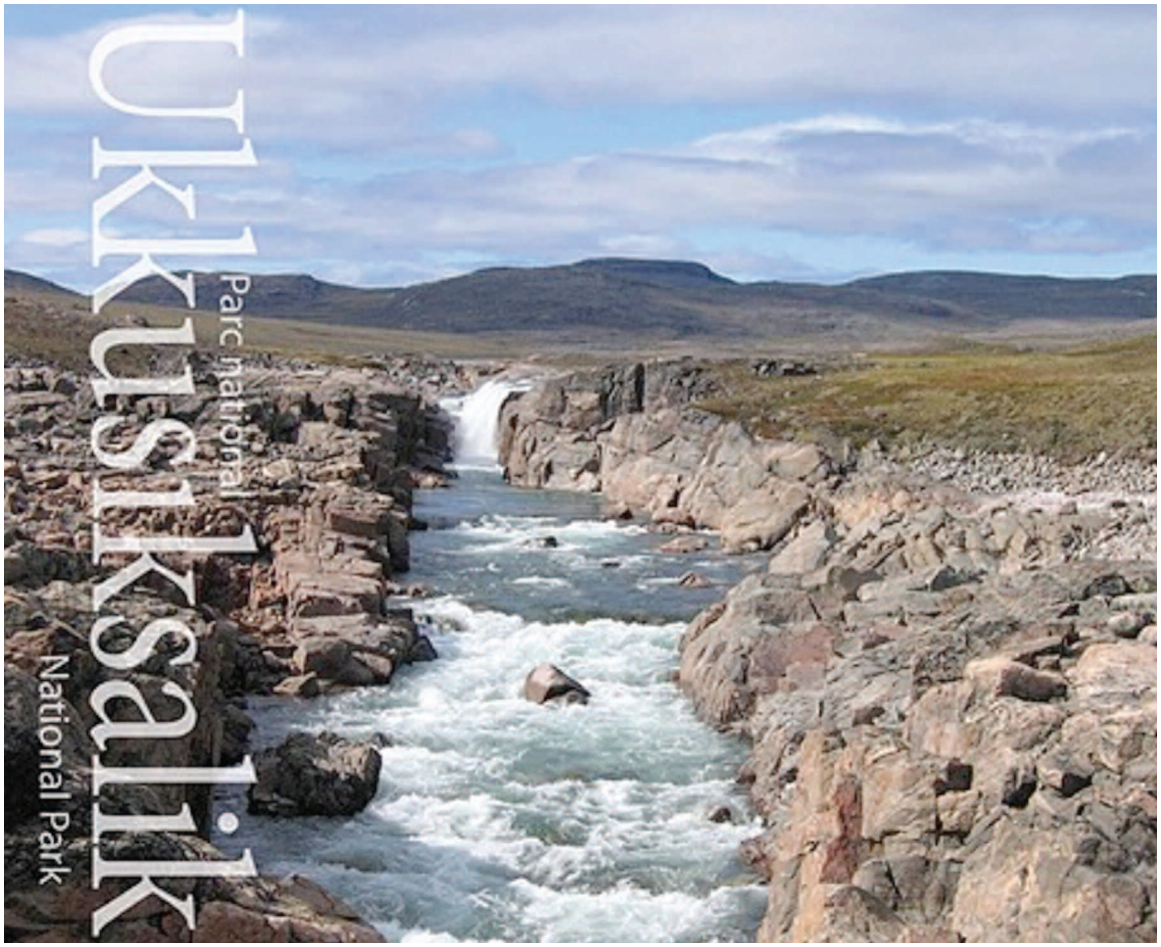


QUTTINIRPAAQ NATIONAL PARK

Pictures of National Parks of Nunavut

SIRMILIK NATIONAL PARK

Pictures of National Parks of Nunavut



UKKUSIKSALIK NATIONAL PARK

National Parks of Nunavut

Your task is to make a poster presentation describing one of Nunavut's National Parks.

- Do your work in pencil first or on the computer.
- Do not just print material from the website.
- Check that the writing is clear and the information is correct before going over it in darker colours.
- Check the spelling, capitalization, grammar and punctuation.

Make sure your poster answers each of the following questions;

- Which Ecozones does the Park protect?
- Provide a map of Nunavut to show its location. Describe the area of land and/or water in the National Park.
- What, if any, species at risk does the park protect? If possible, include pictures and information about the species status and what is being done to protect it from becoming extinct.
- What does the Park's name mean?
- Write about some of the reasons this area is protected — are there any interesting geological features, archaeological sites or other resources that make it significant?
- What communities are closest to this park?
- What are the main reasons people would visit this park?
- Have Inuit lived in that area — why or why not?
- If you could establish a national park anywhere in Nunavut, where would it be and why would you pick that area?

What's That? Habitat!

(By Remy Rodden)

What's that? Habitat!
C'est quoi? L'habitat!
What's that Habitat!
C'est quoi? L'habitat!
Habitat, habitat is where it's at

Now every living creature
Needs a place to roam
We all need a shelter
We can call our home
We'll die without food and water,
It's as simple as that
Put it all together
And it's called habitat

Chorus

Food (Food) Water (Water)
Shelter (Shelter)
Space (Space) 3X
Habitat, habitat is where it's at!

Just think about that beaver he's in water
all the time
He stockpiles leaves and branches
all through the summertime
He stores them under water
And in the winter he stays fat
'Cos they're under the ice outside
his lodge and that's his habitat

Chorus

Now a grizzly bear needs lots of space
To find all the food she needs
To feed herself and her cubs real well
With fish, raw meat and berries
She gets her water from the lakes and
Streams and by the autumn she's so fat
She stays in her den, doesn't eat
All winter and that's her habitat

Bio-diversity

(By Remy Rodden)

Bio-diversity,
Mother Nature sings this song
Bio-diversity,
I hope that you will sing along

Bio means life (as in biology)
Diversity means lots of variety
Healthy ecosystems
Need different living things
And if you listen closely
You can hear them sing

Chorus

'Cause every living creature has its place
They need food, shelter, water, space
So let us do our part to help them all survive
By keeping their habitat alive

Black bear, grizzly bear, smallmouth
salamander, barn owl, pallid bat, golden seal
and stoneroller, Squanga Lake whitefish,
walrus and king rail, blue racer, red root,
hop tree, beluga whale, heart-leafed plantain,
soap weed and sea otter, green sturgeon,
Athabaska swift
whooping crane, swift fox, spotted owl,
spotted bat, blackstripe topminnow,
ord's kangaroo rat, wood bison, wood poppy,
mountain plover, great auk,
Englemann's quillwort, blue ash and
Cooper's hawk, marbled murrelet, right whale
and colicroot, grey fox, loggerhead shrike

Chorus, etc.

hairy-nosed wombat, timber wolf and grass
owl, dove flower, bog turtle, pitcher plant and
rock fowl, Madagascar boa, peregrine falcon,
black coral, grison, weaver and dolphin,
coelocanth, bush dog, bobcat and bullfrog,
crocodile and hippopotamus

Aardvark, egret, blue whale, manatee ocelot,
sea cat, panther and parakeet, rat snake
pearlfish, bandicoot and jaguar, armadillo,
antelope, cockatoo and condor,
birdwing butterflies, red leg tarantula,
aye-aye and monkey-puzzle tree

Chorus, etc.

Environmental Stewards

QUTTINIRPAAQ NATIONAL PARK

Learning Competencies

Students will develop a deeper understanding of what it means to be an environmental steward and relate it to the actions of their fellow Nunavummiut who are applying this knowledge to their home communities. Students will investigate employment opportunities at Parks Canada. Students will be able to identify actions that they can do as a single individual in order to become an environmental steward.

Language Development

Students will be comfortable with the following vocabulary;

- **Avatittinnik Kamatsiarniq:** A guiding principle for Inuit and it means to respect and care for the land, animals and the environment. Avatittinnik means our surrounding environment and Kamatsiarniq means to look after someone or something with care. This is the same as environmental stewardship.
- **Environmental stewardship:** A term used to describe when one person or group acts on behalf of the environment. Preserving and enhancing the quality of the environment for now and future generations.
- **Steward:** One who acts on behalf of another. A person who's responsible for an event.
- **Personal action:** Something you can do to help another.
- **Pijitsirniq:** A guiding principal for Inuit and it means to serve and provide for family and/or community. Serving others before you serve yourself. This term could be used instead of the word steward.
- **Responsibility:** Taking care of your duties and answering for your actions.

Background

Environmental stewardship or avatittinnik kamatsiarniq is a term used to describe when one person or group acts on behalf of the environment. Under this definition, everyone is a steward of the environment around us. We do not own the environment — no one can. We are simply caretakers of the resources that we use in our daily lives. Stewardship (pijitsirniq) is what we do. In this unit students will explore the meaning of environmental stewardship and learn about examples of Nunavummiut who are acting on behalf of the environment.

We do not own the environment — no one can.

Materials

- Handout: lyrics to The Caribou Song
- MP3 music file — song by Remy Rodden from the CD called, **Think About the Planet**.
- *UP Here* article titled, *From Ice Age to Computer Age* on Sheila Watt Cloutier — digital file
- Stewardship Fact Sheets
- Parks Canada Employment fact sheets
- Body Biography student hand-out and teacher answer sheet
- Website listing environmental stewards http://www.ecotopia.org/ehof/index.html
- Iqaluit Greenhouse video file

Opener

The Caribou Song

As students are entering the classroom, play Remy Rodden's, *Caribou Song*. The caribou herds in the southern portion of the Yukon Territory have dwindled considerably in recent years. This song is a call to protect all wildlife (and ourselves) by protecting critical habitat. While this song was written for the herds in the Yukon, it's important to learn a lesson from their experience and ensure that the herds in Nunavut do not suffer the same outcome.

After listening to the song, ask the students what they can do to lend a helping hand to the caribou and other wildlife. Tell them that for the rest of the unit they will be learning about what others have been doing. If students need to read the words to understand the meaning, hand out a copy of the lyrics provided.

Connector

Nunavummiut Environmental Stewards

Ask the students: 'What does 'steward' or 'pijitsirniq' mean?' Brainstorm ideas. Share that a steward and pijitsirniq is 'one who acts on behalf of another'. It also means a person who supervises, or manages something; especially the careful and responsible management of something. So 'environmental steward' and 'avatittinnik kamatsiarniq' is one who acts on behalf of the environment.

Under this definition, everyone is a steward of the environment around us. We do not own the environment — no one can. We are simply caretakers of the resources that we use in our daily lives. Stewardship is what we do.

Inuit lived as nomads, on the move seasonally from location to location. Inuit moved from place to place when they thought the area got "too hot". This meant if they lived in one area too long, the habitat would start to get "lived on" and the wildlife population size would drop as Inuit hunted them for survival. To avoid this, Inuit moved to another location, which would be referred to as "cold", meaning it was rich in wildlife and the environment was clean.

Discussion

Have the students discuss and brainstorm the values of being environmental stewards.

Discuss the two guiding principles of Inuit: Avatittinnik Kamatsiarniq and Pijitsirniq. Inuit practised protecting the land, wildlife and the environment, because it was the only way of surviving in the north. Everything Inuit ate, used for clothing and equipment (kayak, tents, and hunting gear) came from the environment. Elders say there is a strong requirement to protect the environment.

Next, ask the class if they can name any environmental stewards from Nunavut. Discuss the achievements of Sheila Watt Cloutier. Ask your class if they know who she is. She is just one person, and yet she has worked tirelessly to fight for the rights of northerners 'to be cold'. She gave climate change a human face and in doing so, won many awards including;

- International Environmental Leadership Award in 2006 from the Global Green, USA, the American Branch of Mikhail Gorbachev's Green Cross International,
- Citation of Lifetime Achievement from the Canadian Environment Awards,
- Earth Day Canada International Environment Award,
- Honorary Doctorate of Law from the University of Winnipeg,
- 'Northerner of the Year' award from *Up Here* magazine 2005,
- Officer in the Order of Canada in December 2006,
- In February, 2007, she was publicly nominated for the Nobel Peace Prize by members of the Norwegian parliament, including the former Minister of the Environment,
- Rachel Carson Prize in June, 2007,
- Mahbub ul Haq Human Development Award presented by UN Secretary General Ban Ki Moon

Ms. Watt-Cloutier sums up her work by saying: "I do nothing more than remind the world that the Arctic is not a barren land devoid of life but a rich and majestic land that has supported our resilient culture for millennia. Even though small in number and living far from the corridors of power, it appears that the wisdom of the land strikes a universal chord on a planet where many are searching for sustainability."

Think-Pair-Share

Hand out a copy of Up Here magazine's article titled, From Ice Age to Computer Age, written by Jasmine Budak. Her article on Sheila Watt Cloutier as Northerner of the Year summarizes how Sheila exemplifies being an environmental steward. As individuals, have each student read through the article and answer the following;

- In your words, why was Sheila Watt Cloutier chosen northerner of the year in 2005?
- Select what you think is the most interesting fact or sentence from the article and state why you selected that sentence.
- Would you describe Sheila Watt Cloutier as an environmental steward? Why or why not?

When students are ready with completed answers they need to find a partner and share their answers between them. If time permits they should each share with another partner.

Activity

'Hot Seat' Jigsaw

There are many examples of northerners who, through their actions, are environmental stewards. In this activity, the students will read about an environmental steward and then share their knowledge with others. To complete the activity, do the following;

1. Split your class into 6 groups. These are their 'home groups'. Each home group needs to have a number (1-6).
2. Hand out a chart called, 'Stewardship information' to each student in the class.
3. Hand out one fact sheet to each group. In their home groups they need to read all of the information from that one fact sheet and fill in their chart for their home group.
4. Note that for the 6th group their information is recorded on video, rather than in print. Ensure they have access to a computer or DVD for viewing.[1]
5. Once they have all the information for their home group have the class mingle with each other. They need to find someone from each of the other 5 groups until their chart is complete.
6. After all students have a completed chart, the group 'hot-seat' activity begins. Each home group needs to be prepared to act as a steward and be interviewed. Students should be able to anticipate questions that might be asked and prepare their. Groups should select props to represent the steward's work and ideas. Students from other groups could ask questions in a form of a media interview.
7. Each student or each group summarizes what it means to be an environmental steward.
8. Ask the class if they know anyone from their community who fits this description.
9. Ask the students how they would use their own wisdom and knowledge to better serve their community.

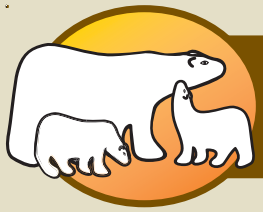
[1] This video came from the Government of Nunavut with permission. Gwen Frankton and Neil Burgess put it together for use in the on-line-learning Plants of Nunavut course. The material for this course is also excellent to accompany the Diversity module.

Reflection

Content: Pick your favorite environmental steward from the fact sheets, or another person that you know about and write why you think that person is an environmental steward.

Social: Using your imagination, draw a picture of what the earth would look like if we were all environmental stewards. Draw another picture of what the earth would look like if no one were an environmental steward. Think about what kind of world you want to live in.

Personal: There is a well-known saying: 'if you're not part of the solution, you're part of the problem'. Write a paragraph about what you do in your daily life to impact the environment. Are you part of the solution or the problem? What can you do in your community to be an environmental steward?



Classroom Reinforcement

1. Post all of the fact sheets around the classroom.
2. Post the biographies of the Parks Canada Employment opportunities.
3. Gather pictures and stories of other environmental stewards and make an environmental steward 'wall' in the classroom. Include local people if possible.
4. Invite an elder come to the classroom to talk about what it takes to be an environmental steward. If the elder is unilingual, have one of the school staff translate. The idea is to ask questions of the elder. Get the students to write the answers to questions while the elder is talking. Breaks may be required. Provide the elder with the questions beforehand. Ask the elder to talk about Inuit values of environment and wildlife. Ask the elder what was done to make sure the values were followed?

Questions to ask:

- What were the values to make sure the environment was healthy?
- What stories did the elder hear as a child about having a healthy or unhealthy environment?
- How were wildlife and the environment seen as a whole?
- Were there any protected areas where Inuit were not supposed to go? Why?
- Tell us how to respect wildlife, what did people do or not do?
- Tell us the memorable moments when the elder was being a steward.

Accommodating Diversity

1. Give the option to draw the responses to 'if you're not part of the solution, you're part of the problem' rather than answering in writing.
2. Use a vocabulary wheel to make sure everyone understands the meaning of the word 'stewardship'. To do so, place the word in the centre of a piece of paper and ask the class for synonyms of the word (such as custodian, keeper, guardian, caretaker, etc.). Each of these synonyms or longer descriptions can be placed on spokes around the wheel of the word in the centre. Post this vocabulary wheel picture on the wall to reinforce the meaning.

Follow-Up Activities

Employment Opportunities with Parks Canada

Explain to the students that there is a wide range of Parks Canada careers. As well, there are opportunities for high school and university students to work for Parks Canada during the summer. In this activity, students will be introduced to Parks Canada job opportunities. In Nunavut, there are Parks Canada staffs in the communities closest to the national parks as well as in Iqaluit.

Complete a jigsaw activity by having students divide into six groups. Give all students the biography handout (Careers at Parks Canada) and members of each group one of the six career fact sheets. Have students read the fact sheet in their groups and complete the individual biographies. Work with each of the six groups to see that they are able to complete the biographies. Once completed, have students re-group with each career represented. Students then share what they have learned about their assigned career. Have the class regroup to discuss which of the careers seems most interesting to them and why.

OR

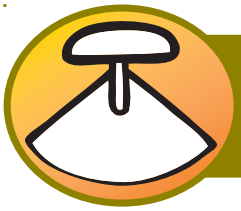
There are many examples of other northerners, Canadians and people from the International Community who are environmental steward role models. Using the website, http://www.ecotopia.org/ehof/index.html, have the class research environmental stewards and report on these individuals and their accomplishments. For example, students could do a search on Jack Miner, a Canadian Environmental Steward.

Assessment

Have students investigate and create their own report on an environmental steward in their community. This could be an elder, a person in a position related to the environment, Parks Canada staff or even a peer.

OR

Have the students write a profile of themselves as an environmental steward, including things they are currently doing or have done to support the environment, include things that they hope to do in the future. This will lead to Unit 3 where students will be asked to make a commitment and follow through to earn an Environmental Stewardship certificate.



Printable and Support Material

The Caribou Song

(By Remy Rodden)

Once upon a time throughout
This land the caribou did roam
Thousands and thousands wandered through the hills,
our backyard was their home
They provided food and shelter for the First Ones
Then along came the miners and the rails,
Their habitat began to change
And up when the fences and the roads
In the middle of their winter range
Now the Carcross herd is barely just surviving
We've got to do something soon

Oh caribou, caribou,
Symbol of the northland,
The wilderness so true
O caribou, caribou
We will be in trouble
If we don't take care of you
(if we take care of your habitat,
we'll be taking care of you)

Now the caribou is perfect for the North,
It's adapted to a land that's cold
Its hooves are big and wide
And they act like snowshoes
And shovels in the deep, deep snow
And their hollow hair
Keeps them toasty warm
They dine on lichens, a kind of plant,
That no other critter wants to eat
So caribou survive
Where other animals can't,
They have a very special niche
And the caribou when it dies,
It feeds its neighbours —
The wolves and ravens too!
Chorus
As goes the land so go ourselves
And all of us depend on the land
If the wildlife is in trouble then we are too,
So we'd better lend a helping hand
Won't you take the time to try and help your neighbour?
Everything's connected somehow

Fact Sheet #1

Aqsarniit Middle School

Iqaluit, Nunavut

This school has made a real difference in the community. Through its Environmental Club, the school supported the city of Iqaluit's blue bin program, started a green bin program for recycling paper and has worm bins for recycling vegetable compost. The club promoted the program throughout Iqaluit as well as to peers at other schools by way of presentations prepared and given by students from the Environmental Club.

The school supports a parent volunteer program developing a large scale community-wide composting program involving 100 families. More importantly, when the Iqaluit city council decided to cancel the recycling program, the Aqsarniit Environmental Club played a major role in convincing the city to reconsider. Aqsarniit School has a major program for Earth Day, and has received Green and Emerald school status through the SEEDS Green Schools program.

Awards won:

- 2005 EECOM Awards of Excellence for Outstanding School (EECOM is Environmental Educators and Communicators and is a national organization).
- The Great Ecokids Challenge, 2004 winners

Fact Sheet #2

George Naikak Hakongak

GEORGE NAIKAK HAKONGAK

Naikak was born in Ikaluktuuttiak (Cambridge Bay) and raised in Umingmaktuuk (Bay Chimo) and Kingaok (Bathurst Inlet) in the Kitikmeot. He is the son of May Hakongak and Jacob Kudlak. He currently lives in Ikaluktuuttiak with his wife Donna and two daughters, Ovilok and Nuka. George is a very skilled hunter and knows the land very well because he has spent a lot of time on the land.

Naikak has had many jobs including: being a schoolteacher, a wildlife officer with the Nunavut government and currently he is the Senior Advisor: Environment, Water and Marine Management for the Department of Lands and Resources with Nunavut Tunngavik Incorporated (NTI).

The work with NTI is an example of environmental stewardship. He is responsible for land management. For example, when a mining company wants to open a mine, the company writes how they will use the area to operate a mine. Naikak is part of the Regional Inuit Association (RIA) team that goes through the various plans to make sure the land is taken care of and the needs and concerns of the NTI and the RIA are met. In his own words, Naikak says, 'in a nutshell environmental stewardship is what I do'.

Naikak is also an author. He worked with Natasha Thorpe, Sandra Eyegetok, and the Kitikmeot Elders on the book, *Thunder on the Tundra: Inuit Qaujimajatuqangit of the Bathurst Caribou*, which has been an excellent addition to northern libraries. Caribou have always been central to Inuit identity, subsistence, culture, and tradition. Thunder on the Tundra shares Inuit knowledge about caribou in the Kitikmeot region. This book is a wonderful example of environmental stewardship because people volunteered their time and shared their knowledge. It also inspires others to think deeply about their actions while on the land and about how their actions might impact caribou.

Naikak also volunteers with the Canadian Rangers, the Ikaluktuuttiak Search and Rescue and CASARA, which is the Civil Air Search and Rescue Association.

When asked what he wished youth knew today Naikak said, *'With a new generation youth have all the technology and don't go on the land so much anymore. It's important that more parents bring them out to show them the land and animals. Kids tend to stay in town and go to the game hall, everything is more town focused and that makes it hard for them to know the land well. They need to get out there and pay attention so they will be able to notice changes and participate in taking care of the land.'*

Fact Sheet #3

Department of the Environment, Government of Nunavut and the Hamlet of Rankin Inlet

Do you know how many pop cans, juice cans and other beverage containers are thrown out everyday in the North? It's way too many to count. All these containers end up in the landfill (dump) and eventually those places can get filled up and then more land is needed for more garbage.

In the south where communities have access to roads, it's easy to recycle. This is not the same for the north. But, some people believe that if the cans and bottles can get to the north, they can get back south to be recycled. The Department of Environment is trying to figure out how to do this. Rankin Inlet is one community that has had some success. They have agreed to participate in a pilot project. Community members can bring their cans and bottles to a depot 4 afternoons a week. Each container is worth 5 cents. On average they are collecting 60,000 containers per month. Wow, try and figure out how much space that would take up in a landfill!

Although they are not sure on how to get them south, at least they are all collected in one place. The community is actively looking at ways to get the materials to the south to a recycling facility that will purchase the material and make new things from the recycled materials. Did you know that making cans from recycled aluminum uses **95% less** energy than from making cans from bauxite ore, which is the where, aluminum comes from? This means 20 cans can be made from recycled aluminum for the same amount of energy it takes to make one can from bauxite. Throwing away one aluminum pop can wastes as much energy as pouring out almost a cupful of gasoline.

Recycling is only one way of reducing waste. By itself, recycling can't solve the problem of too much garbage. Another way to reduce waste is to:

a) Refuse to buy unnecessary items.
b) Refuse to buy products with too much packaging.
c) Find new uses or new owners for used items.
d) All of the above.

Yup, you got it, all of the above. What are you doing to reduce your waste? Why don't you and your school start something like the program in Rankin Inlet and figure out a way to divert all those beverage containers from getting into your landfill?

Fact Sheet #4

Davidee Kooneeliusie

Davidee Kooneeliusie is an Ecosystem Technician for Parks Canada at Auyuittuq National Park. Davidee was born in Nunataaq in Cumberland Sound outside of Pangnirtung. He lived there until he was 2-3 years old when his family moved to Kerketen Island in Cumberland Sound, outside of Pangnirtung, now a National Historic Site.

Each spring and summer, he and his family would temporarily live in Pangnirtung. The family moved again to North Pangnirtung when he was about 5 – 6 years old and then to Broughton Island (Qikiqtarjuaq) where he grew up.

Davidee attended school in Qikiqtarjuaq and then moved away in 1965 to 1968 to Churchill Vocational Centre, Churchill Manitoba. His favourite subjects were:

- Sheet Metal working,
- Wood Work and
- Social Studies.

In 1968 he went to Guelph Ont. and worked as a factory worker for a period of six months.

In 1969 he worked at a DEW line Site near Qikiqtarjuak and in 1970 went to Alert, on Ellesmere Island to work. From 1970 to 1973 he worked for Broughton Island Housing Association and was responsible for the collection of rental payments and interpreting for clients and staff in English & Inuktitut.

In 1973 he was approached to work for Parks Canada as a Warden for Auyuittuq in Pangnirtung and Qikiqtarjuaq, he agreed.

DAVIDEE WORKING ON THE MULTI-YEAR POLAR BEAR STUDY.

Davidee's still works for Auyuittuq National Park. He was a Park Warden for 32 years and has been Ecosystems Technician for 3 years. As a Parks Canada employee Davidee works to further the mandate of Parks Canada, which is to preserve, protect and present Canada's national heritage for current and future generations. As a Park Warden he;

- Studies, monitors and manages ecosystems;
- Provides scientific information for decision-making;
- Protects ecosystems and cultural resources;
- Delivers effective public safety programs; and
- Builds relationships and partnerships with the surrounding communities and visitors.

Fact Sheet #5

Paula K. Hughson

Park Manager
Ukkusiksalik National Park (UNP)

Currently Ukkusiksalik National Park (UNP) has 3 staff: Park Manager, Park Warden and Administrative Assistant. Paula works with UNP's park management committee and the Nunavut Field Unit to keep the lines of communication open and for their advice on park management issues.

UNP is in the start up phase — there have been major projects including the construction of the administrative building for the park in Repulse Bay. Paula also informs mining companies that are close to the park boundaries about the laws and regulations that pertain to national parks. Another important organization that Paula works with is the Kivalliq Inuit Association, the Designated Inuit Organization for the Kivalliq region. Ukkusiksalik has 5 communities associated with the park and Paula ensures that the communities receive information about summer job opportunities and project activities.

Paula began her career with Parks Canada in April 1999 as the Nunavut Field Unit (NFU) biologist and was initially based in Ottawa and then Iqaluit. She was with the NFU for 5 years before returning to university to start her masters in Natural Resources Management. She has almost completed it. In 2005 she applied for the UNP Park Manager position and won the competition. She began working as the UNP park manager in April, 2006. Paula loves her job and is very happy to be back at Ukkusiksalik, living in Repulse Bay and working on her thesis, which she hopes to complete.

PAULA AT UKKUSIKSALIK

Fact Sheet #6

The Iqaluit Green House

The information for the Iqaluit Green House is on the video provided. Students watch the video and record the information on their chart.

Stewardship Information Sheet

Date: _____ Name: _____

NAME	LOCATION	ACTION	OUTCOME	COMMENTS

Teacher Solutions: Stewardship Information Sheet

Date: _____ Name: _____

NAME	LOCATION	ACTION	OUTCOME	COMMENTS
Aqsarniit Middle School	Iqaluit	- Started an environmental club - Got recycling going and composting	- Got the city to reconsider cancelling its recycling program - Received awards	
George Naikak Hakongak	Cambridge Bay	- teacher - Wildlife officer, - senior advisor for NTI - wrote a book	- Naikak educates others and is a leader by example, - Also has raised his kids to be stewards	
Hamlet of Rankin Inlet	Rankin Inlet	- Pilot project for beverage container recovery program	- Diverting beverage containers from dump	
David Kooneeliusie	Pangnirtung	- Worked as a Park Warden for Parks Canada, worked in the environmental field	- Helps to preserve Nunavut's natural and cultural heritage	
Paula Hughson	Repulse Bay	- Parks Manager for Ukkusiksalik National Park	- Communicates with Inuit Organizations, mining companies and the communities to follow Parks Canada legislation and regulations	
Iqaluit Green House	Iqaluit	- Community is working together to see if green house is viable this far north	- Growing vegetables in the north rather than having to ship them can reduce carbon foot-print	If it can work in Iqaluit it can work in any northern community.

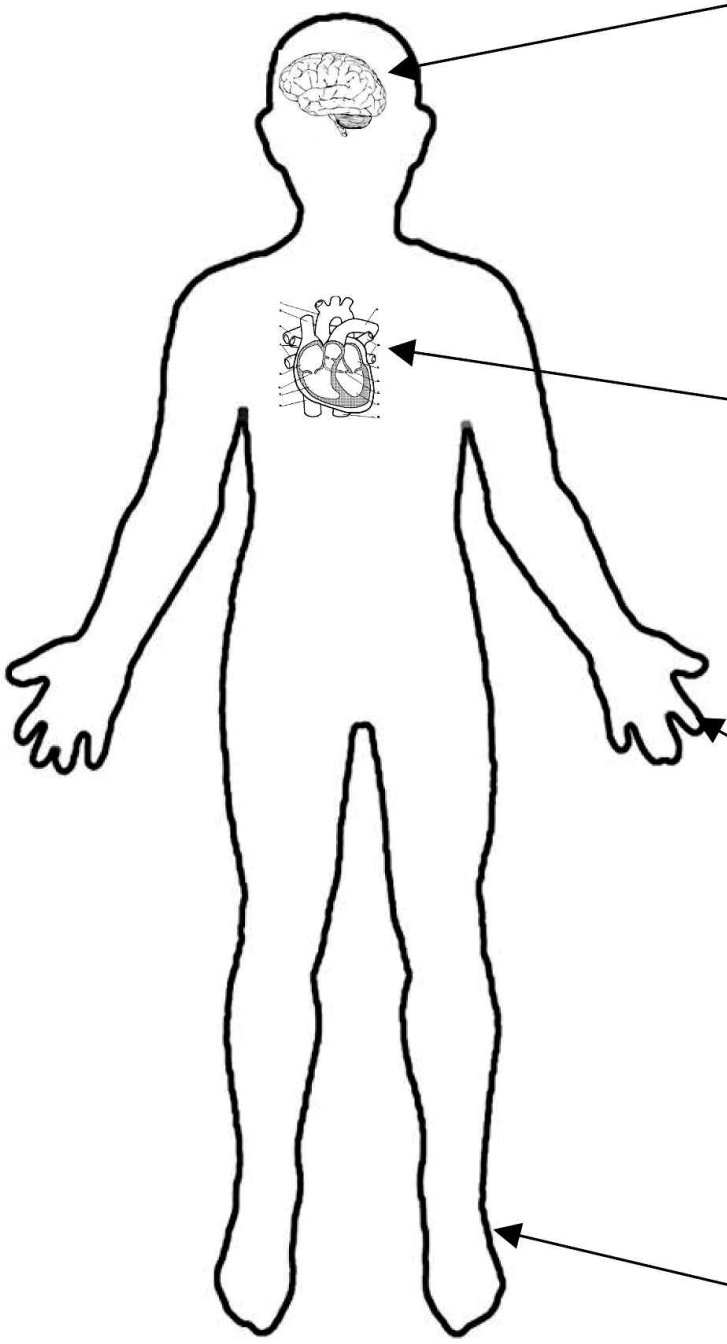
Student Handout: Careers at Parks Canada

Date: _____ Name: _____

Choose one of the Parks Canada Career Fact Sheets. Read the fact sheet and fill in the Body Biography about the career.

Career Chosen:

_____



Their Brain: (education needed, type of thinking)

Their Heart: (what is important to them)

Their Hands: (tools used, type of work)

Their Shoes: (work environment, location)

Career Fact Sheet

Resource Management and Public Safety Specialist

Resource Management and Public Safety Specialists work closely with communities adjacent to the national park, stakeholders, and other Parks Canada staff to protect, conserve or restore natural areas of national importance. They perform various duties that contribute to memorable and meaningful visitor experiences.

Resource conservation and public specialists usually live in small communities inside or adjacent to the national park. They are local people or they work with local people who have an intimate knowledge of the park area and its resources based on personal experiences and generations of traditional knowledge.

Resource conservation and public safety specialists have many responsibilities.

Their tasks include:

- Studying, monitoring and managing ecosystems
- Providing scientific information for decision-making
- Protecting ecosystems and cultural resources
- Delivering effective public safety programs
- Building relationships and partnerships

Typically they will have graduated from university and studies natural science or natural resource.

They will be required to work outside during the field season, usually from 2-4 months during the summer, in physically demanding conditions using a variety of equipment such as boats, snowmobiles and ATVs. Some of the planning and other administrative tasks require time in an office and using computers.

Career Fact Sheet

Interpreter/Communicator

Communication Officers help visitors understand and appreciate the rich natural and cultural heritage of Canada's national parks and historic sites. These trained communicators share heritage stories on site, using a variety of methods and media such as guided tours and outings, illustrated talks, displays, audio-visual programs, community exhibits and publications.

Interpreters usually have two years or more of post-secondary education in natural or social sciences. Most important is a good general knowledge of the natural or human history of Canada, along with the ability to communicate this information in a pleasant, confident and interesting manner. Park interpreters are key players in park visitor experience and education as they provide orientation and registration for all visitors to national parks in Nunavut. These park presenters are often local people who interpret local knowledge of park areas. Sometimes, resource conservation and public safety specialists are also involved with delivering interpretive programs.

Interpreters work inside and outside.

They use a variety of tools to create displays and activities including computers, art supplies and digital media.

Career Fact Sheet

Biologist

If you like the outdoors, wild animals, ecology, math, computers and working with people, then perhaps being a biologist is the career for you.

At Parks Canada, biologists conduct research to learn more about living organisms, to assist in the management of natural resources, and to develop new practices to maintain healthy ecosystems.

Biologists work outside while studying plants, animals, and making observations of the environment. They use a broad range of scientific measuring and sampling equipment to study subjects such as the landscape, wildlife populations, plants, soil and water. Biologists also spend time writing reports and analyzing their research.

Biologists attend university to complete a Bachelor of Science degree that specializes in natural or environmental science such as wildlife management, botany, ecology or other related fields.

Career Fact Sheet

Cultural Resource Management Advisor

If you have a passion for Inuit and other cultures, and have an understanding of Inuit Qaujimajatuqangit then perhaps being a Cultural Resource Management Advisor is the career for you.

Cultural Resource Management Advisors strive to protect the places in national parks and national historic sites, where people have lived or traveled, and the objects they have left behind. The places, the objects, the people, or the events may be nationally or locally significant. They bring history to life for visitors, so they understand how Inuit and other cultures once lived.

Cultural Resource Management Advisors consult with local community members, historians, archaeologists, ecosystem scientists, park managers, and the park management committees. They create partnerships with organizations with similar interests and goals, and gather information, plan and make decisions in consultation with partners about potential projects. Once all the required information is gathered, they provide advice or recommendations to management teams

To become a Cultural Resource Management Advisor you must complete a two-year diploma college program or obtain a degree from a University specializing in archaeology, anthropology, history, or another related discipline.

Career Fact Sheet

General Labourers and Trades People

Parks Canada requires General Labourers and Trades People to maintain and develop park facilities. Jobs include: carpenters, electricians, general labourers, supervisors, painters, janitorial workers, grounds people, drivers and so on, depending upon the location.

Many of the positions require completion of an apprenticeship (on the job training combined with formal training). These positions require a range of indoor and outdoor work.

These positions use a range of different tools depending on the job to be completed.

Career Fact Sheet

Management and Administrative Staff

Like any business, Parks Canada needs management and administrative staff to plan, administer and support the operations of the organization. Management staff make most of the decisions that affect national parks and work with the national park office Ottawa. Administrative staff include office support staff, financial staff, supervisory positions, and computer support personnel, just to mention a few.

Much of this work is done in offices and consists of working with a variety of people. Use of office equipment, including computers, telephones, and fax machines are common.

Education of management staff usually includes college diplomas and university degrees depending upon the position. These jobs may be located at national parks or they may be in regional centres such as Iqaluit.

Career Fact Sheet

Patrol Person

Patrol Staff have the opportunity to work outdoors. Patrollers hike, ski and sometimes fly within the National Park. This type of work requires a person to work outdoors in sometimes-difficult conditions.

Patrollers are involved in Park protection and maintenance. Their jobs include patrols into park for extended periods of time. While in the park, they ensure visitors do not damage the land, waters or the park infrastructure. In the summer they hike on foot, carrying heavy packs over rough terrain. In the winter and spring, they ski or use snow machines to patrol the park. While on patrol, when patrollers encounter visitors, they provide safety information in order for visitors to have a safe and enjoyable trip. Patrollers receive Wilderness First Aid, Firearm Safety Courses and various rescue techniques training.

Patrol staff work with scientists, visitors and other staff who work in the natural parks. Patrollers work with a variety of equipment and tools to do their jobs.

A high school diploma or equivalent with training and experience on the land is a requirement for this type of job. Patrollers travel in the park on foot while carrying their own gear or on skis during the winter and spring. Patrollers work closely with other Parks Canada staff.

Teacher Solutions: Possible answers

POSITION	BRAIN	HEART	HANDS	FEET
Resource Management and Public Safety Specialist	University degree in natural science or natural resource management	Protecting the ecosystem and making the park safe for visitors	Boats, snowmobiles, ATVs, computers	Inside and outside
Interpreter/ Communicator	Two year post-secondary learn more about national parks and historic sites	Helping people understand and camera, multi media equipment	Computers, books, graphic equipment,	Inside and outside
Biologist	University in Biology natural world	Understanding the	Scientific equipment	Inside and outside
Cultural Resource Management Advisor	Two year post-secondary our history	Understanding how people lived in the past and preserving	Excavation equipment, archaeological tools, computers	Inside and outside
General Labourers and Trades People	Apprenticeship training facilities	Maintaining and developing park	Construction tools	Inside and outside
Management and Administrative Staff	College or University running smoothly	Planning and administration to keep park operations fax machines	Computers, office equipment, telephones,	Inside and sometimes outside
Park Patroller	High school diploma or equivalent and operations	Helping people in protection, education and skis	Variety of equipment, snowmobiles,	Inside and outside for extended period

Notes:

Becoming an Environmental Steward

Learning Competencies

Students will be able to define the word 'dilemma' and will practice how to make appropriate choices when faced with dilemmas. Students will become aware of the energy consumption in their school and attempt to make the school more energy efficient. Students will make a commitment to be an environmental steward and receive a certificate.

Language Development

- **Avatittinnik Kamatsiarniq:** One of the guiding principals for Inuit and means to have respect for and care for the land, animals and the environment.
- **Overwhelmed:** Overwhelmed is a feeling you have when something is weighing heavily on you. For example, you may feel overwhelmed if you think that you are unable to make a difference or change something; this feeling is usually linked to stress.
- **Dilemma:** A dilemma is when you are faced with two or more options and the right choice is not clear.
- **Energy efficiency:** The wise use of energy (or to not waste), to find the most economical way to use a product.
- **Ecological footprint:** Refers to the amount of the Earth's surface that is needed to produce all the energy and resources that an individual will use to live within a particular lifestyle, absorbing all the waste produced, directly or indirectly.
- **Energy Audit:** A measurement of how much energy is currently being used.

Background

Although it sometimes seems like we cannot make a difference as individuals it is important that students know that they can. In Unit 1 and 2 students studied Nunavummiut who were making individual contributions. In this Unit students will work, as a group, to reduce the school's greenhouse gas emissions and thus reduce their carbon footprint. Once they know how to reduce greenhouse gas emissions on a school-wide basis, they will be asked to make a personal commitment and act on their commitment. Those who act will be rewarded with an environmental stewardship certificate.

Although it sometimes seems like we cannot make a difference as individuals it is important that students know that they can.

Materials

- MP3 music file and lyrics to the song by Remy Rodden from the CD called, **Think About the Planet**. Song is "Think About the Planet"
- Dilemma scenarios cut out individually and placed in a 'hat'
- Records of schools utilities usage
- Parks Canada Charter
- Environmental Stewardship Certificate template

Opener

Think about the Planet

(a song to inspire environmental stewards)

It's much too easy to become overwhelmed with the world's problems. Musician Remy Rodden hopes that this song helps youth realize their actions are important. We each can make our dreams come true! Play the song at the beginning of this unit and discuss with your students how they feel. Do they ever feel overwhelmed? Ensure they understand what overwhelmed means and add it up to their word wall. The lyrics to the song are included in the unit. Share with the students who need to read the words to understand the meaning of the song.

Connector

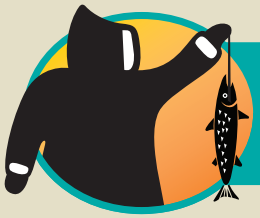
Stewardship in action; dilemmas

Introduce the concept of a dilemma by using an example. For example, have your students think about the following tough situation:

It's a warm spring day and the land is still wet from the snowmelt. You and your friend are racing each other on your four-wheelers and you come across a sign that says, FRAGILE HABITAT, AREA CLOSED. You are having such a great time with your friend but they don't obey the sign and keeps on motoring through. You don't want to miss some of the fun, but what do you do?

Discuss this situation with the class and ask them to respond with what they would do. You could also further the discussion by talking about staying on the same path so that only one area gets chewed up rather than making tracks all over the area. Remind them of the definition of overwhelmed and how responding to these dilemmas in the appropriate way is a very concrete example of what they can do.

1. The above situation is called a dilemma. A dilemma is when you are faced with two or more options and the right choice is not clear. There are a lot of dilemmas in everyday life.
2. Prepare ahead of time a set of the dilemma scenarios. Cut them out and put them into a hat or bowl at the front of the room.
3. Get your class into pairs. Have each pair select a dilemma scenario from the bowl. Their task is to read the dilemma and discuss what their choice would be.
4. When they have decided as a pair how they would deal with it, have the students present their choice to the rest of the class. They should ask their classmates what they would do.
5. Blank squares are also provided for students to write dilemmas they have faced in the past.



Activity

Energy Efficiency

Traditionally

How did Inuit conserve energy years ago? Traditionally Inuit used a qulliq (oil lamp) for warmth. When they didn't need to use the lamp, they would lower the heat by making the wick smaller or thinner. In the winter, there was a stronger desire to save the animal oil, as they might not catch a seal needed for fuel for the qulliq.

As it is so apparent in northern Canada, most students will be aware of climate change. If reminders are needed, go to www.climatechangenorth.ca. This excellent resource was put together by northerners, for northerners. Use the background sheets written for intermediate students and select a couple of the lesson plans to remind them of the impact climate change can have on their north and the rest of the world.

Efficiency in your School

(NOTE: If you can't do this project over the long-term, don't do the audit. You can however, complete the rest of the activity including replacing bulbs in your classroom and calculate the expected long term savings.)

One of the important tools used to reduce the impact of climate change on the world's plants and animals is to protect large areas of land, such as those areas protected within Canada's national parks system. This protection of large land masses will hopefully give the space that animals and plants need to adapt to the changes.

Of course, it is also important to try to reduce our climate change impacts. One way to do so is to increase our energy efficiency in our schools. This will show the students that they can do something and perhaps take their learning to their homes.

You can reduce your school's 'ecological footprint' by increasing the energy efficiency in your school. An ecological footprint refers to the amount of the Earth's surface that is needed to produce all the energy and resources that individuals use to live within a particular lifestyle and to absorb all the waste produced, directly or indirectly.

This activity may align with math, social studies, science and language arts curricula. It's also an excellent tool for increasing students' confidence in communication skills and will help them understand that they can make a difference.

1. It is important that your students understand the types of energy. Review the following. Energy is either kinetic or potential. Kinetic energy is energy in motion, or energy actually doing work. Potential energy transforms into kinetic energy when it starts to do work. For example, a qamutik sitting at the top of a hill has potential energy. When the qamutik starts to slide down the slope, the potential energy transforms to kinetic energy.

   How do we measure energy? Energy is calculated in units called 'joules'. Power is the rate at which we use this energy and is measured in 'watts'.

   One watt (W) = one joule (J) of energy use per second.

   On our electricity bills, energy consumption is measured in kilowatt-hours (kWh). This is equivalent to 1000 watts of power used for 1 hour. For every

kWh of electricity used, 1kg of carbon dioxide (CO2) is released into the atmosphere. This is when the electricity is generated using diesel. Therefore, a 100-watt light bulb left on for 10 hours (100 watts X 10h = 1000 Wh = 1kWh) causes 1kg of greenhouse gas to be released into the atmosphere. Discuss with the class what ways electricity can be generated without the release of carbon dioxide (i.e. solar, wind, hydro, nuclear). Currently communities in Nunavut rely mostly on diesel power to generate their electricity.

2. As a first step in understanding your school's energy consumption, have the students count the number of lights in your classroom. Estimate the hours per day they are used. Check the wattage of the bulbs, then work out how many kilowatt-hours (kWh) you use in a day, week, month or year.

   Use this formula: (number of bulbs) X (average wattage of bulbs) X (average hours of daily use). This will give you the number of kilowatt-hours used per day.

   Now, calculate how much greenhouse gas your classroom creates from lighting. Remember, 1kWh = 1kg of CO_2.

   Below is a performance chart for various light sources.

Performance Characteristics of Various Light Sources[2]

LAMP TYPE	EFFICACY (LUMENS/WATT)	AVERAGE LIFE (HOURS)
STANDARD INCANDESCENT	5-20	750-1000
TUNGSTEN-HALOGEN	15-25	2000-4000
COMPACT FLUORESCENT (5-26 WATTS)	20-55	10,000
COMPACT FLUORESCENT (27-40 WATTS)	50-80	15,000-20,000

3. Next, research the current energy uses in your entire school. How many lights are there? What kind of light bulbs are used? What is the amount of energy used by each bulb, etc? To reduce energy wastage you must first find out where energy is used. Organize teams to inspect the different areas of the school: classrooms, offices, corridors, the library, computer rooms, school hall, toilets, and outside areas. Identify all the equipment and fixtures that use electricity and find out when these items are used.
4. As each team carries out their survey, make notes on possible energy savings. For example, were lights on unnecessarily in naturally lit rooms? Were lights on in unoccupied rooms? Was equipment left on when not in use?
5. Next, set short and long term goals to reduce energy use in the school. These could include: reducing lighting usage and purchasing more efficient light bulbs; purchasing desk lamps for teachers; replacing exit lights with LED lights; replacing windows that are not energy efficient; using an automated timing control system to turn off lights outside work hours and a motion sensor system installed in all toilets can resulted in reduction in electricity bills; and tracking energy usage for years to come, ultimately reducing the school's ecological carbon footprint.
6. When your students have completed their research and have selected the tools they would use, plan for them to meet with administrators and maintenance staff. They could work with the janitors and ask them to shut off the lights when they leave the rooms. Students can also deliver presentations at DEA meetings, plan school wide assemblies and prepare presentations for Parent Teacher

[2] Performance Characteristics obtained from http://www.earthday.net/SchoolEnergyAuditEditedFinal.pdf.

Other schools that have done this were able to save their school money.

Meetings. At these meetings the students could suggest changes in purchasing habits. For example, if the students researched the difference between hand towels and hand dryers in terms of environmental impact they could convince their school to purchase the most efficient one.

7. At Alaittuq School in Rankin Inlet, they installed a "SolarWall"© that works especially well in cold and northern climates because the low azimuth of the spring sun reflects the sunlight off the snow. The economic returns are also substantial given the high proportion of days in the spring, summer, and fall that are extremely sunny, yet very cold. The system is monitored, and the results serve as an educational tool in instructing students about environmental technologies. Students could contact the school in Rankin and ask them about the benefits of the "SolarWall"© and determine if they should advocate their school to build one. The "SolarWall"©, is expected to reduce fuel use at the school by about 2 600 litres per year. Taking into account rebates available for renewable energy, the system is anticipated to be cost effective in five to six years.[3]
8. Using the same past electric bills, read through them to document and compare the electrical consumption after the changes have been made. Other schools that have done this were able to save their school money. There are grants that can be applied for from the Federal Government to purchase LED lights. In other schools retailers have donated desk lamps with compact fluorescent bulbs for teachers to use during their planning periods.
9. Of course, simple things like shutting the lights off in the classroom when leaving the classroom or when there is enough natural lighting are also important. Get the students to make reminder artwork to go around the electrical switches.
10. As a group, make a plan of action and complete the action. Students should be amazed at how much they can accomplish in one year.

[3] Information obtained from http://www.ainc-inac.gc.ca/clc/tp/alait_e.html

Reflection

Making a Commitment

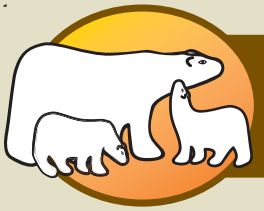
This activity invites the students to make a commitment. Prepare ahead of time papers that look like rocks to build an inuksuk. Get a LARGE piece of paper (taller than you) and write on the top, 'our individual commitments'.

Each individual needs to take at least one "rock" and write one personal commitment on the paper rock. Together as a class, build a strong inuksuk.

Ask them to think hard and to be realistic; if the only thing they pledge is to pick up garbage — that is a good start. When everyone has completed their pledge have each student come up to the front and read out their pledge. Then, using the glue stick, have the student attach the "rock" to build a strong inuksuk on the large paper. Make sure you make a commitment yourself. Invite the principal to come to the class as well. Post the commitment inuksuk outside the classroom and add to it as students complete their pledge and want to add more. Build on this throughout the year.

Students must complete their commitment prior to receiving their certification. After a month or so, come back to the topic and ask what students have done differently in the last month. Decide as a class how to determine who should receive a certificate for being an environmental steward. As a class, set criteria for certificate completion (i.e. How do you know when you have reached your goal? How do you know how far you have progressed?) Using the criteria, have students peer and self assess to determine who should receive a certificate. Some students may not receive a certificate. Give them more time to complete their commitments.

Print copies of the attached certificate and have the principal or mayor of the community sign their certificates.



Classroom Reinforcement

Parks Canada as a Steward

Students have learned about Environmental Stewards nationally and locally and have made commitments to being an environmental steward themselves. In a similar way, organizations can also work towards taking care of the environment. Talk with the students about how Parks Canada is a part of the federal (or Canadian) government and responsible for being a steward of special natural and historic places and environments across Canada.

Hand out copies of "The Parks Canada Charter" to the students. Discuss with the students that a charter is a written statement describing the responsibilities of people or organizations. The Parks Canada Charter outlines the purpose of Parks Canada. Read aloud the mandate in the charter. (Use a version written on chart paper in order that words can be underlined.) Ask the students to identify words in the statement that describe the actions of Parks Canada (in other words, what Parks Canada does). Students should identify the words: protect, present, understanding, enjoyment. With the students, discuss how the mandate of could be simplified in a more student-friendly way. For example:

Parks Canada protects and shares Canada's special natural and cultural places. They do this so that people can enjoy and understand these places now and in the future.

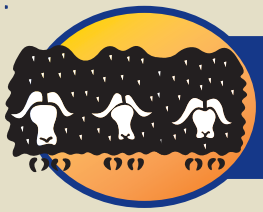
Read through the roles within the charter. Discuss with the students how each of the following roles relates to being a steward: guardian, guide, partner, and storyteller.

Finish by discussing the "Our Commitments" section of the Charter. How does that relate to their personal commitments?

Avatittinnik Kamatsiarniq: is one of the guiding principals for Inuit and means to have respect for and care for the land, animals and the environment. It defines the concept of environmental stewards and emphasizes the key relationship Inuit have with their environment.

Have a discussion on the similarity between the Parks Mandate and the above IQ Guiding Principle.

If your school has a charter or mission statement, have the students compare it with Parks Canada Charter. As a class, write a charter for the class to follow that includes elements of environmental stewardship.



Accommodating Diversity

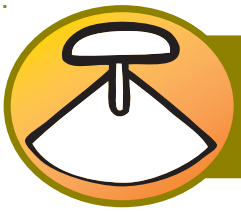
Use the Parks Canada 3-D Tours to explore Canada's National Parks. These tours can be found on Parks Canada website (www.parkscanada.ca). Follow the link to 3-D Tours.

Follow-Up Activities

Your class accomplishments should be celebrated. Not only has there been a great deal of learning, the students have made a commitment to do something outside of class hours to make their community a better place. Hold a class celebration. Invite community leaders and their families. Cook a healthy meal and share the commitments and accomplishments with the people who attend your class party. Invite the press or submit your own story about this success so that others can learn from your example.

Assessment

If they have acted on their commitment they have achieved success for this unit. Give extra time for students who have not yet met their commitment. Alternatively, have an individual oral assessment with these students and ask them to respond appropriately to one of the dilemmas. If they can show they know what the appropriate response is then they have achieved success. Remind them that actions however, speak louder than words.



Printable and Support Material

Think about the Planet

(By Remy Rodden)

Maybe you get scared sometimes
When you hear about our dirty world
They tell us that there's garbage everywhere,
Too much for every boy and girl
But I believe that if we try
We can clean it up and kiss pollution goodbye
It's really very simple, here's what you have to do

Think about the planet when you go to bed
And dream sweet dreams
Of clean streams in your head
Clean hearts, clean streets, clean minds
Leave all that ugly pollution behind
And when you wake up in the morning
Make the dream come true

Maybe when you hear the TV news
About wars and guns and violent stuff
It makes you sad or feel read bad
Or want to fight and be real tough
But getting mad yourself only makes things worse,
If you want to change the world
You've got to change yourself first
So try to be happy and sing along with me

Think about your neighbour when you go
to bed, And find all the ways to be kind
in your head. Kind to yourself, to your neighbours and friends
'Cause that's the only way we'll make the violence end
And when you wake up in the morning make the dream come true

So any time that you're feeling like it
there is nothing that you can do
to change the things that make you sad
Just remember this little tune
'Cos nothing is so bad that there is no hope
To sing and to dream can help anyone cope
But you've got to work hard
to make the dream come true

(repeat each chorus)

Dilemma Scenario Cards

1. You are walking down the street with a friend or family member when they toss their candy wrapper onto the street.

   What's the problem?
   What could you do?

2. You have plans to hunt with a friend. The last couple of trips, your friend has been killing ravens for fun and he just leaves them there.

   What is the problem?
   What could you do?

3. You come across a huge oil slick that has been dumped on the snow/ice surface of your favourite fishing lake.

   What is the problem?
   What could you do?

4. While boating up river to go and check your net, you pass by a net that hasn't been checked for days and you notice there are now five loons tangled, dead in the net.

   What is the problem?
   What could you do?

5. You've just completed painting your room. There is one or two cups of paint left in the can. You debate flushing it down the toilet.

   What is the problem?
   What could you do?

6. While out boating you and your family watch someone dumping a 45-gallon drum of dark liquid into a stream.

   What is the problem?
   What could you do?

7. Your house is on water delivery service and every weekend you always seem to run out of water.

   Name the problem.
   Describe some solutions.

8. At home, the television is always left on through the night; the lights and even the radio at times are left on as well.

   Name the problem.
   Describe some solutions.

9. Almost everyday you are late for school. You live only 1 km away but still your mom has to make a rush trip with the truck to get you to school on time.

   What is the problem?
   What can you do?

10. You're out hunting seals with your dad and as you turn into the bay you see someone throw their garbage over board into the ocean.

    What is the problem?
    What can you do?

11. You are out on the land and you come across a 45-gallon drum of some liquid that is leaking onto the tundra. There is a dark pool of liquid that seems to be seeping into the soil. There is no tag on the barrel but it looks old and rusty.

    What is the problem?
    What could you do?

12. You are out fishing with a group of friends. You have caught your limit but the fishing is good. Your friends decide to keep fishing and forget about the limit on arctic char.

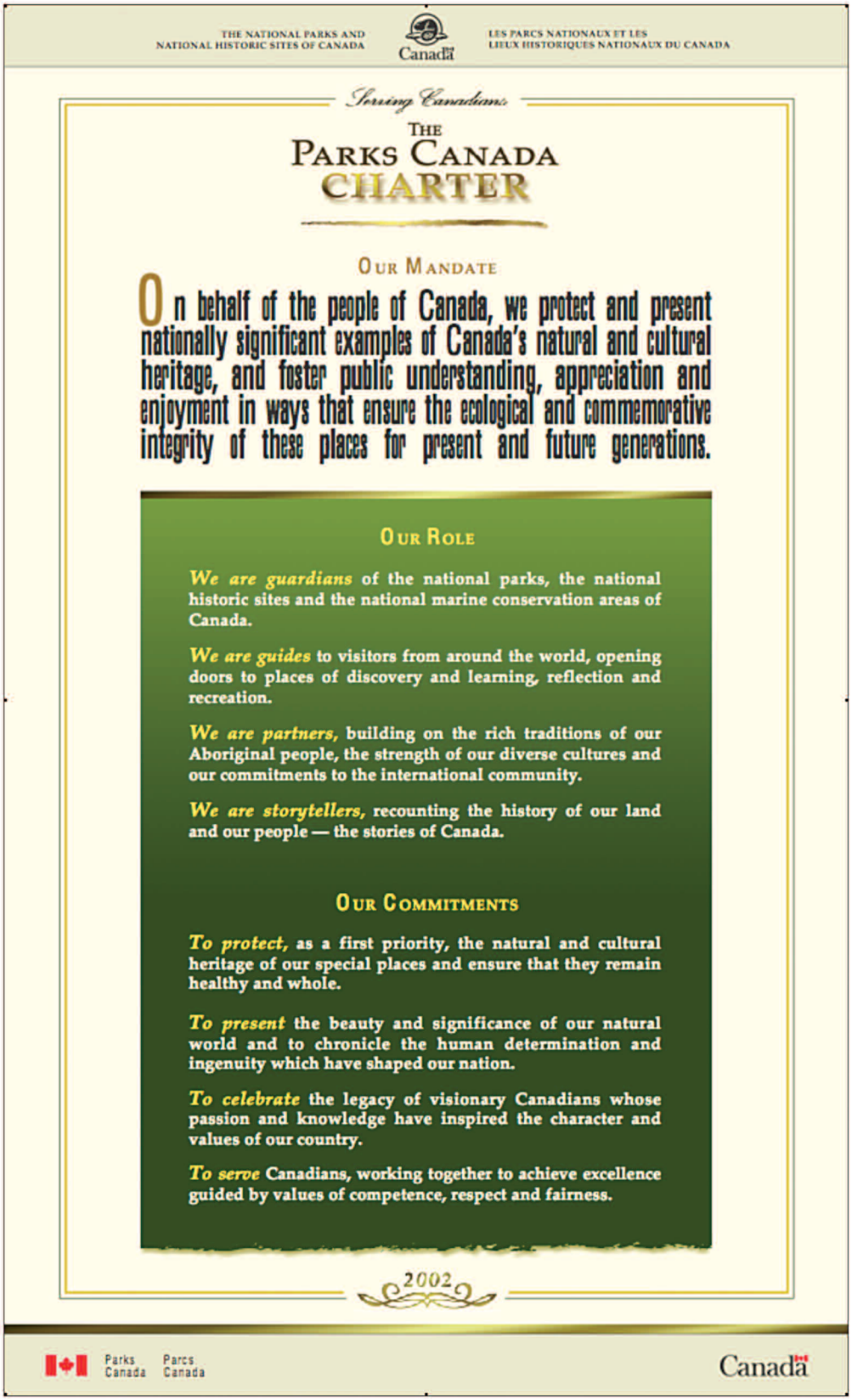
    What is the problem?
    What are some solutions?

13. You learn that your local lake system has high level of lead and other pollutants. The fisheries department is warning people not to eat the livers of certain fish.

    What's the problem?
    What can you do about it?

14. You and a group of friends are on your four-wheelers on a well-beaten path heading towards a fishing hole. Two kids in the group decide to go off the trail and chase each other over the tundra. There are four more of you in the group. Do you decide to follow?
    What's the problem?
    What are some solutions?

The Parks Canada Charter



THE NATIONAL PARKS AND NATIONAL HISTORIC SITES OF CANADA

Canada

LES PARCS NATIONAUX ET LES LIEUX HISTORIQUES NATIONAUX DU CANADA

Serving Canadians

THE PARKS CANADA CHARTER

OUR MANDATE

On behalf of the people of Canada, we protect and present nationally significant examples of Canada's natural and cultural heritage, and foster public understanding, appreciation and enjoyment in ways that ensure the ecological and commemorative integrity of these places for present and future generations.

OUR ROLE

We are guardians of the national parks, the national historic sites and the national marine conservation areas of Canada.

We are guides to visitors from around the world, opening doors to places of discovery and learning, reflection and recreation.

We are partners, building on the rich traditions of our Aboriginal people, the strength of our diverse cultures and our commitments to the international community.

We are storytellers, recounting the history of our land and our people — the stories of Canada.

OUR COMMITMENTS

To protect, as a first priority, the natural and cultural heritage of our special places and ensure that they remain healthy and whole.

To present the beauty and significance of our natural world and to chronicle the human determination and ingenuity which have shaped our nation.

To celebrate the legacy of visionary Canadians whose passion and knowledge have inspired the character and values of our country.

To serve Canadians, working together to achieve excellence guided by values of competence, respect and fairness.

2002

Parks Canada Parcs Canada

Canada

Avatittinnik Kamatsiarniq: One of the guiding principals for Inuit and means to have respect for and care for the land, animals and the environment.

CITES: Convention on International Trade in Endangered Species is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.

COSEWIC: Committee on the Status of Endangered Wildlife in Canada is an independent body that assesses the national status of wild species, subspecies and separate populations. (Not all populations of a particular species may be at risk.)

Development: In the context of the land, development refers to changes to the land such as in mining, oil and gas exploration, housing, gravel pits, airstrip, etc. When the land is changed from its natural state it is said to be 'developed'.

Dilemma: A dilemma is when you are faced with two or more options and the right choice is not clear

Ecological footprint: Refers to the amount of the Earth's surface that is needed to produce all the energy and resources that an individual will use to live within a particular lifestyle, absorbing all the waste produced, directly or indirectly.

Ecozones: Large areas of a particular climate, landform and vegetation.

Endangered: A wildlife species facing imminent extirpation or extinction.

Energy Audit: A measurement of how much energy is currently being used.

Energy efficiency: The wise use of energy (or to not waste), to find the most economical way to use a product.

Environmental stewardship: A term used to describe when one person or group acts on behalf of the environment.

Extinct: A wildlife species that no longer exists.

Extirpated: A wildlife species no longer existing in the wild in Canada, but occurring elsewhere.

Habitat: The natural home of an animal is called it's 'habitat'. All animals need food, water, shelter and space.

Limiting Factors: Influences in the life history of any animal, population of animals, or species, e.g., food, water, shelter, space, disease, predation, climatic conditions, pollution, hunting, poaching, and accidents. When one or more of these exceed the limit of tolerance of that animal, population of animals, or species, it then becomes a limiting factor; it then directly affects the well-being of that animal and may result in the animal's or animals' death.

Marine: A water environment.

Overwhelmed: Overwhelmed is a feeling you have when something is weighing heavily on you. For example, you may feel overwhelmed if you think that you are unable to make a difference or change something; this feeling is usually linked to stress.

Personal action: Something you can do to help another.

Pijitsirniq: A guiding principal for Inuit and means to serve and provide for family and/or community.

Protection: To protect the land means to limit the amount and type of human activity on an area of land and to prevent damage to the land. Land is protected to safeguard its special natural and cultural values. Traditional activities can still be maintained.

Responsibility: Taking care of your duties and answering for your actions.

Sonauvvat: What's that?

Species at Risk Act (SARA): The act is a law that specifically prohibits wilful harm to endangered species that are listed in regulations under the Act and the wilful destruction of, or interference with, their habitats.

Species at Risk: The term, Species at Risk, refers to wild plants and animals that have been assessed by an independent body, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), and found to be at some risk of disappearing from the wild in Canada.

Steward: One who acts on behalf of another.

Terrestrial: A land environment.

Threatened: A wildlife species likely to become endangered if limiting factors are not reversed.

Arctic Energy Alliance
http://www.aea.nt.ca/

Biotics Web Explorer
http://www.pc.gc.ca/apps/bos/BOSMain_E.asp

Climate Change North
http://www.climatechangenorth.ca

Environment Canada's Ecozone information
http://www.ec.gc.ca/soerree/English/vignettes/default.cfm

Environmental Educators North
http://www.eenorth.com

Environmental steward website
http://www.ecotopia.org/ehof/index.html

Energy Performance Characteristics obtained from http://www.earthday.net/resources

Hinterland Who's Who
http://www.hww.ca

Parks Canada
http://www.pc.gc.ca/

Parks Canada's Teacher Resource Centre
http://www.pc.gc.ca/apprendre-learn/prof/index_e.asp

Populations Connection
http://www.populationconnection.org/

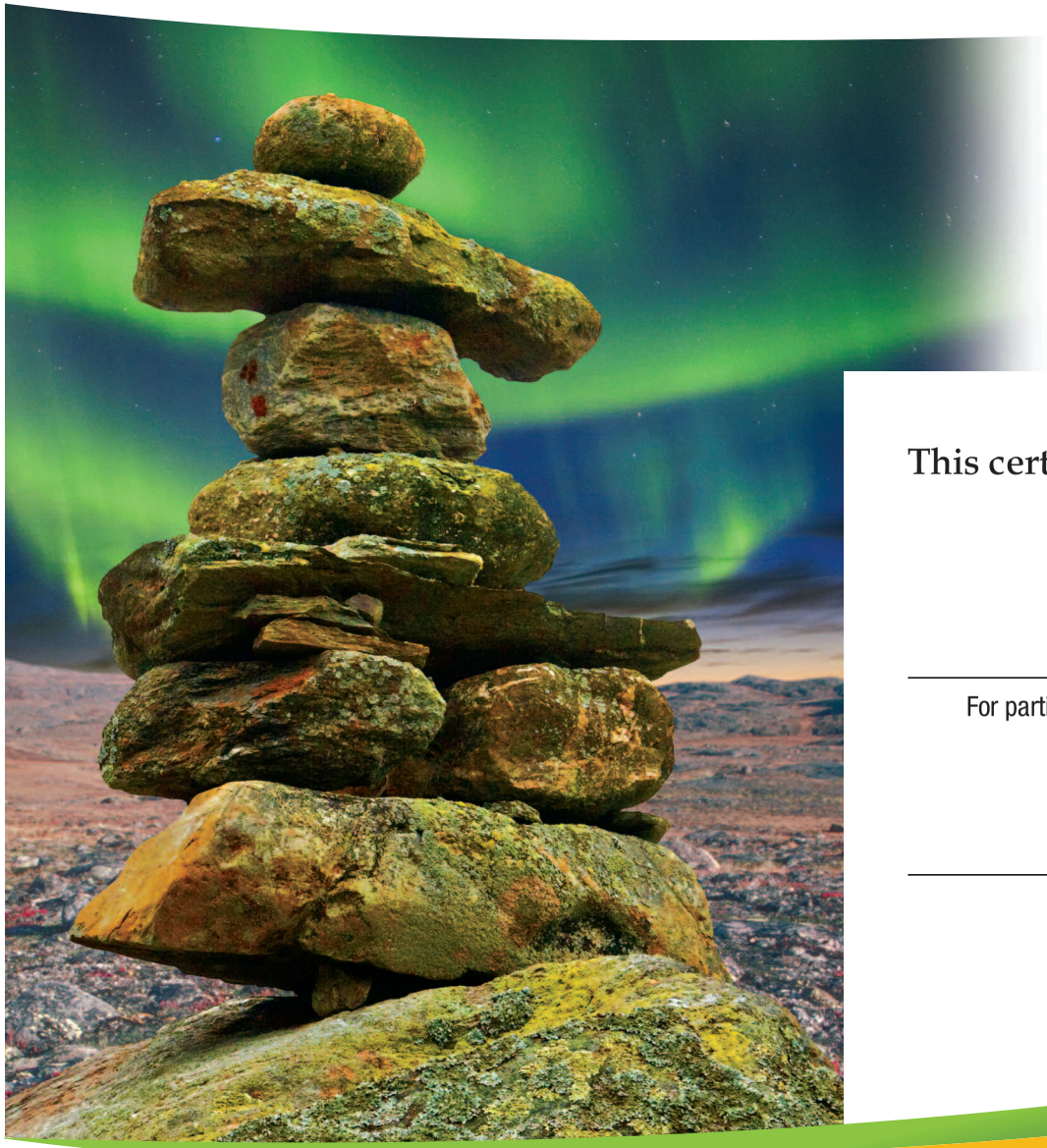
Remy Rodden CD called, **Think About the Planet**

UP Here article titled, *From Ice Age to Computer Age* on Sheila Watt Cloutier

WWF-Canada Teachers and Kids
http://wwf.ca/takeaction/teachers_kids/

Parks Canada in Nunavut
parkscanada.gc.ca

Parcs Canada de Nunavut
parcscanada.gc.ca



Environmental Stewardship Certificate

This certificate is awarded to

_____

For participating, and completing, the Environmental Stewardship Certificate Program

_____ _____

Date Signature

Parks Canada Parcs Canada

Bringing you Canada's natural and historic treasures
Mettant à votre portée les trésors naturels et historiques du Canada

Canada

Journal Reflection Assessment

Date: _____ Student name: _____

ATTRIBUTE TO BE EVALUATED	COMMENTS FROM TEACHER OR STUDENT	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
Completed reflection activities		Hasn't completed any	Completed over half	Completed most	Completed all
Communicates using new vocabulary		Not successful (even with prompting)	Not quite successful (successful with difficulty)	Minimally successful (despite errors)	Quite successful (minor errors)
Reflection		Unable to relate stewardship topics to personal life	Beginning to see a relationship between topics and personal life	Able to relate topics to personal life	Able to relate topics to personal life and beyond
Language growth		Few words, one or two sentences, one or two topics	Three to five sentences, two or three topics	Five to eight sentences, three to five topics	Eight or more sentences, more than five topics
Evidence of using the journal as a learning tool		None	Uses journal to copy, store or record, not to develop further learning	Uses journal to record information, minimal original (own) ideas to extend learning	Uses journal to work through ideas and extend learning

Negotiated Mark: _____/_____

Assessing Attentive Listening (Teacher Assessment)

Tally each time the behaviour is observed. Date: _____

NAMES OF STUDENTS	BASIC SKILLS					ADVANCED SKILLS			
	Faces Speaker, Leans Forward	Looks in the direction of the speaker	Nods, smiles if appropriate	Does not interrupt the speaker	Encourages speaker to continue talking	Asks relevant questions	Paraphrases speaker's main ideas	Reflects the speaker's feelings	Summarizes for the group

Task Completion

STUDENT NAME	TASK 1 Protection and Development	TASK 2 Species at Risk	TASK 3 National Park Presentation	TASK 4 Environmental Stewards	TASK 5 Sheila Watt Cloutier	TASK 6 Stewardship in Action: Dilemmas	TASK 7 Efficiency in your School

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