
Module 3

Biodiversity in the Yukon

elk & evergreens



pinos & porcupines



MODULE 3. BIODIVERSITY IN THE YUKON

Learning outcomes

Activities (page) Curriculum connections	3-6	3-8	3-10	3-12	3-14	3-16
	Science	Math	Science	Science	Science	Science
Social Studies	Science	Social Studies	Language Arts	Language Arts	Social Studies	
		Language Arts				
		Fine Arts				
Knowledge — In these activities, students will learn more about: <ol style="list-style-type: none"> Yukon's outstanding natural diversity and our complex and interconnected ecosystems; how to identify specific plant and animal species within their own community; ecozones of the Yukon; important Yukon plant and animal species, including aliens; collecting, displaying and analyzing data in order to make predictions about a population. 						
	•	•	•			•
	•	•			•	
	•		•			
	•	•	•	•	•	
	•				•	
Attitudes and Values — Following participation in these activities, it is hoped that students will: <ol style="list-style-type: none"> demonstrate improved personal attitudes, values and behaviours which contribute to preservation of the biodiversity in their community; participate enthusiastically in investigations of the biodiversity of their communities or area; express awareness and appreciation for the natural regions of the Yukon. 						
		•	•		•	•
	•	•	•		•	•
			•	•		•
Skills and processes — Through these activities, students will practise their ability to: <ol style="list-style-type: none"> work cooperatively; plan, implement and evaluate a project. 						
	•		•			
		•	•		•	•

Activities legend

- 3-6 Flag the Feature Flora & Fauna!
- 3-8 The Numbers Game!
- 3-10 Be a Yukon Tour Guide
- 3-12 Yukon Biodiversity Wordsearch
- 3-14 The Aliens Have Arrived!
- 3-16 Reach Out!

A WORD TO THE TEACHER

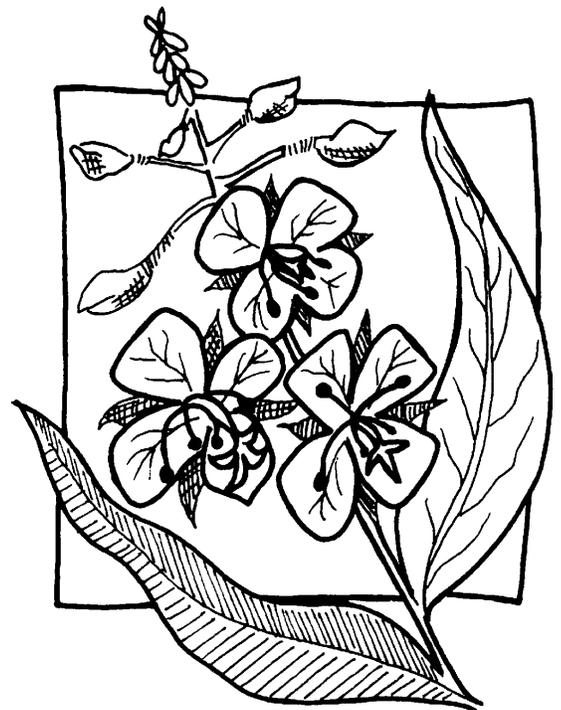
The Yukon is a living laboratory for the study and teaching of biodiversity. Yukon Backyard Biodiversity and Beyond focuses on the diverse species and spaces of our territory. The main characteristics of the Yukon's five ecozones are introduced, along with information about plant and animal species that occur within them. Basic concepts of biodiversity are reinforced by helping students make connections with habitats that are familiar to them.

Focus on student experience

1. Brainstorm a list of trees, plants, animals, birds, insects and other organisms that students know live in their communities. Try to find out which ones are native, and which ones are “aliens” from other places. Invite a local naturalist in to help you.
2. Share personal stories about memorable experiences with nature during outings or vacations in the Yukon. Create a classroom mural of “Yukon - Larger Than Life.”



3. Discuss a land-use issue in your community. Use newspaper articles and other media reports that present all sides of the issue. Create a list of questions for a follow-up.
4. As you take a field walk through the school grounds, a park, a forest or along a stream, ask students to observe and list questions about the things they see, hear, smell and touch. Begin an inventory of the plant and animal species in your area.



BACKGROUND

You live in the Yukon Territory, home to thousands of species of living things, including birds, mammals, amphibians, fish, plants, and insects. The biodiversity of our undisturbed ecosystems has a global significance. There are 30 species of plants that are only found here. We call these species *endemic*.

Our territory is a mosaic of landscapes. This is a land where jagged ranges of snowclad peaks, icefields, boreal forests, tundra, wetlands, great lakes, mighty rivers, and a northern coastal plain combine to form our outstanding scenery.

The Yukon has three major climatic areas—the north is influenced by the Arctic Ocean, the central and southeastern region has a cold, continental climate, and the southwestern region is influenced by the moderating Pacific Ocean. Our various climates interact with the many different landforms to create numerous local climates. The plants and animals within these local areas are often quite different.

In order to research and understand the Yukon’s diversity of ecosystems, scientists have developed a classification scheme. This scheme defines areas from the global scale to the microscopic.

At the territorial scale, scientists have divided the Yukon into five ecozones. Each ecozone is defined by its climate, human activity, vegetation, soils, geology and physiographic features. Within the ecozones, scientists have created 23 ecoregions in the Yukon to further group ecozones.

The Yukon’s current wildlife biodiversity has a relatively young history. Most of the Yukon’s plants and animals only immigrated here after the glaciers began retreating between 10,000 and 15,000 years ago.

Humans migrated with the animals. Most archaeologists believe that the ancestors of our First Nations people migrated across the Beringia Land Bridge and hunted the animals on the land and fished in the abundance of the rivers and lakes. Many of today’s First Nations



people live on or near part of their original homelands. These lands are still important fish and wildlife habitats for First Nations cultures. There was a time in the territory when resources were considered limitless, a time when few people thought very much about protecting biodiversity and habitat. Today many Yukoners believe in the importance of preserving biodiversity and preserving and restoring enough space for a healthy interrelationship between all of the living and non-living parts of our various ecosystems.

Three-quarters of the Yukon's 31,000 residents live in the Whitehorse area. Many of the plants and animals live in the same areas that people do. There is competition from many different groups for the use of land. The main land use activities in the Yukon include mining, waste disposal, agriculture, transportation, settlement, and tourism. Resolving the conflicts among these different groups is a difficult challenge.

Most of the Yukon's development occurs along major roads. The gradual expansion of our road network (5,000 km of roads) has led to fragmentation of wildlife habitat. While transportation is a major part of the Yukon economy, in some cases it has had a harmful effect on wildlife.

Key points

1. The Yukon can be divided into 5 large ecozones, each with a distinctive biodiversity. These ecozones can be further subdivided into 23 ecoregions.
2. Many thousands of species of living things live in the Yukon.
3. Although most people in the Yukon live in or near Whitehorse, there is competition for the use of the Yukon's wilderness areas.
4. Preserving the biodiversity of the unique spaces of the Yukon is a priority for many people in the territory.

12,000 years ago, the glaciers began retreating and plants & animals, including humans, began moving onto the land.



Activity idea: research First Nation people's knowledge & use of native plants & animals. Look for clues above.

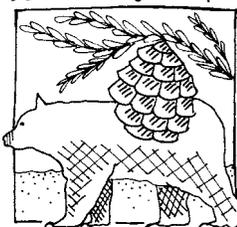
ECOZONES OF THE YUKON

Taiga Plains

Taiga, a Russian word, refers to the northern edge of the boreal coniferous forest. The climate is marked by short, cool summers and long, cold winters. Vegetation is open, generally slow growing, conifer dominated forests of predominantly black spruce. Shrubs are often well developed and include: dwarf birch, Labrador tea, and willow. Northern extension of the flat Interior Plains. Characteristic animals include black bears, moose, arctic ground squirrels, and birds of prey.

Main town: None

Black bear & black spruce



uplands and lowlands. A wide variety of animals can be found living in this ecozone: Porcupine Caribou Herd, polar bears, migratory birds, walrus, seals, and beluga whales.

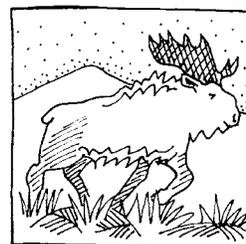
Main town: None, but traditional land of the Inuvialuit for hunting, fishing, and trading.

Boreal Cordillera

Mountains, plateaus, wide valleys and lowlands. Short, warm summers and severely cold winters. Semi-arid climate. Coniferous forests and arctic alpine tundra. Veneer of volcanic ash over most soil surfaces is unique within boreal forests of Canada. Diversity of wildlife, many salmon spawning areas, and route for migratory birds. Elk and Wood Bison have been introduced here.

Main towns: Watson Lake, Whitehorse, Stewart Crossing, Pelly Crossing, Carmacks, Mayo, Carcross, Haines Junction, Dawson City and Beaver Creek.

Moose & Muskeg

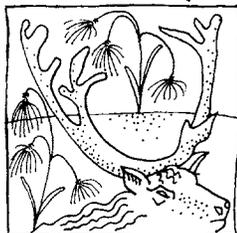


Taiga Cordillera

Located along the northernmost extent of the Rocky Mountain system and covers most of the northern half of the Yukon. Summers are warm to cool with extended periods of daylight. Winters are long and cold with very short daylight hours. Natural vegetation ranges from arctic tundra in the north to alpine tundra in higher elevations and taiga or open woodland in the south. The landscape is characterized by steep mountains, narrow valleys and foothills and basins. Wildlife is diverse: caribou, Dall sheep, moose, bears, and wolverines.

Main town: Old Crow, Yukon's most northerly settlement.

Caribou & Cottongrass

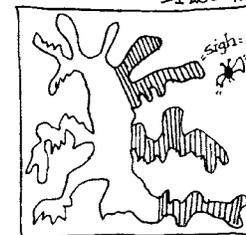


Pacific Maritime

The nearby coast and extreme mountain elevations combine to produce very high precipitation, mostly as snow. Large valley glaciers and the highest mountain peaks in Canada. Mount Logan reaches 5959m and is the highest mountain in Canada. Small birds and countless insects are blown into the ice-fields by strong coastal winds. They may attract predatory or scavenger bird species. Hardy lichens cling to high elevation rock outcrops even in this, the harshest habitat in the Yukon.

Main town: None. Kluane National Park protects 100% of this ecozone.

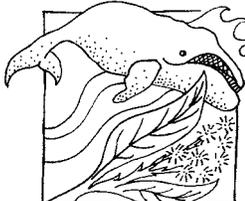
Lichen & Lonely Insects



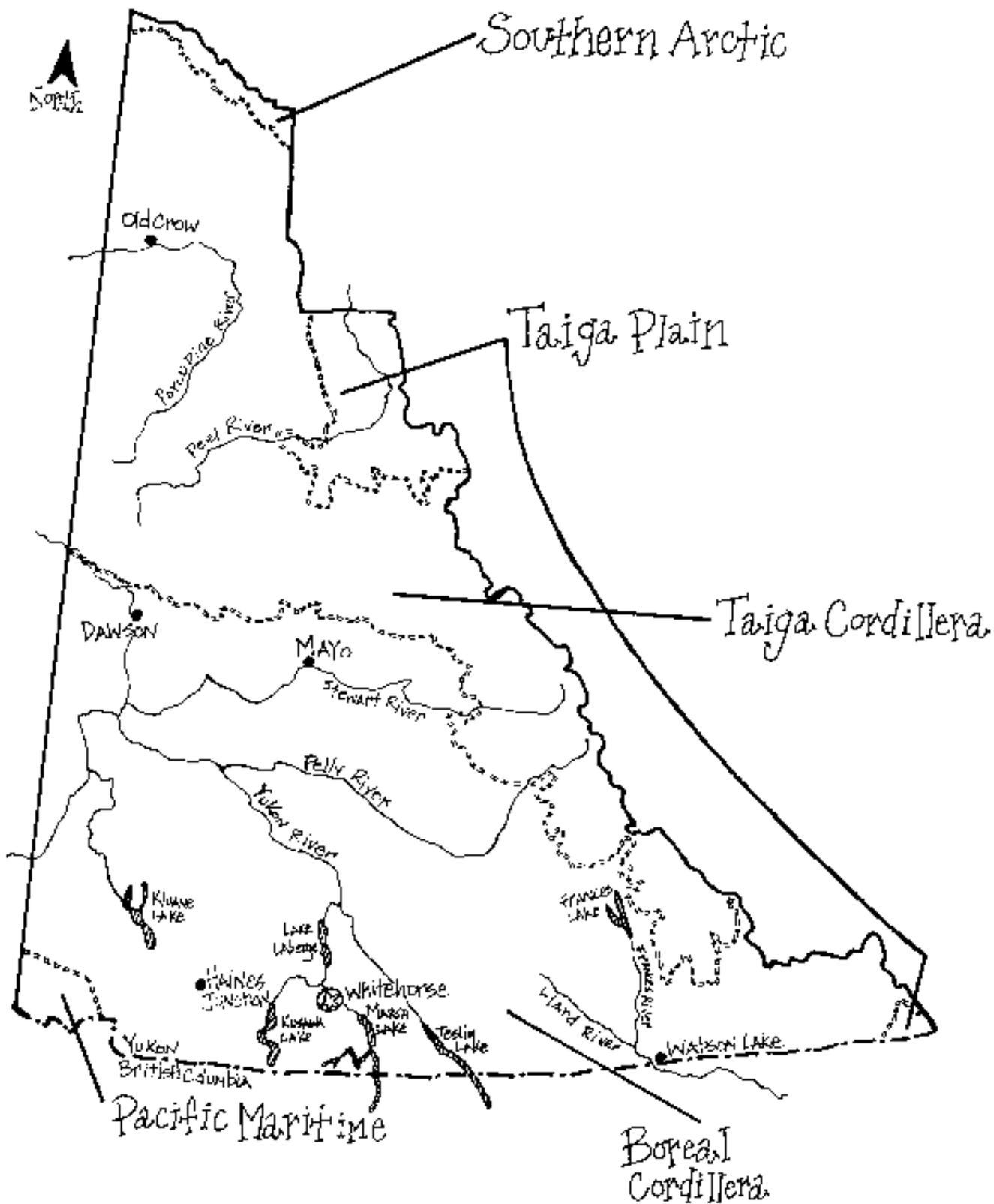
Southern Arctic

The Yukon's only coastline. experiences long, cold winters and short, cool summers. Vegetative transition between the taiga forest to the south and the treeless arctic tundra to the north. Terrain consists largely of broadly rolling

Whales & willows



Information courtesy of: A National Ecological Framework for Canada (1996) Government of Canada and Yukon Wild - Natural Regions of the Yukon (1995) Canadian Parks and Wilderness Society and the Yukon Conservation Society.



FLAG THE FEATURE FLORA AND FAUNA!

Aim...

The Yukon has a variety of geology and climate. The Yukon Territory has a variety of geology and climate and therefore biological diversity. It stretches from the Arctic Ocean and tundra in the north to mountainous icefields and Boreal forests in the south. To the west and in the central region are rolling uplands and small mountain ranges. The place we call home has a globally significant biodiversity.

In Canada, there are 50 species of plants that can only be found in the Yukon. These plants have evolved in ice-free areas called refugia. There are also non-plant species in this category, like the Ogilvie Mountain lemming and Beringian fritillary butterfly.

Set...

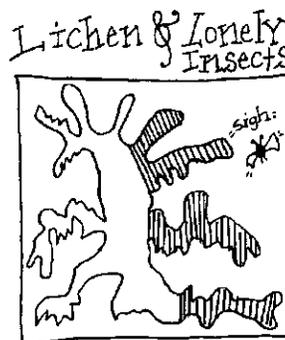
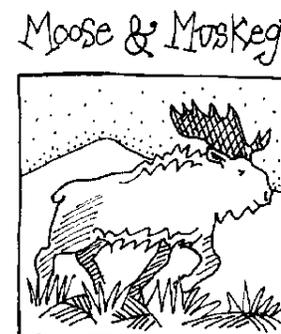
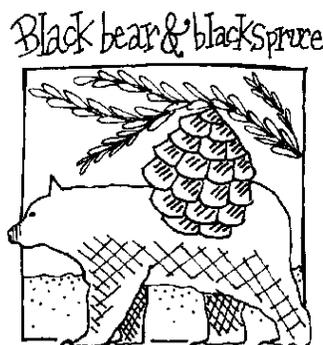
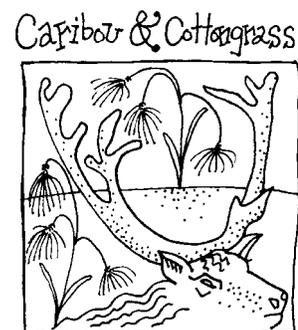
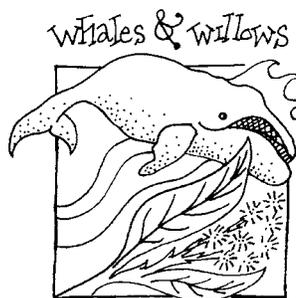
Write on the map on the next page the names of the five ecozones.

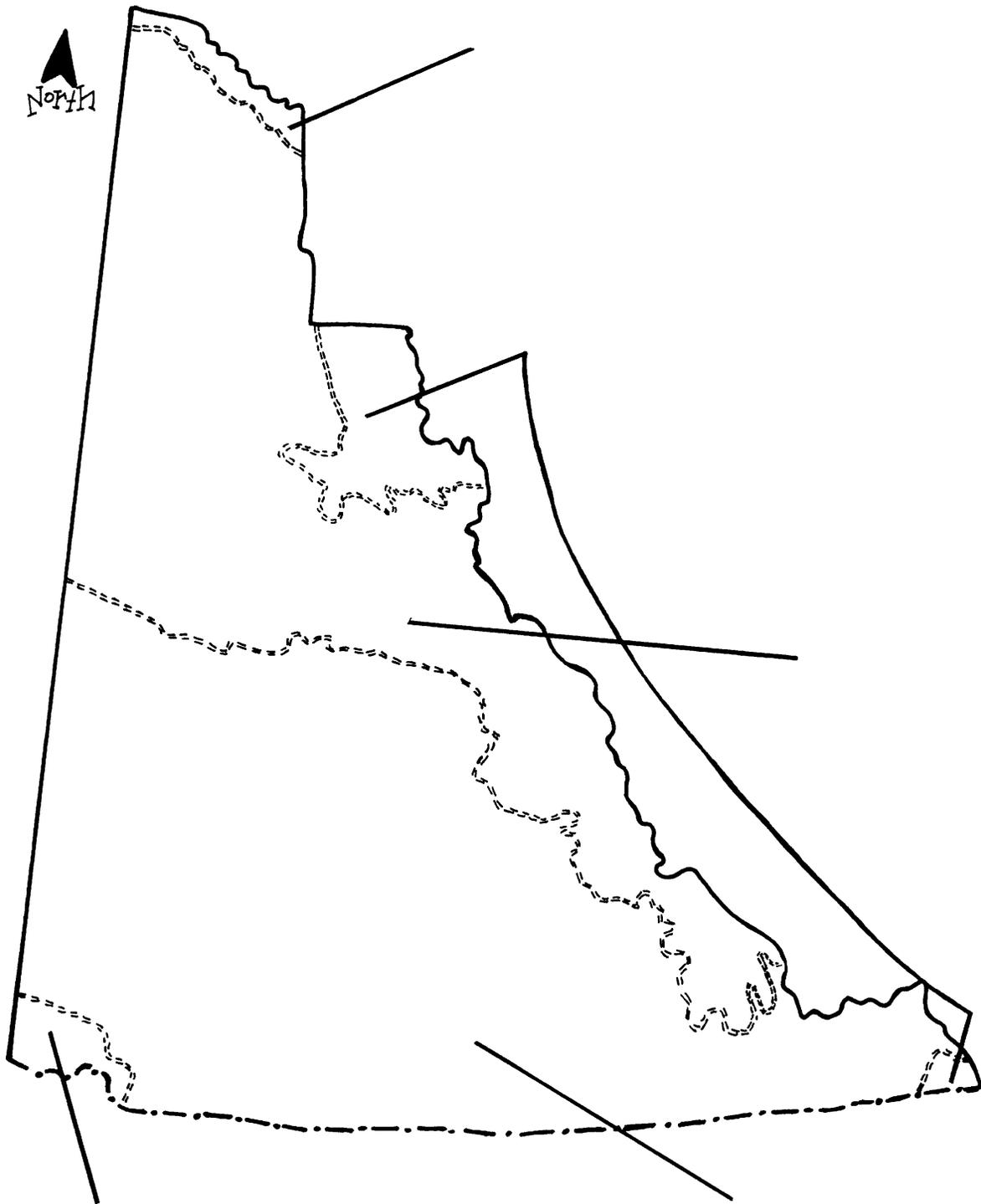
GO!

Each line on the map on the next page points to an ecozone where two of the featured flora and fauna listed are found. (Cut out the pictures and paste them near the name of the correct ecozone.)

- | | |
|---------------------------|-------------------|
| Whales & Willows | Southern Arctic |
| Caribou & Cottongrass | Taiga Cordillera |
| Black Bear & Black Spruce | Taiga Plains |
| Moose & Muskeg | Boreal Cordillera |
| Lichen & Lonely Insects | Pacific Maritime |

From the Yukon Species List in Appendix A3, pick one feature flora or fauna in one of the ecozones to research. Use the Study Guide in Animal Mania (2-4) to help you.





THE NUMBERS GAME!

Aim...

To graph and interpret trends in the population of Yukon wildlife.

Ready...

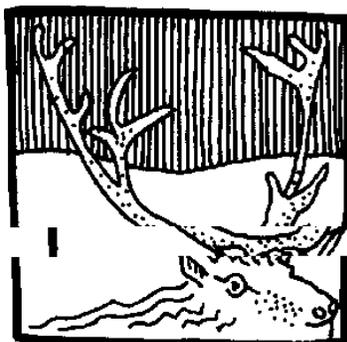
Scientists and naturalists collect data over a period of time in order to detect trends in a wildlife population. Sometimes they are able to get an accurate count. Sometimes they measure off a small part of the habitat for a particular animal, count the number of animals in that small area (a sample) and then make an estimate of the total number, for example the Porcupine Caribou Herd. Sometimes observers, such as experienced birdwatchers, are sent out to follow the same route year after year and count the number of birds of a particular species that they see. An index is calculated from data gathered over time for each route. The higher the index, the more birds on the route.

Set...

After you read the following information, complete the activities listed under the data chart.

Porcupine Caribou Herd

This herd of caribou has been an important part of the north Yukon's natural environment for thousands of years. The range of this herd lies squarely across the border between Canada and the U.S.A. Porcupine caribou numbers have increased since the early 1970s. The herd almost doubled in size, reaching a peak of 178,000 in 1989. Between 1989 and 1990 poor weather conditions led to a decline in population size. Numbers appeared to be stable in the early 1990's but the current rapid decline worries the Porcupine Caribou Management Board and the biologist who work with the herd.



Chinook Salmon

A fishway on the Yukon River, at the Whitehorse Rapids Dam, allows fish to migrate upstream into Schwatka Lake. The Whitehorse Rapids Fish Hatchery was constructed in 1983-84 as a hatchery for chinook salmon, as some juvenile fish are lost while migrating downstream through the dam turbines. In 1988, three years after their first

release, hatchery-raised chinook salmon returned as spawning adults through the Whitehorse Rapids Dam Fishway. Subsequent years have seen an increase in the percentage of hatchery-raised salmon compared to the wild salmon stocks.

Anatum Peregrine Falcon

This bird of prey is an endangered species in the Yukon and all of Canada. As a result of environmental contamination, the anatum peregrine falcon population declined severely in the 1960s and 70s. From 1971 through 1974 there were no anatum peregrine falcons spotted during surveys in the Yukon. A national recovery plan and reductions in emissions of DDT have resulted in steadily increasing numbers of these falcons breeding in the Yukon.

Data courtesy of Ministry of Environment, Lands and Parks, State of Environment Reporting Office. Please note that the Ministry is not responsible for any manipulations of the data done by others.

Information courtesy of *Yukon State of the Environment Report 1995*, published by Environment Yukon and Environment Canada, 1996.)

Year	Porcupine Caribou Herd	Peregrine Falcon	Chinook Salmon	
	Population estimate	Pairs producing young	Whitehorse Fishway counts	Wild stock Hatchery stock
1970		7		
1971				
1972	100,000			
1973				
1974		6		
1975		18		
1976		14		
1977	105,000	13		
1978		5		
1979	110,000	16		
1980		35	1,383	
1981		40	1,555	
1982		40	473	
1983	135,000	55	905	
1984		54	1,042	
1985		61	508	
1986		59	557	
1987	165,000	85	327	
1988		40	355	50
1989	178,000	65	459	90
1990		73	1,115	292
1991		97	760	506
1992	160,000	81	434	324
1993		61	380	288
1994	152,000		697	877
1995		81	2103	1198
1996		53	2958	1035
1997		80	2084	500
1998		27	777	738
1999		69	1118	827
2000		69	677	467
2001		61	988	355
2002		108	605	236
2003			1443	1010
2004			1989	1392
2005		97	2632	1500
2006			1720	808

GO!

1. Prepare a bar graph, a line graph and/or a pictograph for each of the wildlife populations in the table of data above.
2. Interpret the data by discussing the following questions:
 - What trend(s) do you observe in the Porcupine Caribou Herd numbers? What factors might be contributing to the trend(s)?
 - Why do you think there were no falcons spotted between 1971-1974? What factors might contribute to increases in falcon populations?
 - What factors might contribute to the ups and downs of the chinook salmon population at the dam? What percentage of the total return from 1988-1995 is made up of hatchery salmon stocks? Why would scientists be concerned about the increasing numbers of hatchery stock versus the numbers of wild stock passing through the fishway?

Data courtesy of *Yukon State of the Environment Report 1995*, published by Environment Yukon, formerly the Department of Renewable Resources and Environment Canada, 1996. Dave Mossop, The Porcupine Caribou Management Board and The Joint Technical Committee of the Yukon River US/Canada Panel, 2006 (JTC).

BE A YUKON TOUR GUIDE



Aim...

To provide a creative way of learning about the various ecozones. Imagine that you have been hired as a *Yukon Ecotour* guide. Your company expects you to prepare a brochure for possible future clients inviting them to join your tour of the Yukon's *ecozones*. Your job is to emphasize and display the wonderful biodiversity of the Yukon to the people on your tours.

Ready...

1. In a group of 2 or 3, pick one ecozone to concentrate on. Be sure that each of the ecozones is covered by a group in your class.
2. Use the map on the previous page to help you plan your tour and write your brochure. Use the information on ecozones for vocabulary and features. Refer to the Yukon Species List (Appendix 3).
3. Write to the various tourist regions of the Yukon for information to include in your brochure.
4. Visit a Yukon Visitor Information Centre.

Set...

Before you can write a good brochure you need to do some “market research.” For the purpose of this project make some good guesses about the likes and dislikes of your target market. Use the questions below as a guide.

1. Decide who is your target audience for this brochure. Is it other Yukon residents? Is it international tourists? Is it other Canadians? Is it other youth? Each audience will respond to a different approach.
2. What kind of language, photographs, illustrations, or pictures will appeal to them? What kinds of biological features will interest them? Will they be most interested in plants or will they want to see examples of endangered species and spaces? Will they enjoy some bird watching? Will they be in shape to hike or canoe? Will they want to spend time in the parks of a city or town?

GO!

1. Plan your brochure. Use the Brochure Planner included here.
2. Prepare a “mock-up” of your brochure with all of the words included and pictures cut from magazines or other brochures.

Flowers of the Yukon



Follow-up

1. Plan a mini-ecotour of your community for children in younger grades. Plan a tour for seniors.
2. Invite your local Member of the Legislative Assembly, Mayor and Town Council to view your collection of brochures. Take him/her on an Ecotour of your community.

Resource: Yukon's Vacation Planner

Brochure planner

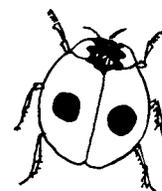
Ecozone to visit _____

Target audience _____ Number of days for tour _____

Comments _____

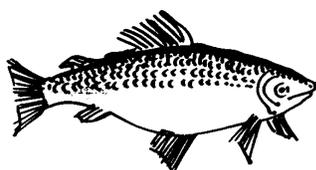
Main towns for overnight	Important things to see and do	Important trees, plants, animals, birds, etc. to point out	Other
1			
2			
3			
4			

YUKON BIODIVERSITY WORDSEARCH



The Yukon has a great diversity of animals and plants. The biodiversity of our undisturbed ecosystems has a global significance. Find the names of some of our diverse and unique animals and plants in the wordsearch below.

A	M	O	U	N	T	A	I	N	G	O	A	T	K	C	L	N	H	U	J	D
A	R	A	V	E	N	R	Q	C	M	L	T	P	Q	I	G	O	K	M	B	I
F	K	C	E	N	R	C	D	O	E	I	N	S	U	Y	W	S	Z	A	V	X
B	M	L	T	W	G	T	H	S	J	W	U	S	A	L	M	O	N	Y	P	M
I	J	O	R	I	Y	I	U	C	X	V	O	I	Y	O	E	O	A	Z	Q	U
Y	C	S	U	E	C	C	W	O	N	A	T	R	Q	U	R	F	M	B	G	Y
L	A	Q	M	K	R	G	I	M	O	C	P	N	M	T	I	S	U	A	W	E
I	P	V	P	U	Y	R	R	M	G	L	O	U	H	E	O	N	A	L	E	O
T	B	X	E	H	T	A	E	O	Z	B	I	E	M	K	A	A	F	D	U	F
T	W	O	T	M	S	Y	J	N	U	I	R	P	W	O	U	Y	I	E	A	V
L	I	G	E	A	V	L	F	L	I	N	R	V	M	U	S	K	R	A	T	T
E	X	Q	R	N	Z	I	X	O	W	R	D	C	O	Y	O	T	E	G	I	U
B	E	I	S	W	B	N	V	O	I	E	U	S	S	J	H	I	W	L	Y	N
R	H	R	W	K	O	G	O	N	L	T	S	J	Q	F	L	O	E	E	N	D
O	D	M	A	F	L	D	E	T	L	C	N	G	U	U	R	X	E	P	E	R
W	Z	P	N	H	F	C	J	U	O	I	E	D	I	Y	I	N	D	I	R	A
N	E	G	E	R	J	N	A	O	W	T	H	V	T	L	T	R	Z	C	E	V
B	U	Q	O	P	R	X	L	Y	Z	C	C	T	O	A	F	P	R	Q	A	D
A	S	G	T	V	F	K	W	P	N	R	I	I	J	X	H	L	N	E	M	G
T	I	J	M	H	O	B	O	R	E	A	L	F	O	R	E	S	T	K	L	A

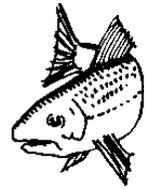


Follow-up

Now make up your own wordsearch using the names of plants and animals found in your area.



Animals and plants of the Yukon to find in your wordsearch



1. r _ _ _ n
Yukon's official bird.
2. g _ _ _ n _ s _ _ _ r _ _ _
This is the most commonly seen mammal in the Yukon, especially along roads.
3. _ a _ _ o _
This animal travels thousands of kilometres in its lifetime, attempting to return to its birthplace in order to reproduce.
4. _ o _ _ u i _ _
Although these animals survive mostly on plant juices, they are better known as pesty "bloodsuckers".
5. t _ _ m _ _ t _ r _ w _ _
This bird has a call that sounds like a trumpet.
6. l _ _ t _ _ _ r o _ _ _ a _
You may find this flying mammal calling your attic "home".
7. _ r _ _ _ c g _ _ y l _ _ g
This animal is found throughout the Yukon in lakes and streams. It was a large dorsal fin and bright coloured sides.
8. n _ r t _ _ n w _ _ d _ _ o g
This amphibian is widely distributed throughout the Yukon.
9. _ c _ w _ _ _
Although often thought to be legendary, this animal does exist, living in ice and snow and feeding on algae.
10. c _ m m _ _ _ _ _ n
This bird is featured on the one dollar coin.
11. _ _ y _ _ e
This mammal only moved to the Yukon a hundred years ago. It can leap over 4 metres in a single bound.
12. b _ r _ _ l f _ _ e _ _
More than half of the Yukon is covered in this type of vegetation, with most of the trees being conifers.
13. l _ c _ _ n
This slow-growing organism is a primary food source for caribou. It is mostly found in Arctic and alpine areas.
14. _ i _ _ w _ _ d
This completely edible plant is the official flower of the Yukon.
15. _ r _ _ _ c t _ r _ _
This bird gets the world's record for the longest migration. It summers in the Arctic and winters in the Antarctic.
16. _ i _ l _ _
This supple plant is used by many animals as a place for bedding down, hiding, and giving birth. It is also a staple diet for moose.
17. _ o _ n _ _ _ _ n _ o _ t
This mountain-dwelling mammal has backward-curving, dagger-like horns and long, shaggy, white fur.
18. t _ _ d _ _
 This vegetation is found mostly in Arctic and alpine areas. It has no trees, but is rich with lichens, mosses, sedges, grasses, and dwarf shrubs.
19. _ a _ _ e _ _ l _ _
This symbol of the U.S.A. is one of the Yukon's most common birds of prey.
20. m _ _ k _ _ t
 This large rodent lives in houses similar to beaver lodges. It is abundant on the Old Crow Flats and is important to the local trapping industry.

Some information courtesy of "Walk on the Wild Side - Roadside Ecology of the Yukon", Shelley Gerber and Tanya Handley, Yukon Conservation Society, 1994.

THE ALIENS HAVE ARRIVED!

Aim... To learn about plants and animals that are not native to Yukon, and their impact on native species.

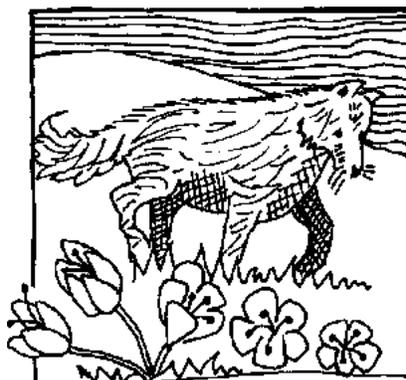
Animals and plants introduced into the Yukon by humans often cause problems. These invaders can often take over food, shelter and space of native species and some cases, inflict them with disease.

Some Yukon road rights-of-way are seeded with grass species (both native and non-native) to reduce soil erosion and for aesthetic purposes. Threespine stickleback do not occur naturally in the Yukon River watershed and are considered an exotic species. Dandelions thrive in everybody's lawn. A pond receiving the overflow from the Takhini Hot Springs pool was home to many goldfish that had been put into the pond over a period of years. Because this pond drains into the Takhini River, fisheries scientists were concerned that exotic diseases or parasites might be introduced from the pond water into the Yukon River system. In 1994, an estimated 50,000 goldfish were destroyed and removed from this pond of less than one hectare.

Ready...

In a group of two or three, complete a small research project and present your findings. You will need:

- a copy of the Alien Notes sheet
- several natural history guides on plants and animals
- notebook



Yukon introduced species:

- 154 plants
- 2 fish
- 3 birds

Set...

Decide on an alien/imported species for your research subject. Possible research subjects: dandelion, house sparrow, European starling, coyote, sweet clover, house finch, rock pigeon, goldfish, and Threespine stickleback (pick one of your community's common imported aliens). Refer to the "Yukon Invaders" brochure for more ideas. A brochure on invasive plants produced by Environment Yukon, Yukon Territorial Government. Visit the Canadian "Wild Species" website – a federal site on the general status of species in Canada www.wildspecies.ca.

1. Observe your specimen- in its habitat if possible.
2. Complete your field notes. Note: You may have to take some of your questions to people in your community who know a lot about the plants, animals and birds of the area.
3. Present your alien species to the class through drama or art. Prepare a skit presenting the life history of your invader from the Old World to its location in your community. Or draw a mural or cartoon sequence telling its story. Be sure you talk about the animals or plants your alien species displaces.

Alien Notes



STUDY SUBJECT _____

SCIENTIFIC NAME _____

SPECIMEN LOCATION (Where did I find or observe my specimen?)

SPECIMEN SKETCH SPECIMEN DESCRIPTION

LIBRARY RESEARCH – ORIGIN OF MY SPECIMEN (Where did it come from?)

CURRENT STATUS (What is its effect on the community?)

REASONS FOR SUCCESS (Why is it successful at competing with native species?)

COMMENTS (Are there any programs to control the spread of my subject?)

REACH OUT!

Mostly Science

1. Imagine you are travelling to a distant land. You climb a mountain range and descend into a valley no one has ever seen before. There is a unique relationship between climate, landforms and wildlife. Describe your imagined ecoprovince and prepare a set of field notes on the unusual plants and animals you find there. Describe a couple of the species you found in detail.
2. Set up bird feeders near your school. Count the number of birds that come to the feeders, identify the species using a field guide, and note the changes as the seasons change. Which birds are most common in summer? Which birds are more common in winter?

Mostly Social Studies

1. Research the history of one of the Yukon's ecozones. In the present use a timeline or chart to note how various human activities in the ecoprovince affected the plant and wildlife.
2. Study the climate and geography of the Yukon and make connections between various climates, landforms and wildlife.

