

WILD Yukon Environment Education



News!

Yukon Department of Environment/Conservation, Protection and Public Education

Spring 2002

2002 is Year of the Great Bear Legacy

Let's celebrate Yukon bears!

You are cordially invited to involve your class in the **Year of the Great Bear Legacy**, a multi-partner program aimed at raising awareness of bears at all levels. Special events, a travelling museum exhibit and new publications are all planned as part of this initiative in the territory.

Yukon participants include Tourism, Education, Environment, Canadian Heritage, CPAWS-Yukon and the Wilderness Tourism Association.

The grizzly bear has been chosen as the symbol for this initiative because the partners believe that having grizzlies in our environment is an indication of healthy ecosystems.

We are joining Alberta and British Columbia in this celebration, and more than one hundred public and private sector tourism partners are involved.



Between the jurisdictions, we will offer visitors more than 500 interpretive and educational opportunities designed to encourage a better understanding of black bear, grizzly and polar bear behaviour in their natural habitats. If you travel south this summer, keep an eye out for the Great Bear logo and activities!

We would like you and your class to participate in this celebration as well. In this issue of *WILD Yukon* we will offer you some background information on the three species of bears that live in the Yukon. You will find lesson activities, web links, resource reviews and other tools to help you teach about bears...and the usual news and updates.

For more information, check out:
www.theyearofthegreatbear.com or
www.environmentyukon.gov.yk.ca

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Department of Environment **What's in a name?**

Observant readers will note that *WILD Yukon* now issues from the Department of Environment, rather than the Department of Renewable Resources. The new name was chosen because it better reflects the broad spectrum of what we do.

For the same reason, our branch name has changed to Conservation, Protection and Public Education.

You can still count on us though for quality services to teachers and youth! If anything, our dedication and commitment to education has been "renewed". Give us a call at 667-3675 or 1-800-661-0408.

National Wildlife Week - April 7 to 13 **Climate is Changing—Help Wildlife Weather the Storm**

This focus of this year's National Wildlife Week is climate change. Species like the polar bear will be greatly affected by this ecological crisis. Polar bears are among the species most vulnerable to climate change. If arctic sea ice starts to break up earlier than normal in the spring because of climate change, polar bears will have reduced access to hunting and breeding grounds. Female polar bears will not be able to hunt enough food to sustain them through the summer months. With lower body weights, the mothers will have a hard time successfully nursing their cubs. In Canada, the southernmost polar bear populations are already experiencing declines in cub survival because of these factors.

The far-reaching effects of climate change are already evident in the Arctic, where the rate of warming is at least twice as fast as anywhere else on Earth. Arctic ice is shrinking at an alarming rate, the average thickness dropping nearly 40 percent in the past three decades.

Look for your National Wildlife Week resource package at your school. It contains lesson plans for grades K-12 and excellent background information on climate change.



Whyte Museum

Bear exhibit to tour Yukon in '02

If all goes according to plan, this acclaimed travelling exhibit on bears will be on display in various Yukon locations July to September. The exhibit is backed with incredible learning materials., so would be well worth working into your teaching plans. A schedule will be posted as soon as it is available at www.taiga.net/YukonEE (or call 667-8291).

Meanwhile, the museum has all its educational materials at its web site, www.whyte.org/bears/. This is what you'll find there:

Bears: Year 2000 and Beyond: A guide to current thinking and work in bear research.

Looking at: Bears in Art: Suggestions for teachers, students and parents for looking at art..

BEARS Zoology Zone: Educational content on bears made interactive and fun for 6- 12 year olds.

Teacher's Guide to the Exhibit: This guide includes activities that will help you explore the exhibition and relate it to many subjects.

Web site collaboration

Yukon Bears: Award-winning Selkirk School project

It's amazing what a Grade 3 class can do these days. With a little help from technology teacher Trevor Mead-Robbins, the kids in Maria William's class at Selkirk School have put together the territory's most comprehensive web site on bears.

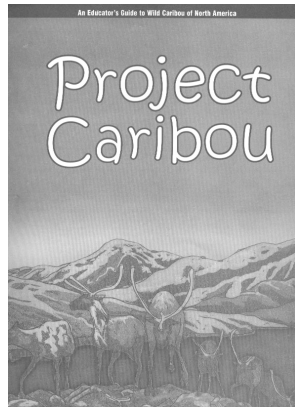
Students have posted their artwork, stories, and research projects at this site. In addition, the entire contents of the Department of Environment's booklet *The Bear Facts* (currently in the process of being reprinted) is posted in both English and French.

This is a great example of how schools and the Department of Environment can collaborate on projects of benefit to the general public. Contact us if you have a good idea! Have a look at the Selkirk site at: www.yesnet.yk.ca/schools/selkirk/projects/bears/.

New resource

Project Caribou

Years in the making, but worth the wait, we hope— this comprehensive learning resource on caribou is now available to Yukon teachers. It's chock full of the latest background info on caribou, and includes new and adapted activities for K-12. How about trying out *Bot Fly Boogie* or *Caribou Bingo* ?



Copies of this book are available free-of-charge to Yukon teachers. Give us a call (667-3675). Or, if you want, the entire document is available to download as a PDF file at the special website at: www.projectcaribou.org. You'll also find interesting links, support materials and more at this site.

North-specific from the NCE Climate Change Schools

Over the past six months, teachers and students in nine schools across the three northern territories participated in a pilot project on climate change. A web site— www.taiga.net/nce/schools—has information on the schools, teachers and classes that participated, class projects, photographs, as well as class activities and lesson plans.



You can be involved! The site is not limited to the schools and classes who participated in the pilot project. As materials and projects are developed across the North, teachers are encouraged to submit them for the web site, so that it will become a northern hub for activities and information and a place where teachers and classes can exchange data and results.

Ideas or suggestions? Contact the Northern Climate Exchange public education and outreach coordinator Bob Van Dijken at 668-8874 or bvandijk@yukoncollege.yk.ca .

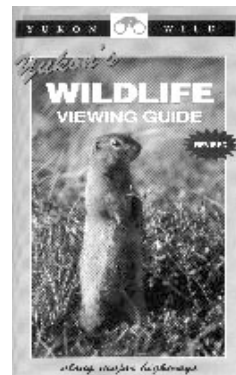
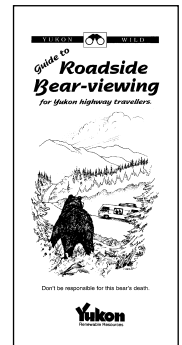
Free from Environment Yukon Bear publications for you

In this Year of the Great Bear, you may wish to review these publications. You can obtain them from any Environment Yukon office, or by calling 667-5652.

Be Bear Aware: This classic colouring book for younger audiences has just been updated to reflect the latest thinking on bear safety. It features new and original illustrations by Chris Caldwell.



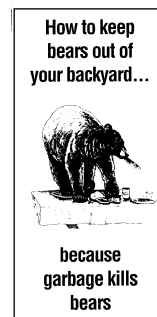
Roadside Bear Viewing: Aimed mainly at road-travelling tourists, this pamphlet has basic bear biology and safety information.



Yukon Wildlife Viewing

Guide: The definitive guide to watchable wildlife in the Yukon. A must-read for anyone with an interest in wild fauna!

The Bear Facts: This very informative guide to the three kinds of bears found in the Yukon is being revised and reprinted this summer. Look for it later in the season. In the meantime, the unrevised info is available at: www.yesnet.yk.ca/schools/selkirk/projects/bears/.



How to Keep Bears Out of Your Backyard: This handy little pamphlet how you can play your part in keeping our wild bears wild—by discouraging them from becoming "spoiled" and ultimately a danger to themselves and people.

Compare your bears

Yukon bear facts

	Polar Bear	Black Bear	Grizzly Bear	You!
Adult Weight				
Male	500–600 kg	115–170 kg	170 kg	your weight
Female	200–300 kg	50–100 kg ?	108–144 kg	
Bear is full-grown at age:	4–8 years	4–6 years	5–8 years	adult age
Standing height				
Male	3.5–4 m	1.7 m	2.5 m	your height
Female	2.5–4 m	1.4 m	2.2 m	
Adult bear's number of teeth	42	42	42	your teeth
Top speed for short distances	70 kph	50 kph	60 kph	your fastest speed
Average birth weight	750 grams	300 grams	500 grams	your birth weight
Month(s) cubs are born	early Jan.	Jan & Feb	Jan & Feb	your birth month
Length of time cub with Mom	3 years	1.5 years	2–3 years	your time at home
Usual number of cubs in litter	2	2	2	# of kids in family
Average natural lifespan	25 years	25 years	25 years	human lifespan
Habitat	sea ice	forest	alpine & tundra	where you live
Fur colour	white	white–black	blonde–brown	your hair colour
Preferred food	seals	plants, berries	plants, berries roots, fish	your favourite food

Table adapted from *Grizzlies of the Arctic Tundra, An Educator's Guide* by Jamie Bastedo. See Resources...What's New? page 10 for a description of this resource.

Activity Idea

How Do You Measure Up to a Bear?

This activity accompanies the Yukon Bear Facts table above. Adapted from *Grizzlies of the Arctic Tundra A Educator's Guide* by Jamie Bastedo (see page 10).

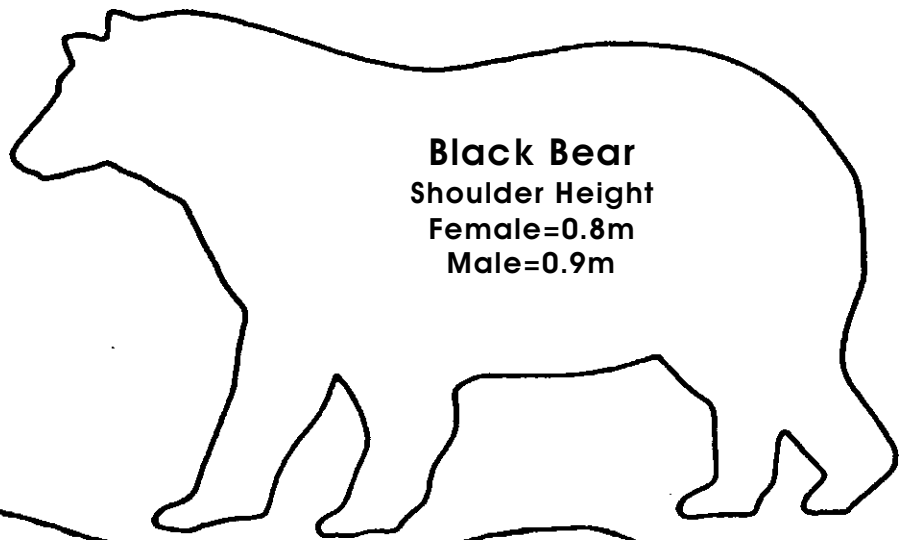
1. Before handing out copies of “Yukon Bear Facts” table, discuss the various physical and biological features of bears listed. For instance ask students who they think is the fastest bear, what's different about a black bear and grizzly's home, or why might grizzly cubs stay the longest with their mother. Then hand out the Table and have student fill out the “You?” column.

2. Project the bear outlines onto a wall or screen to match the specified should heights then trace them

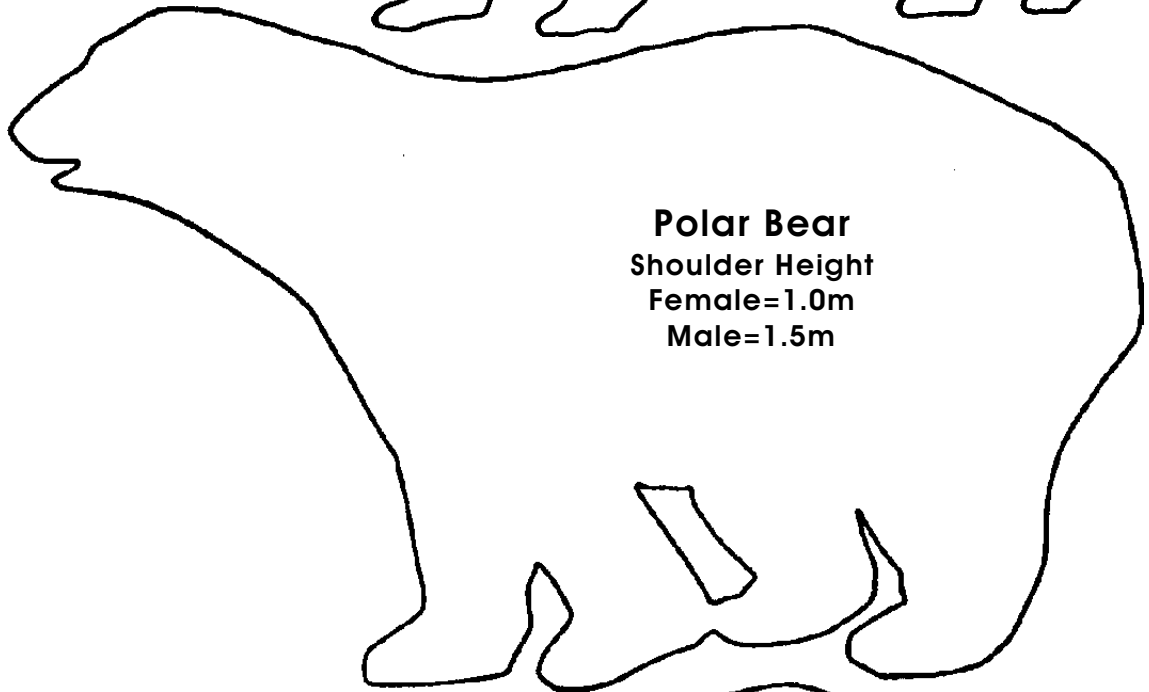
to make life-size drawings for your classroom.

Student could trace their own bodies in appropriate bear encounter poses or scenarios (e.g. Backing up slowly, remaining downwind of bear) to paste up nearby the bear images.

3. Students could add to the Yukon Bear Facts table of information by researching other aspects or details. Related bear facts could be displayed on the life size drawing of each bear. Other facts to research include: home range, time spent in den hibernating, unique physical features, safety practices, behaviour, favourite forms of play, status throughout Canada and United States, etc.



Black Bear
Shoulder Height
Female=0.8m
Male=0.9m



Polar Bear
Shoulder Height
Female=1.0m
Male=1.5m



Grizzly Bear
Shoulder Height
Female=0.9m
Male=1.0m

Activity: An Uncertain Future

Adapted from *Grizzly Bears Forever! A teacher activity guide for Science 7,8,9* (see p.11)

Using distribution maps of wolverine, wolf and grizzly bear students compare past and present distribution of these large carnivores. They consider questions such as: Why has habitat shrunk? What may happen in the future? How can we change this pattern so that we can live with the large animals of this land?

The presence or absence of carnivores is usually used as an indicator of ecosystem health for three main reasons: carnivores greatly influence the entire food web; carnivores require large areas for their habitat, and; carnivores are shy of human activities

For these reasons, carnivores disappear when their habitat is fragmented by human activities and made into smaller areas. If large predators can survive in an ecosystem, it usually means the system is healthy enough to support the other animal species.

1. Review the maps of wolverine, and wolf with the class. Have these animals disappeared from much of their original range? Why did this happen? There have been many changes to the land such as agriculture; mining, forestry, urban growth (cities), roads and other kinds of human developments destroyed their habitat. Looking at the “last refuge” areas for these animals, what do you think they look like – mountains, forest or prairies? Most of the carnivores’ last refuges are the mountainous areas where humans have not yet settled in large numbers because they are more difficult to access. Some large untouched forests may also be home to these animals.

2. Review the map showing the historical distribution of the grizzly. What was the historical range of the grizzly within North America? The range included Mexico, mid-western states and Saskatchewan.

Why do you think the range of the bear has shrunk? Huge development in the last 80 years that ploughed the land, built cities, railways, roads and industrial plants. The natural habitat that bears need to survive was fragmented or destroyed. This habitat loss, along with intense hunting pressure, eventually caused bears to disappear from settle areas.

3. Show students the present-day distribution of grizzly bears. What is the name of the remaining U.S. “island”? Yellowstone National Park, it contains a

population of 300 bears, which are believed to be isolated from bears to the north by ranches, highways and other development. What do you think happens to the bears in this “island”? “Islandization” of bear population means they are isolated from other populations. They can’t connect with each other for breeding purposes. As a result, inbreeding and weakening of the population occurs, usually resulting in the local extinction (“extirpation”) of the bears from an area. Once a population dies out, whether from disease or over hunting, no new bears can get there to repopulate the area because the islands of habitat are no longer connected to each other.

Where is the next area of concern within Canada? The next pinch point, the thinnest point at the base of the long peninsula that reaches down into the northern U.S. is where the bow valley and Banff National Park is located.

What human activities would cause this point to completely pinch off, forming a second island of habitat? Increased development in the Bow Valley such as railways, highways, urban expansion, resort development, and increased human use.

5. Using the terms probable future and preferred future have students imagine the future and what they would like to see and what might happen given the current trends. Given the trends (development patterns) of the past century, what is the probable future of the grizzly bear range in North America? Using an erasable marker on the overhead, or you can have students answer this question in small groups. Use the “present distribution” map to show what the probable future of the grizzly bear might be.

What is your preferred future for the distribution of the grizzly bear? Try to get the class to agree on an answer to this question, and use the “present distribution” map to show the class’s preferred future.

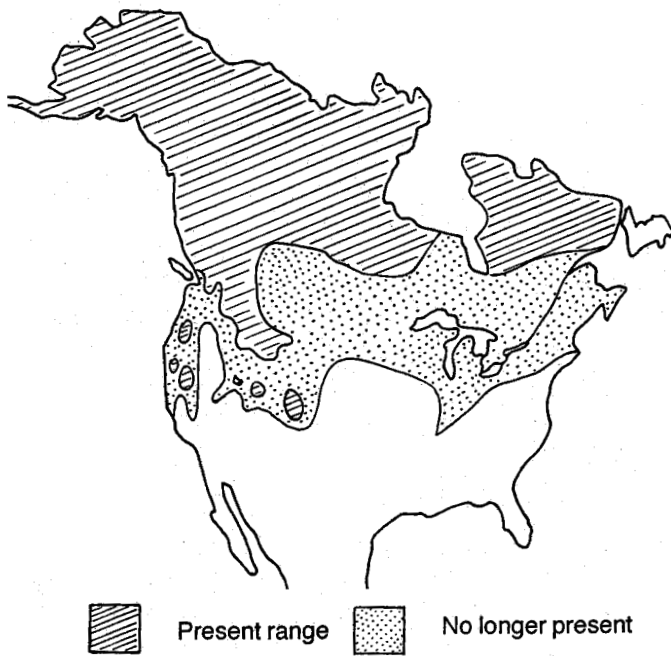
What actions need to occur now in order to achieve this “preferred future”? Some action-oriented ideas may include: stop human developments in protected areas, like national parks; identify important areas for grizzly and other indicator species, and; important unprotected land should be given protected status.

How can we, as citizens, ensure that these actions stated about will actually occur? Be heard! Here are some contact suggestions but there are many ways that you can be heard and ways you can make a difference:

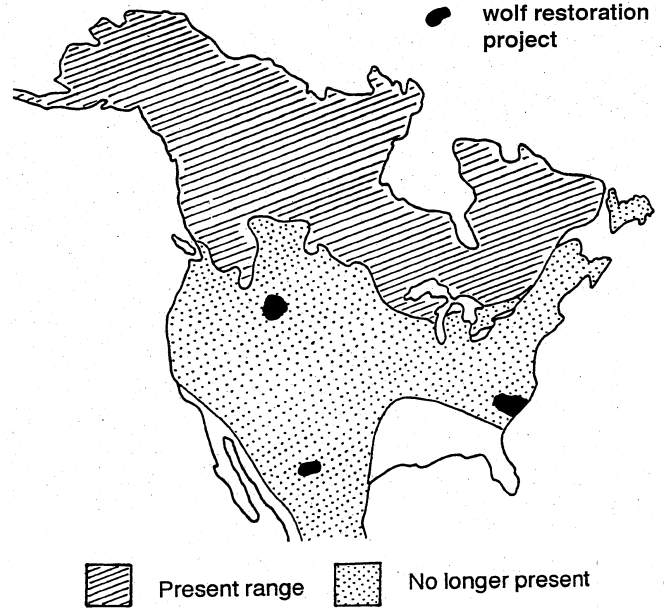
- Write decision-makers and express your concerns.

- Share your knowledge with you friends and family; think about how your actions affect wildlife.
- When in bear country, practice careful management of your food and garbage.
- Learn more about wild species.

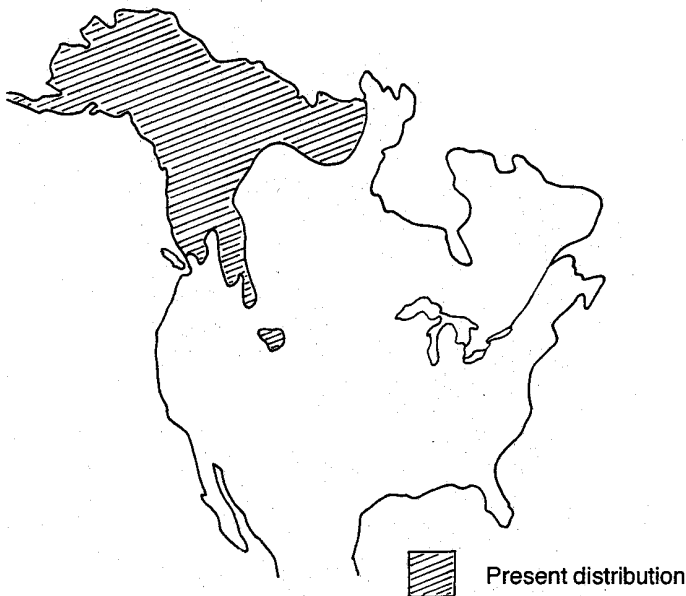
Wolverine Distribution



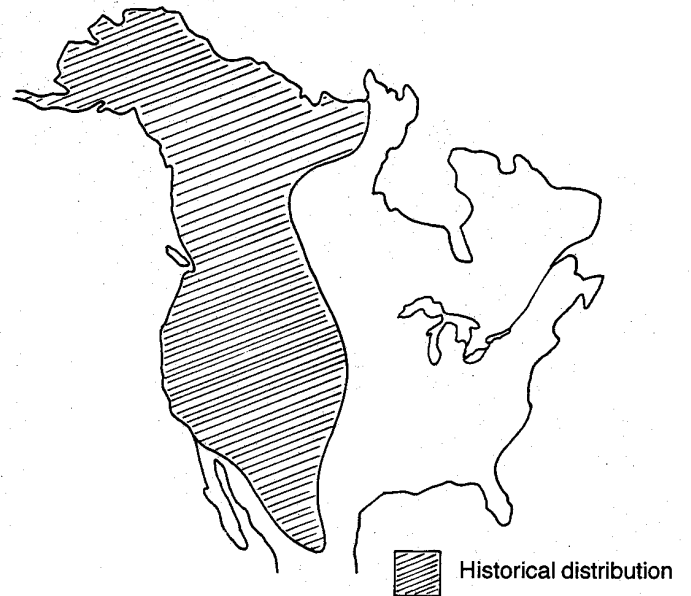
Wolf Distribution



Distribution of Grizzly bears



Distribution of Grizzly bears



Activity overview

Bears over time

from *Grizzly Bear Biology Concepts and Activities for Grade 11,12* (see p.11)

In this activity students progress from genealogy to the larger evolutionary picture portrayed by an evolutionary tree (phylogeny) of bears.

Objectives Students differentiate among and give examples of convergence, divergence and speciation. They identify the role of extinction in evolution and compare genealogy to phylogeny. Students are given information on the fossil record, comparative anatomy, chromosome and gene structure, and studies of molecular evolution, in order to determine a phylogeny for bears.

One effective way to teach how evolutionary relationships are related to speciation and extinction is to examine a phylogeny in detail. Bears offer an ideal group, since there is a good fossil record, there are eight extant species, several molecular relationships among living bears (such as the notion that the panda is not a bear, or the notion that the polar bear belongs to a distinct genus), have been turned upside down by the combination of evidence that is now available to science, and is summarized in this activity.

Key Terms and Concepts classification diversification phylogeny adaptive radiation genealogy gradual phyletic change common ancestor extinction allied species comparative anatomy chromosome homology palaeontology analogy

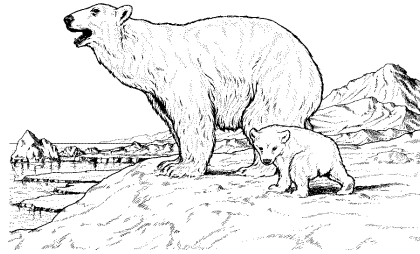
Genealogy, Phylogeny? A genealogy reveals the ancestry of the individual; a phylogeny reveals the ancestry of the species. Thus, a phylogeny is a study of evolutionary history. All living this have both a genealogy and a phylogeny.

Outline of Activity

1. Using the student guide, students are introduced to the terms taxonomy, phylogeny and genealogy.
2. They are guided through the creation of a phylogenetic tree for bears using molecular findings, genetic structure and two tables of information on 18 different bears. One table describes the 8 different species of bears alive today another table list 10 species of extinct bears.

3. Upon completion of the phylogenetic tree students have five questions to answer based on this phylogenetic tree for bear species.

The teacher's guide provides background, answers to all questions asked as well as a completed phylogenetic tree that shows bear evolution.



Polar Bear Activity

Blubber Mittens?

from www.teelfamily.com/activities/polarbear

To find out what it's like to have a layer of blubber to keep warm, try this easy Blubber Mitten experiment. You'll need:

- 1 lb lard or shortening
- 2 zippable sandwich bags
- a bowl of ice water with ice cubes

Fill one of the zipper bags about 1/3 full of shortening, then turn the remaining zipper bag inside out. Place it carefully inside the bag with the shortening so that you are able to zip the one bag to the other. This creates a re-useable "blubber mitten" for you to put your hand in. Place your bare hand in the bowl of cold water and see just how cold it is!

Next, place your hand in the "blubber mitten" and now place your mittened hand in the ice water. How cold does the water seem with the blubber mitten on?

Do you think a nice thick layer of blubber would be great protection against cold? Walrus, whales, and seals also have wonderful layers of blubber that help to keep them warm.

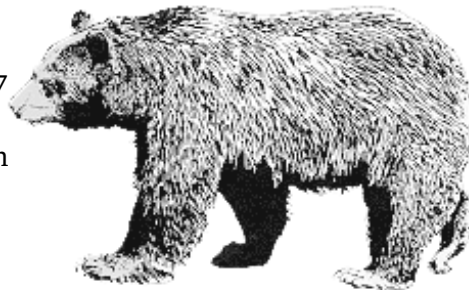
Activity

Fuel for Hibernating Bears

Background: During the summer, a bear normally consumes about 8,000 calories a day, but this increases to 20,000 – 35,000 calories during the “hyperphagia” in the fall (preparing for hibernation). The grizzly bear diet is 90% fruits, berries, roots, and vegetation. Only 10% is meat and carrion. Buffalo berries, roots of plants such as *Hedysarum* or sweet-vetch, and *Equisetum* or horsetails, are food for black bears. Occasionally, an early hibernation ground squirrel or a caribou carcass left by a pack of wolves can supplement the feasting.

Method: Using the menu below, ask students to select a variety of foods and portion sizes to tally 20,000 – 35,000 calories—the same number a bear might eat during its hyperphagia phase.

Discussion: How much weight do Yukon Grizzlies put on? Seasonal weight gain for adult males is an average of 37 kg (26% increase over spring weight) and adult females gain an average of 40 kg (39% increase over spring weight). That’s a lot of berries!



What are they eating throughout the spring, summer and fall? From mid-May through to the end of July, Horsetail (*Equisetum* species) is their favourite. The use of other plants like willow (*Salix*) catkins in May and *Oxytropis* flowers in June increase in importance through to the end of June. Over wintered berries are eaten in the spring as well but are not eaten by the end of June.

Grizzly bears are occasionally successful at hunting young ungulates (Dall sheep, moose, caribou). The most likely time they may catch one is in early June.

July is the start of berry season for them as soapberry (*Shepherdia Canadensis*) crops ripened and berries dominate the diet through August and September while root crops gradually increase in importance and use of horsetail drops completely. Roots dominate the diet in early October with other berry species silverberry (*Eleagnus commutata*) and crowberry (*Empetrum nigrum*) replacing use of soapberry.

Caloric Value of Various Foods

Dairy Products #cal/30 g

Butter	203
Whole Milk	18
Cheese, Cheddar	113
Cheese, Swiss	105

Fruits & Juices #cal/30 g

Apple, raw	13
Orange, juice	15
Apple Juice	15
Banana	16
Prunes, dried	64

Nuts #cal/30 g

Almonds	170
Brazil	185
Peanut Butter	167
Peanut, roasted	165

Baked Goods #cal/30 g

Bread, Whole Wheat	69
Bread, White	77
Cookie, Sugar	126
Triscuit	125
Fig Bar	1

Meat, Fish, Eggs #cal/30 g

Hamburger, cooked.....	81
Salmon, canned	43
Bacon, cooked	173
Frankfurter	88
Egg, fresh	41

Grain Products #cal/30 g

Oatmeal, uncooked.....	110
Rice, puffed	113
Macaroni	105
Egg Noodles.....	110
Rice, Brown, raw	1

Note: Values adapted from Ferber, Peggy ed. *Mountaineering: The Freedom of the Hills*. Seattle, WA: The Mountaineers, 1979. Yukon data from McCann, R. 1998. *Kluane National Park grizzly bear research project. Interim report to accompany the project review, Oct 21 & 22, 1998*. Prepared for Kluane National Park, Haines Junction, Yukon. 128pp.

Available now

Bear resources—what's new?

Staying Safe in Bear Country

Video Produced by Wild Eye Productions and A/V Action

Available from Resource Services, Education (see p. 12) and local book stores...

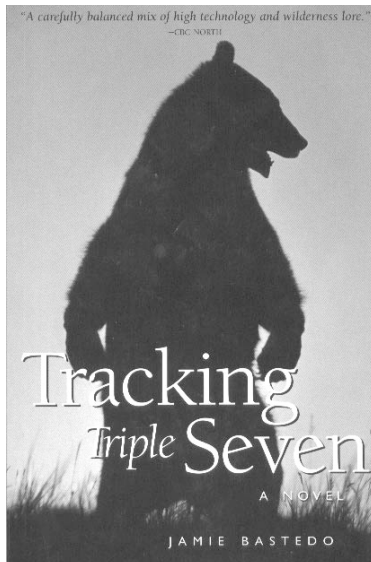
This 48 minute video is the consensus opinion of leading experts on bear behaviour and its relevance to human safety. Provides information to help reduce human injuries and property damage from grizzly and black bears throughout North America. This video will increase your knowledge of bear behaviour and help you prevent bear encounters and attacks.



Tracking Triple Seven

A Novel by Jamie Bastedo

Grades 5 – 9 Classroom sets available from Resource Services, Yukon Education



Join Benji, a fourteen-year-old city kid who visits his father's arctic diamond mine. Benji's adventures take off when he accidentally joins a team of grizzly bear biologists and their Inuk pilot. Together you learn about cutting-edge technology and good old bush wisdom during the often-thrilling search for Triple Seven, one of the grizzlies of the arctic barrens. During the search you share in the challenging reality of a bear family's quest to claim its rightful place in the biggest wilderness on Earth.

This story will teach students about research techniques, bear biology, bear and human interactions as well as some of the resultant consequences. A good jumping off point to group discussions and it is recommended to use the book in combination with the teacher guide described below.

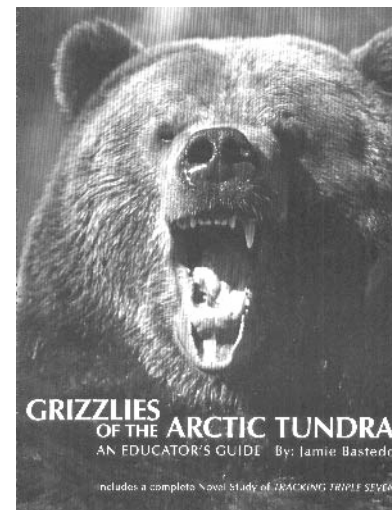
Grizzlies of the Arctic Tundra

**An Educator's Guide Developed by Jamie Bastedo
Grades 5 – 9**

This guide has been prepared by the author of "Tracking Triple Seven" as part of a national education project on the arctic grizzly. This richly illustrated resource includes detailed natural history information on grizzly bears, user-friendly classroom activities plus a chapter-by-chapter novel study of Tracking Triple Seven.

To Purchase Tracking Triple Seven and Grizzlies of the Arctic Tundra

Red Deer Press MacKimmie Library Tower, Room 813 2500 University Drive NW University of Calgary Calgary, Alberta, T2N 1N4 Phone: 403-220-4334 Fax: 403-210-8191 Email: khanson@ucalgary.ca Order from website: www.reddeerpress.com



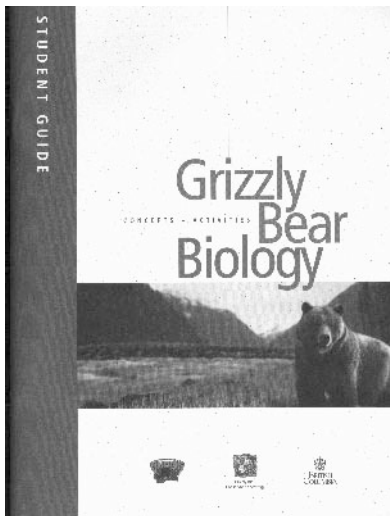
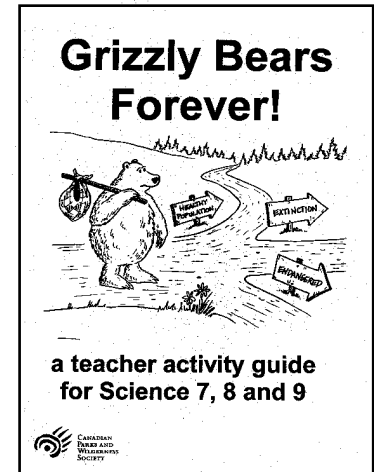
Grizzly Bears Forever!

Teacher activity guide Science 7, 8 and 9 Developed by the Canadian Parks and Wilderness Society

This resource includes fifteen activities developed to create a relevant, exciting, and informative resource that carefully examines the present day challenges we face in the field of large mammal conservation. Activities explore such topics as: grizzly bear-human interactions, healthy ecosystems, future of the grizzly, habitat limitations, simulation games, sponsor a grizzly and more.

To order from Canadian Parks and Wilderness Society www.cpawscalgary.org/education, or call the Calgary/ Banff Chapter (403) 232-6686 Fax: (403) 232-6988.

See page 6 for a sample lesson from this resource.



Grizzly Bear Biology Concepts and Activities

Teacher Guide and Student Guide Developed by Wild BC
Created for BC curriculum, Grades 11&12

There are 6 well-developed activities that are supported with charts, graphs, sketches and questions in the student handbook. The series of activities explores the bear's anatomy, behaviour and habitat. Students follow the footsteps of grizzly bear researchers, using original data and current information to examine bear evolution and population dynamics. The grizzly bear presents an ideal case study for teaching biological principals while engaging students in critical thinking about a wildlife conservation topic. The great bears' majesty, mystery and vulnerability combine to make them a remarkable example of studying human interaction with the natural world. This resource will be available at every high school or through the resource center.

To Purchase: **Write** Wild BC, Habitat Conservation Trust Fund, Ministry of Environment, Lands and Parks, P.O. Box 9354, Stn. Prov. Govt., Victoria, BC V9W 9M1; **Phone:** 1-800-387-9853 **Fax:** 1-250-952-6684 **Email:** wild@pop.gov.bc.ca; **On-line:** www

See page 8 for an outline for a lesson from this resource.

Interpreting Bear: An Educator's Manual

Interpretive Activities for Students Grades 4 to 9

Produced by Friends of Banff National Park Education Services

A ninety-seven-page resource with a range of great lesson ideas including a comparison of black and grizzly bears, their habitat, conservation, safety and a case study of one bear's story. Support materials are included. Packed with many useful ideas. Check out a sample activity in the Ideas and Activities section of the newsletter.

Contact: Box 2590 Banff, Alberta, T0L 0C0; education@friendsofbanff.com; www.friendsofbanff.com

Bear Materials at Resource Services (Education)

<http://www.resourceservices.gov.yk.ca/>

Videos

Staying safe in bear country

Call# VT 4883 : video recording a behavioral-based approach to reducing risk produced by Wild Eye Productions, Atlin, BC in association with AV Action Yukon Ltd.

Published Magic Lantern, c2001.

Description 1 videocassette (48 min.) :13 mm.

Summary : This video is the consensus opinion of leading experts on bear behaviour and its relevance to human safety. Provides information to help reduce human injuries and property damage from grizzly and black bears throughout North America. This video will increase your knowledge of bear behaviour and help you prevent bear encounters and attacks.

Working in bear country

Call# VT 4884 J/S : video recording for industrial managers, supervisors and workers produced by Wild Eye Productions, Atlin, BC in association with AV Action Yukon Ltd.

Published Magic Lantern, c2001.

Description 1 videocassette (20 min.) : 13 mm.

Summary : This video is the consensus opinion of leading experts on working safely in grizzly and black bear country. It is essential to view Staying Safe in Bear Country before viewing Working in Bear Country.

Bears and man

Call# VT 0792 Published NFB, 1974.

Description 1 videocassette (27 min.), colour.

Summary: Photographed in Banff and Jasper, this program shows how dangerous bears can be.

Ghosts of the rain forest: the rare white bears of Canada's west coast.

Call# VT 4867 ISBN 096858215X

Published Canadian Geographic, c2000.

Description 1 videocassette (48 min.) :1/2 in.

Summary: A mysterious colour mutation of the black bear, the white kermode numbers no more than 15 on Princess Royal Island with a few more thought to exist on the adjacent mainland. Join Canadian Geographic in exploring this beautiful island and meet its remarkable living ghosts.

Primary Theme Boxes

Little bears box.

Call# TB 0033

Description 1 theme box.

Summary : Includes multiple copies of HAIRY BEAR, PEACE AT LAST, and BLUEBERRIES FOR SAL by R. McCloskey.

More bears.

Call# TB 0040 Description 1 theme box.

Summary : Multiple copies of PEACE AT LAST, DEEP IN THE FOREST, BROUGHTON BEAR, and PADDINGTON BEAR'S NEW YEAR'S PARTY.



Kits and film strips

Bears.

Call# SP 0234 Published Dept. of Education, N.W.T
Description 1 teachers' manual, 49 study cards.

Summary : A language development and multidisciplinary unit for grade one.

Bear aware: a self-guided training kit.

Call# K 3083 Published [Victoria, BC] :Ministry of Forests, [ca. 1993]

Bears. Part 1.

Call# FS 1615 Description 63 frames colour.

Summary: Survey of types of bears.

Bears. Part 2.

Call# FS 1616 Description 75 frames colour.

Summary: Shows life habits and cycles.

Different kinds of bears.

Call# BB 2861

Description Multi-media kit :

Summary: Readers learn about three kinds of bears: polar bears, the American black bear, and the giant panda.

The Polar bear.

Call# FS 0115

Description: 34 frames colour, guide. Summary: Shows habitat, life cycle and habits.

Polar bear on ice off Natkusiak Peninsula, Victoria Island, NWT.

Call# SP 0167 Description: 1 study print. Summary: A photo by Sam Miller, NWT Fish and Wildlife Service.

Polar bears.

Call# SS 0054 Published NFB

Description 10 slides, guide.

Summary: Close-up photography allows the viewer to observe the polar bear in his icy realm. Bilingual teacher's notes explain various aspects of the polar bear's habitat and livelihood.

The Polar regions.

Call# K 1042 Published VP, 1976.

Description Multi-media kit

Summary: An ecological study of the Arctic and Antarctic region with detailed attention to the plant life and the food chains of the mammals and birds of these environments.

**Circumpolar world.**

Call# RK 2941 Published Whitehorse, Yukon :Dept. of Education Curriculum, 1997.

Description: 10 copies of The Northern Polar World, 6 copies of Life in the Polar Lands, 5 copies of Baseball Bats for Christmas, 15 National Geographic articles, 19 books (various titles, some multiple copies), Internet resources, and 2 teacher resource guides.

Summary: A multi-level resource containing fiction and non-fiction works predominately about the North American Arctic. Activities focus on seven themes: geography, resources, First Peoples, change, the modern north, challenges, and links.

The Black bear.

Call# FS 0118 Description 42 frames colour, guide.

Summary: Shows habitat, life, annual cycle, and habits.

You should know this!**Bear safety quiz**

What are the bear facts? Challenge your bear safety knowledge with this **True or False Quiz: (Answers and explanations on page 15).**

1. Bears cannot run downhill.
2. Under the right circumstances a bear can smell you from 1.5 km away.
3. Being around bears is only dangerous if you get between a mother bear and her cub.
4. Bears are dangerous predators of humans.
5. Bears can run more than 50 km per hour.
6. It is safest to be as quiet as possible in bear country.
7. If charged by a grizzly, climb a tree.
8. Improper management of garbage is the single largest cause of creating a spoiled bear.
9. Bears have poor eyesight.

Now lets see how you did...turn to page 15 for the answers.

Can you bear it?**Web site on bears...**

For your convenience, all the following links have been posted on the Yukon On-line Guide to Environmental Education at www.taiga.net/YukonEE.

The Year of the Great Bear

www.yearofthegreatbear.com

Describes the Year of the Great Bear initiative along with partnerships and events for 2002. Included is grizzly and black bear information in a readable format as well as links to other resources.

Yukon Mammals Series

www.renres.gov.yk.ca/wildlife/mammals.html

Yukon government website contains the Yukon Mammals Series as well as bear safety information.

Yukon Bears www.yesnet.yk.ca/schools/selkirk/projects/bears

Many of you will have already seen this award-winning site put together by Selkirk School. (See page 2).

Marilee's Bear Links

www.ameritech.net/users/macler/bears.html

This teacher has put together a fun list of links to all sorts of bear stuff: teddies, pandas and more.

Whyte Museum Bears

www.whyte.org/bears/

The Whyte Museum of the Canadian Rockies has excellent on-line materials on bears. (See page two for more info).

**Bear Tracks**

www.nwtwildlife.rwed.gov.nt.ca/publications/beartracks

A good resource for information on the barren-ground grizzly bear. A readable newsletter that documents highlights from five years of original research on tundra-dwelling grizzlies in Canada's central arctic. Includes printable colour maps showing movement patterns of individual bears.

North American Bear Centre www.bear.org

This site specializes in educational outreach and features a special kids' section with interactive games, a description of interesting projects, bear stories written by kids, a listing of useful books, videos and films, a "bearmart", plus a direct on-line link to bear biologist, Dr. Lynn Rogers to answer questions.

The Bear Facts

www3.gov.ab.ca/srd/fw/bearfacts/

Produced by the Alberta government, this website provides good background information on the biology of grizzlies and practical tips on bear safety.

Wildalive www.nwf.org/wildalive/grizzly

This National Wildlife Federation site is an excellent source of information for students and teachers. Includes lesson plans for grades K to 8, video clips, bears of the world, Question and Answer section, life cycle information, science facts, the historical distribution of the grizzly and much more on other wildlife species.

Polar Bears Alive

www.polarbearsalive.org

A great source of information, maps, images, addresses, web links and more specifically focusing on the polar bear. Many excellent images as well as an on-line gift shop that feature polar bear paraphernalia.

The Bear Den

www.excite.sfu.ca/projects/exwork/best/bearden

A site developed by Don Middleton that includes a site called "the cub den" for young children. This is a much different site from the American site with the same name.

The Bear Den

www.bearden.org

The Bear Den is a good "first-stop shopping" site to gather basic information on bears and find useful links to other bears sites. Includes a "fun and games" kids site, fact sheets, and bear sounds.

Eastern Slopes Grizzly Bear Project

www.canadianrockies.net/grizzly

The focus here is on scientific research and the effects of human activities on grizzly bears. Includes good background information, a list of bear videos and films, a bear photo gallery and links to other bear websites.

Brown Bear Resources www.brownbear.org This site includes good background information on grizzly bears, plus related education materials.

Bears www.bears.org

A unique site with a strong cultural slant, it is "dedicated to preservation of accurate bear beliefs". Includes a good summary of bear "myths" and stories from around the world.

Life in a Bear Den or Orsa Gronklitt

www.atlas.dalnet.se/~ftale/index.php?page=bjornwebcam&lang=en

Pictures of a bear den, in Sweden, through web cam. For the first time ever, you are in the position to take a first hand look on what happens in a bear den. In addition the site includes information on what has happened in the den.

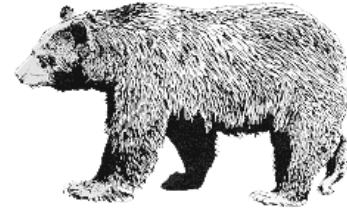
Craighead Environmental Research Institute

www.grizzlybear.org

For mature students, this site covers numerous topics related to grizzly bear biology, conservation and management.

International Association for Bear Research and Management (IBA) www.bearbiology.com

The IBA is a non-profit volunteer organization supporting bear research across the globe. Among many other things, this site contains reliable and up-to-date information about all eight species of bears.

**From quiz on page 13****Bear safety quiz answers**

1. *False.* Bears can run just as well downhill, uphill or on flat ground.
2. *True.* The sense of smell is the bears most important sense. They rely upon their sense of smell to inform them about their environment. If you are up wind from the bear your smell can be carried and the bear will pick up your scent up to 1.5 km away.
3. *False.* Finding yourself between a mother and cubs is certainly dangerous. However, mother grizzly bears are extremely protective and defensive. You are risking your life when you are anywhere close to the cubs. The danger is not your position relative to the young. The danger is when a mother perceives that you pose a threat.
4. *False.* Bears rarely stalk people. Black bear adults do sometimes attack young bears, and grizzlies occasionally attack black bears. However, by far the majority of bear-human encounters end peacefully.
5. *True.* Bears can run more than 50 km per hour and they can do it up hills, down hills or sideways! Humans can't run half as fast.
6. *False.* The sense of smell is a bear's most important and sensitive sense but a bear's hearing is also excellent. If you are down wind from a bear it may not smell you and if you are very quiet, it will not hear you. If you want to avoid surprising a bear in the bush make noise. Singing, carrying a bell on your pack, clapping or just talking can help the bear learn that you are in the area.
7. *False* (usually). If you meet a bear chances are it does not want a confrontation any more than you do, but a great deal of caution is needed. If possible, just back away slowly but do not turn your back and run, at this may provoke a chase. Climbing a tree is not entirely reliable but sometimes works. There have been stories of grizzly bears reaching high into a tree and knocking hikers to the ground. If you run into a bear, remain calm and talk in low tones. Avoid direct eye contact and back slowly away. Once you are at a safe distance, leave the area.
8. *True.* Most problem bears become accustomed to eating garbage and then become spoiled (habituated) or get used to humans and associate humans with a source of food. Studies have found that habituated bears are four times as likely to die at the hands of humans than bears who remain wild.
9. *False.* Bears can see as well as humans but their dominant sense is their sense of smell.

For more information on bears and bear safety check out: www.renres.gov.yk.ca
www.nwtwildlife.rwled.gov.nt.ca/publications/safetyinbearcountry

For your information

EE news and opportunities

Call for Proposals—Climate Change Action Fund Public Education and Outreach program (CCAF-PEO)

The call for proposals is to develop a joint initiative with the federal government that helps build Canadians' awareness of the role the private sector is playing and the efforts by Canadian business and industry to reduce greenhouse gas emissions.

Please note the closing date of March 15, 2002.

The new information can be accessed by visiting the Web page:

http://climatechange.gc.ca/english/actions/action_fund/public.shtml or by contacting the CCAF-PEO office at (819) 997-260.

Calculate the impact of your vacation....

Are you planning a family vacation or trying to prevent the chorus of "I'm bored" by lining up activities for your kids? Check out the "Guide to Climate-Friendly Activities and Vacations" at www.climatechangesolutions.com/english/individuals/tools/life-style/cool.htm.

You'll be able to compare accommodation options on the Cool Continuum and rate a select list of activities to see how eco-friendly they are.

Climate change challenge Enter the School Solutions Contest!

Do you have students who are doing great things to help address the issue of climate change? Are you looking for an engaging hands-on project for your class?

The School Solutions Contest is an action-oriented, solutions-based contest for students from grades 4 - 12/OAC. It is hosted at climatechangesolutions.com, the Pembina Institute's award-winning megasite of interactive tools, success stories and resources about climate change. The theme of the contest is "Solutions to Climate Change" and students enter on-line in one of three categories: video, poster or photo essay. Students are encouraged to help others learn about climate change by showing what they and their class, school or community are doing to help stop climate change.

The School Solutions Contest will:

- * engage students in learning about climate change and renewable energy;
 - * promote hands-on environmental education; and
 - * offer students a chance to win great prizes from Mountain Equipment Coop, Rollerblade Inc, Owl Magazine and YTV.
- Don't miss out! Contest closes May 7, 2002.**

For all the contest details visit www.climatechangesolutions.com/english/schools/contest Email schools@pembina.org with your questions or comments.

Explore Your World Biodiversity Month (US-based)

"Explore Your World! Biodiversity Month" is a time to celebrate America's rich diversity of life through educational activities and scientific exploration. You can involve your students in "Explore Your World! Biodiversity Month" by organizing an activity to explore biodiversity for May 2002. Simply by registering your event with "Biodiversity Month" you can link your effort to those of others and contribute to a broader understanding of biodiversity. The "Biodiversity Month" web site offers suggestions, resources to help you plan an event and teach about biodiversity, and forms to register with "Biodiversity Month" and report your results in May. "Biodiversity Month" is part of the International Biodiversity Observation Year (IBOY) 2001-2002.

www.nrel.colostate.edu/iboy/biomonth/



...more resources and opportunities

My Community, Our Earth: National Geographic (US-based)

"My Community, Our Earth" is a project developed by The National Geographic Society, The Association of American Geographers, ESRI, and the United Nations Environment Programme that invites students to use the tools of geography to examine how their communities can be made healthier and more livable, and how they can exist in greater harmony with the natural world.

Participants will receive a resource kit, which contains software, maps, and educational materials about geography, GIS technology, and sustainable development. Project submission deadline: May 31st. A selection of the projects will be featured on the MyCOE website and will be displayed at numerous venues, including the World Summit on Sustainable Development in Johannesburg, South Africa in August 2002.

www.geography.com/sustainable/index.html

NA Association for EE website revamped

NAAEE's web site has been updated, reorganized, and improved! Features include new graphics, a special section for Affiliate members, and an on-line store with select NAAEE publications and birding products from HomeEarth.com. Future updates will include a member's only site, online access to the membership database, and other interactive features. www.naaee.org

Global Rivers Environmental Education Network (GREEN)

Earth Force GREEN has launched a new, interactive resource allowing users to:

- * Enter, analyze and share the watershed data they collect;
- * Access interactive maps, calendars, guides and resources;
- * Download classroom activities;
- * Keep an ongoing project log to track progress made towards solving a watershed problem;
- * Share pictures and stories of your group in action.

Local watershed organizations can partner with Earth Force GREEN to create customized web pages where they can track the progress of water monitors working with their program. Contact green@earthforce.org for more information. www.green.org/

Teacher's Corner - Make the Most of Outdoor Classroom

The Evergreen Foundation has launched Teacher's Corner, a new on-line database of lesson plans designed specifically for teaching in an outdoor classroom.

Teacher's Corner is designed to support teachers across Canada in their efforts to teach daily lessons on their school grounds.

Teacher's Corner can be found at: www.evergreen.ca/en/lg/lg-teach.html

Canadian EE Conference August 11-14, Montreal, QC

Remember last year's big EE conference in Whitehorse, "Telling Our Stories"? The Canadian Network for Environmental Education (or EECOM) is holding its annual conference in Montreal this year. The conference theme is "Community and EE"...

For more info, see the EECOM web site at: www.eecom.org.

Pennies for the Planet

World Wildlife Fund's 2001-2002 Pennies for the Planet program targets three outstanding places from the Global 200 - the Galápagos Islands, the Terai Arc, and the Klamath-Siskiyou Coniferous Forests. The program teaches students about what biodiversity is, why it's so important, and international efforts to protect it. Activities and support materials are available from the Pennies for the Planet web site. www.worldwildlife.org/windows/pennies/

Yukon On-Line Guide to Environmental Education

Just a reminder of this home-grown web site outlining what EE resources are available in our community. The site sponsor, the Environmental Education Society of the Yukon, would like feedback. www.taiga.net/YukonEE

April 2002

Yukon Biodiversity Awareness Month



Celebrate biodiversity this April

Over the past few years, it has been noted that a number of conservation- and environment-related events fall into the month of April. Notable amongst these are **National Wildlife Week**, the **Celebration of Swans** and **Earth Day**. What can be seen as a common thread between these events? Protection of biodiversity!

Yukon groups with an interest in these various activities have combined efforts to coordinate various events under the banner of **Yukon Biodiversity Awareness Month** (or YBAM). YBAM aims at raising awareness of local and global diversity in the Yukon. See www.taiga.net/spring.



...swans too!

Don't forget that you can be part of the festivities of the Yukon's Celebration of Swans from **April 13-21**.

Your students can participate in the **Swan Art Contest**, which closes on **April 11**. There'll be great prizes awarded. Contact Wildlife Viewing at 667-8291 or Innovators at 668-8739.

And go see the birds at Swan Haven, the interpretive center on McLintock Bay off the Alaska Highway south of Whitehorse. Swan Haven will be open during the Celebration from 5-9pm on weekdays and 12-7pm on weekends. Call 667-8291 for more information.

Summer youth programs!

Info and applications:
www.environmentyukon.gov.yk.ca

Conservation Action Team (CAT)



The CAT program offers 1-2 week camping experiences in the summer. The focus is on environmental concerns — from agriculture to wildlife.

Application info packages are available through schools, Yukon Environment offices, the main Government of Yukon Inquiry Centre desk, or by calling 667-8005.

Yukon Youth Conservation Corps (Y2C2)



Students learn and earn while working on conservation projects around the territory. Projects are proposed and overseen by groups, municipalities and First Nations.

Students apply as for any other Government of Yukon job. Application packages are available through the Public Service Commission Staffing Branch by phoning 667-5653 or 1-800-661-0408.

WILD Yukon Environment Education News!

WILD Yukon is for Yukon teachers and others interested in environment and conservation education.

We welcome your letters, suggestions, children's work, reviews of new print and A/V resources. Mail, fax or e-mail submissions to:

Conservation Education Coordinator
Conservation, Protection & Public Education
Department of Environment
Government of Yukon
Box 2703, Whitehorse, Yukon Y1A 2C6

phone (867) 667-3675
toll-free 1-800-661-0408
fax (867) 393-6206
e-mail remy.rodden@gov.yk.ca
www.environmentyukon.gov.yk.ca

Yukon
Environment