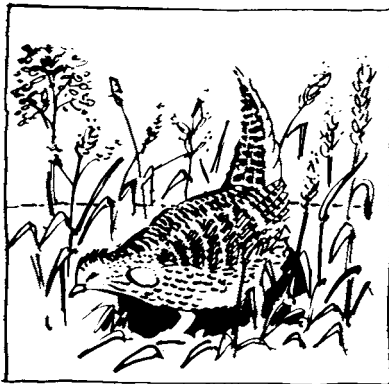

Module 5
Biodiversity:
Think Globally!

grouse & grasses



lynx & tamarack



MODULE 5. BIODIVERSITY: THINK GLOBALLY!

Learning outcomes

Activities (page)	5-4	5-6	5-8	5-9	5-12	5-15	5-17
Curriculum connections	Science	Language Arts	Science	Science	Social Studies	Social Studies	Science
	Social Studies	Fine Arts		Social Studies	Science	Science	Social Studies
					Language Arts	Fine Arts	Fine Arts
Knowledge — In these activities, students will learn more about:							
1. biomes of the world;	•			•			•
2. local consequences of threats to global biodiversity;			•	•			•
3. environmental consequences of unequal resource distribution and wealth among the nations of the world;				•	•		•
4. global strategies for preserving and restoring biodiversity;		•				•	•
5. global land use dilemmas.				•	•	•	•
Attitudes and Values — Following participation in these activities, it is hoped that students will:							
1. demonstrate a conservation ethic which values and supports biodiversity in the Yukon and throughout the world;	•	•	•	•			•
2. demonstrate awareness for the range of values and perspectives associated with maintaining biodiversity.				•	•	•	•
Skills and processes — Through these activities, students will practise their ability to:							
1. communicate and discuss issues related to global biodiversity;		•	•	•	•	•	•
2. plan, implement and evaluate a project;	•				•		•
3. take positive action to protect the natural environment of their community.		•			•	•	•

Activities legend

5-4	Biome Biography	5-12	Earth Summit!
5-6	If I Could Change Anything . . .	5-15	Our Voices!
5-8	The Long Trip South	5-17	Reach Out!
5-9	Global Trees, Global Uses		

A WORD TO THE TEACHER

The universe, with its 100 billion galaxies, is so large that its size is incomprehensible. By comparison, the Earth is an insignificant speck and therefore, in astronomers' terms, the sun and its nearby planets are part of our backyard. *Biodiversity: Think Globally!* takes your students on a journey through the *biomes* of Earth. Explore how human actions on one part of the Earth create consequences for another part. Create awareness and concern for the diminishing biodiversity of the planet and highlight collective world efforts to preserve biodiversity such as the 1992 Earth Summit in Rio de Janeiro, Brazil.

Focus on student experience

1. Create a World Watch bulletin board. Display newspaper and magazine articles related to environmental issues and concerns from around the world. Use the bulletin board to generate ideas for research topics and special projects.
2. Explore students' family backgrounds, and complete an Earth mural. Illustrate the natural world of each area of origin represented by the students in the class. Plants, animals and natural features could be included. This project could spin off into further research on the various biomes.
3. Make a collection of labels from products made from plants or animals. Students could each bring 6 or 7 from home. These products may be found in the kitchen, bathroom, barn, basement or garage. Categorize them in a variety of different ways: uses, origins, costs, etc.



create an Earth mural



BACKGROUND

“When you look out towards the stars you realize it’s an awful long way to the next watering hole.”

Loren Acton

The Earth is the third planet from the sun—a blue planet in an apparently deserted and lifeless family of seven other planets. It is the challenge and responsibility of each one of us to help preserve and restore the health of this marvellous oasis in the universe.

We can begin with a greater understanding of the ecosystems of the Earth. Scientists divide the Earth into six major land and three major water biomes. Each *biome* has a different climate and distinctive plants and animals. Imagine you are a space traveller visiting Earth for one day. Your itinerary reads:

Explore the planet Earth in one day and visit the six major land biomes.

Start your flight over the North Pole and the Arctic Ocean. The climate here in the *tundra* biome is very cold and dry.

Next fly over the three forest biomes: first, still in the north, over the great evergreen or *coniferous* forests; further south, where it’s warmer and wetter, over the *deciduous* forests and then, near the equator, over the *tropical rainforests*.

Representing only 7% of the planet’s land surface, these tropical forests are home to more than half of all species on earth. A constant high temperature and rainfall provide ideal conditions for plant growth. You fly over a canopy of huge trees growing so thick you won’t be able to see down through them. There is life at every level of the forest canopy.

Now fly over the *grasslands* of Africa, America and Central Asia. Because of a long season without rain, there are few trees in the grasslands, but they support huge populations of large grass-eating mammals.

Now fly north of the grasslands to north Africa and the apparent emptiness of the *deserts*. Africa has the largest deserts on Earth, but there are desert biomes on all of the continents. In these areas there is little



or no rainfall and plants and animals have developed special ways of surviving their harsh habitat.

As night falls on the desert you finish your visit to Earth. You'll have to come back to explore the largest group of biomes on Earth—the *water biomes: saltwater seas and river estuaries, freshwater rivers, lakes and marshes*. But you'll need to bring your submarine and your underwater diving gear for that exploration.

The Challenge of Preserving the Biodiversity of Earth

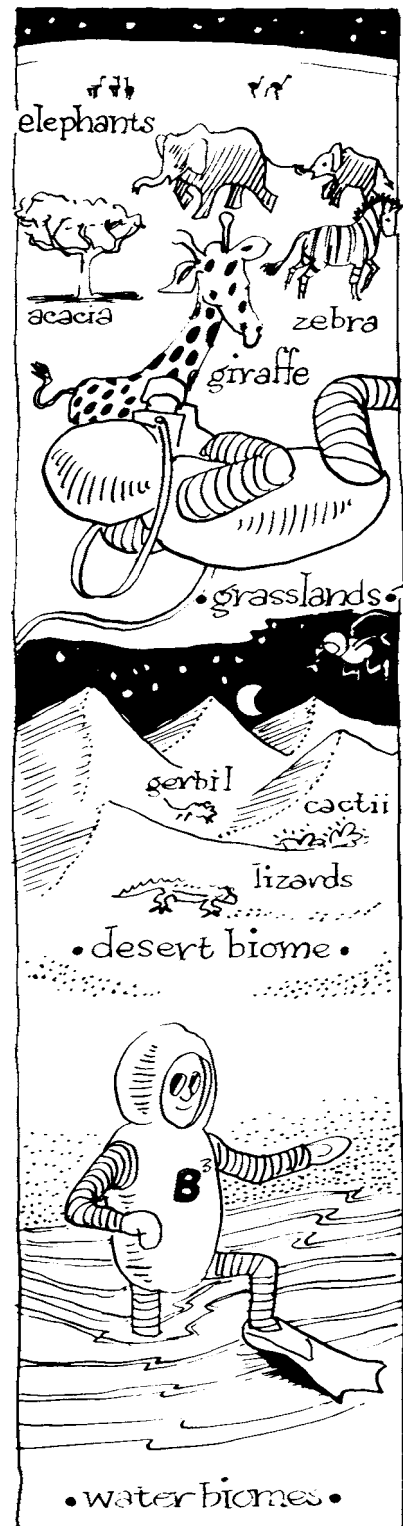
The urgency for action to preserve biodiversity is well publicized in the media. There are, however, many reasons why it is sometimes difficult to take action. One of the most important reasons is that the majority of the world's plants and animals live in the rainforests of lesser-developed countries. The demand for products made from those plants and animals comes from more-developed countries. High demand on the part of those of us who live in richer countries fuels the destruction of important ecosystems in other countries. Careless use of the Earth's resources like water, air and soil by all of us contributes to the problem.

Taking action

In 1992, the nations of both the northern and the southern hemispheres came together for an Earth Summit to plan action to preserve the Earth's biodiversity. Held in Rio de Janeiro, Brazil, 157 nations signed one of the Convention on Biological Diversity. Canada was one of the first industrialized nation to sign. The treaty became international law on December 29, 1993. Perhaps we have made a beginning towards protecting biodiversity on Earth.

Key points

1. Current population and human use of energy and resources threatens the biodiversity of the planet.
2. There are six major land and three major water biomes on the planet. Each has distinct and unique plants and animals.
3. A new international treaty will support efforts and programs to preserve the world's biodiversity.
4. Each of us has a responsibility to help preserve and restore the biodiversity of Earth.



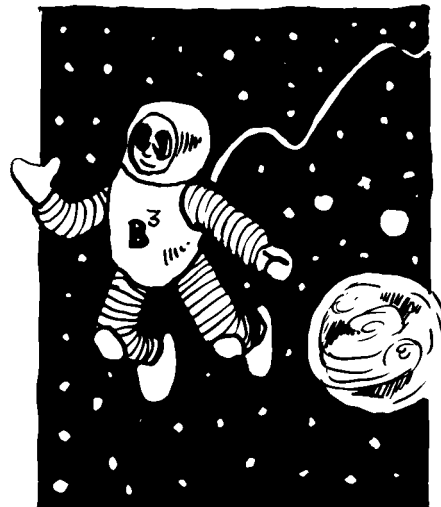
BIOME BIOGRAPHY

Aim...

To present the biomes of the Earth.

Ready...

Space station Earth has six land and three water biomes. On land these are: tundra, coniferous, deciduous and tropical forests, grasslands and deserts. The water biomes are: the saltwater seas and huge river estuaries; freshwater rivers; and lakes and marshes. Each biome has its own climate and different plants and animals. Become a geographer and explore one of these biomes.

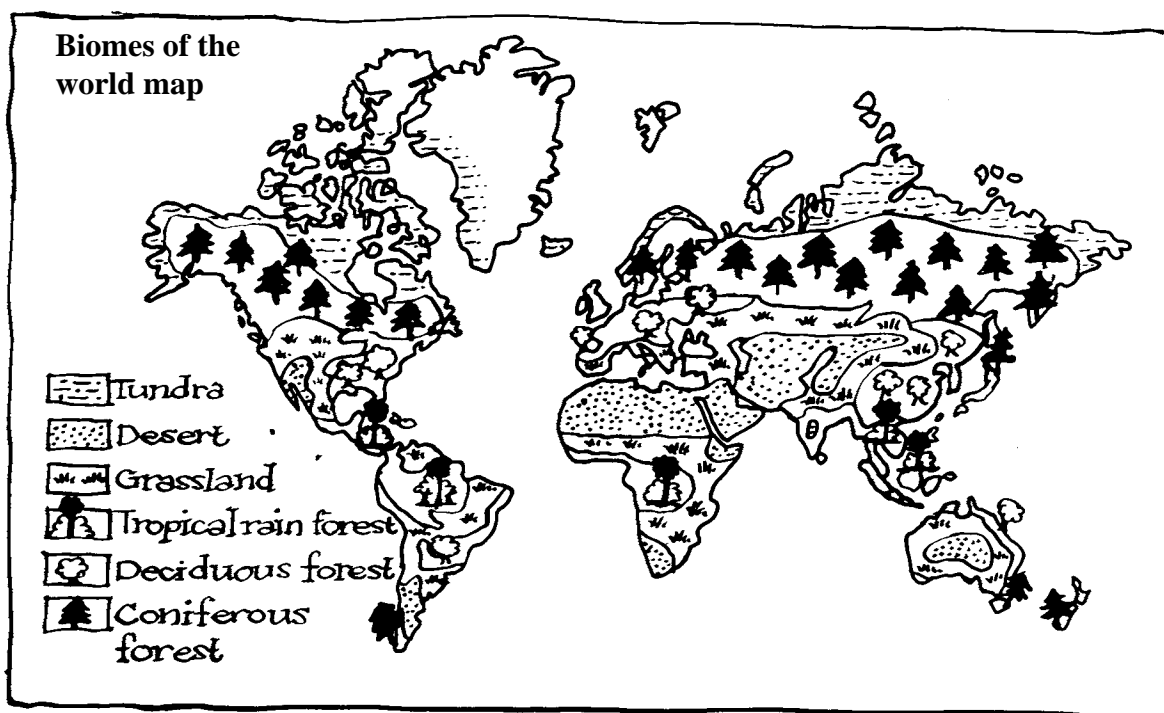


Set...

1. On a map of the world supplied by your teacher, write the names of the continents and oceans.
2. Refer to the map of the biomes of Earth below. Note the locations on Earth of a biome you would like to research. Shade in the location of your biome on one continent.

Go!

1. Get together with 3 or 4 other people who have chosen the same biome as you.
2. Work together to get as much information about your biome from your textbooks and library sources as possible.
3. Record your information on the worksheet which follows called *My Biome Biography*.



My Biome Biography: Worksheet



Name of BIOME _____ Continent _____

Location of my BIOME _____

Climate in my BIOME _____

Special plants of my BIOME

Special animals of my BIOME

_____	_____
_____	_____
_____	_____

The people of my BIOME

1. What type of people are native to my BIOME? Who else lives there now?
2. What do most people in my BIOME eat?
3. What do most people in my BIOME wear?
4. How do the people in my BIOME make a living?



Special characteristics of my BIOME

IF I COULD CHANGE ANYTHING...

Aim...

To help you create a positive picture of the Earth where protecting biodiversity is a priority.

Ready...

There are many changes taking place in the biodiversity of Earth. Some of these changes may be taking place in your own backyard. Visualize a world where such changes are creating a better world—the Earth of your hopes and dreams.

Set...

Sit in groups of four around a large table or group of desks. Close your eyes and relax. Have a teacher guide you through this exercise. As you relax, use your imagination.

Note: Use nature sounds or special music tapes as background.



Imagine yourself in some place that you know well. Notice the things about you, notice the things you like and the things you dislike. Think of some other place where you really enjoy being, at home, at school, on the beach or on the top of a mountain, or wherever. Somewhere you enjoy being. Think of a town or a city that you know, its traffic, its buildings, shops, factories, factory chimneys, and just for a minute or two, explore in your imagination different places around the country, around the world...

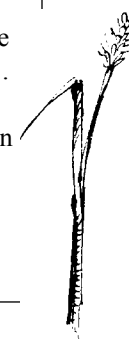
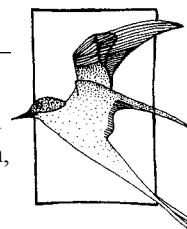
Now, imagine yourself leaving the surface of the earth...perhaps taking off in an aircraft, or on a cloud...or in some other way, away from the surface of the earth, seeing more and more of it, seeing the roads, the cars, the towns, the villages, seeing the fields becoming smaller and smaller. . . In your imagination you continue to leave the earth until you can no longer distinguish the details. You can see the oceans, the clouds, the land, and all the colours of the land, and you continue, in your imagination, to move away from the earth until you begin to see the world as a large sphere, filling the whole of your vision... the continents...the oceans. As you continue to move away from it, the world, the sphere becomes smaller, and you begin to see it as that rather beautiful blue and green, brown and white globe that we've become familiar with...that the

astronauts have so often seen...our planet earth as we view it from space. Just enjoy seeing, and being aware of that beautiful blue, green, brown, and white planet...our home...

And now, in your imagination, begin to return slowly to the planet...watch it become larger.... You begin to see more detail again...outlines of the continents, and the islands, and as you come nearer, you begin to realize that, somehow, it has changed...it's not quite the same...it looks the same, but you sense it isn't. And as you come nearer still, you can see more of the details...the mountains...the hills...the deserts...the forests... the towns and the cities... You realize how it has changed. It has become, somehow or other, the planet of your hopes, of your imagination... the sort of world you would always have liked to live in, for yourself. The sort of earth that you would always hope that your children and your grandchildren would be able to live in.

And so you return to some place that's familiar yet different...on the surface of the earth. Notice how it's different...notice how it has changed.... Begin to explore this planet earth... Visit some of the places that you visited in your imagination before you left...Notice how they are different and how they have changed.

Based on an idea from Guy Dauncey



GO!

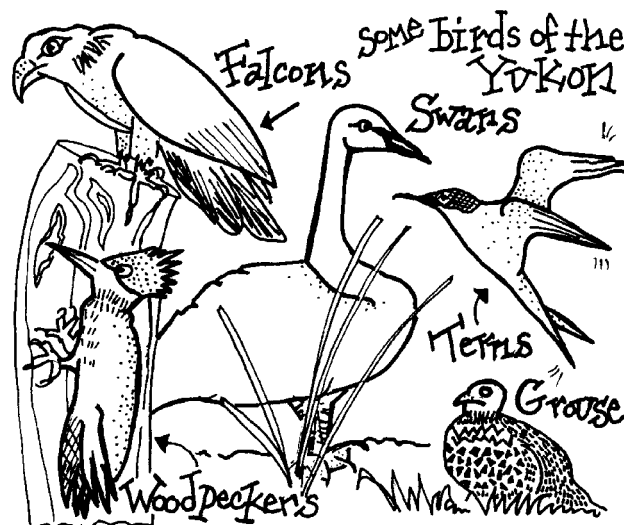
1. Take a sheet of paper and some pastels and draw this earth of your hopes and your dreams. Try this on your own. Now, take turns explaining to the rest of the group what your drawing means to you. Describe some of the things you imagined during the visualization. While doing this, it is important not to judge or criticize another person's drawing, but instead to ask questions like "What does that mean?" and "Can you explain this to me?"



paint the world of your hopes

Follow-up

1. A being from another planet has just arrived on planet Earth and you are the first human it meets. It is friendly and intelligent but it doesn't understand your language. Draw a map or a picture of the planet to show some of the things you love about your world. Write or tape an explanation of your drawing.
2. Many people are concerned that the world is losing its wilderness areas because humans want or need more places to be used for housing, mining, hydroelectricity, timber, sport or tourism. Discuss reasons you would give to someone else for protecting and restoring wilderness areas.



THE LONG TRIP SOUTH

Aim...

To emphasize the relationship between global biodiversity and the preservation of migratory bird species.

Ready...

Global habitat diversity is vital for many species of migratory birds. A bird or other animal is migratory if it travels from one place to another with the changing seasons.

Swans, geese, ducks, bluebirds, and Arctic terns are among the beautiful types of birds which we can see in the Yukon during the spring and summer. After breeding and raising their young in different parts of the territory, these birds migrate south to spend time living in warmer climates.

Set...

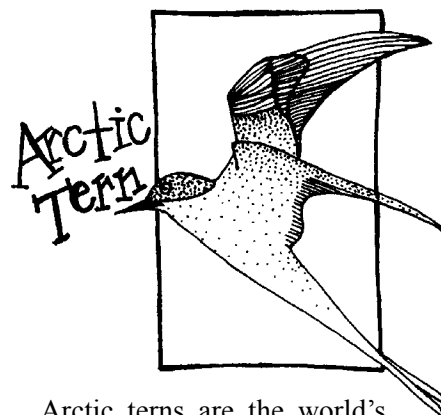
1. Brainstorm the names of as many different birds as you can. Include names of birds you know about but have never seen.
2. Write these names into your notebook.

GO!

1. Use a field guide* to find out which of the birds on your list are resident to the Yukon and which are migratory. Include information about what each bird eats and where it lives in summer and in winter.
2. Draw their migration routes on a world map. Draw your own map or use an outline map.
3. Are there any birds on your list which are threatened or endangered? Refer to the Yukon section of the Canadian "Wild Species" website. How might this be occurring?

Follow-up

1. Go for a walk or sit under a tree. Listen and look for the species of birds that live in and travel through your area. With a tape recorder, record any birds' songs you hear and note whether or not you recognize them. Refer to cassette recordings of Nature Sounds.
2. Make sketches of the birds you see. In your sketches, be sure to include as much information about the birds as you can, such as their sizes, shapes, colours and anything else you find interesting. Note whether a bird spends most of its time on the ground, in the bushes or high up in the tree tops. Note what it is doing.
3. After you have spent some time observing birds in the field, find out more about them. Did you happen to see any migratory bird species?



Arctic terns are the world's long distance champions! They breed in the Arctic and sub-Arctic regions of the northern hemisphere and then winter in the oceans of the southern hemisphere, as far south as Antarctica

Information taken from "Walk on the Wild Side"

* e.g. National Geographic Society, Field Guide to the Birds of North America, 1992 or Peterson, R.T, Western Birds, Peterson Field Guides, 1990

GLOBAL TREES, GLOBAL USES

*Adapted from Lyle, undated

Aim...

To make connections between products we use and biodiversity in the rest of the world.

Ready...

Do you enjoy eating bananas, riding your bike, playing with balloons, drinking hot chocolate? All these items involve products gathered from trees. Let's look at some of the trees that grow in different parts of the world and how people use the bark, wood, fruit, leaves and sap of these trees for a number of purposes and products.

Set...

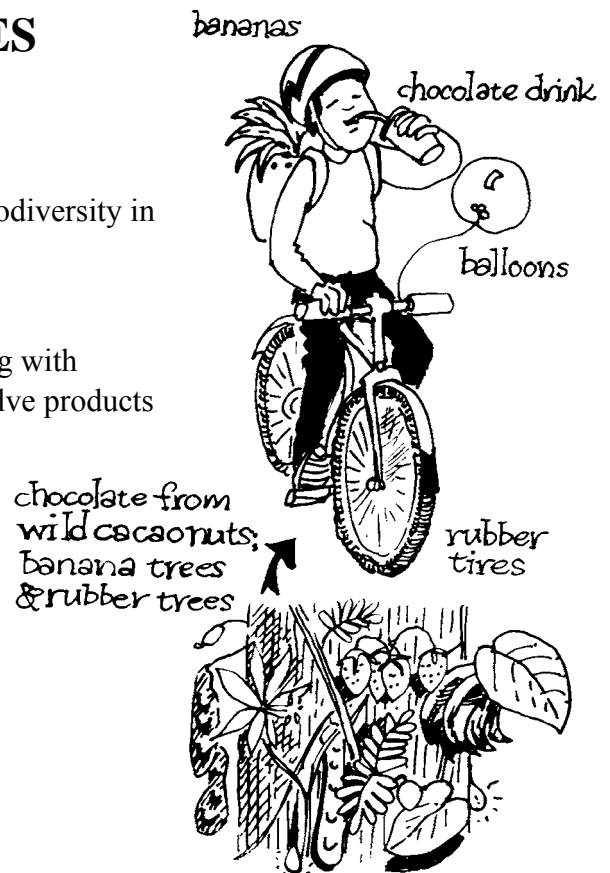
1. In small groups or as a class, brainstorm as many uses for trees as you can.
2. Working with a partner, you will need:
 - your Tree Products Chart (page 5-10)
 - a list of Trees and Their Uses (page 5-11)

GO!

1. Complete your *Tree Products Chart* by transferring information from the *Trees and Their Uses* list.
2. Using the list you brainstormed as a group, choose one or two tree species which interest you. Try to pick a species which grows in your neighbourhood. Find out more about this tree and add this information to your *Tree Products Chart*.
3. Present the information on your tree to the rest of the class.
4. Look for a product or use of your tree. Bring this to your presentation.

Follow-up

1. Go on a walk to see, smell and touch the trees that live in your neighbourhood.
2. Visit a local botanical garden to experience a tropical rainforest. Take along your *Tree Products Chart* and identify as many of the trees on your list as you can.
3. Try to find evidence of tree "products" and uses in your home and at the local grocery store. Research what part of the tree is used and where it comes from.
4. In small groups discuss the following questions: What choices can we make to protect the biodiversity of trees, and all of the organisms that depend on trees, in our neighbourhoods? What can we do to protect the biodiversity of trees around the world?



Trees and their uses

Note regarding scientific names: Since scientists from around the world speak a number of different languages, they have devised a naming system. All living things have been given a two-part scientific name which is used everywhere in the world. The first word is the genus; the second is the species.

Cork Oak (*Quercus suber*)

An evergreen native to the Mediterranean and the Atlantic coast of Africa. The thick, deeply textured bark is stripped every 9-10 years to produce the traditional cork, widely used for stoppers, insulation, table mats, etc.

Betel Palm (*Areca catechu*)

An evergreen palm, native to South West India, South Asia, Indonesia and Polynesia. Seeds from this tree are widely chewed by Asian peoples as a mild stimulant. The seeds also yield a red dye.

White Spruce (*Picea glauca*)

An evergreen native to North America. This fast-growing tree is harvested to supply pulp wood for the paper industry. The First Nations people made tea of the young buds for a good source of vitamin C against scurvy.

Teak (*Tectona grandis*)

An evergreen native to India and Indonesia. The wood of this tree is known for its durability, density and hardness. It is widely used for making furniture and veneers.

Olive (*Olea europaea*)

An evergreen tree from the Mediterranean region. The fleshy fruits of this tree are eaten and are also pressed to produce olive oil used in cooking.

Nutmeg (*Myristica fragrans*)

An evergreen tree originally from the Moluccas, also grown in the West Indies. This tree yields a fruit from which both mace and nutmeg are derived. The former is used in

cooking and perfume, the latter to flavour food and drinks.

Sweet Gum (*Liquidambar styraciflua*)

A deciduous tree native to northwest America. Both the wood and the leaves are fragrant smelling. The bark is stripped, then boiled and pressed to yield an oil called storax, used in the preparation of perfumes.

Mate (*Ilex paraguayensis*)

Pronounced ma-tay. An evergreen native to Paraguay but grown throughout tropical South America. The dried leaves of this plant are roasted and crushed to make a tea-like drink which is consumed throughout South America.

Yew (*Taxus brevifolia*)

A small evergreen tree native to B.C. and northwest America. The bark of this species is the source of the drug taxol, used to treat ovarian and breast cancers.

Adapted from Lyle, undated.



EARTH SUMMIT!

Adapted from Lyle, S., A. Jenkins and S. Roberts. Undated. Forest Matters, Global Concerns and Environmental Perspectives. Carmarthen: Greenlight Publishers

Aim...

To create awareness of conflicting points of view about the importance of preserving biodiversity.

Ready...

In 1992, people from all over the world gathered together in Rio de Janeiro, Brazil, to talk about the future of the Earth's environment. At this Earth Summit, a special treaty was signed called The Convention on Biological Diversity. Canada was one of the first industrial nation to sign the treaty. It came into effect on December 29, 1993.

This treaty is a legally binding agreement that provides a framework for the conservation of the biological diversity of the planet and the sustainable use of biological resources.

One of the challenges of preserving biodiversity among the countries of the world will be to resolve conflicts about land use.

Set...

1. With a partner, read the statements on p. 5-14 which may have been made by various people who gathered in the Earth Summit.
2. Discuss who might have made these statements.
3. Now match each of the statements to one of the people listed below.
 - a timber merchant
 - a small farmer
 - an environmentalist
 - a rubber tapper
 - a meat marketer
 - a government official
 - a spokesperson for the Kaipo Indians
 - an engineer in charge of building a dam
 - a business person

Each of these individuals makes a legitimate point about the important use of the resources of Brazil. The same types of conflicts occur in our communities about the use of land, and about the preservation of biodiversity.

GO!

Research a land issue conflict in your community or in the territory. Get to know the various points of view first. Then prepare a set of role cards and conduct a simulation of a public meeting where students play the roles of the various important points of view in the conflict.



Follow-up

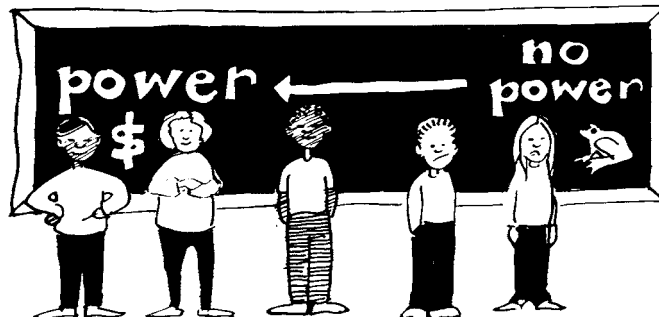
1. Imagine you are a journalist who attended your public meeting. Prepare a report for your local newspaper. How would the reports differ if they appeared in different magazines or newspapers?
2. Choose one country from the list below. Each of these countries signed the Convention on Biological Diversity. Research the natural resources, parks, significant plants and animals and demographics of your country. At a model United Nations (UN) General Assembly, decide how your country would respond to the following commitments stated in the Convention:
 - to conserve biodiversity in natural settings, by establishing, managing and maintaining a system of parks and protected areas;
 - to promote the conservation of endangered species and their habitats;
 - to protect traditional indigenous knowledge about the use of the Earth’s animals and plants and to encourage the sharing of the economic benefits that might arise from using such traditional knowledge;
 - to maintain facilities such as zoos, gene banks and seed banks to conserve the genetic diversity of animal and plant life;
 - to encourage economic, social and educational incentives to promote biodiversity;

Over 188 countries have ratified the Biological Diversity Treaty of December 1993. The ones listed below were the earliest signers.

Antigua and Barbuda	Cook Islands	Mexico	Philippines
Armenia	Czech Republic	Monaco	Saint Kitts and Nevis
Australia	Ecuador	Mongolia	Saint Lucia
Bahamas	Fiji	Nauru	Seychelles
Belarus	Guinea	Nepal	Tunisia
Barbados	Japan	New Zealand	Uganda
Burkina Faso	Maldives	Norway	Uruguay
Canada	Marshall Islands	Papua New Guinea	Vanuatu
China	Mauritius	Peru	Zambia

For a complete list check the Internet, <http://www.biodiv.org/world/parties.asp>

Activity idea: While still in your role play organise yourselves according to who has the most power and who has the least with regards to the future of the rainforest.



Statement cards (to cut out)

A lot of our trade these days is in tropical hard-woods—most of which comes from Amazonia. These woods, like mahogany and teak, are used to make a variety of things. The demand for doors and windows these days is enormous. How can you stop this ever increasing demand? You can't. We have to meet the needs of our customers, and items like fitted kitchens which used to be luxuries for the rich are now available to all.



I used to have a small plot of land in the north where I grew enough food to feed my family and some to sell so I could buy other things. Then a large company came and took over my land to grow sugarcane to make alcohol, a fuel for cars. I was forced to move to the city and live in the shanty town with no hope of a job. I have come to the rainforest because here my wife and I can start to farm again and make a new life for our family.

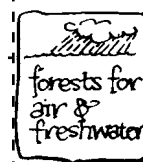


We are building four major dams in Amazonia. This will provide hydroelectricity for the smelting of bauxite to make aluminum, and will also provide electricity for the growing cities of Brazil. What else can we do? Brazil has no oil, but we have rainforests with valuable minerals and wood. How can we leave it alone? The environmentalists say "Don't touch it," but that's impossible. A modern society cannot survive without energy.



The tropical forests are rich in plants and animals. More than half the world's species live in them. Every day another animal or species of plant becomes extinct. The forests are also places of great beauty whose fragile ecosystems have taken thousands of years to evolve. We depend on them for our climate, our medicines, our foods. We must put pressure on all governments to stop the destruction of the rainforests before it's too late.

We buy beef from the ranchers of third world countries, giving them the opportunity to trade with us and earn foreign exchange.



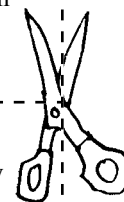
We have lived in the rainforests of Amazonia for hundreds of years. We tap the native rubber trees for latex rubber and sell it. The forest is safe with us. We don't take more than the forest can give. The white men are coming here and chopping down the forest, and if they carry on there will be no rubber trees to tap. We can't let them do it. We shall fight to save our way of life and the forest itself.

It's all very well for people from European countries to criticise Brazil for developing Amazonia; they can afford to be idealistic, they are rich. Brazil is a country that is deeply in debt. Realistically, all we can do to pay the interest on our loans is to use our natural resources to develop economically and raise the standards of living of our growing population.

Amazonia is rich in minerals, timber, and the potential for hydroelectricity. Amazonia is a growing project - this is progress. In the near future the roads will be completed, the mining will be fully developed, the energy resources will be available to industry, and this will earn millions for Brazil. Industry is progress and it must continue and expand for the good of Brazil.

I have to defend myself and all the rainforest people. We are the true Brazilians; we have lived in harmony with the forest for over 20,000 years. We are the only ones who know how to look after the forest. The white man is crazy; he is destroying the forest for short-term profit. What will his grandchildren do when the land has turned to dust?

Amazonia is rich in minerals, timber, and the potential for hydroelectricity. Amazonia is a growing project—this is progress. In the near future the roads will be completed, the mining will be fully developed, the energy resources will be available to industry, and this will earn millions for Brazil. Industry is progress and it must continue and expand for the good of Brazil.



OUR VOICES!

Aim...

To present biodiversity through the voices of the young people of the world.

Ready...

The excerpts below present biodiversity from the point of view of the young people in the photograph who are students at Lester B. Pearson College of the Pacific in British Columbia.

Set...

Read the excerpts; then refer to the various pieces of work and projects you have previously completed as part of this biodiversity study.



spectacled bear of the Andes

The Spectacled Bear, A Lonely Survivor

My name is Juan Arango and I live in the Andes Mountains of Colombia in South America. The spectacled bear, named for the yellowish rings around its eyes, feeds mainly on fruits and palm buds and sleeps in nests built in trees out of branches and leaves. Near my home, the spectacled bear population has diminished due to excessive hunting and destruction of the forest. During the last Ice Age, this bear once lived across North and South America. It is also the closest living relative of the short-faced bear that lived in the Yukon during the Pleistocene. Today it is found in the Andes Mountains from Venezuela to Chile. My parents have told me lots of legends about the spectacled bear and I hope we can protect those remaining for the future.



Pearson College Students

Gonzalo Solis Quires, Costa Rica

Olivia McEvoy, Ireland

Lilian Ero Nosa, Nigeria

Abdel Yahara, Mali

Damali Nabagereka, Uganda

Tashi Wangyal, Bhutan

Absent: Juan Arango, Colombia

Protecting an Important Tree in Nigeria

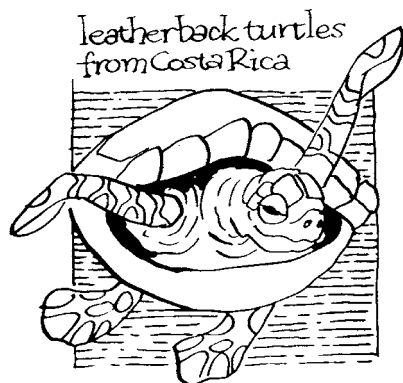
My name is Nosa Ero and I live in the country of Nigeria located on the west coast of Africa. Near my house is the great iroko tree which grows from the savannah (grasslands) to the rainforest. When my parents were young and before I was born, people of my country believed that the iroko tree was the home of spirits, witches and wizards. These beautiful deciduous trees were cut down for paper and medicinal purposes.



Today, I am proud that my country protects the iroko trees, the biggest trees found in Nigeria.

Leatherback Turtles are Protected in Costa Rica

My name is Gonzalo Solis Quires and I was born on the west coast of Costa Rica along the Pacific Ocean. During my vacations (December-February), my scout group would volunteer its services to Baula National Park to help protect the leatherback turtles.



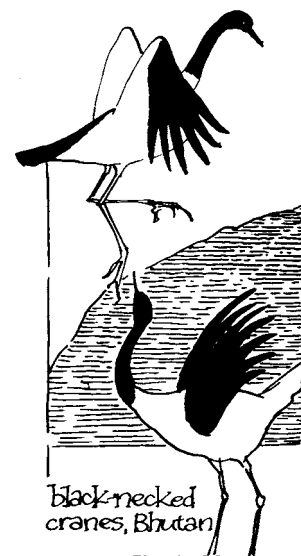
At this time of year, female leatherback turtles come ashore at night to lay their eggs along the sandy beaches of Baula National Park.

Turtle eggs are a delicacy with the local people and they come at night and try to steal the eggs to eat and sell to others. They would often use bright lights that would scare the turtles off their nests and back out to sea.

With our scout leaders, we would help protect the leatherback turtles during their nesting season. I learned about our biodiversity and the importance of protecting endangered animals in my country.

Black Necked Cranes Visit Bhutan

My name is Tashi and I live up high in the Himalayan mountains in a small mountain country called Bhutan. Every winter season, the graceful cranes come to nest and feed along the marshy streams next to the farmers' fields. In my country, the cranes are a symbol of happiness. These birds mate for life and have a very elaborate courtship dance. My government has protected these beautiful birds so they can come and visit us every year.



GO!

1. Pretend you have, or find, a pen pal in another country of the world. Write them a letter telling them about a special Yukon or Canadian initiative to protect biodiversity.
2. Prepare a Biodiversity Scrapbook on your community to exchange with another community or country.

REACH OUT!

Mostly Science

1. Create a collage of the world's biomes on top of a large outline map of the world. Use pictures you draw or cut out from magazines to illustrate typical plant and animal life in each biome.
2. Create models or mobiles representing an animal or plant in a biome of Earth.
3. Create a food web for a favourite animal from another part of the Earth. Then explore the consequences of loss of habitat for the various animals and plants on the web.
4. Build a Global Biodiversity exhibit for your school or local mall. Small groups could work on one biome and present information on: location, characteristics (plants, wildlife, climate, etc.), conservation efforts, importance of wild plants and animals to humans. Have a one-day open house to display exhibits.

Mostly Social Studies

1. Choose a nation and explore the relationships between the natural life, climate, etc. of the area and its history and/or traditions.
2. Organize a model UN to debate solutions to the destruction of various ecosystems in the world.
3. Use simulations to illustrate the effects of unequal distribution of the world's resources on humans and on biological diversity.
4. Study an industry and identify procedures and processes which minimize the impact of the industry on the biodiversity of the area.
5. Discuss the concept of 'ecological footprints.' Compare different nations footprints. Calculate your own ecological footprint with the help of the Mountain Equipment Coop ecological Footprint calculator on their website. Even better, take it home and play *Bigfoot/littlefoot* - a Yukon environmental board game designed to help you better understand the impacts of your footprints while learning about the Yukon ecoregions (contact Environment Yukon 667-3675 for more info).

Mostly Fine Arts

1. Select appropriate lyrics with biodiversity themes from popular songs by favourite groups. Use these lyrics in a poetry study.

