Green Kids Incorporated Presents

The Evergrow Enviro Show

in association with A-Channel

Teacher's Kit 2001

Terms to Know and Teach!

ACID RAIN

Emissions of sulfur and nitrogen oxides escaping from industrial smoke stacks and automobile exhaust. These emissions can be wet or dry. Dust, fog, rain and snow are forms which acid rain can take.

AIR POLLUTION

Air pollution has been proven to affect the health of all ecosystems it touches. When plants take in polluted air, their growth is slowed and they are more prone to disease. The exact same is true for humans and other animals. Children growing up in areas where the air is more heavily polluted are up to four times more likely to develop asthma and other allergies, as well as cancers and other diseases. Major causes of air pollution are the burning of fossil fuels (vehicle exhaust, industrial smoke stacks) and methane (large scale farming of large animal, i.e.. Beef).

BIODEGRADABLE

Material which can be decomposed by bacteria or other biological means.

BIOMASS ENERGY

The burning of vegetable matter instead of coal, oil, or natural gas.

BLANCHING

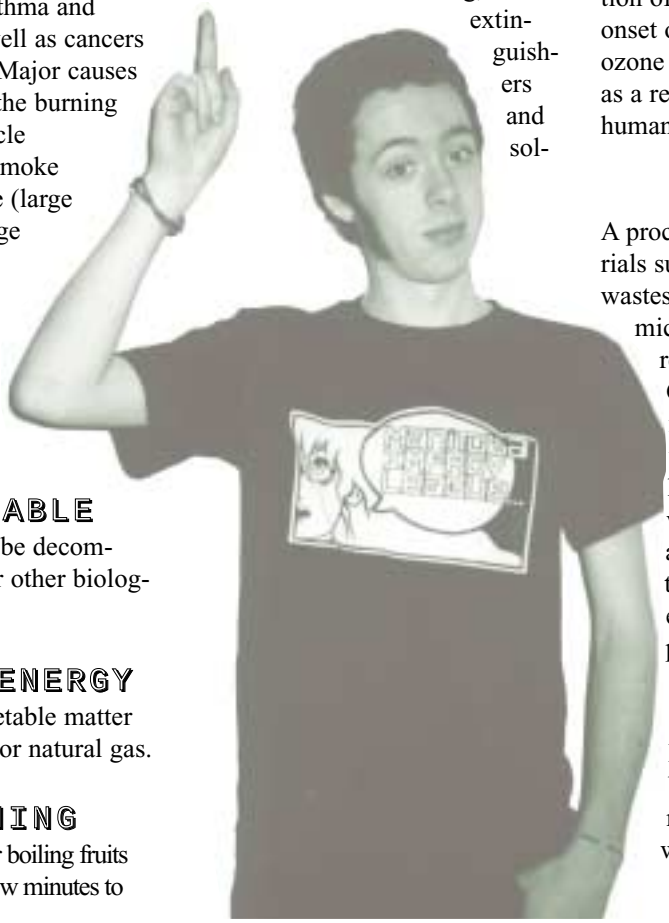
Process of steaming or boiling fruits and vegetables for a few minutes to help destroy natural enzymes which would otherwisespoil the food.

BOREAL FOREST

In Canada, our boreal forest is found in almost every province and territory, It is a part of a belt of mostly evergreen trees that circle the earth just south of the Arctic Circle. Almost half of Manitoba and Saskatchewan are classified as boreal forest.

CHLORO-FLUOROCARBONS (CFCs)

Chlorine-based compounds contributing to ozone layer depletion. CFC's can be used in aerosols as propellants, coolants in refrigerators and air-conditioning, in fire extinguishers and solvents.



CLEARCUTTING

The removal of all trees in an area, and consequent destruction of the original ecosystem and state of habittat. Clearcutting is used primarily by the pulp and paper industries and often, unfortunately, in our rainforests. It is the tree farming practice that is most harmful to the environment and often leaves the area unable to regenerate itself

CLIMATE CHANGE

Many scientists predict the earth's weather patterns to enter a warming trend for at least the next decade. Research has shown a connection between high production of greenhouse gases and the onset of our climate change. Our ozone layer is in a depleted state as a result of these and other human pollutants.

COMPOST

A process in which organic materials such as kitchen and yard wastes are broken down by microorganisms into a soil replenishing material. Compost is a strong natural fertilizer and reduces the volume of waste going to landfills. Any organic waste ranging from leaves and grass clippings to teabags to fruit and vegetable waste may be composted.

CONSERVATION

Behaviour aimed at making better use of or protecting natural resources and wildlife.

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DEFORESTATION

The process whereby trees are removed from a forested area.

ECOSPUN

The trademark name of a polyester fibre made from recycled P.E.T. (plastic pop bottles). Often made into a fleece and used for pull-over sweaters, Ecospun is also used to make canvas- based clothing like backpacks and caps.

ECO FIBRE

Waste cotton from regular cotton fabric manufacturing is recovered and used for Eco Fibre.

ENVIRONMENT

Interrelationships among different elements influencing the life of an individual or a population.

FOOD ADDITIVES

Substances added to food which enhance or preserve it and which generally have no nutritive value themselves.

GREENHOUSE EFFECT

The trapping of heat in the earth's lower atmosphere caused by an increase in gas concentration. Carbon dioxide is a gas which can contribute to the greenhouse effect and potentially cause global climate change.

HABITAT

The environment which creates a home, characterized by food, water, shelter and space.

HAZARDOUS WASTE

Materials posing an immediate, severe threat to the environment, humans, wildlife, water, air, etc.

HEMP

A plant which can thrive in almost any climate, hemp grows quickly and yields crops 4 times more economical in the space and time they require then wheat or tree crops. Hemp contains its own natural herbicides and pesticides, and is almost always grown organically. As the second strongest natural fibre on earth, materials such as clothing, paper, building materials, textiles and even plastics made from hemp are guaranteed to last. Extremely nutritional and anticarcinogenic oils, seeds and nuts can be extracted from the hemp plant. The most promising use of hemp to date may be its potential as a source of biomass energy and in the production of paper!

HERBICIDES

Are (usually) used to kill plants such as weeds that interfere with the main plant being gardened or farmed. Research indicates that using herbicides for a prolonged period of time can do long term damage to the soil, eventually making it difficult to grow almost any plant, including the one initially protected by the herbicide.

HYDRO POWER

Energy harnessed from moving water. Aside from local habitat damage caused as hydro dams are built and the pollution caused in the manufacturing and transportation of the materials used in building them. Hydro power is renewable.

INCINERATION

Waste disposal process through which combustible wastes are burned and transformed into ash and gases.

LANDFILLING

Process by which wastes are disposed of under controlled conditions on land or landcover. The wastes are buried under covering materials such as earth or plastic and compacted. A province the size of Ontario loses over half a hectare - the size of a football field - of good land EVERY DAY to make room for garbage.

LEACHATE

Contaminated water possibly containing hazardous metals which leaks from landfill sites.

NON-BIODEGRADABLE

Materials which cannot be decomposed by bacteria or other biological means.

NON-RECYCLABLE

Materials which cannot be reprocessed for use as another product.

NON-RENEWABLE RESOURCE

Natural resource which exists in limited quantity (gold) or takes an extremely long period of time to renew itself (oil).

ORGANIC COTTON

Cotton grown without the use of any chemical pesticide, herbicides or chemical fertilizers. Traditionally grown cotton use some of the most harmful chemicals in farming to fertilize and control pests. Studies have shown these substances to have poisoned the soil, air, ground water and the people living and working near areas where cotton is farmed. Organically grown cotton is just as good or better than cotton grown in chemicals and has no harmful impact on our environment.

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ORGANIC WOOL

Wool produced without the use of chemicals in the feed, hormones or pesticides. The resultant wool is free of chemical residues and both the sheep and the humans are protected from adverse effects.

ORGANICALLY GROWN

A description put on farmed matter, from fruits and vegetables, to animals, to cotton and wheat crops which have been grown and processed, from start to finish, without the use of any chemicals or hormones.

ORGANICALLY GROWN FOOD

Food grown using natural fertilizers such as compost and manure instead of chemical fertilizer. Pesticides are replaced by natural pest control.

OZONE

A highly oxidizing gas which can be hazardous at ground levels. These ground level ozone gases are considered smog and do not aid I the reduction of Ultraviolet rays from the sun.

OZONE LAYER

Ozone gas in the upper atmosphere which protects life on earth by filtering out harmful radiation from the sun. The ozone layer is located in the stratosphere (one of the upper layer's of the earth's atmosphere).

PACKAGING

Materials used to protect products against elements which otherwise could modify their qualities. Packaging can be made of plastic, paper, steel, aluminum, glass, mixed materials, etc.

PESTICIDES

Are (usually) chemicals used to kill off small insects in areas where plant life is being gardened or farmed. Research indicates that after numerous pesticide applications a lawn is likely to be more vulnerable to pest attacks. The reason for this is that pesticides also kill earthworms, which help to keep soil healthy, and beneficial organisms that prey on harmful insects. Effective alternatives to chemical insecticides are natural insect deterrents. Of the 36 most commonly used lawn pesticides: 34 can cause cancer, 14 cause birth defects, 11 have negative reproductive effects, 21 damage the nervous system, 15 injure the liver or kidneys, and 30 are sensitizers or irritants. 12 of the 40 most commonly used agricultural pesticides are suspected carcinogens. (CPR!)

P.E.T.

Polyethylene terephthalate. Soft drink containers are made fromthis type of plastic. P.E.T. bottles can be recycled and used for products such as containers, insulation, or clothing. Contains high levels of various hormones, including estrogen, which enter the edible product and in turn the person consuming it.

PLASTICS

Made from petroleum and natural gas. Often used in food packaging, many plastics contain high levels of hormones and substances harmful to humans and other animals. These are transferred from the packaging to the food or drink and into the consumer.

POLYSTYRENE

Type of plastic foam which can be used for the fabrication of disposable food containers such as hamburger "clamshells."

RAINFORESTS

Found all around the world, our closest rainforest is in British Columbia

RECYCLABLE

Materials which can be and are being recycled to a significant degree (such as glass, paper, alminum, etc).

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RECYCLE

The reprocessing of used materials into new products. Recycle is the third of the 5 Rs because of the energy it requires and the pollution it can cause.

REDUCE

The most important of our 5 Rs. Buying, using and wasting less are the keys in achieving any sort of sustainable development. We can reduce our waste by composting and recycling, using recycled products, buying food in bulk, purchasing products with minimal packaging, and bringing your own reusable bags to the store.

RENEWABLE

Resources which can be replaced infinitely by nature or through management programs. Drinking water, trees, hydroelectric power are renewable resources if used and managed properly.

RESOURCE

Raw material and forms of energy used for the production of consumer goods.

RETURNABLE CONTAINER

Container for which a prepaid deposit is redeemed when brought back to the point of purchase or another designated location.

REUSE

Utilization of a product for the same purpose or for some other use.

SMOG

Smoke and fog combination which results in air pollution.

SOIL EROSION

Occurs naturally, but is happening in some areas so quickly that the soil is almost to damaged to use. The soil in areas that have been cleared of their native vegetation - for farming or as the result of clearcutting or crop burning - is left completely exposed to wind and moving water. Our grain, vegetable and wood farmers are now learning that practices such as building shelter belts and leaving crop residue to insulate the ground help to keep the soil, its moisture and nutrients in place.

SOLAR POWER

Energy harnessed from the sun. Aside from minimal pollution caused in the manufacturing of the materials used in making the panels which harness the energy, and attached wiring, solar poweris pollution free as well as renewable.

SOLID WASTE

All solid and semi-solid wastes, including trash, garbage, yard waste,ashes, industrial waste, swill, demolition and construction waste and household discards such as appliances, furniture and equipment.

SOLID WASTE MANAGEMENT

The control, handling and disposal of all solid waste. One goal of solid waste management is to reduce waste to a minimum.

SYNTHETIC FIBRES

Materials made from either transformed natural fibres or substances like petroleum and carbon or chemicals. Some examples are nylon, acrylic, polyester and rayon. The creation of these materials uses much more energy and produces much more pollution than more traditional natural fibres, like wool, linen, cotton and silk.

SUSTAINABLE DEVELOPMENT

Is a concept through which when achieved, humans will live and prosper in harmony with our environment. This would involve maintaining a steady balance between our environment, our economy and the health of people.

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VERMI-COMPOST

Is a compost system in which worms work with the microorganisms to break down compostables.

WATER POLLUTION

Effects the health of all organisms coming in its contact. When plants drink polluted water they often get sick and many die. Those that do live are likely to be diseased or deformed in some way. Water quality is affected by acid rain as well as agricultural chemicals used countries away. Lack of sewage treatment and other forms of improper waste disposal also add to the pollution of our water tables. People drinking or preparing food with even mildly polluted water are more likely to develop sickness and dis ease.

Kids can learn more terms by researching in the library or on the internet!

DOES YOUR SCHOOL HAVE AN ENVIRO-CLUB?

Why not encourage children at your school to start their own enviro-club. The main objectives of this club can operate on both local or global levels. Just pick a few activities that will benefit the environment. Listed below are a number of activities that can be done in your community.

Possible Activities:

Have a weekly, bi-weekly or monthly garbage cleanup. This will encourage children to stop littering and help show them how much littering occurs in their community. The pickups should be in different areas throughout the community. Following the pick ups, organize a group discussion to see what the majority of litter was. It may be beneficial to create teams during the pick ups. At the end see which team picked up the most garbage and reward them with a prize. Weigh the garbage after each pick up to give children an indication of the heights to which littering has reached and to let them know how much they have actually picked up. This activity will encourage children to stop themselves and others from littering

Make sure your school has garbage and recycling bins throughout the playground and in all classrooms.

Implement a waste free lunch system into your school. This means that children are not allowed to bring anything in their lunches that is packaged, or non-renewable. They will learn to bring re-usable lunch bags or lunch boxes, re-usable containers for both food and drink etc. (A note for parents: The use of non-packaged materials will not only be saving the environment but it also saves money).

Does your school have its own compost? Teach children about composting and build one at your school. This will allow children to show their parents how to build one at home.

Pick a global issue of significance and encourage children to write letters, or take action on it. In many cases pressure from children is even better than that of adults.

An enviro-club will also teach children to work together, as a team, toward a common, earth-friendly goal!

CARPOOLING IS FUN!

Encourage children to organize a carpool system in your community!

Have them create a posting at your local school, church, community centre, etc. They could post family schedules as well as phone numbers where parents can be reached. This will allow people to coordinate carpools throughout their communities.

Carpools save the environment and save money. By carpooling, families use less in gas as well as save money on repair costs for vehicles as they will be driving them less.

Look! It's the very first Green Kids van! And the very first Green Kids!

A Special Note to Teachers and Parents!

When waiting in the car, you should shut off the engine instead of letting it run. Leaving the car for 10 seconds uses more gas then restarting the car.

When buying your next car, think of the environment and not just appearance. Sport Utility Vehicles are most likely one of the most inefficient vehicles on the road. They require huge amounts of gas to run. Using one litre of gas can put 2.4 kg of Carbon dioxide into the air! Also ensure that your car is regularly tuned up. A well tuned car can use up to 1/3 less fuel.

Why Not Walk or Take the Bus?

Try to take the bus instead of the car whenever possible. Ride your bike or walk as much as possible. You'll be getting in shape and saving the environment too!

Special Report: Climate Change and the Greenhouse Effect

What Is The Climate?

Climate is what the weather of a place is like over a long time. Climate can change and when it does, we call it "climate change". Climate changes can be natural. Natural changes happen over a very long time (hundreds and hundreds of years).

Climate Change

The reason climate change is such a big issue now is that things people have been doing for the last 100 years have been adding up and can change the climate in a big way. These changes could happen faster and be bigger than any in the last 1000 years. Driving cars, using electricity, cutting down and burning trees and creating things in factories are all ways by which humans add to these changes.

How Warm Will It Get?

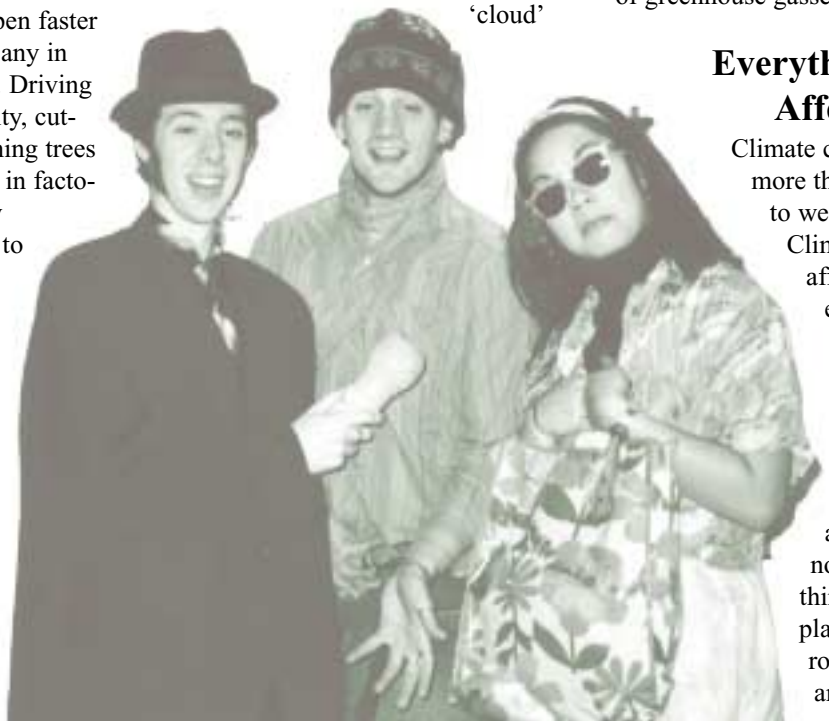
Most scientists think that the average temperature of the world will go up between 1°C and 3.5°C over the next one hundred years. For Canada, many scientists think that temperatures could go up between 5°C and 10°C. Climate change could affect EVERYONE and EVERYTHING around the world. Each home in Canada uses 7800 (KWh) of energy every year. Making this electricity causes pollution as well as contributes to the greenhouse effect. The greenhouse effect is the name given to the thinning of the earth's atmosphere, which contributes greatly to global climate change.

Atmosphere and the Greenhouse Effect

The Earth's atmosphere is made up of natural gasses that form a protective 'cloud' around the planet, which helps to regulate the Earth's overall climate. Man made 'greenhouse gas emissions' change the make up of our atmosphere - this is the greenhouse effect.

Where Do Greenhouse Gasses Come From?

Making electricity created 17% of the greenhouse gas emissions in Canada in 1995. 80% of electricity produced in Canada is created by hydro or nuclear power while the other 20% produced by burning fossil fuels that causes the greenhouse gasses. In 1995 making electricity from fossil fuels released 103 million tones of greenhouse gasses.



Everything Is Affected

Climate change is more than changes to weather. Climate change affects the environment that people, plants and animals depend on. Climate change also affects all the non-living things on our planet, like soil, rocks, oceans, and lakes.

Stop Pollution and the Greenhouse Effect At Home!

HOME LIGHTING

The type of light bulbs you use in your home can save a great deal of electricity.

Did you know that the average Canadian home uses between 35-49 light bulbs? Incandescent light bulbs are the most common types of light bulbs used in Canadian homes. Did you know that only 5-8% of the electricity used by these lights is actually turned into light? More than 95% of the electricity used by these light bulbs is turned into heat from the bulb! Fluorescent light bulbs use about 1/4 less energy and can last up to ten times longer.

Ask your parents what types of light bulbs they use. If they are not using fluorescent light bulbs, explain to them that they are wasting energy.

Outdoor lighting can also be wasteful. The use of a motion light outside instead of leaving the outdoor lights on at night can save a great deal of energy! You must always make sure to turn off the lights after leaving the room.

YOUR FRIDGE AND FREEZER

Your freezer, how can your freezer be wasteful?! By keeping your freezer full, frozen foods help keep each other cold. If your freezer is empty, a lot more energy is being used to cool it. If you don't have enough food to fill your freezer, you can put containers of water in it to fill it up.

Also, be sure that your freezer is set at -18 degrees celcius. It does not need to be any colder!

Your fridge should also be set at 2-5 degrees celcius. Also try not to leave the fridge door open, you don't need to cool your entire house!

Not everyone lives in a house and in most cases, people who live in apartments condos or townhouses pay only one bill which includes their water and hydro. This may make these people much less caring about their use of energy and water. Rememer, although you are not paying for it in dollars the more energy and water you use the more pollution you are responsible for.

Air dry your dishes instead of using the heat dry and you can save about 2 dollars every time. Be sure that the dishwasher is full before you run it. The average dishwasher uses about 33-48 litres of hot water per load. 80% of the energy is used to heat up the water. Running a half load means your heating up water for nothing. Use the light cycle on your dishwasher whenever you can. You can be saving up to 7.5 cents per load!

COOKING

When your parents are cooking in the oven ask them to pre-heat it. They can also place the food in the oven while it is heating up. If your parents are wanting to boil water, do it at the same time that the oven is on as the heat being released from the oven will help boil the water. Be sure that the lids to all their pots fit well as they will then require less energy to heat!

Cooking small amounts of food can be done in the toaster oven instead of using a large oven which will use more energy. An electric frying pan also uses much less energy than a stove top.

Use your microwave as much as possible. It uses about half the electricity of a stove top element. It costs around one dollar to run an oven for an hour while a microwave can run for 16 hours on that same 1 dollar. Use the microwave to boil your water for cups of tea, and make scrambled eggs in the microwave instead of the stove top. Cooking soups in the microwave will also save energy and money.

HOME APPLIANCES

Don’t overload your dryer. The air will not be able to reach all the

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clothing and the load will take much longer to dry. The drier is the second highest user of electricity in the home. In the summer, dry your laundry outside on a line or hang clothes indoors which do not need to be in the dryer. Be sure to clean your dryer filter before every use, the dirty filter makes the air move slower and the time it takes to dry your clothes take much longer.

If your familly is buying new appliances, make sure they are buying an appliance with an EnerGuide label. This label tells you how much energy the appliance uses per month and helps you to make a decision on buying more energy efficient appliances.

TEMPERATURE CONTROLS

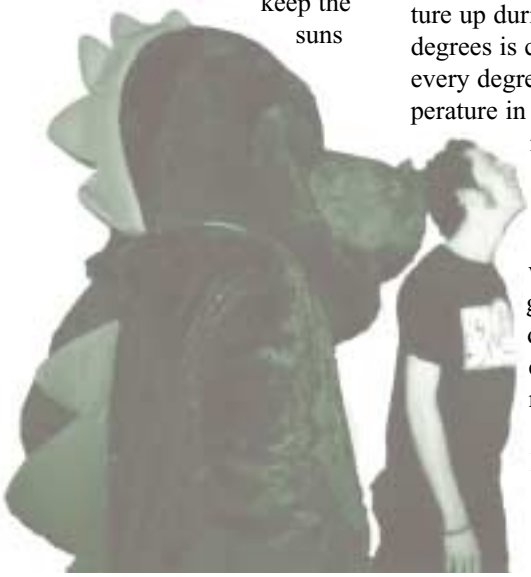
Regulating the temperature of the home uses a great deal of energy especially in Canada where we have hot summers and very cold winters. If your house is too hot in the summer, you may not need to turn up the air conditioner. You should close all your curtains and blinds, which will help keep the suns heat out. Turn off your air conditioner an hour earlier every day. It costs about

1 dollar to run the air conditioner for 3 hours. Turning it off an hour earlier every day will save you about 10 dollars a month. Make sure that when you run your air conditioner, you don't have any windows open. The way an airconditioner works is by taking the moisture out of the house, this makes you feel cooler.

Opening a window will let moisture back into the house making the air warmer. Using a fan instead of an air conditioner will save huge amounts of energy. You can run a normal fan for 104 hours using the same amount of energy as an air conditioner does in 3 hours.

Set your heat system to 20 degrees celcius in the winter. For every one degree above 20 degrees you will increase your heating cost by 5%. Turning your thermostat from 25 degreess to 20 will save you about 16 dollars a month.

Keep your thermostat temperature up during the summer. 25 degrees is comfortable and for every degree you raise the temperature in the summer you'll be reducing your cooling bill by 5%. Be sure to turn your heat down at night or when you are not going to be home and don't lower your air conditioner's setting at night.



In the winter, instead of turning up the heat, open all your blinds and curtains to allow the sun's heat to enter. If the sun can warm your house by three degrees, you'll save 15% in heating bills.

Make sure your doors and windows have proper seals. By not allowing warm air out in the winter and cold air out in the summer you can save $10-20 a year.

If you are planning on repainting your house. Use light, bright colours. These lighter coulours reflect a lot of the energy that reaches them. It will take much less energy to light up a room that is white than one that is black.

Watt Is Energy?

The energy we use is measured in units called watts or kilowatts (1000 watts). Your stereo uses 30 watts per hour, your TV uses 80 watts per hour and your VCR uses 40 watts per hour. You pay for these watts in terms of kilowatt hours which is the number of kilowatts you use in an hour. Practice saving watts and you'll be saving money! If you can save 50 Kilowatt hours, you can run your dishwasher 20 times for free. 100 kilowatt hours would let you run your laundry machine 50 times which is almost one free load every week! Turn off the TV if you're not watching it - for every 60 minutes, you will save 80 watts of electricity!

Rainforest Q & A

What is a rainforest?

A: A tropical rainforest consists of three layers of life: the canopy, the understory and the forest floor. The canopy is the treetops (160-220 feet tall!) which make up the rainforest's green ceiling. Most of the animals of the rainforest such as monkeys, birds, tree frogs and even snakes, live in the canopy. The understory is the young trees, ferns and shrubs that are under the canopy. Most plants in the understory never grow to adult size because the canopy blocks out most of the sunlight. The forest floor is the bottom layer of the rainforest. Except for rotting vegetation which nourishes the thin tropical soil, the forest floor is almost bare. Large mammals like jaguars and African gorillas live on the forest floor.

Where are tropical rainforests?

A: Tropical rainforests are located around the equator where temperatures stay near 80 degrees year round. Rainforests receive 160 to 400 inches (400-1000 cm) of rain each year. The largest rainforests are in Brazil (South America), Zaire (Africa) and Indonesia (South East Asia). Other tropical rainforests are in Hawaii and the islands of the Pacific & Caribbean.

Who are the tribal people of the rainforest?

A: They are usually called Indians or indigenous people. No one knows for sure how or when these original inhabitants of the rainforests got there. There are perhaps a thousand or more forest groups around the world - many close to extinction! In 1900, Brazil had 1,000,000 (one million) Indians. Today, there are less than 200,000. Eighty-seven tribes have disappeared in Brazil since 1900 - that's almost one tribe per year! Indigenous people live in small groups or tribes. They are either hunter-gatherers or hunter-gardeners. They build their homes from trees and palm leaves. They have their own spiritual beliefs. Rubber tappers also live in the rainforests of Brazil. They are not Indians but have learned to take rubber from rubber trees without killing the trees.

Why are the rainforests so important?

A: Rainforests help control the world's climate. In the rainforest, it rains a lot and is very hot. When it rains, the heat makes the rainwater evaporate back into the air - this means it's recycled. Rainwater in the Amazon can be recycled five to seven times. 50% of rain in some rainforests comes from evaporation. The clouds that cover the rainforests around the equator reflect the sun which keeps the rainforest from getting too hot. Rainforest canopies also absorb carbon dioxide, which is a gas in the atmosphere. When the rainforests are burned and cleared, the carbon is released. This makes the weather much hotter and is called the greenhouse effect.

Won't a rainforest grow back?

A: Not with the diversity of plants and animals. Rainforest ecosystems have been developing for hundreds of millions of years and have species that only live there.

Although housecats don't come from the rainforest, Kaiko is very concerned about the animals that do.

What happens to a rainforest when the trees are chopped down?

A: About 80% of the rainforests nutrients comes from trees and plants. That leaves 20% of the nutrients in the soil. The nutrients from the leaves that fall are instantly recycled back up into the plants and trees. When a rainforest is clear-cut, conditions change very quickly. The soil dries up in the sun. When it rains, it washes the soil away.

How You Can Help the Rainforests:

Use Less Paper

Since most paper comes from trees, using less paper can help save the rainforests. Use recycled 100% post-consumer waste (PCW) paper whenever possible. Better yet, use tree-free paper. Tree-free paper uses no trees--it is made from plants like kenaf, or from farmers' leftovers like corn stalks and wheat straw. If paper is 100% PCW or tree-free, it will say so on the package. If it doesn't say "recycled" or "tree-free" that means it most likely isn't. Ask your stationery store to carry tree-free paper! Remember to save paper by writing on both sides of the sheet, and by using half-sheets and scratch paper whenever you can. And remember to always recycle. Another way to use less paper is to use a lunch pail or canvas sack for your school lunches, and take a canvas bag to the grocery store instead of using a paper or plastic bag. Use cloth napkins at home and at school instead of paper napkins, and use cloth towels to dry your hands or wipe up spills instead of paper towels. If you must use paper napkins or towels, use only one at a time instead of grabbing a handful.

Use Less Gasoline and Plastic

Gasoline and plastic are two things that are made from petroleum, or oil. A lot of oil comes from the rainforests through a process called extraction. Since oil extraction is very harmful to the rainforests, using less oil products can help save the rainforests. Instead of using gasoline to drive somewhere in a car, ride your bike, walk, carpool, or take the bus whenever possible. Also make sure your family's car tires are inflated properly since low air in tires uses more gas than is necessary. Reduce the amount of plastic you use by choosing glass bottles and containers whenever possible and by re-using the plastic containers and bottles that you already have. If you have a plastic water bottle, do not throw it out and buy a new one. Instead, rinse it thoroughly and refill it again and again.

Eat Less Red Meat

One big reason rainforests are being destroyed is for beef. Millions of acres of rainforest are slashed and burned, which means that the land is set on fire in order to clear it. The cleared land is then turned into grass pastures for cows. These cows get butchered and are often sent to the United States to be put into fast-food hamburgers, frozen meat products, and canned pet food. For every quarter-pound fast-food hamburger that comes from the rainforest, 55 square feet of rainforest is destroyed. That is the size of a small kitchen! And that's just for one hamburger! When ordering food at restaurants, find items on the menu that do not contain beef. Ask your parents to help you create a list of healthy foods that you can eat at home that do not contain beef. When choosing pet food for your dog or cat, choose a flavor that isn't beef. By reducing the amount of beef you choose to eat, you are doing a lot to help save the

rainforests!

Fundraise for the Rainforest

Raising money to help protect rainforest land is easy and important. You can join together with kids from your classroom or neighborhood to hold a popcorn or lemonade sale, a car wash, a rainforest play, a rummage sale, or to collect aluminum cans to recycle for cash. Another way to raise money for the rainforests is to just ask 5 or 10 people you know if they will give one dollar for the rainforests. If ten of you each ask five people for one dollar, you've just raised 50 dollars!

Write a Letter

Writing letters to the presidents of companies, or corporations, that destroy the rainforest is a very powerful thing to do. Unfortunately, there are many corporations that destroy the rainforest by logging the trees, drilling for oil, or using rainforest beef in their products. See the Action Alert section of www.ran.org.com. Tell the company that you care about the people and animals that live in the rainforests.

Educate Yourself and Others

Rainforests are magical places that are important to every living thing on earth. Whether we live in the city, country, mountains, or deserts, rainforests affect all of us. Learn more about the rainforests and why they are so magical and important. Check out the RAN website to get more information, or go to your local library for books on the rainforest. Tell your friends and family what you have learned about the rainforests and encourage them to join you in helping save them.

Keep in Touch With RAN!

Sign up to receive emails from RAN about how you can join other kids in the fight to save our rainforests! Send a blank e-mail to RainforestHeroes-subscribe@topica.com.

Know Where Your Food Comes From!

What do chocolate, popcorn, cola, and salsa have in common? They are all foods whose ingredients were originally discovered in the rainforest! Many delicious foods originally came from the rainforest, including: bananas, pineapples, oranges, lemons, coconuts, cashews, peanuts, corn, rice, avocados, onions, tomatoes, eggplants, peppers, ginger, sugar, cinnamon, vanilla, cocoa, and even kola nut (which is used to flavor cola drinks). Even though we can now grow many of these foods ourselves or buy them at the grocery store, we must thank the rainforests for providing us with these foods in the first place.

Eating foods that come from the rainforest is not always good. For instance, in order to make enough orange juice for everyone, some orange juice companies destroy rainforest land to plant orange groves. One thing we can do to help save the rainforests is to drink orange juice made only from oranges that are grown in the United States. Orange juice containers will say where their oranges are grown. Oftentimes it will say that the oranges are from Brazil, which means they were grown on cleared rainforest land. If that's the case, try to find another brand of orange juice to buy.

Eating less beef is another thing we can do to help save the rainforests. Thousands of acres of rainforest are slashed and burned each year to grow grass for cattle pastures. Cows eat this grass and then get butchered and sent to the United States to be made into fast-food hamburgers. For every quarter pound fast-food hamburger that comes from the rainforest, 55 square feet of rainforest is destroyed. That's about the size of a small kitchen-and that's just for one hamburger! Choosing to eat less beef can really help save the rainforests. Make a list of healthy foods to eat instead of beef, and share it with your family and friends.
Also, look for snack foods like nuts and dried fruits that are labeled ‘sustainably harvested from the rainforest’. This means that they came from the rainforests without harming the trees, plants, animals or people that live there. Eating these foods helps the rainforest, and they're good for you too!

We all need food to survive. Making positive, rainforest-friendly choices about what we eat can help the rainforests survive as well. We all have the power to save the rainforests!

You can learn more about rainforests by going to your school library, or why not research it on the internet? Check out www.greenkids.com for all sorts of links to environmental websites!

Keep Our Water Clean!

The Chemicals in My Neighborhood - Survey and Report

Many chemicals can be harmful to our precious water supply! Many of the worst chemicals are actually in or near our own homes! It is important to recognize these chemicals and to try to reduce or eliminate their usage. Household cleaners, shampoos, lawn herbicides and pesticides have extremely negative effects on the cleanliness of water!

Report on the use of chemicals in your neighborhood. Design your own survey aimed at determining your community's use and support of potentially harmful chemicals. Some questions you may use are:

1. Does your family use chemicals to treat the lawn?

YES _____ NO _____

Did you know that the runoff from chemicals used to treat lawns can seep into nearby streams, lakes and rivers effecting many plants, animals and insects that live in water? Most lawn chemicals lower the amount of oxygen available to marine animals and can actually kill them! Is having a nice lawn worth negatively effecting our environment?

2. Does you family use chemicals like bleach or ammonia to clean your house?

YES _____ NO _____

3. Does your family use chemicals like bleach or ammonia to clean your cookware and eating utensils

YES _____ NO _____

4. Does your family use chemicals like bleach or ammonia to clean your clothing?

YES _____ NO _____

Vinegar is a great substitute for chemicals like ammonia. A mixture of vinegar and water can be used to clean your floors, sinks, windows, and counters instead of cleansers. It is natural and does not negatively effect the environment!

5. Does your family use Diodegradable soaps and shampoos?

YES_____ NO _____

There are many brands of shampoos that are biodegradable. These include Herbal Essentials, Pears and Tom's of Maine. These products are also not tested on animals!

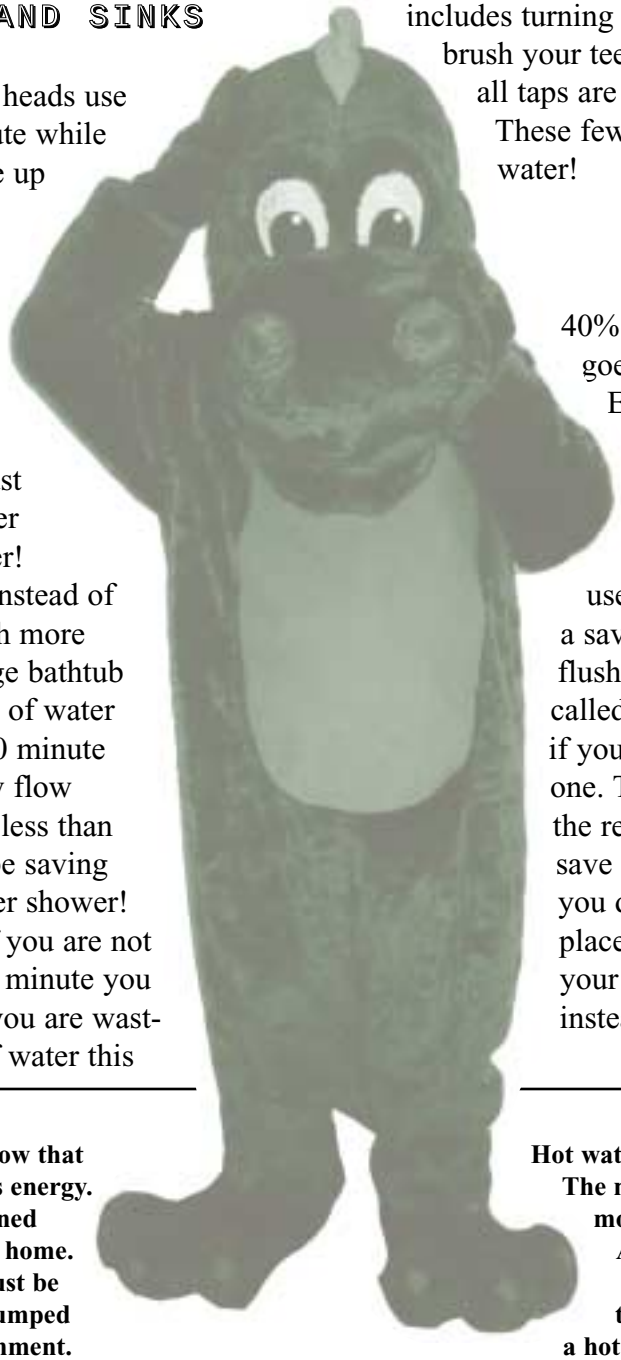
It may be necessary for children to look at the labels of their cleansers to see if ammonia is in fact present. Be sure that all children know the safety concerns associated with these chemicals prior to having them handle them. It may be recommended to have parents partake in this activity with their children.

How Can You Save Water?

Each Canadian uses about 350 litres of water every day.
75% of this water is used in the bathroom.

SHOWERS AND SINKS

Low flow shower heads use 9.5 litres per minute while older ones can use up to 20 litres. When you shower, turn off the water while you are shampooing and washing and then turn it on again to rinse off. Also, just try to take a shorter shower all together! Taking a shower instead of a bath, saves much more water. The average bathtub requires 200 litres of water to fill it while a 10 minute shower with a low flow shower head uses less than 100 litres. You'd be saving about 100 litres per shower! Turn off the tap if you are not using it, for every minute you leave the tap on, you are wasting 10-18 litres of water this includes turning off the tap while you brush your teeth. Always make sure all taps are turned off completely! These few steps will save a lot of water!



TOILETS

40% of the water we use goes down the toilet! Encourage your family to use low flow toilets and showers. Low flow toilets use only 6 litres a flush while older ones use 20 litres that would be a savings of 14 litres per flush. You can place what is called a dam in your old toilet if you don't want to buy a new one. This gadget is placed in the rear of the tank and will save almost half the water. If you don't want to buy a dam, place a brick in the back of your toilet to use up space instead of water.

It is important to know that using water also uses energy. Water has to be cleaned and pumped to your home. Once it is used, it must be cleaned again and pumped back into the environment. Therefore, the more water you use the more energy you are wasting.

Hot water uses energy to heat it. The more hot water you use the more energy you are wasting. Always have a full load when doing laundry and try to use a cold wash instead of a hot one. Why waste money heating up the water.

We Need Trees!

Trees are extremely important for the reduction of carbon dioxide in our environment. Trees actually "breathe" in carbon dioxide and "breathe out" oxygen. Trees also hold soil together reducing erosion and filter many harmful chemicals out of the environment. Why not organize a tree plant in your community. Find a park or two that could use some more trees and plant away. You can even plant in your schoolyard. In most communities, it is necessary to get permission from the city to do so and they may even be able to assist you in finding trees for free! One tree can absorb 4 kg of Carbon dioxide from the air.

The Green Kids circa 1997.

The 2000 Green Kids in The Adventures of Eugene Green and the Clean Machine".

You Can Save Trees

Bring your lunch to school in reusable containers instead of paper bags.

Write on both sides of your paper.

Use a cloth napkin instead of napkins.

Take a canvas bag to the grocery store instead of using plastic bags.

Use cloth towels at home to clean up spills instead of paper towels.

Use real plates and cups instead of plastic or Styrofoam.

Buy tree free paper if possible,
Ask your parents not to buy any wood products which are from old growth forests, if they don't know where the wood is coming from, they should ask.

Build your home out of something besides wood, there are numerous other materials available.

A Tree Free Cryptogram!

Write the letter in the alphabet that follows the letter below the line to learn a fun fact about the rainforest. For example, if the letter below the line is a V, then print W.

A _ _ _ _ _ _ _ _ _ A _ WASTE _ _ _ _ _ _ _ U _ _ _ _ _
- F Q H B T K S T Q - K A D B N L D R R D E T K

_ _ _ _ _ _ _ A _ _ _ A _ _ _ _ _ _ _ _ _ _!
V G D M V D L - J D O - O D Q E Q N L H S

It's Compost Time!

What is Composting?

Composting is the process of turning organic garbage back into soil. Soil, of course, is one of the Earth's greatest treasures. Any garbage that is organic, which means 'made out of things that were once alive' can be easily be turned back into rich soil.

More than half the trash that every family throws away each year is organic. In fact, every year each one of us tosses out over 500 kilograms of organic garbage. How much do you weigh? Now compare that to 500 kilograms? We're throwing out up to ten times our on weight in stuff that can be put back into the Earth!

Do You Want to Compost?

There are many easy ways to compost. For some of them, you may need the help of your teacher or parents.

Here's one that anyone can do: Make a pile of leaves and grass clippings in your backyard in your backyard. Now all you have to do is wait! In a while, it will turn into soil.

Build a special bin in backyard and be sure to put all of your organic garbage into it. Turn it over every now and then with a shovel or a rake, and it will eventually turn into soil.

Composting With Worms

Believe it or not, worms are great composters. Follow these steps and see for yourself!

Build a wooden box (you may need help with this) about two feet wide, ywo feet long and eight inches deep.

Fill the box with a moist bedding, like peat moss, leaves or shredded paper.

Buy some red worms at a local nursery or bait shop and put them in. Add two kilograms of worms for every one kilogram of food to start, they'll multiply quickly.

Put in two handfuls of soil.

You can put in household organic garbage except for meat, dairy products, bones, fatty foods and hard to digets iems like fruit pits.

Mix the organic garbage into the box and then stand back!

The worms will eat the rotting garbage and turn into soil! Some of the richest and most fertile soil around, in fact!

An Experiment in Renewable and Non-Renewable Resources

Most of the dammage that humans do to the environment is due to overusing and misusing energy resources. We do need to get some energy from somewhere - but which ways are best? This experiment will help to give you an idea.

Part A

Material s (per group of 2 - 5 people):
1 veggie dog cube per student
toothpicks
1 small candle

Method:
1) Put each veggie dog cube on a toothpick.
2) When your group's candle is lit, cook each cube for one minute or until the flame goes out.

Observation:
1) How many veggie dog cubes wer cooked by the candle?
2) How hot did they get (warm, hot, or very hot)?
3) Can the candle be used again? Why or why not?

Part B

Materials (per group of 2 - 5 people):
1 veggie dog cube per student
toothpicks
1 large magnifying glass
1 glass or metallic cooking or baking dish

Method:
1) Set cooking surface near a sunlit area.
2) Put one veggie cube on the cooking surface.
3) Focus the bright light of the sun through the magnifying glass so that there is just a spot on the veggie dog cube.
4) Cook each dog for one minute.
5) Use the toothpick to pick the veggie dog up once its cooking period is done.

Observation:
1) How many veggie dog cubes were cooked by the sun?
2) How hot were they?
3) Can the magnifying glass and the sunlight be reused? Why or why not?
4) Can you cook veggie dogs this way in you r kitchen? At night?

Conclusion

Using your observations and any other research you've done on natural resources, list the advantages and disadvatages of the candle and the sunlight as sources of heat for cooking.

EnvironmentalMeasures

Take this test and see how you measure up! Discuss the ways you might need to improve in class or with your friends. encourage them to take the test too!

Survey Says:	yes	sometimes	no
1) I use both sides of paper when I can.	10	5	0
2) I make decisions to buy less garbage.	10	5	0
3) I make decisions to produce less garbage.	10	5	0
4) I make decisions to buy less packaging.	10	5	0
5) I use water wisely and not to excess.	10	5	0
6) I use reusable dishes and cutlery.	10	5	0
7) I reuse before recycling.	10	5	0
8) I compost.	10	5	0
9) I never litter.	10	5	0
10) I recycle paper, plastic and glass.	10	5	0
11) I use tree free paper before paper made from recycled wood pulp paper.	10	5	0
12) I use recycled paper before new paper.	10	5	0
13) So long as they still work, I reuse my school supplies, like binders and pencil crayons, from year to year.	10	5	0
14) When I bring a luch to school, it is packed only in reusable containers so I do not have to throw out, or even recycle, anything when I am done.	10	5	0
15) I will think about whether I really need something before I buy it.	10	5	0
16) I reasearch ways to conserve.	10	5	0

17) I repair things instead of throwing them out.	10	5	0
18) I put things in the rcycling box that belong there.	10	5	0
19) I look at labels on containers.	10	5	0
20) I research companies that reduce, reuse and recycle.	10	5	0
21) I research things that can harm the environment.	10	5	0
22) I pick up litter on my yard or in the street.	10	5	0
23) I encourage others to rethink the 5 Rs.	10	5	0
24) I think about the things that shouldn't go down the drain or into the soil.	10	5	0
25) I help the recycling program at school.	10	5	0
26) I use the recycling box at home.	10	5	0
27) I help my family think about our environment.	10	5	0
28) I don't buy products that harm our planet.	10	5	0
29) I feed a garden with proper scraps.	10	5	0
30) I think of ways to conserve.	10	5	0
31) I refuse to buy a product with a lot of extra packaging.	10	5	0

How Did You Do?

0 - 75	76 - 155	156 - 225	226 - 310
Danger!	**Warning!**	**Caution**	**Enviro-Crusader!**

Resources

Canadian Forest Service, Manitoba Office
200 - 180 Main Street, Winnipeg, Manitoba
R3C 1A6 Tel 204-983-4817

Canadian Global Change Program
Box 9734, Ottawa, Ontario
K1S 3W3 Tel 613-798-2837

Canadian Wildlife Fedration
350 Michael Cowpland Drive
Kanata, Ontario K2M 2W1
Tel.:1-800-563-WILD
(613) 599-9594 (Ottawa Area)
Fax:(613) 599-4428

Earth Day Canada
144 Front Street, Suite 250, Toronto, Ontario
M5J 2L7 Tel 416-599-1191

EECOM: The Canadian Network for Environmental Education and Communication
c/o EcoLogic, Box 1514
Antigonish, Nova Scotia
B2G 2L8 Tel 902-863-5984

Environment Canada, Communications Branch
220-240 Graham Avenue
Winnipeg,
Manitoba
R3G 0T3
Tel 204-
984-
5952

Fort Whyte Nature Centre
Box 124, 1961 McCreary Road
Winnipeg, Manitoba
R3Y 1G5 Tel 204-989-8355

Instructional Resources Branch, Manitoba Education and Training
Box 3, Main Floor, 1181 Portage Ave,
Winnipeg, Manitoba
R3G 0T3 Tel 204-945-7830

International Institute for Sustainable Development
161 Portage Avenue East, 6th Floor
East, Winnipeg, Manitoba
R3B 0Y4 Tel 204-958-7700

Living Prairie Museum
2795 Ness Avenue
Winnipeg, Manitoba
R3J 3S4 Tel 204-832-0167

The Manitoba Eco-Network
867 Westminster Avenue
Winnipeg, Manitoba
R3G 1B1 Tel 204-772-7542

Manitoba Environment Department Library
Building 2-139 Tuxedo Boulevard
Winnipeg, Manitoba R3N 0H6 Tel 204-945-7125

Manitoba Forestry Conservation
900 Corydon Avenue
Winnipeg, Manitoba
R3M 0Y4 Tel 204-453-3182

Manitoba Hydro
System Planning and Environmental Division - Environmental Education
820 Taylor Avenue
Winnipeg, Manitoba
R3C 2P4 Tel
204-
474-4934

Manitoba Model Forest
Box 10
Pine Falls, Manitoba
R0E 1M0 Tel 204-367-5232

Manitoba Natural Resources Library
200 Salteaux Crescent
Winnipeg, Manitoba
R3J 3W3 Tel 204-945-6610

Manitoba Naturalist's Society
401-63 Albert Street
Winnipeg, Manitoba
R3B 1G4 Tel 204-943-9029

North Americamn Association for Environmental Education
Box 400, Troy, Ohio
45373 Tel 202-467-8753

Oak Hammock Marsh Interpretive Centre
1 Snow Goose Bay at Highway 20,
Box 1160
Oak Hammock Marsh, Manitoba
R0C 2Z0 Tel 204-467-3300

Resource Conversation Manitoba
330 Portage Avenue, Suite 1140
Winnipeg, Manitoba
R3C 0C4 Tel 204-925-3777

The SEED Foundation Green School Program
SEEDS Canada Foundation
10169-104 Street, Suite 440
Edmonton, Alberta
T5J 1A5 Tel 403-424-0971

Western Canada Wilderness Committee
Contact us at our new offices:
227 Abbott Street,
Vancouver, B.C., Canada
V6B 2K7 Tel 604- 683-8220
Toll Free 1-800-661-WILD

World Watch Institute
1776 Massachusetts Avenue
North West
Washington, District of Columbia
20036-1904 Tel 204-452-1999

World Wildlife Federation
90 Eglington Avenue
East, Suite 504
Toronto,
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M4P 2Z7