

TAKE ACTION

Grade Level: Intermediate

Duration: One Class Period

Location: Classroom

Key Vocabulary: Endangered, Extinct, Organism, Population, Habitat



Materials

- Chart paper and felt pens
- Students research projects for reference

Learning Outcomes

The student will be able to:

- a) Compare and contrast habitats and determine which habitats have the most serious problem,
- b) understand the importance of changes in a specific habitat, and
- c) understand the importance of being socially responsible about their environment.

Method

The students will review their collective research (assuming they've completed the other FORED endangered species activities) and use FORED-provided background materials provided to rank reasons for endangerment and possible actions for preservation.

Suggested Procedure



1. Instruct students to review their previous research and collected materials to compare and contrast various habitats and determine which habitats have the most serious problems. Chart.
2. Have students rank the reasons for endangerment from most important to least important and to predict what will happen if nothing is done to help endangered species and their habitats.
3. Encourage students to come up with possible solutions and forms of action that can be taken both as individuals and as a community. Chart.

4. Develop a plan of action that your class can take which will address the issue of endangered species and protecting biodiversity. State the Action and how it will help. Chart.
5. Summarize how changes in a habitat or loss of a habitat can affect the survival of a species and stress that everyone has a role to play in preventing this threat to our world.
6. Plan to take action on an agreed upon item from the group ACTION PLAN.



Students may also be interested in taking individual action. Have them each choose an action (ie. Write a letter to the newspaper or MLA) and follow through with completion.

SOME WAYS THAT WE CAN HELP:

- Education: Stay informed
- Public Awareness: Spread the word
- Set up displays: for students, parents, community
- Support organizations: fundraising, volunteering
- Care for the environment
- Write letters
- Get involved with other concerned students or join a club
- Invite an expert to present to your class

Evaluation

Have students summarize the action plan and give students each a role in helping to put the plan into effect.

Extension

This activity was adapted by *FORED BC* from the Royal British Columbia Endangered Species in Endangered Spaces classroom activities.

BACKGROUND INFORMATION FOLLOWS:

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Why do species become endangered?

There are **4 major reasons** why animals become endangered:

Habitat loss | Illegal hunting | Pollution | Introduced species

1. **Habitat loss**

Habitat refers to the place where animals and plants live. There are five components to a habitat: food, water, shelter, space, and an appropriate arrangement of these elements. Animals must have sufficient habitat to survive.

- Habitat loss is the number one reason that animals become endangered.
- Today, nearly every type of animal habitat is impacted by changes in land use and habitat loss.

Grasslands:

- Grasslands have been cleared for agriculture and to make room for towns and cities.

Rain forests:

Approximately 1 acre of rainforest is destroyed every second. That equals:

- 60 acres/minute (1.2 acres/football field = 50 football fields/minute)
- 3,600 acres/hour
- 86,400 acres/day
- 31,500,000 acres/year
- Rain forests are destroyed or badly damaged by logging, clearing for farming and cattle ranching, mining, dams, and oil development.

Deciduous forests:

- Thousands of acres of deciduous forests have been destroyed throughout the world.
- Deciduous forests are cleared for logging and to make room for expanding cities and towns.

Deserts:

- Deserts are not vast empty spaces. They, too, are delicate ecosystems teeming with life.
- Deserts are damaged or destroyed by overgrazing by livestock, off-road vehicles, military equipment, mining, and irrigation.

Wetlands:

- Each year between 300,000 and 500,000 acres of mangroves, salt marshes, freshwater marshes, bogs, and swamps are destroyed.
 - Wetlands are drained for agriculture, development, industry, and marinas.
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2. Illegal hunting

- Many species of animals, such as rhinos, tigers, and bears, are endangered due to illegal hunting for their body parts. Animals are poached (hunted and killed illegally) and their body parts, such as rhino horn, tiger bone, and bear gall bladder, are sold on the black market.
- Each year an estimated \$5 billion in illegal profits are generated through illegal wildlife trade. Some sources say that this black market is larger than illegal arms sales and second only to the drug black market. (Reference - "Trafficking in the Wild Kingdom." Wichita Eagle newspaper, 2/16/97)

3. Pollution

- Pollution from pesticides, burning coal, oil, and gas, industrial plants, and automobile emissions all impact wildlife populations.
- The US bald eagle, is just one example of how pollution can cause a decline in wildlife populations. Bald eagles became endangered largely due to the pesticide DDT. The pesticide, now banned in the United States, caused the eagles and many other bird species to lay thin-shelled eggs.
- Deformed frogs are being discovered around the world. Scientists have several theories to explain the malformations and declines in frog populations, including one that implicates pollution. Damage to the earth's ozone layer, caused by chemicals such as CFCs (chlorofluorocarbons), allows increased amounts of ultraviolet radiation to enter the earth's atmosphere. Scientists fear that the additional UV light could be damaging not only to frogs, but could cause problems for humans as well.

4. Introduced Species

- When non-native plants or animals are introduced to an area, they may disturb the natural balance of the ecosystem. Introduced species may over populate an area, driving out the native species and causing many other problems. They may prey on native species which have no defenses against the invader. Introduced species may also carry new diseases, for which the native species have no natural immunity.
- Animals and plants on islands seem to be particularly susceptible to destruction by introduced species. Hawaii has the greatest number of endangered species of any of the 50 states, largely due to destruction of native species by introduced species.

Endangered Species Need Your Help!

Here Are Some Ways That You Can Get Involved:

Conserve Habitats

- **One of the most important ways to help threatened plants and animals survive is to protect their habitats permanently in national parks, nature reserves or wilderness areas. There they can live without too much interference from humans. It is also important to protect habitats outside reserves such as on farms and along roadsides.**
- **You can visit a nearby national park or nature reserve. Some national parks have special guided tours and walks for kids. Talk to the rangers to find out whether there are any threatened species and how they are being protected. You and your friends might be able to help the rangers in their conservation work.**
- **When you visit a national park, make sure you obey the wildlife code: follow fire regulations; leave your pets at home; leave flowers, birds' eggs, logs and bush rocks where you find them; put your rubbish in a bin or, better still, take it home.**
- **If you have friends who live on farms, encourage them to keep patches of bush as wildlife habitats and to leave old trees standing, especially those with hollows suitable for nesting animals.**
- **Some areas have groups which look after local lands and nature reserves. They do this by removing weeds and planting local native species in their place. You could join one of these groups, or even start a new one with your parents and friends. Ask your local parks authority or council for information.**
- **By removing rubbish and weeds and replanting with natives you will allow the native bush to gradually regenerate. This will also encourage native animals to return.**

Make Space For Our Wildlife

- **Build a birdfeeder and establish a birdbath for the neighborhood birds.**
- **Plant a tree and build a birdhouse in your backyard.**
- **Start composting in your backyard garden or on your balcony. It eliminates the need for chemical fertilizers which are harmful to animals and humans, and it benefits your plants!**
- **Ask your parents not to use harmful chemicals in your garden or home.**

Recycle, Reduce, And Reuse

- **Encourage your family to take public transportation. Walk or ride bicycles rather than using the car.**
- **Save energy by turning off lights, radios and the TV when you are not using them.**
- **Turn off the tap while you brush your teeth and use water-saving devices on your**

toilet, taps and showerhead.

- **Ask your parents to buy products and food without packaging whenever possible. Take your own bag to the store. It will reduce the amount of garbage and waste your family produces.**
- **Recycle your toys, books and games by donating them to a hospital, daycare, nursery school or children's charity.**
- **Encourage your family to shop for organic fruits and vegetables.**

Plant Native Plants That Are Local To The Area

- **If you can, plant native plants instead of non-native or introduced ones in your garden. You don't want seeds from introduced plants escaping into the bush. Native grasses, flowers, shrubs and trees are more likely to attract native birds, butterflies and other insects, and maybe even some threatened species.**

Control Introduced Plants And Animals

- **Non-native plants and animals are ones that come from outside your local area.**
- **Some parks and reserves, beaches, bush-land and rivers are now infested with invasive plants, and native species often cannot compete with these plants.**
- **Many environmental weeds come from people's gardens.**
- **Sometimes, the seeds are taken into the bush by the wind or by birds.**
- **Controlling these foreign species is an important step in protecting wildlife**

Join An Organization

- **There are many community groups working on conservation activities. Join an organization in your area and start helping today!**

Make Your Voice Heard

- **State and territory government conservation agencies are responsible for the management of national parks and the protection of wildlife. They are sometimes supported by public foundations.**
- **Tell your family, friends and work mates about threatened species and how they can help them.**
- **Start a group dedicated to protecting a threatened plant or animal in your area or perhaps to help care for a national park.**
- **Write articles or letters about threatened species to newspapers.**
- **Ring up talk-back radio programs to air your concerns, or arrange to talk on your community radio station.**

What Kids Can Do To Help Protect Endangered Species And Their Habitats

Here Are Eight Ways That Kids Can Get Involved Too!

🌸 Draw Pictures - You can find out which species on the endangered species list live in your area and why they are endangered. Then draw a picture of the animal and the biggest threats to its survival. If you need a picture of the species, you can probably find one at your public library. Send the picture, along with a short letter explaining why you drew it, to your MP or MLA. Be sure and tell them how you feel about endangered species.

🌸 Write A Letter - You can write a short letter to your MP or MLA, the people who are in charge of the Species At Risk Act, the Canadian law that protects endangered species. Write in your own words how you feel about endangered species and when you think it is important to protect them. You can use information on our endangered species web pages for ideas. In your letter, you might select a species that is of particular interest to you and discuss why you feel so strongly about that species. Letters like yours help politicians know how people in the areas they represent feel about endangered species protections.

If your parents or teachers do not know the name of your MP or MLA, you can call your local library to find out.

🌸 Make Masks And Costumes - Based on a picture of an endangered species, make a mask or a costume using paper mache, paper bags, construction paper, or whatever you can find around the house or in the art room at school. You can even make it a group project or a game at a party. When you finish, maybe you and your friends can wear your costumes and march in a parade. Be sure to take photographs.

🌸 Make Puppets - Find photographs from magazines or books of endangered species. From these images, create a puppet that looks like your favourite endangered animal. You can use socks, buttons, glitter, felt, orange juice cans, small bowls, plastic and aluminum wrap, glue, thread and needle, magic markers, pipe cleaners, and other odds and ends to make your puppets. Once you have made your puppet, you can create a story explaining why the species has become endangered. Use your local library and the internet to research why the species is endangered. Using your puppet, tell your story to an audience.

🌸 Make A Storybook - Select a single, or many, endangered species that interest you. Do research in your local library and on the internet to learn more about the species. Determine where they live and why, what they eat, what eats them, who shares their home, and why they are endangered. Draw pictures to illustrate your story. Share your storybook with others.

🌸 Personal Reading - Read and learn as much about endangered species as you can. Your local library is probably the best place to begin. You could look in encyclopedias, reference books, picture books, storybooks, magazines, and even cd-roms using a computer.

🌸 Local Species Research - Research to determine if there are any endangered species in your hometown. Try to find out what other people in your community are doing for these species. Perhaps you can interview them and ask why they are interested, and what they are doing.

🌸 Tell Others! - Share your new knowledge with others. Tell them about endangered species and explain why they are endangered. Encourage others to learn more about endangered species. Let them know that together, we can all make a difference.

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Useful Websites:

<http://www.teachnet.ie/smcDonald/pages/basecamp.htm>

http://www.abnc.ca/programs/pdf/how_species_endangered.pdf

<http://www.cpawscalgary.org/education/pdf/how-species-become-extinct.pdf>

<http://www.cws-scf.ec.gc.ca/theme.cfm?lang=e&category=12>