

References for Species at Risk Education and Outreach

General references

Environment Canada

Species at Risk website: www.speciesatrisk.gc.ca

This website provides information on all COSEWIC-designated species, their biology, range, reason for decline, recovery efforts, etc. Includes a search engine.

Book: Communication skills for conservation professionals

Jacobson, Susan K. 1999. *Communication skills for conservation professionals*. Island Press. 351 p.

If you have only one book to read, I recommend this good standard reference, ideal for recovery biologists. Covers planning, targeting your audience, choosing the right media, evaluating your program, and more. Lots of case studies.

Canadian Nature Federation : Species at Risk Education Guide, 2000

This excellent guide provides explanations of concepts relevant to species at risk issues (biodiversity, ecosystems, habitat, extinction, etc), data on Canadian species at risk and various interesting pieces of information to stimulate thought. The guide connects our daily activities to the plight of species at risk, and provides suggestions on how we can prevent species from becoming at risk and how we can help species recover. The guide includes activities that are targeted at various age groups (from grade 3 to 9) and are designed to take place in the classroom. The guide is only available in English at this point but will soon be translated into French. It costs \$18 + taxes + shipping.

For more information :

The Canadian Nature Federation

Suite 606, 1 Nicholas Street

Ottawa, Ontario, K1N 7B7

Tel : 1-800-267-4088

E-mail : cnf@cnf.ca

http://www.cnf.ca/species/species_learn_kit.html

Canadian Wildlife Federation (CWF)

General Website : <http://www.cwf-fcf.org>

A link is provided from the general website of the CWF to an activities page (<http://www.wildeducation.org>). This page gives access to a description of numerous activities (WILD connections), 6 of which come from Project Wild (including 1 on migration and 1 on habitats), 5 Fish Ways activities (1 on species of fish that are at risk), 6 Habitat 2000 activities (they focus on restoration), 10 Ocean Education activities (1 on ocean ecosystems, 1 on the impact of fishing technologies on fish populations).

IUCN-The World Conservation Union

General Website: <http://www.iucn.org>

'Biodiversity Is Life' <http://iucn.org/bil/main.html> is a new set of IUCN web pages which provide an overview of biodiversity issue, including species at risk matters. It is very simple and general, yet addresses a wide variety of questions, with nice and powerful pictures.

BirdLife International

General Website : <http://www.birdlife.net/>

Publication recently launched : « Threatened Birds of the World » (provides info on status of birds, hot spots and recommendations for conservation measures). Includes kids pages called « birds in trouble » which explain why birds are becoming extinct and what extinction means. The pages also include information for teachers and kids on why we should value birds and details on a country-wide and worldwide competition to suggest how we can help protect birds (the prize is a trip to Taiwan).

Canadian Botanical Conservation Network

General Website : <http://www.rbg.ca/cbcn/>

This website includes pages for kids (http://www.rbg.ca/cbcn/en/kids/kid_main.htm, with information on biodiversity, plants that are at risk, a dictionary, general facts on plant biology, ideas of what people can do to help and a quizz. The website also explains the role of the network in the recovery of plant species.

Royal BC Museum

General Website : <http://rbcml.rbcm.gov.bc.ca/index.html>

Includes a set of pages on endangered species and spaces of the Thompson-Okanagan region of BC (http://rbcml.rbcm.gov.bc.ca/end_species/index_es.html). The pages provide a glossary, information on particular species and their status, lesson plans (K to 7), and a set of activity sheets.

Canadian Broadcasting Corporation (CBC)

General Website : <http://cbc.ca/>

MetroTorontoZoo : Endangered Species Teachers Resource Kit

Described on the website of the Zoo as follows : "The kit consists of a booklet, charts and fact sheets to help teachers from grades 4 through OAC level explore the importance of biodiversity, why it is disappearing and what is being done to conserve it. Each chapter of the booklet includes suggested activities and study ideas for both the classroom and your Zoo visit."

<http://www.torontozoo.com/>

The kit focusses on the species at risk that are found in the Toronto Zoo, some of which are Canadian species (most come from various regions of the world). It costs \$10 and can be obtained by calling (416) 392-5944.

Green Teacher

General Website : <http://www.greenteacher.com/>

This environmental magazine for teachers includes suggestions for class activities (different age groups and curricula) on species at risk. Some of these activities are available online: Gareth Thompson, 1995, *Endangered Species*, Green Teacher, Vol 44 (<http://www.greenteacher.com/articles/44planet.html>). Current and back issues can be ordered – topic and author searches can be done online

(<http://www.greenteacher.com/backiss.html>, or

<http://www.greenteacher.com/gtsearch.html>). Issue 45 (1995-96, only available as a photocopy) includes an article, *Animals in jeopardy: a schoolwide theme on endangered animals for grades K to 8*.

Issue 49 (Fall 1996), *We Saved the Elephants ... or did we?*

Issue 60 (Winter 2000), *Making connections with Insect Royalty*. (instructions for raising Monarch butterflies in the classroom)

Federation of Ontario Naturalists and World Wildlife Fund (Canada), 1984.

Wildlife in Jeopardy; An Educational Resource Kit (Ontario's Endangered and Threatened Species), Don Mills, Ont. : The Federation. Library of the Ontario Region, Cornwall, Tel: (613) 938 5787, Call Number: SK353.W56

The edukit contains 5 main components, each with concepts and activities: Wildlife in jeopardy, Communities in jeopardy, Why should we care, What is being done, What can you do.

The edukit indicates that habitat loss is the main cause of species extinction, it highlights other causes, discusses the role of species in ecosystems, etc. Activities include discussion groups on certain topics, crosswords, “fill in the blanks” sheets, a conservation game, a poster that features certain species and can be coloured in. The kit also contains slides, a “wildlife reader” booklet, with a few poems and short stories about certain species, fact sheets, information on conservation programs and organizations (some of which would be outdated by now).

The focus of examples and activities is on Ontario species and habitats. Some of the elements of the edukit appear outdated, especially those that have a social connotation.

Sakamoto, E., 1991. The Endangered Species Activity Book: A Teacher Resource

Grasslands National Park Library, Tel: (306) 298-2257, Call Number: QL 83 S35.

This book can be used as resource for students in grades 4-11 (mostly for 7-9).

The activities presented include species riddles, word scrambles, mathematics exercises etc. All of these activities deal with the theme of species at risk, with explanations of concepts such as biodiversity, extinction etc, and data on past and current extinction patterns and species diversity.

Lesson Plans

Kananaskis Country

General Website : http://www.gov.ab.ca/env/parks/prov_parks/kananaskis,

This protected area provides edukits on wolves, grizzly bears and raptors. They can be downloaded for free at

http://www.gov.ab.ca/env/parks/prov_parks/kananaskis/ee/edukit.html.

The resource kit on grizzly bears is aimed at grades 8-10 students. It contains 110 pages of lesson plans that address general questions such as the workings of ecosystems and the habitat needs of species and focuss on the problems faced by the grizzly bear. Details are provided for in-class activities (learning about the wildlife and habitats of Alberta, role plays etc) and outdoor activities (information gathering on schoolyard species, information gathering on species in a nearby natural area).

For more information :

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Other Short Lesson Plans

The following lesson plans mostly involve research and discussion or presentations over a particular endangered species theme. Many include an internet component, while one consists in a craft activity.

Rice University :Vanishing Species

<http://riceinfo.rice.edu/armadillo/Vanishing>

The New York Times: Species for Sale – Endangered Species as Commodities : A Science Lesson

Wild Wildlife – Exploring the Moral, Economic and Ecological Impacts of Animal Extinction

<http://www.nytimes.com/learning/teachers/lessons/991012Tuesday.html>,

Learning Space :Endangered Species

<http://www.learningspace.org/instruct/lplan/library/lmcghee.html>,

<http://www.learningspace.org/instruct/lplan/library/Murphy.html>,

<http://www.learningspace.org/instruct/lplan/library/Harless.html>,

EELink : Investigating Endangered Species in the Classroom

<http://eelink.net/>

Encarta Schoolhouse : Species Countdown
A World of Biodiversity
Here Today, Gone Tomorrow?
Rare Bird Alert!
Oh, Give Me a Home
TechnoZoo : Designing a Zoo Habitat (craft)
http://encarta.msn.com/encyclopedia_761557586/Endangered_Species.html

Learning for a Sustainable Future (LSF)
General Website : <http://www.schoolnet.ca/future/>.

Colouring Books

Walton, Richard K et al, 1991. A field guide to endangered wildlife coloring book.
Boston : Houghton Mifflin Co., Wood Buffalo National Park Library, Tel: (867) 872-7900 or (780) 697-3662), Call Number: QH 48 W35.

Colouring book with explanatory text on species at risk issues (extinction, causes of extinction, habitat loss etc). Focus on US species at risk, some of which are also at risk in Canada (eg, peregrine falcon, sea otter, etc).

US Environmental Protection Agency : Endangered Species Colouring Book
<http://www.epa.gov/espp/coloring/cbook.pdf>,

This Colouring Book includes a brief text with the drawing of each species. Focus is on US species at risk. (note : it takes a long time to download the file).

Other Internet Resources

Canadian Heritage Information Network

General Website : <http://www.chin.gc.ca/>,

Includes a virtual exhibit on butterflies

(<http://susan.chin.gc.ca/Exhibitions/Butterflies/english/teach+games/index.html>,

Information is provided on the life cycle of Monarch Butterfly, with pictures of the different stages, question and answers, and activities (rearing butterflies and others) and games (crosswords etc).

Community Learning Network (CLN)

General Website : <http://www.cln.org/>,

Provides a series of links to lesson plans on species at risk at

<http://www.cln.org/themes/endangered.html>,

Environment Canada: From the Mountains to the Sea: A Journey in Environmental Citizenship (1993 publication available at

<http://www.on.ec.gc.ca/water/greatlakes/intro.html>

This publication defines concepts relevant to the plight of species at risk and provides two crosswords. A few suggestions of activities to learn more about species at risk and our ecological footprint are also included.

Native Americans and the Environment

General Website : <http://cnie.org/NAE/index.html>,

Provides links to articles or stories on environmental issues relevant to First Nations. Some of them relate to species at risk.

Ducks Unlimited (DU)

General Website : <http://www.ducks.ca>,

Provides educational materials on wetlands (PDF format, can be downloaded free of charge upon registering for free). The materials include a teachers guide as well as student sheets. Materials for Grade 9-12 address issues of species decline specifically.

New Brunswick Environmental Network

General Website : <http://www.web.net/nben/>

The network produces an internet-based newsletter called « Elements ». One of its themes is species at risk : <http://www.elements.nb.ca/theme/theme.htm>

Groupe de recherche et d'étude sur les mammifères marins (GREMM)

General Website : <http://www.gremm.com>,

Includes information on marine mammals at risk and threats to their survival at <http://www.BaleinesEnDirect.net/FSC.html?sct=2&pag=2>,

Atlantic Salmon Federation

General Website : <http://www.asf.ca/>,

The Federation runs a programme for schools called « Fish Friends », through which schools can obtain a curriculum guide on Atlantic Salmon as well as fish tanks if they wish.

Greenpeace Canada

General Website : <http://www.greenpeacecanada.org/e/>,

Includes Kids Pages with an interactive « Save the Whale » Game – where the player aims at positioning him/her zodiac in between a large whale hunting boat and a whale.

US Environmental Protection Agency

General Website : <http://www.epa.gov>,

Includes information on US species at risk (<http://www.epa.gov/kids/index.htm>) and games such as an endangered species matching game .

(US) National Wildlife Federation

General Website : <http://www.nwf.org>,

This organization, like the Canadian Wildlife Federation, produces educational materials on wildlife. They are focussed on US species but some of them are also found in Canada and some of the educational activities could be adapted to Canadian species. One

educator's guide that was produced recently deals with species at risk (<http://www.nwf.org/nationalwildlifeweek/1999/edguide.pdf>,

US Fish and Wildlife Service

General Website : <http://www.fws.gov/>,

The site includes a section for kids (<http://endangered.fws.gov/kids/>, with information on species at risk in the USA, recovery, games and what kids can do to help. A kit is also provided for teachers with similar information as well as details on the species listing and recovery process of the USA.

Environmental Education on the Internet

Includes a page on endangered species (<http://eelink.net/EndSpp/>, with links to various websites (mostly US-based)

Reports on species at risk produced by kids and schools:

SchoolWorld Internet Education, Australia :

<http://www.schoolworld.asn.au/species/reports.html>,

The Endangered Animals of the World, USA-Netherlands :

<http://www.tenan.vuurwerk.nl/indexusa.htm>,

US Audubon Society

General Website : <http://www.audubon.org>

Animal Den (commercial)

<http://www.animalden.net/ai/endanger/slide1.html>

Online slide show (each slide is accompanied by an explanatory paragraph) which introduces concepts of habitat loss, extinctions, species loss as an indicator of our planet's health, and measures taken to reverse the loss of species. The slide show focusses on animals from the US although it also addresses some species such as the African elephant and the rhinoceros.

The Green Brick Road

Website : http://weblinks.schoolsgogreen.org/links/weblinks_res_dist/0001E7FD-007EA7AB-0001F708

Provides lists or references of books, videos and organizations that address various environmental topics, including 2 books about species at risk and a hotline (Econet) where environmental questions can be asked. (The organization is based in Ontario)

Note : site under re-construction

The Endangered Species Chocolate Co.

General Website : <http://www.chocolatebar.com/>, This company is based in the USA. It produces chocolates wrapped in a package that comprises information on charismatic species at risk such as polar bears, seals, orang utans, panda bears. A percentage of the sale of these chocolates is donated to environmental organizations.

The Canadian Endangered Species Coalition

General Website : <http://www.chebucto.ns.ca/Environment/FNSN/hp-cesc.html>,

Sierra Legal Defence Fund (SLDF) <http://www.sierralegal.org>,

Contributes to advocacy efforts by NGOs for an effective Species at Risk Act.
Has produced report on legal measures to protect species at risk from logging in
BC : <http://www.sierralegal.org/reports/wildlife3.html#contents>

Resource Persons

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