



Predicting: What If?

Summary

Students will research a species at risk in Canada and predict what will happen to it now and in the future, based on the existence of protective legislation.

Activity Information

Level: Grade 7 (sec. I)

Subjects: Interactions Within

Ecosystems; Science, Language Arts

Estimated Duration: One or two 60-minute class period(s) for discussion and to begin research, one 60-minute period to complete presentations and discuss findings.

Materials: none.

Learning Outcomes

Interactions Within Ecosystems

State a prediction and a hypothesis based on background information or an observed pattern of events (e.g., predict what an aquatic ecosystem will look like in 25 years based on characteristics of the area and the long-term changes observed in similar sites).

Defend a given position on an issue or problem, based on findings (e.g., defend a decision to increase or decrease hunting or fishing quotas for a particular species).

Describe interactions between biotic and abiotic factors in an ecosystem.

Teacher Background

It's the law. How many times have you heard that and wondered how and why a law was established? We all understand the importance of legislation. In Canada, it protects everything from our individual rights (*Charter of Rights and Freedoms*) to special areas (*Parks Act*).

While it is hard to measure the value of wildlife, we all recognize Canada's plant and animal resources offer economic, social and environmental values that need to be protected for future generations. To that end, the Government of Canada officially recognized the importance of species at risk by passing *the Species at Risk Act*, proclaimed in June 2003. This new legislation provides for the protection of species at risk in Canada. Interested individuals and organizations across the country have voiced their concern for the speed with which species were disappearing from the planet and supported the need for the Act.

The Act is intended to:

- prevent Canadian wildlife species, subspecies, and distinct populations from becoming extirpated or extinct;
- provide for the recovery of species that are extirpated, endangered or threatened as a result of human activities; and
- manage species of special concern to prevent them from becoming endangered or threatened.

Agencies with primary responsibility for the legislation include:

- Environment Canada
- Fisheries and Oceans Canada
- Parks Canada Agency
- Canadian Endangered Species Conservation Council
- Committee on the Status of Endangered Wildlife in Canada (COSEWIC)
- National Aboriginal Council on Species at Risk.

There is more than just the *Species at Risk Act* that protects plants and animals.

Some other important pieces of federal legislation include:

- *Canada Wildlife Act*
- *Migratory Bird Convention Act*
- *Wild Animal and Plant Protection and Regulation of International and Inter-provincial Trade Act*
- *Canadian Environmental Assessment Act*
- *Fisheries Act*
- *National Parks Act*.

In addition to the federal legislation, some provinces and territories passed species at risk legislation. (e.g., *Nova Scotia Endangered Species Act (1999)*, *Manitoba Endangered Species Act, (1990, r.1993)*). Those provinces and territories that do not have legislation protect species at risk through federal laws or through provincial wildlife acts.

More information can be found at: www.sararegistry.gc.ca

Procedure

1 Ask your students if they have heard the term **species at risk** and, if they have, what they think it means. Begin a discussion about what they believe is being done to help these species, and then talk about the kinds of laws that are in place in Canada and in their province/territory. Focus on Canada's *Species at Risk Act*. Some questions for the discussion include:

- Q: What are the threats that species are facing? In other words, what are we protecting them from, and what is putting them at risk?
- Q: What would a law have to do to help protect species at risk? What could be done to combat the loss of species?
- Q: Does our province/territory have a species at risk act? If not, where would legislation be found to protect species at risk? Is more legislation needed?
- Q: What do we need to do to ensure that any piece of legislation that protects wildlife species is enforced?
- Q: How can private landowners be encouraged to be stewards of species at risk on their property?
- Q: How do we help pay the costs of protecting species at risk?

2 Divide the class into seven groups. Explain that each group will select a species at risk, carry out some preliminary research, and then make two predictions about the future of that species using their research.

Note: You can assign species or you can invite students to visit the speciesatrisk.gc.ca Web site to select a species of their choice.

Some suggestions include: swift fox, cucumber tree, Harlequin Duck, Vancouver Island marmot, wood bison, Acadian Flycatcher, Loggerhead Shrike, Rocky Mountain tailed frog, Eastern Prairie fringed orchid, Atlantic salmon, blue racer. Required information for some may be limited.

3 Explain that the preliminary research requires that each group record the following information in the form of a fact sheet about their species:

Natural History: What is the natural history of your species? What is its habitat? What is its range? What does it eat? Who are its predators? How does it survive?

Status: What is the current risk category? What are the reasons for this designation? Has the designation been upgraded or downgraded?

Statistics: What is the current population of this species? Compare current population figures with those of the past. Is there a projected future figure?

Recovery Efforts: What, if anything, is being done about re-introduction, captive breeding, engaging local communities in species and habitat protection, and other recovery activities? Are these efforts working?

Legislation: Is the species protected by any federal or provincial legislation?

4 Once the students have completed their preliminary research, they can proceed to their predictions. Explain that each group will present its predictions to the class and this will lead to a class discussion about whether or not the predictions for the seven species are accurate.

1. Given what you know about your species at risk, what do you believe will happen to it in 10 years, based on existing laws and recovery efforts?
2. What do you believe would happen to your species if there were no species at risk legislation, either at the provincial/territorial or federal levels, and recovery initiatives were not taking place?

Each group is responsible for preparing a brief presentation (no more than 10 minutes each) of each prediction. Students should provide a picture of their species for their own recognition, as well as their classmates'.

5 Students should submit their research and presentation notes for evaluation.

Extensions

Prepare a "what if" fact sheet on the future of the species (could include data from research that justifies conclusion) and post on a school bulletin board.

Based on their knowledge of the federal *Species At Risk Act*, invite students to make suggestions to deal with potential shortcomings of that legislation.

Consider posting each of the predictions on a wall and ask the students to think about, and follow, their predictions throughout the school year.

Species at Risk Fact Sheet



Name of Species:

Natural History

What is the natural history of your species?

What is its habitat?

What is its range?

What does it eat?

What are its predators?

How does it survive?



Status

What is the current risk category?

What are the reasons for this designation?

Has the designation been upgraded
or downgraded?

Statistics

What is the current population of this species?

What was the population figure in the past?

Is there a projected number?

Recovery Efforts

What, if anything, is being done about
re-introduction, captive breeding and other
recovery activities?

Are these efforts working?

Legislation

Is the species protected by any federal or
provincial/territorial legislation?
