



Surveying Species at Risk

Summary

Students will create and administer a survey to find out what people know about species at risk and to identify ways to increase their awareness and understanding.

Activity Information

Level: Grades 4 and 6 (elementary cycles 2 and 3)

Subject: Habitats and Communities, Diversity of Life, Language Arts, Math, Geography

Estimated Duration: One 60-minute class period for discussion, one 60-minute period to explain survey findings, homework will likely be required to complete research.

Materials: markers, construction paper.

Learning Outcomes

Habitats and Communities

Demonstrate that specific terminology is used in science and technology context (use appropriate terminology such as habitat, food chain, etc.).

Identify their own and their family's impact on natural resources (e.g., identify the potential impact of their lifestyle on moose, deer, rabbit, or salmon habitats and populations).

Compile and display data, by hand or by computer, in a variety of formats including frequency tallies, tables and bar graphs (e.g., display data in a graph from a population-simulation game).

Diversity of Life

Describe the potential impact of the use by humans of regional natural resources (e.g., identify the possible impact on the local deer population).

Teacher Background

What is a species at risk? According to the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) it is defined as *any plant or animal threatened by, or vulnerable to, extinction*. To learn about different categories of risk, see page 3.

There are many things we currently know about species at risk. We know some species are already extinct and we know many others are at risk because of habitat destruction, poaching, introduction of exotic species and other pressures.

But what's important is finding out what your students know about species at risk. Do they know anything? How much does your school population know? Your community? If human activities are the most significant issue for species at risk, then it is extremely important that people understand how their activities can cause the decline of some species, and what they can do to turn this around. We do things every day that can have a negative impact on species; we can also modify our actions to reduce the impact.

This lesson lets your students collect and analyze information about what their peers and family members know about species at risk. Students will create a simple survey to be administered to a specific audience in order to collect this information.

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Procedure

1 **Begin a class discussion about species at risk.** Ask your students if they have ever heard of species at risk? They may have heard of endangered species, which is often synonymous with species at risk. Have they ever heard of extinction or extinct species? Review each of COSEWIC's five at-risk categories (extinct, extirpated, endangered, threatened, special concern) and provide examples so that students can visualize each category.

2 **Ask your students to raise their hands if they have ever participated in a survey.** They have just participated in a mini-survey. Have they ever completed the comment card in a restaurant inviting their views on service, the quality of the meal, etc.? This is also a survey. Ever wondered how advertisers can claim four out of five dentists prefer one brand of toothpaste? Well, they probably surveyed dentists.

Explain to students that surveys are an important tool for collecting information, opinions, statistics, data, etc. There are different purposes for collecting information and there are different ways to use the data that are collected. The data can determine what people think or know about certain issues, and the data are often used for further research.

3 **Explain that each student is going to design their own survey** so they can find out how much a particular audience knows about species at risk in Canada. They will first select their target audience, and then design a series of questions that will help them determine what their target audience knows. With the class, brainstorm potential target audiences and list them on the board. Students may come up with some of these audiences:

- the entire student population
- all students and staff
- students in their grade
- students in another grade
- family members
- neighbours

4 **Help students start thinking about what they would want to ask in their survey.** Explain that the survey can have open-ended or close-ended questions. Open-ended suggests that a respondent (the person who answers the survey) can provide any answer that they want. A close-ended question is one where respondents choose from a number of potential responses or answer yes or no, true or false. Students might also consider a rating scale, such as 1 is least familiar, 5 is very familiar.

Brainstorm a list of potential questions with your students and write those questions on the board. Use the Sample Survey to get started.

5 **Ask each student to identify their target audience and then draft their survey.** Students must ensure the following:

- The survey must have at least eight questions (make sure at least five are close-ended).
- The survey must be completed by at least 10 people (respondents).

Sample Survey

1. Have you heard of species at risk?
 Yes
 No
2. Do you know why species become at risk?
 Yes
 No
3. Can you give examples of why species become at risk?

4. Did you know that there are different categories for species at risk?
 Yes
 No
If yes, can you name some or all of them?

5. Can you name any species that are extinct?
 Yes
 No
If yes, please list them here.

6. How many species are designated by COSEWIC as at risk in Canada?
 25 to 100
 100 to 200
 200 to 300
 300 to 500

[continued on page 14]

7. Have you ever read anything about species at risk?
- Yes
 - No
- If yes, what was it?
- _____
- _____
- _____

8. Where have you heard about species at risk?
- newspaper
 - radio
 - television
 - World Wide Web
 - other _____

9. If you were going to learn more about species at risk, would you:
- surf the World Wide Web
 - read a magazine
 - watch a television program
 - all of the above
 - would not want to learn more

10. Protecting species at risk is everyone's responsibility.
- I agree
 - I disagree

11. It's not as important to protect plants as it is to protect animals.
- I agree
 - I disagree

12. Do you think the food and products that you buy and the way that you live (travel in cars, create garbage, use pesticides on gardens) might cause species to be at risk?
- Yes
 - No

13. If you said yes, what would you change in your life to have less negative effect or more positive effect?
- _____
- _____
- _____
- _____

- The survey results must be compiled into a simple chart (see Step 6).
- Once the survey results have been compiled, students will prepare simple graphs to display the data from the close-ended questions.

Students may need 30 to 60 minutes to draft their surveys. Once the students have completed their surveys, ask them to find one classmate to complete a peer review. A peer review will give them a second opportunity to ensure that their questions are clear, valid and will deliver the results that they are seeking. Afterwards, have them make at least 10 copies, and then carry out the survey with their target audience.

6 When the surveys have been completed, students can begin to compile their collected data. Below is a model of a draft outline they can use to analyze their data:

Close-ended Question Topic	Yes	No
Number of people who heard of species at risk	7	3
Number of people who have seen a movie or TV program about species at risk	5	5
Number of people who know how many species are designated at risk in Canada	8	2

Once they have compiled their data, students can then prepare simple graphs representing the responses to the close-ended questions.

Students should be prepared to describe the responses to their open-ended questions during classroom discussions.

7 Hold a class discussion about the survey results. What was the general consensus? Do people know enough about species at risk? Could more be done to inform them? Does the class have any suggestions to help? How would they advertise? What media would they use; newspaper, Internet, television, radio, a combination? What messages are most important to share with the public?

Ask students to hand in a copy of their survey, results and the raw data.

Note: You may wish to post the results on a bulletin board so that classmates and schoolmates can see them.

Extensions

- Radio or TV stations air PSAs at no cost to promote community causes. Have students prepare a PSA with a message related to species at risk in their area.
- Have your students prepare a newspaper commentary on why species at risk awareness is important in their community, and have them use the data from their surveys to create graphics on awareness of various target groups.
- Teachers can easily adapt this lesson into a class-wide survey, where students ask their families about their knowledge of species at risk and report back to the class, producing a graph or display.