

1-2 Loss of Biodiversity

Outcomes:

1. Understand that biodiversity loss due to human activity adversely affects ecosystems. (NLS-2)
2. Analyze social issues related to rates of global extinctions. (118-9)
3. Communicate questions, ideas, and intentions, and receive, interpret, understand, support, and respond to the ideas of others. (215-1)
4. Identify multiple perspectives that influence a science-related decision or issue. (215-4)
5. Explain various ways in which natural populations are kept in equilibrium and relate this equilibrium to the resource limits of an ecosystem. (318-5)

Introduction

How are we contributing to the loss of biodiversity around the world? As the number of human beings increases so does our dependence on technology. This causes an increased need for energy to power that technology. This puts greater pressures on both our *local* environment and even on the *global* environment. Because our North American society is strongly connected to economics and the importance of making money, our ever-increasing demand on our environment is adding to biodiversity loss. In fact the rate of loss is now higher than it ever was before.

Extinction can be defined as the permanent disappearance of an organism. In other words, all the members of one type of organism have died. This means a loss of biodiversity. According to the David Suzuki Foundation, we are endangering the existence of living things to the point where we are losing at least one per cent of existing species per decade. This means we are losing at least two species an hour. That is 2,500 times greater than the rate due to other natural processes.

When organisms become extinct they are gone forever. Their contributions to other organisms are also gone forever. Food, shelter, and medicines linked to many organisms are lost forever. Considering there

may be potential cures for some cancers and other diseases, it seems unfortunate we would allow this to happen. The movie "Medicine Man" starring Sean Connery shows just how important these plants and animals are to the world.

In our province we have lost the great Auk, the sea mink, and the Labrador duck. The full impact on their disappearance is not known. Others are *threatened* or *endangered* like the pine marten, the piping plover, and the wolverine. If they go the way of the great Auk, what will the effects be?

Local: The environment close to us

Global: Refers to the whole planet

Extinction: When all of one organism has completely disappeared

Threatened: decreasing in number, close to endangered

Endangered: continuing to decrease, close to extinction

Analysis

1. What is contributing to biodiversity loss around the world?
2. What does the term "extinction" mean?
3. What does the David Suzuki Foundation say is the current rate of extinction? How much greater is this compared to the past?
4. List three ways that biodiversity loss can affect us in Newfoundland?
5. a) List the names of three organisms that have become extinct in Newfoundland and Labrador.
b) List three organisms that are threatened or endangered.

Extention

1. Read the importance of biodiversity and the effects of losing it at <http://www.ology.amnh.org/biodiversity/index.html>.

References

Encyclopedia of Biodiversity

(<http://www.biodiversity.nl/encyclopedia.htm>)

The David Suzuki Foundation

(<http://www.davidsuzuki.org/WOL/Biodiversity/Importance.asp>)

<http://www.ology.amnh.org/biodiversity/>