

# Habitats: Environmental Issues in the Polar Regions

( [http://www.ccge.org/resources/learning\\_centre/classroom\\_activities/habitat\\_polar.asp](http://www.ccge.org/resources/learning_centre/classroom_activities/habitat_polar.asp) )

## Connections to the curriculum:

Geography, world history

## Connections to the Canadian National Standards for Geography:

Places and Regions

Environment and Society

## Time:

Three to four hours

## Materials:

- Computer with Internet access
- Wall map of the world
- Drawing materials

## Suggested Grade Level: 9 - 12

## Overview

The Polar Regions are frequently neglected in discussions of the environment, but they shouldn't be. The environment of the Polar Regions is particularly susceptible to human impacts such as pollution and the depletion of the ozone layer. Moreover, the effects of global warming on the Polar Regions are likely to have major repercussions in the rest of the world.

Students will learn about how environmental problems affect the Polar Regions, and they will create magazine ads to educate the public about these problems and to convince people to pay more attention to human impacts on the Arctic and Antarctic.

## Objectives

Students will:

- review their knowledge of the polar regions;
- list environmental problems they are familiar with and check the ones they think affect the polar regions;
- research and answer questions about environmental issues affecting the polar regions;
- discuss their findings; and
- create magazine advertisements to encourage the public to support environmental protection of the polar regions.

## Geographic Skills

- Acquiring Geographic Information
- Acquiring Geographic Information
- Organizing Geographic Information
- Analyzing Geographic Information

## Suggested Procedure

### *Opening:*

Ask students to point out the Polar Regions on a wall map, and then ask them to describe

some of the differences between the Arctic and the Antarctic. If their understanding of these differences is minimal, have them read the activity "[The Arctic and Antarctic Circles](#)" and some of the links provided on that page.

*Development:*

Ask students to list some of the environmental problems they have heard about, either locally or in other parts of the world. Then have them place checks next to the ones they think might affect the Polar Regions. Have students place two checks next to any environmental problems they think might impact the Polar Regions more severely than other parts of the world.

Discuss the lists as a class. Have students hypothesize the reasons why certain environmental problems might have particularly severe impacts on the Polar Regions.

Have students use the web sites listed and additional Internet or print resources to find out about environmental issues that affect the polar regions. As they conduct their research, they should answer the following questions:

- What is the ozone hole, and what are its effects?
- How does global warming affect the Polar Regions and what implications might this have for the rest of the world?
- What types of pollution threaten the Polar Regions, and why are these regions frequently more sensitive to pollution than other parts of the world?

*Closing:*

Discuss students' findings as a class. How are global environmental problems affecting the Polar Regions? Why are the Polar Regions particularly sensitive to environmental degradation?

**Suggested Student Assessment**

Point out that, since the Polar Regions are very sparsely inhabited, many people are unfamiliar with the characteristics of these areas and don't think about these parts of the world when they consider human impacts on the environment. Ask students to think about the reasons why it would be beneficial for more people to be aware of environmental concerns in the Polar Regions. Have them create public-interest magazine advertisements that aim to convince the public to support environmental protection in the Arctic and Antarctic. Their ads should include information they have gathered in their research and must mention both the Arctic and Antarctic regions.

**Extending the Lesson**

Have students create "environmental fact sheets" that could be given to members of environmental organizations, politicians, or the general public to educate them about specific environmental issues concerning the Polar Regions. The fact sheets should describe the causes, effects, and predictions for the environmental problems students have learned about in this lesson.

**Related Links:**

[Industry Canada—Canadian Arctic Profiles](#)

[Students On Ice](#)

[National Geographic: GeoAction!—Habitats](#)

[U. S. Environmental Protection Agency—Ozone Depletion](#)

[PBS Online—Warnings from the Ice](#)