

# CGC1P Unit 1: The Diversity of Canada's Natural Landscapes

## Activity 10: Ecological Footprint

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### Overview

Imagine if you can the amount of land, water, and resources Canada would need to support your lifestyle. Look at the things that are surrounding you right now; things like wood, metal, plastics, paper, glass, house, school, and probably so much more. How much land and resources went in to making all these things so you can use them? This concept of the amount of land, water, and resources used is called your ecological footprint. In this activity students will discover the concept of an ecological footprint, determine their own footprint, and compare their footprint to others around the world.

### Lesson

If everyone in the world used as many resources as Canadians do, we would need **four** planets the size of Earth to support all the people we now have living on Earth!

When everything we use from the land is added together, we get our **ecological footprint**, which is how our activities are changing the planet. Consider the following questions:

1. How many people are living on the earth right now?
2. What is the ecological footprint of Canada's largest city, Toronto?
3. What is your ecological footprint?

### *Types of Land*

There are three types of land that are taken into consideration:

- **productive land** we use (farming, forestry, etc).
- **degraded land** we can no longer use for farming or forestry because we have changed it (paved over with roads; built buildings, etc.)
- **virtual land**, the land we would need to convert the carbon dioxide (produced by vehicles, airplanes, heating, air conditioning, etc.) back into oxygen. Almost all of our energy sources create gases like carbon dioxide in the atmosphere.

### *Human Impact*

Human beings are changing the planet. Our actions are causing **global warming**. Our actions are also putting fauna and flora species at risk.

The habitats of the flora and fauna are threatened by our expansion. As we build on land, these creatures lose their homes. Sometimes the size of habitat that is left is not big enough to support a population. There are just little pockets of the original bioregion left, fragments of the original habitat. This process is known as **fragmentation**.

## Assignment

1. Define ecological footprint in your own words or by using an internet source.
2. Identify and explain the 3 types of land to be taken into consideration.
3. What is global warming?
4. What is the process of fragmentation?
5. Visit [www.myfootprint.org](http://www.myfootprint.org) and calculate your ecological footprint. What are your results?
6. What are 10 tips to reduce your ecological footprint?

