

# Lesson Plan: Map Your Eco-Footprint



## Note

This activity builds on the May/June **Green Star! Enviro-Activity Newsletter**.

**Age:** Grade 5-7

## Subjects:

Science, Social Studies, Geography, Math and Computers.

## Skills:

Analysis, application, research, communication

## Duration:

Two 45 minute classes

## Setting:

Indoors

## Materials:

- Individual access to the internet.
- **Ecological Footprints from Around the World** handout

## Objectives:

Students should be able to:

1. Assess the effects of lifestyles and industries on local and global environments by determining their ecological footprint using an on-line Ecological Footprint Calculator.
2. Assess how their actions impact the earth through class discussion and independent work.
3. Compare the lives of Canadians with the lives of people in developing countries, and analyze how lifestyles and resources in different countries affect the size of each person's ecological footprint.
4. Identify ways in which individuals can reduce their impact on the environment.

## Teacher's Backgrounder

### What's YOUR ecological footprint?

Our footprint is not just the outline of our shoe – it's also the mark that we leave behind when we're walking through the forest, running on the beach, or buying our groceries. Every action has a reaction, and sometimes these can be far reaching, impacting other areas around the globe.

### What IS an Ecological Footprint?

It's a measurement of human impact on nature. People consume what nature produces for survival – it's a necessity! Because of this, we all have an impact on our planet. As long as we don't take more from the Earth than it can produce, we're not doing too badly.

We are dependant on the Earth for food, shelter and energy. For this we need resources - productive land to grow our food, build our homes, produce our energy, and to store our wastes. We expect that the Earth will be able to accommodate our "need" for these resources, but are we expecting too much? The average American requires 12.4 hectares of productive Earth in order to support their lifestyle, and the average Canadian requires 7.8 hectares; nature provides only 2 hectares of bioproductive space for every person in the world.

### How much can nature provide?

We are currently consuming 30 percent more than the Earth can sustain. North Americans have the largest footprint - if everyone in

the world had a footprint our size, we would require two more planets the size of Earth to meet our “needs”.

So the question remains: *How BIG is your footprint?*

There are a number of ways we can figure this out. People have created consumption surveys and interactive calculators to help us estimate of the size of our ecological footprint. We will be using the Eco-Footprint Calculator provided by the **Earth Day Network**.

### Method

1. Distribute the handout *Ecological Footprints From Around the World* (attached) to each student. Discuss the concept of an Ecological Footprint using this guide and the Teachers’ Backgrounder (above). Determine students’ knowledge about this concept.
2. Each student will need to use a computer and the link provided to complete the on-line survey provided by MEC or the Earth Day Network. This should take 5-10 minutes per student.
3. After the on-line calculator has been used, students complete the questions on the handout (individually).

**Note:** *prior to the lesson check the website address listed below, as websites may change.*

Eco-footprint Calculator (2 options):

- [www.mec.ca](http://www.mec.ca) - use the search box in the top left-hand corner of the site. Type “ecological footprint”. Find the yellow feet and click on “go”.
- [www.earthday.org/Footprint/index.asp#](http://www.earthday.org/Footprint/index.asp#)

### Evaluation

1. In the next class, look at your class range of Ecological Footprints and identify why some differences may exist between students.
2. Using the Teachers’ Answer Sheet (provided), discuss students’ various answers from questions asked on the *Ecological Footprints From Around the World* handout.
3. Discuss ways in which students, schools, and families can lower their Ecological Footprint.
4. Given time, and maturity of class, identify laws or policy (both current and potential) that would contribute to Canadians making smaller ecological footprints.

This lesson plan has been adapted from  
The Canadian Hunger Foundation: [www.chf-partners.ca/pages/documents/  
EcologicalFootprintsfromAroundtheWorld.doc](http://www.chf-partners.ca/pages/documents/EcologicalFootprintsfromAroundtheWorld.doc) and  
Education for a Sustainable Future Environmental Project:  
[www.esfep.org/MIDDLE%20FILES/esfepmiddleyears.htm](http://www.esfep.org/MIDDLE%20FILES/esfepmiddleyears.htm)