



Ecological Footprint

The Ecological Footprint measures the amount of renewable and nonrenewable resources that are used by our activities. Ecologically productive land area is required to support everything that we eat or use, and also to absorb the wastes we create. Worldwide there are 4.7 biologically productive acres available per person, and this doesn't include the needs of all of the plants and animals. Each person on the earth uses the resources that those acres supply. A growing world population will reduce the number of acres available per person.

Some average footprints:

United States: 24 acres---almost 5 Planets worth of space!

Canada: 22 acres

Italy: 9 acres

Pakistan: Less than 2 acres

Suggestions for using Ecological Footprint in your classroom:

Ecological Footprint can be used as a classroom assignment or discussion. The lesson will support classroom units that examine energy use, efficiency, conservation and climate change.

Connecticut Energy Education suggests using the Ecological Footprint as an attention grabbing introduction to understanding the science of climate change or as a bridge into Student Solutions to the issues, presented after your students have an understanding of the science of climate change and/or energy use.

There is a word document file available with 17 example footprints that can be used in your classroom. Please contact Laurel Kohl for the file. KOHLL@easternct.edu or 860-465-0256.

Ecological Footprint Activities:

Have your students complete the paper calculator of the Ecological Footprint.

- What activities surprised you as using a lot of resources?
- How did your score compare to other students and to the US average?
- How did your score compare to the world available bio-resources and to other nations?

Read the 2004 Report "Ecological Footprint of Nations"

<http://www.rprogress.org/newpubs/2004/footprintnations2004.pdf>

- What affects the growth of the ecological footprint of nations?
- What would you expect to see in the next 20 years? 40 years? Why?

Complete an online Ecological Footprint calculator <http://www.myfootprint.org/>

- How did the online calculation differ from your paper calculation?
- Why do you think there were differences?



- What items would you value differently in the paper calculator? Would revaluing those numbers affect other people's calculations?

After your students have completed an Ecological Footprint calculator:

- Make a commitment to reducing your Ecological Footprint.
- What actions did you pick? What reductions would you expect from those actions?
- Have your students calculate 10 % or 20 % or their total. Have your students complete the Ecological Footprint Calculator a second time and attempt to reduce their total impact by 10 % or 20 %.

If you have discussed carbon dioxide and global warming:

- Have students explain how each category of activities in the Footprint Calculator impacts the amount of carbon dioxide each of us are responsible for.
- To set a "cap and trade" of carbon dioxide and the number of planets each of us would need to live our lifestyle, provide each student with the US average of 5-6 planets in the form of stickers for their Footprint Commitment Sheet.
 1. If each of us should be held to the US average, can you get enough stickers from your classmates to cover your needs by "borrowing" those who did not use all of their stickers?
 2. If you had to "buy" those stickers what would they be worth to you?
 3. Would there be enough available for sale? If we really only have one planet to support us, how could each world citizen get an equal share?
 4. What actions can you take to reduce your footprint to the US average if you are over that amount? Would you be willing to make any or all of those changes?

Ecological Footprint Resources:

Resources for other footprint calculators, and personal changes that you and your students can make to reduce your ecological footprint:

www.earthday.org

www.rprogress.org

http://www.newdream.org/cnad/user/turn_the_tide.php

Feedback on Ecological Footprint:

Share your suggestions to enrich, expand and improve this lesson. How did you use this lesson in your classroom?

Contact Laurel Kohl: KOHLL@easternct.edu or 860-465-0256