

Problem

In an age of increasing consumer awareness, individuals still lack the perspective to understand how their choices affect the larger picture. How, for instance, do my energy choices affect the environment, now and in the future? Add to this already complex problem political and economic interests and the picture can be anything but clear. Multi-sided, objective information about energy choices is simply rare.

Objective

For the sake of future generations, and to empower them to make informed decisions, our objective is to educate the public on the impact of their energy choices. To address this lack of objective information, we set out to create a portable, engaging, multimedia education module for classrooms, community centers, and other interested partners.



Team Members: Kurt Ziegel, Sarah Leingang, Sara Pfau, Sasha Romanova, Tony Osborn, Mike LaGiglio, and Andy Martin

References

IPRO - 332

<http://www.iit.edu/~ipro332s07/index.html>

Online ecological footprint calculators

Earth Day footprint quiz

<http://myfootprint.org/>

Powerhouse Museum BigFoot Interactive

<http://www.powerhousemuseum.com/education/ecologic/bigfoot/mid/>

Redefining Progress

<http://www.ecologicalfootprint.org/>

Global Ecological Footprint Indicator

<http://www.ecologicalfootprint.org/Global%20Footprint%20Calculator/GFPCalc.html>

IslandWood (aimed toward kids)

<http://www.islandwood.org/kids/impact/footprint/index.php>

Bobbie Bigfoot (aimed toward kids)

<http://www.kidsfootprint.org/>

Other Resources

Paper Based Calculator

Eastern Connecticut State University

www.sustainenergy.org

Ways we can make a difference

The Green Ribbon Pledge

<http://www.greenribbonpledge.org/pledge/>

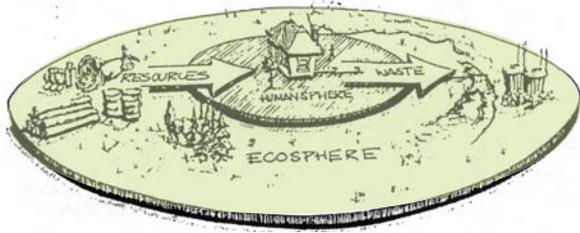


IPRO - 332

Our Energy Future The Ecological Footprint

Energy

Energy is a crucial part of our existence, playing a part in every aspect of our day-to-day lives. For being such an important topic, it is surprising how narrow the focus is on the subject—usually focusing on waste. There are many aspects of energy that are just as important, everything from raw materials to waste products, that is just as crucial as the waste, but is drastically lacking in awareness.



The **Ecological Footprint** is a measure of the load imposed by an individual on nature. The footprint is comprised of four parts: food, mobility, shelter, and goods/services.

The Ecological Footprint

Finding an effective way to tackle such a diverse topic like energy can be difficult, but there is a concept that ties all aspects of energy together: the Ecological Footprint. As the name implies, this way of looking at energy focuses on the impact our energy choices make on the environment—our “energy footprint”. Every choice we make, from a decision between driving a car or using public transportation to how many times we eat meat a week, affects the size of our energy imprint.

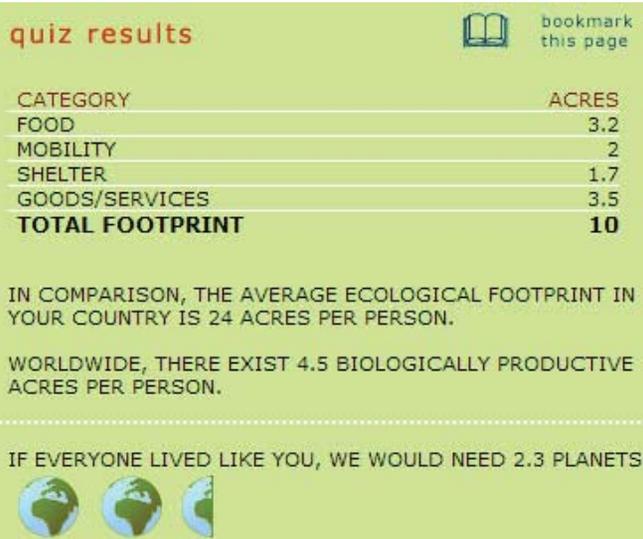
Ecological Footprint diagram from the book *Our Ecological Footprint* by Williams E. Rees, Mathis Wackernagel, and Phil Testemala

Day 1

The first day the Ecological Footprint is introduced and everyone in attendance has the opportunity to calculate their individual Footprint. After the presentation, there is an activity that encourages creativity and the use of logic to apply the concept of the Ecological Footprint to every day activities, forming a personal connection to the concept.

Lesson Plan

- 1) Discussion Starters
- 2) Pre-Test
- 3) Lecture
- 4) Calculate Individual Footprint
- 5) Activity
- 6) Homework Assignment
- 7) Post-Test



example results from quiz taken at <http://myfootprint.org/>

Day 2

The second day of the module is a follow-up on the activities of the first. The Ecological Footprint is explored further, with an emphasis on comparing their Footprints with others from around the world, in different age groups, and then analyzing these differences.

Lesson Plan

- 1) Discussion Starters
- 2) Quick Review
- 3) Video
- 4) Comparisons Activity
- 5) Evaluations



Students discussing their Ecological Footprint



Mr. Chrupka's class, De La Salle High School