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Lesson Plan for Biology and the Environment (BSC 1050)

Objectives:

- Students will gain a better understanding of how human activities affect the environment.
- Students will understand that overpopulation and overconsumption are the underlying reason for our major environmental problems.
- Students will understand that Earth's resources are limited and that their overexploitation will eventually have strong negative consequences on human populations.
- Students will reflect on how their use of Earth's resources impacts the environment and how they can take action to reduce their ecological footprint.

Lesson Plan:

Before the class meets, students will be asked to read Chapter 1 "Introducing Environmental Science and Sustainability" of their textbook:

- Raven, Peter H., Linda R. Berg., and David M. Hassenzahl. Environment, Seventh Edition. USA: John Wiley & Sons, 2010.

There will be a class discussion of the current status of the environment and how humans have contributed to the degradation of the environment.

After the class discussion, students will be asked to complete Assignment 1 (see below). The main purpose of this assignment is for students to understand that our current use of resources is not sustainable and that if actions are not taken the consequences may be dire, such as is exposed in the article "The Tragedy of the Commons" by Garrett Hardin.

Biology and the Environment (BSC 1050) Assignment 1

1. What is your ecological footprint (in global acres)?
 - a. To calculate it visit:
<http://www.footprintnetwork.org/en/index.php/GFN/page/calculators/>
2. If everyone on Earth had your same ecological footprint, how many Earths would we need to sustain the current human population?
3. What actions can you take to reduce your ecological footprint?
4. Define and give examples of common-pool resources.
5. Read the article “The Tragedy of the Commons” by Garrett Hardin:
<http://www.sciencemag.org/sciext/sotp/pdfs/162-3859-1243.pdf>
6. How do common-pool resources relate to “The Tragedy of the Commons”?