ENV 101
Introduction to Environmental Science

Essay Questions
Test Period 1: Ecosystems and Energy

The essay questions below are intended to have you think critically about and express your understanding of the environmental issues we are discussing in class. For the first test period, we are focusing on energy and how it moves through ecosystems and changes form. These questions help you consider how that happens. Use our discussions, readings, and videos as the foundation for your answer. You will submit outlines from each essay question for Homework #1, due on Friday, Feb. 12th at midnight.

1. Describe a central concept of this course, that "human beings and the natural environment have a reciprocal relationship." How does this concept relate to what you have learned about the Ecological Footprint? Describe the reciprocal relationship between humans and the natural world if we have a low Ecofootprint. Describe the relationship if humans and the natural world have a low Ecofootprint? You may use examples from class to demonstrate your understanding of the Ecofootprint and the idea of a reciprocal relationship if you wish.

2. As we discussed in class, energy transfer is the basis for all of the ecosystem characteristics and changes we see on Earth, including human population growth. Energy undergoes several transformations as it completes its journey from the sun to exponential human population growth. Using class resources (discussion, text, group work), describe this path. Your description should include a discussion of photosynthesis, trophic levels and human population dynamics.

3. LITERATURE REVIEW:

In class, we explored the population growth and subsequent decline of the human population on Rapa Nui. Use class resources, as well as THREE RESOURCES YOU DISCOVER ON YOUR OWN to:

1. Describe the population change in Rapa Nui and all of the interconnected variables that caused the population to change.
2. Describe how population changed and why.
3. Now use your understanding of Rapa Nui to consider relevant issues today. How does the change in population on the island of Rapa Nui relate to the human population in Las Vegas?
4. How does the change in population on the island of Rapa Nui relate to the human population on Earth as a whole?

Your discussion should consider resource use and population dynamics. Cite the resources that you use.