

Earth Systems I/Unit 4 Study Guide

ESIU4SG (Environmental Systems)

Study Objectives

1. Describe the nature of environmental systems.
2. Define ecosystems and evaluate how living and nonliving parts interact.
3. Compare and contrast how carbon, phosphorus, nitrogen, and water cycle through the environment.
4. Identify and evaluate the impact humans have had on one of the biogeochemical cycles.
5. Discuss the value of using a carbon footprint calculator for understanding the carbon cycle and for changing behavior.

Vocabulary

biogeochemical cycles feedback loop negative feedback loop positive feedback loop dynamic equilibrium closed system
open system eutrophication lithosphere atmosphere hydrosphere biosphere
gross primary production net primary production biomass nitrogen fixation denitrifying bacteria

Assignments

- ✓ Read: Chapter 7 (pages 183 - 205)
- ✓ Notebook: **10pts**
 - Science Behind the Story: "Biosphere 2" page 190, 191 What worked? What did not?
 - Reading Notes on Study Objectives
 - Crossword
 - Testing Your Comprehension (ques. 1-8 on page 212)
 - Seeking Solutions (ques. 3 on page 212)
- ✓ Carbon Footprint Activity **10pts** (<http://www.carbonfootprint.com/index.html>)(<http://www.safeclimate.net/calculator/>)
- ✓ Vocabulary Quiz **15pts**
- ✓ Test **20pts**

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