

Earth Systems I/Unit 3 Study Guide

ESIU3SG (Thermodynamics)

Study Objectives

1. Explain the First Law of Thermodynamics and cite examples.
2. Describe the Second Law of Thermodynamics and relate it to the Ecological Pyramid.
3. Compare and contrast the major types of species interactions.
4. Characterize feeding relationships and energy flow, using them to construct trophic levels and food webs.
5. Distinguish characteristics of a keystone species.

Vocabulary

amensalism commensalism competition food webs fundamental niche herbivory invasive species
keystone species mutualism parasitism predation realized niche resource partitioning symbiosis trophic levels

Assignments

- ✓ Reading: chapter 6 (pages 148-163)
- ✓ Notebook: **10pts**
 - Video Assignment: Nature "Great White Bear" www.pbs.org/wnet/nature/whitebear
 - Reading Notes on Study Objectives
 - Food Web/Diet Footprint Handout
 - Crossword
 - Case Study - "Inferring Zebra Mussels' Impacts on Fish Communities" (page 160)
- ✓ Ecological Pyramid Model **10pts**
- ✓ Owl Pellet Lab **10pts**
- ✓ Quiz **10pts**
- ✓ Test **10pts**

Earth Systems I/Unit 3 Study Guide

ESIU3SG (Thermodynamics)

Study Objectives

1. Explain the First Law of Thermodynamics and cite examples.
2. Describe the Second Law of Thermodynamics and relate it to the Ecological Pyramid.
3. Compare and contrast the major types of species interactions.
4. Characterize feeding relationships and energy flow, using them to construct trophic levels and food webs.
5. Distinguish characteristics of a keystone species.

Vocabulary

amensalism commensalism competition food webs fundamental niche herbivory invasive species
keystone species mutualism parasitism predation realized niche resource partitioning symbiosis trophic levels

Assignments

- ✓ Reading: chapter 6 (pages 148-163)
- ✓ Notebook: **10pts**
 - Video Assignment: Nature "Great White Bear" www.pbs.org/wnet/nature/whitebear
 - Reading Notes on Study Objectives
 - Food Web/Diet Footprint Handout
 - Crossword
 - Case Study - "Inferring Zebra Mussels' Impacts on Fish Communities" (page 160)
- ✓ Ecological Pyramid Model **10pts**
- ✓ Owl Pellet Lab **10pts**
- ✓ Quiz **10pts**
- ✓ Test **10pts**