

Biology II Unit 9 Study Guide

bio2u9sg (Ecology)

Web Resources:

Coevolution: <http://evolution.berkeley.edu/evosite/evo101/IIIFCoevolution.shtml>

Invasives: <http://www.invasive.org/>

The Sixth Extinction: <http://www.actionbioscience.org/newfrontiers/eldredge2.html>

Big Idea: "All Things Are Connected"

Learning Objectives:

- Describe** the characteristics of matter and energy in an ecosystem. **359-363, 371-374**
 - What do we know about Matter?
 - What do we know about Energy?
 - What are the five levels of ecological organization?**Concepts:** biotic factor abiotic factor community population biosphere ecosystem closed system open system biogeochemical cycle
- Describe** how matter and energy influence population size and carrying capacity of a population. **366-369, 388-389**
 - What factors influence the size of a population?
 - Define carrying capacity and explain what factors limit it.**Concepts:** community population habitat carrying capacity limiting factor gross primary productivity net primary productivity density-dependent factor density-independent factor
- Create** a table to **identify** examples of organisms that interact in the following ways in an ecosystem. Be sure to include who wins and who loses in the interaction and which way matter and energy flows. **403-404**
 - Define Symbiosis and in each case below, indicate who wins, loses, or draws.
 - Explain and provide examples of Mutualism.
 - Explain and provide examples of Commensalism.
 - Explain and provide examples of Parasitism.
 - Explain and provide examples of Predation.
 - Explain and provide examples of Herbivory.**Concepts:** carnivore omnivore detritivore trophic level herbivore symbiosis consumer producer ecology niche keystone species
- Predict and analyze** how a change in an ecosystem can affect both the number of organisms in a population and the biodiversity of species in the ecosystem. **435-444**
 - List and describe examples of natural changes in an ecosystem.
 - List and describe examples of human-caused changes in an ecosystem.
 - How can invasive species impact ecosystems?**Concepts:** biological magnification biodiversity invasive species anthropogenic tolerance curve

Assignments:

Readings: see above

Notebook: **10pts** **Your Score: /10**

- _____ notes on study objectives (right side) 4pts
- _____ summaries/review/reflections (left side) 1pt
- _____ "Dust to Dust – the carbon cycle" 1pt
- _____ Cmap of Terms/Concepts (may submit digitally or on paper) 1pts
- _____ "The Sixth Extinction" (article) 1pt
- _____ "Interpreting Population Data" 1pt
- _____ legible/organized/on-time 1pt

Invasives Species Project Wiki Page (individual): **10pts**

Ecology **Quiz1: 10pts** (SO's 1 and 2)

Ecology **Quiz2: 10pts** (SO's 3 and 4)

Ecology **Quiz3: 10pts** (SO 5)

Unit **Exam 20pts**

Extra Credit: (up to 3pts on reflection from one of the following)

- "Pleasure of Eating by Wendell Berry" (article);
- "Story of Stuff" (video)

"All things are connected."