

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>

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**
 - Population size
 - Carrying capacity

Concepts: community population habitat carrying capacity tolerance curve limiting factor gross primary productivity net primary productivity density-dependent factor density-independent factor
- Explain** how adaptations of species and co-evolution with other species are related to success in an ecosystem. **399-400**
 - Adaptations and success
 - Co-evolution and success

Concepts: ecology niche keystone species
- 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**
 - Symbiosis
 - Mutualism
 - Commensalism
 - Parasitism
 - Predation
 - Herbivory

Concepts: carnivore omnivore detritivore trophic level herbivore symbiosis consumer producer
- 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

Assignments:

Readings: see above

- Notebook: **10pts**
 - ✓ _____ 2-column notes on study objectives
 - ✓ _____ Cmap of Terms/Concepts (may submit digitally or on paper)
 - ✓ _____ "The Sixth Extinction" (article)
- Invasives Species Project Wiki Page (individual): **10pts**

Knowledge Quizzes: **15pts** (Cummulative Grade/Moodle)

Unit Test **20pts**

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

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