

EXAM REVIEW GUIDE: Spring 2009

Directions: Use this list of topics to prepare for your biology exam. We will discuss study strategies and exam format in class.

Topics

- Major themes from *Song of the Dodo*
 - Natural selection
 - Types of isolation
 - Effects of islands on evolution (insular menu)
 - Darwin & Wallace
- Microevolution, Ch. 14
 - Natural selection
 - Change in allele frequencies in gene pools from natural selection and genetic drift
 - Forms of genetic drift
- Biosphere, Ch. 34
 - Levels of organization
 - Abiotic versus biotic factors in ecosystems
 - Climate
- Population & Community Ecology, Ch. 35
 - Population sampling techniques (for pop. size)
 - Carrying capacity
 - Factors affecting population growth
 - Species interactions within communities: competition, predation, symbiosis
 - Succession & disturbances
- Ecosystems, Ch. 36
 - Energy flow & nutrient cycling
 - Trophic levels
 - Energy pyramids
 - Carbon, nitrogen, and water cycles
- Fish Kill Mystery Case Study
- Immune System, Ch. 31
 - Germ theory & disease transmission
 - Barriers to infection
 - Nonspecific immune responses
 - Antigen-specific immune responses: humoral & cell-mediated
 - Vaccines, allergies, autoimmune diseases
- Reproductive System, Ch. 33
 - Male & female anatomy
 - Hormonal control of menstrual/ovarian cycle
 - Meiosis & sex cell production
 - Fertilization
 - STD's
- HIV Case Study