

Study Guide (Ecology Section)

Honors Ecology and Anatomy Exam (10% of overall grade)

Honors Ecology Section Exam Date: 4/17/16

Anatomy Section Exam Date: TBD

****The exam will consist of multiple choice, short answer, fill in the blank, and matching****

Understand the following ecological terms by definition AND (more importantly) conceptually. For example, I may ask you to define and provide an example of habitat fragmentation. I may also ask you a conceptual question like, *How does habitat fragmentation affect local San Diego mammalian populations?* (think ROADS and our local chaparral ecosystem!)

Suggestions:

1. Create flashcards (notecards with word on one side and definition/examples on the other) to better understand definitions/examples.
2. Create a Google doc with example questions using key vocabulary. Review and answer these questions on an additional Google doc over and over until you feel comfortable with the concepts surrounding the word. Example questions can be found throughout emailed Ecology Readings.

Key Vocabulary/Concepts from Ecology Readings (emailed chapters). Concentrate on Figures (i.e. tables, graphs, and pictured examples) and make sure you can relate each to our local chaparral ecosystem and/or our ROADS Project.

Ecology Reading 1 (chapter 13.1-13.3):

- Ecology
- Levels of Organization
- Ecological research methods (observation, experimentation, and modeling)
- Biotic and Abiotic
- Biodiversity
- Keystone species
- Producers/autotrophs
- Consumers/heterotrophs

Ecology Reading 2 (chapter 13.4-13.6)

- Food chains/food webs/trophic levels
- Herbivore/carnivore/omnivore/detritivore/decomposer
- Specialist/generalist
- Hydrologic cycle
- Oxygen cycle/photosynthesis/respiration
- Energy pyramid

Ecology Reading 3 (chapter 14.1-14.3)

- Habitat/niche
- Competition (interspecific and intraspecific)
- Symbiosis (mutualism, commensalism, and parasitism)
- Survivorship curves (Type I, II, and III)

Ecology Reading 4 (chapter 14.4-14.6)

- Changes in a population's size (immigration, births, emigration, and deaths)
- Carrying capacity
- Limiting factors (density-dependent and density independent)

Ecology Reading 5 (chapter 16.1-16.3)

- Resources (nonrenewable and renewable)
- Ecological footprint (understand figure 16.4)
- Greenhouse effect/global warming (figure 16.8)
- Indicator species
- Biomagnification

Ecology Reading 6 (chapter 16.4-16.5)

- Habitat fragmentation
- Introduced and invasive species
- Sustainable development
- Umbrella species

Ecology Reading 7 (chapter 17.1)

- Taxonomy/taxon (plural taxa) (figure 17.3)
- Scientific naming (binomial nomenclature)
- *Genus* and *species* (what is each and how do you properly type or write scientific names)

These two questions will be on the exam:

1. Why does roadkill matter?

Claim, evidence, and reasoning. Include a quote/statistic (and an in text citation) from at least one of our articles read in class.

2. Why do marine mammal strandings matter?

Claim, evidence, and reasoning. Include a quote/statistic (and an in text citation) from at least one of our articles read in class.

Optional (but encouraged): one 8.5"x11" sheet of paper (ONE SIDE) to be used on our exam. EVERYTHING MUST BE HANDWRITTEN BY YOU...EVERYTHING!