

Environmental Science - Chapter 1

Section 1 – Living Things and the Environment

ecosystem
habitat
biotic factor
abiotic factor
photosynthesis

species
population
community
ecology

- What is an ecosystem?
- What is habitat? What things does a habitat provide?
- What are biotic and abiotic factors?
- List some abiotic factors. How do they affect an ecosystem and the organisms that live there? (Example: what is the importance of sunlight?)
- What are the levels of organization for an ecosystem? What is the smallest unit? What is the next largest unit? ...
- What is ecology?

Section 2 - Studying Populations

population density
estimate
birth rate
death rate

immigration
emigration
limiting factor
carrying capacity

- What is population density? (# of individuals / unit area)
- What four methods do ecologists use to determine the size of a population?
- Be able to estimate the size of a population using sampling. ($\# \text{ individuals} = \text{area} \times \text{pop. density of sample}$)
- In what two ways does a population increase?
- In what two ways does a population decrease?
- What limiting factors determine the carrying capacity of an environment?
- Be prepared to graph and interpret population information. When describing graphs:
1) what happened (change/trend); 2) when (from – to); 3) how much change

Section 3 - Interactions Among Living Things

adaptation
natural selection
niche
competition
predation
predator
prey

symbiosis
mutualism
commensalism
parasitism
parasite
host

- What are adaptations and how do they help organisms survive?
- How do adaptations reduce competition between different species?
- What is a niche?
- What are three major types of interactions among organisms?
- What are some ways organisms reduce competition?
- What are some adaptations of predator organisms?
- What are some defense adaptations of prey organisms?
- What effect does predation have on population size?
- What are the similarities and differences of the three types of symbiotic relationships?
- Be prepared to classify the type of symbiosis described in a relationship between organisms. (Examples: Red-tail hawk builds a nest on a saguaro cactus without harming the cactus.)