Ecology Unit Study Guide

1. List the 5 characteristics of living things.
2. What are the two key components in natural selection?
3. Looking at the phylogenetic tree can you pick out the Least Common Ancestor (the one that is the most different)
4. Vocabulary:
   1. Adaptation
   2. Homeostasis
   3. Theory
   4. Hypothesis

**Ecology Concepts**

1. Identify biotic and abiotic factors of an environment.
2. List the levels of biological organization.
3. What is the primary energy source that all plants need?
4. How is a food web different than a food chain?
5. Why are decomposers important in food webs?
6. What group of living organisms is always found at the bottom of a food web?
7. How much energy is lost as you move up on an energy pyramid?
8. List the steps of the water cycle.
9. Explain why the carbon cycle is important to living things.
10. Name two examples of fossil fuels.
11. What do organisms typically compete for?
12. Who usually wins a competition between two species? Why?
13. Identify an example of the following: predation, parasitism, mutualism, and commensalism.
14. Draw the steps of the Nitrogen Cycle. Be sure to include nitrogen-fixation, ammonia, nitrates, and denitrification
15. Vocabulary:
    1. Community
    2. Ecosystem
    3. Habitat
    4. Population
    5. Predation
    6. Autotroph
    7. Herbivore
    8. Heterotroph
    9. Omnivore
    10. trophic level
16. Which is more common—primary or secondary succession? Why?
17. Vocabulary:
    1. Succession
    2. Lichen
    3. Weather
    4. Climate
    5. Pioneer Species

**Population Ecology**

1. List the 5 factors that influence a population.
2. What would an exponential growth curve look like on a graph? What would a logistic growth curve look like on a graph?
3. What will happen when Earth reaches its carrying capacity?
4. Be able to interpret/construct a population pyramid. (Calculate percent of a certain demographic)
5. What method did we use to estimate the population size? How is this used in real life?
6. Vocabulary:
   1. Carrying capacity
   2. Emigration
   3. Immigration
   4. Population growth rate
   5. Natality
   6. Mortality
   7. Demography

**Human Impact on Biodiversity**

1. Explain the importance of biodiversity.
2. Explain the 5 major factors that threaten biodiversity.
3. Where does acid rain come from?
4. What is the ozone layer? Where is it located?
5. What does the ozone layer help protect?
6. What causes global warming?
7. Vocabulary:

Extinction-

Natural resource-

Sustainability-

Deforestation-