

Unit Overview and Study Guide: Ecosystems

Name: _____

Learning Targets:

1. Explain how abiotic and biotic factors affect the ecosystem (with many examples).
2. Describe how species adapt over generations (with many examples).
3. Explain how organisms can change their behavior to survive environmental changes (with many examples).
4. Defend an opinion with facts about how human activities affect the environment.

Complete the following on a separate piece of paper as it is covered in class.
Start studying for the test NOW!!!

1. How do changes in **abiotic** or **biotic** factors affect **populations** of organisms (e.g., fire, flood, drought, parasite infestation, non-native species introduction).
2. Draw two example food webs show how energy is transferred from organism to organism in an **ecosystem**.
3. Explain the many ways **photosynthesis** necessary for the ecosystem.
4. Explain the roles of **producers**, **consumers**, and **decomposers** in a food web.
5. Explain how fungi and bacteria decompose **organic** matter.
6. Explain why the amount of energy available for living organisms in an ecosystem decreases from producer to consumer.
7. Describe how a change in the population of one member of a **food web** affects populations of other members of the food web.
8. Explain why do **adaptations** in organisms occur and how do they help them survive and reproduce over generations?
9. Why is **biological diversity** healthy for an ecosystem? What happens when diversity is decreased?
10. Explain with a few examples how a species becomes **extinct** when its environment changes faster than the process of **natural selection** allows the species to adapt to the change. Include the idea that natural selection is a relatively slow process that can only be observed directly in species with very short life spans (e.g., insects, bacteria).
11. Explain 5 ways human activity contributes to the breakdowns or buildups in ecosystems and extinction.

