

Enzyme Review

1. Define enzyme, substrate, and active site.
2. What type of macromolecule is an enzyme?
3. List the name of the energy that enzymes change and how the enzyme changes it (increase or decrease)
4. Would the substrates ever get broken down or put together without the enzyme? Explain.
5. What are ALL the factors that can destroy an enzyme or prevent it from working? How does each affect the rate of an enzyme reaction?

Identify the following in #4-8: **Enzyme, Substrate, and Products**

6. Catalase reacts with Hydrogen Peroxide to form Water and Oxygen.

Lipase

7. Lipid \rightarrow fatty acid 1 + fatty acid 2

8. Amylase reacts with amylose to form maltose and simple sugars.

ATPase

9. ADP + P \rightarrow ATP

10. Lactose reacts with Lactase to form glucose and galactose.

11. In question #7 and 9, why doesn't the enzyme's name get written within the chemical equation?

Food Web Review

12. What is energy? What does ATP stand for?
13. What is the difference between a food chain and a food web?
14. What is the ultimate source of energy for most food webs?
15. What happens to most of the energy in any given trophic level?
16. Label the following food chain with the correct trophic level names and connect with arrows.
 - a. Grass Grasshopper Mouse Snake
 - b. Next, draw an energy pyramid placing the organisms in the correct tiers of the pyramid including the amount of energy that is available at each level.
17. If organisms in the second trophic level were to decrease, how would the numbers of organisms in the first and third trophic levels be impacted? What term is giving to the second trophic level?
18. What is the purpose of the decomposers in an ecosystem?