

## Enzymes (Generally Speaking)

trackstar.4teachers.org

Trackstar #: 370014

Answer the following questions using the website found in the trackstar listed above.

### Website #1:

*Click on "Enzymes: The Basics"*

1. Enzymes are \_\_\_\_\_ that serve as \_\_\_\_\_. They speed up/slow down \_\_\_\_\_, but remain \_\_\_\_\_.

*Click "Next."*

2. The \_\_\_\_\_ and a regulatory region can be found on a typical enzyme.

3. What is the purpose of the active site?

*Click "Next."*

4. Define "substrate."

5. Each enzyme acts on a \_\_\_\_\_ substrate.

*Click "Next."*

6. The \_\_\_\_\_ fit model describes the interaction between the enzyme and the substrate.

7. The substrate induces a more \_\_\_\_\_ fit of the active site around it.

*Click "Next."*

8. Describe what happens when lactose binds with the enzyme lactase.

### Website #2:

9. Catalysts are substances that \_\_\_\_\_ chemical reactions.

Name \_\_\_\_\_

Period \_\_\_\_

\_\_\_\_\_ catalysts are called \_\_\_\_\_.

10. Reactions with enzymes are up to \_\_\_\_\_ times faster than those without enzymes.

11. An \_\_\_\_\_ - \_\_\_\_\_ complex forms when the enzyme's active site binds with the substrate like a \_\_\_\_\_ fitting in a \_\_\_\_\_.

12. Because the enzyme does not form chemical bonds with the substrate, it remains \_\_\_\_\_. As a result, the enzyme molecule can be \_\_\_\_\_.

### Website #3:

13. All chemical reactions require \_\_\_\_\_ to break chemical bonds and begin the reaction.

14. Enzymes \_\_\_\_\_ the barriers that normally prevent chemical reactions from occurring by \_\_\_\_\_ the required activation energy.

15. Enzyme names end with the \_\_\_\_\_ suffix, unless they were named \_\_\_\_\_ to adoption of the *-ase* naming system.

16. For example, \_\_\_\_\_ is the enzyme that breaks down the substrate \_\_\_\_\_.

### Website #4:

17. List the six properties of enzymes. You can paraphrase them if you want.

- Enzymes
- They
- They
- Each
- They
- They

Name \_\_\_\_\_

Period \_\_\_\_

**Website #5:**

18. One of the earliest written references to enzymes is found in \_\_\_\_\_ Greek epic poems dating from about \_\_\_\_\_, where mention is made of the use of enzymes in the production of \_\_\_\_\_.

19. The Japanese have also been using \_\_\_\_\_-occurring enzymes for more than a thousand years in the production of fermented products such as \_\_\_\_\_.

*On the left hand side, in the menu, list three different ways enzymes are used today.*

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**Website #6:**

*Watch the animation and draw the example of the enzyme and substrates, labeling them both.*