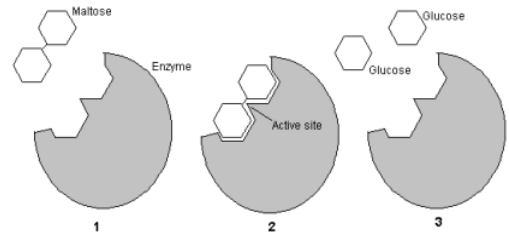


# Enzymes & Cell Metabolism

## Vocabulary Review



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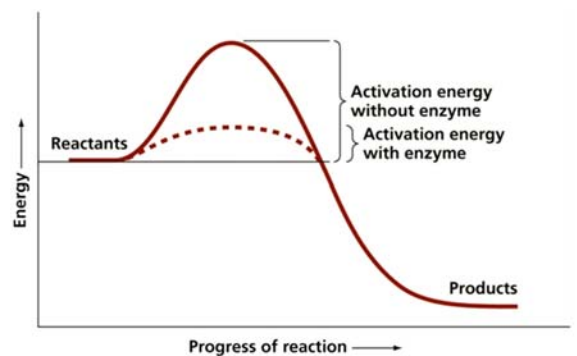
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## Across

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1. The organic, nonprotein molecules (e.g. vitamins) that assist the enzyme and may even accept or contribute atoms to the reactions.
2. Model that states that the active site of an enzyme changes shape slightly when bonded to substrate.
4. When an enzymes shape changes and it can no longer perform its function, it is referred to as being \_\_\_\_\_.
6. The name for the reactants in an enzymatic reaction.
8. The energy of \_\_\_\_\_ is the energy that must be added to cause molecules to react with one another.
11. Type of reaction that requires an input of energy.
13. Abbreviation for the common energy currency of cells.
15. Enzymes function to (raise/lower) the energy of activation for a reaction.
17. In this type of work, ATP supplies energy needed to pump substances across the plasma membrane.
18. Enzymes are highly \_\_\_\_\_ as each one will drive only one biochemical reaction.
20. Most enzymes have an optimal \_\_\_\_\_ to work most efficiently at, however if it gets too high or too low the enzyme will cease to function.
23. Three letter suffix for naming enzymes
24. Sum of all the chemical reactions that occur in a cell.
25. This metal acts as a non-competitive inhibitor and will cause death if exposed to it for a prolonged time.
26. Required by all organisms to carry out the processes of life.
27. In this type of work, ATP supplies the energy needed to permit muscles to contract, cilia and flagella to beat, etc.

## Down

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1. In this type of work, ATP supplies energy needed to synthesis macromolecules.
3. A protein that functions to speed a chemical reaction.
5. This poison is a competitive inhibitor and will cause rapid death as it interferes with ATP production.
7. Type of reaction that releases energy.
9. Produced by the thyroid gland and targets the mitochondria of most cells in the body.
10. Small part of enzyme that fits together with the substrate.
12. Inorganic ions such as copper, zinc, or iron that help enzymes function properly.
14. Small, organic molecules that must be consumed in our foods as the body cannot produce them. Without them, the body suffers from a lack of certain enzymatic actions.
15. Model that states an enzyme and substrate fit perfectly together.
16. When the bonded together, the enzyme and substrate form an enzyme-substrate \_\_\_\_\_.
19. A metabolic \_\_\_\_\_ is a series of linked reactions that begin with a particular reactant and terminate with an end product.
21. Most enzymes have a preferred \_\_\_\_\_ to work most efficiently at (e.g. pepsin likes ~2 and trypsin likes ~8).
22. The \_\_\_\_\_ site is where the coenzyme binds.