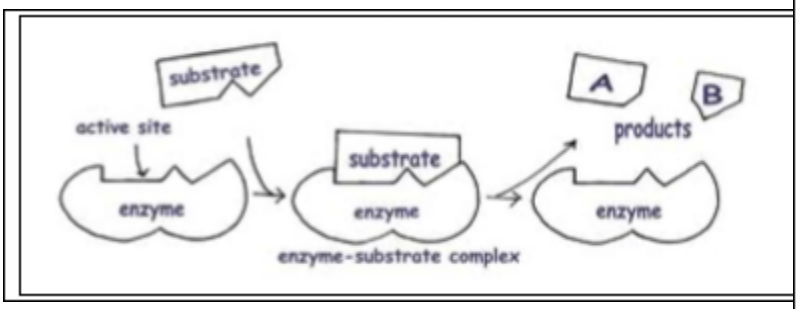
Enzymes

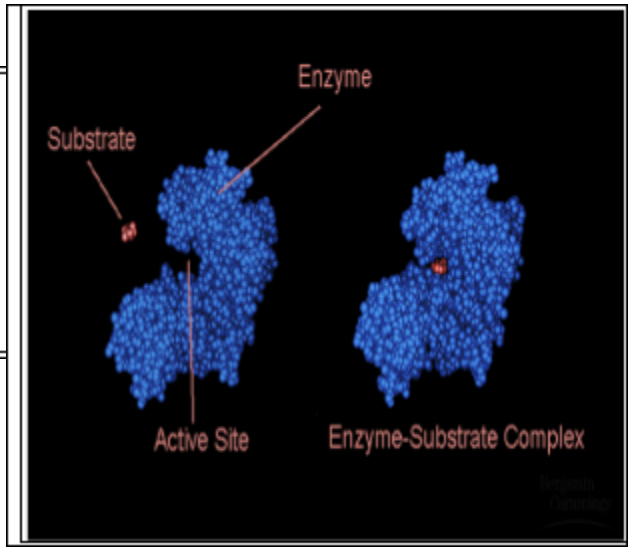
Catalysts:
A _____ is a chemical that _____ chemical reactions.

Enzymes:
Enzymes are _____that speed up chemical reactions. Therefore, we call enzymes _____ because they speed up reactions that occur in _____.

Structure of Enzymes

- Each enzyme has a special _____ to match a specific _____ . (Similar to a lock and key, where the enzyme is the _____ and the substrate is the _____)
- The substrate attaches to the enzymes _____. This is where the reaction occurs.





Example:
Your liver cells contain an enzyme to break down hydrogen peroxide into water and oxygen gas.

Features of Enzymes

- At the end of the reaction, the enzyme remains _____. Therefore, it can be used _____ to speed up other chemical reactions
- Without enzymes, most of the reactions in a cell would proceed _____ to maintain life

Competitive Inhibitors

- _____ for an enzymes active site
- Sometimes they _____ of the substrate
- If they bind to an enzyme, they will prevent (inhibit) other substrates from binding to the enzyme
- Example) Poisons like _____ and _____ act this way (leads to death if not treated immediately)

Homework
Read textbook pages 51-54
Answer questions #1b, 2, 4 and 5 on page 55