

Chemical Digestion of Macromolecules

9-9-10

2. Objectives (2 min.)

SWBAT:

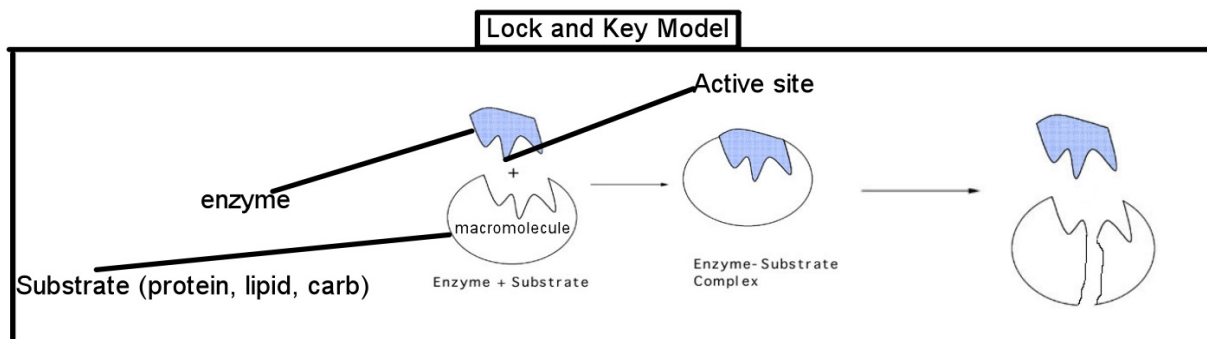
Content:

- (1) **explain** how macromolecules are digested,
- (2) **distinguish** between enzymes and substrates,
- (3) **define** and **explain** basic facts about enzymes and substrates,
- (4) **identify** the parts of the scientific method in a news article

Language: by

- (1) **explaining** the lock and key model,
- (2) using a diagram,
- (3) **note taking** in class,
- (4) **reading** and **applying** their knowledge of the scientific method

3. How macromolecules get chemically digested (15 min.)



-macromolecules get chemically digested by the help of **enzymes**

enzymes: a protein made by a living organism which speeds up chemical reactions

-enzymes are not destroyed during the process

-enzymes must have the substrate connect at its **active site** in order to speed up the reaction

substrate: the substance an enzyme acts on (in digestion it will be a carb, protein, or lipid)

*Specific
Shaped
enzymes*

4. Enzyme or substrate? (5 min.)

pancreatic
amylase

protein

lipids

amylase

pancreatic
lipases

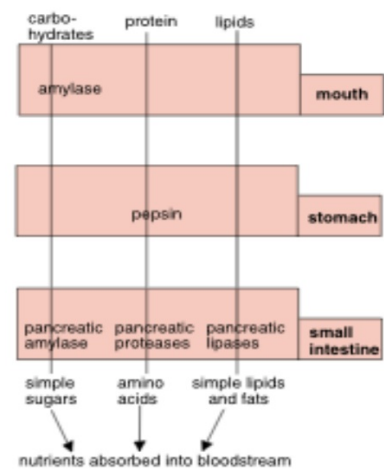
pepsin

pancreatic
protease

carbohydrate

Enzyme

Substrate



5. Weekly wrap up (8 min.)

**Lets quickly review the topics
we covered on Tuesday and
Wednesday!**

6. Scientific method in the news (20 min.)

Please read the following article, and explain how the author mentions each step of the scientific method.

7. Closing (3 min.)

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