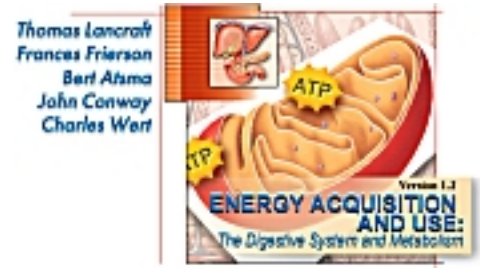


Introduction to Chemical Digestion

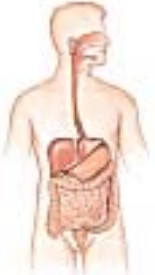
Directions:

- a. Click the "Contents" button,
- b. Open the *Digestive System* File,
- c. Click *Animations*,
- d. Click *Introduction to Chemical Digestion*



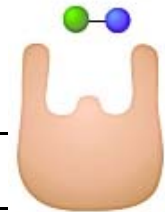
Introduction

1. Explain the function of *chemical digestion*. _____



Digestive Chemicals

2. What is the general function of *digestive enzymes*? _____



3. Identify other chemicals needed for digestion.

- a. _____
- b. _____
- c. _____
- d. _____

4. *Hydrolysis* is the breakdown of larger molecules to form smaller molecules. Water molecules are used in this process.

- a. Define *substrate*. _____
- b. Define *products*. _____

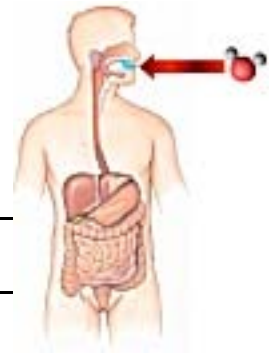


5. Analyze the reaction shown.

- a. Identify the enzyme. _____
- b. Identify the substrate. _____
- c. Identify the products. _____



6. As you have just seen, water molecules are important to *hydrolytic reactions* critical to digestion. Describe other critical water uses.



Liquefaction and Transport _____

Secretion Transport _____

Nutrient Absorption _____

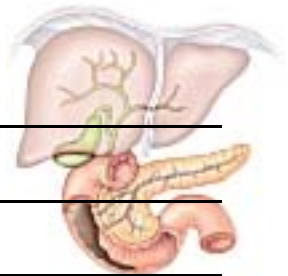
7. The stomach produces hydrochloric acid. How is HCl critical to the following:



Pepsin (a gastric enzyme) _____

Proteins _____

8. Describe the following regarding *bile*.



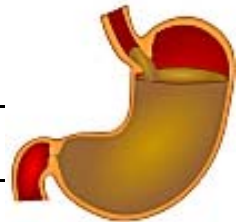
Source (organ) _____

Molecular structure _____

Primary function _____

Emulsification need _____

9. Describe bicarbonate functions.



Intestinal protection _____

Intestinal enzymes _____