

Name \_\_\_\_\_

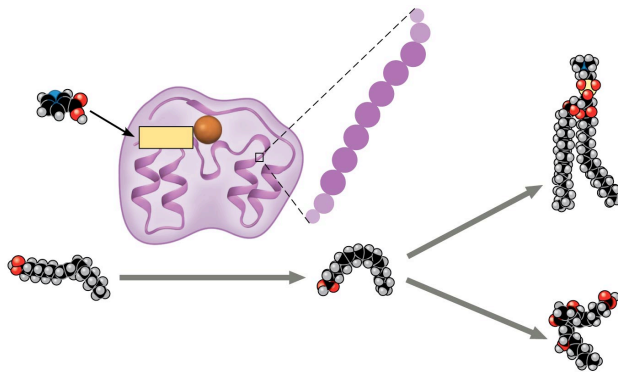
**AP Biology**  
**Chapter 41 - Animal Nutrition**

**Guided Reading Assignment Campbell's 10<sup>th</sup> Edition**

**Essential Knowledge**  
**None**

LO 2.8 The student is able to justify the selection of data regarding the types of molecules that an animal, plant or bacterium will take up as necessary building blocks and excrete as waste products.

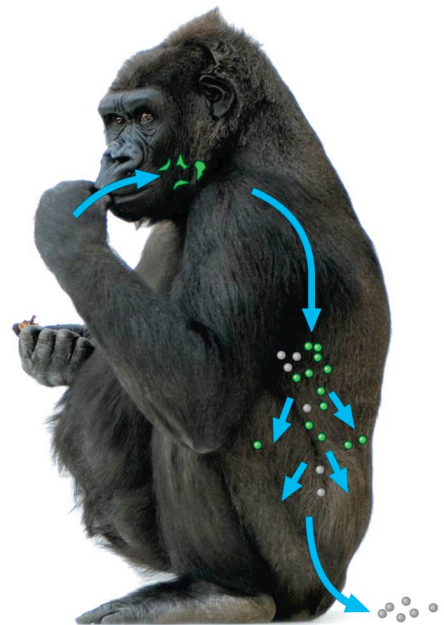
LO 2.9 The student is able to represent graphically or model quantitatively the exchange of molecules between an organism and its environment, and the subsequent use of these molecules to build new molecules that facilitate dynamic homeostasis, growth and reproduction.



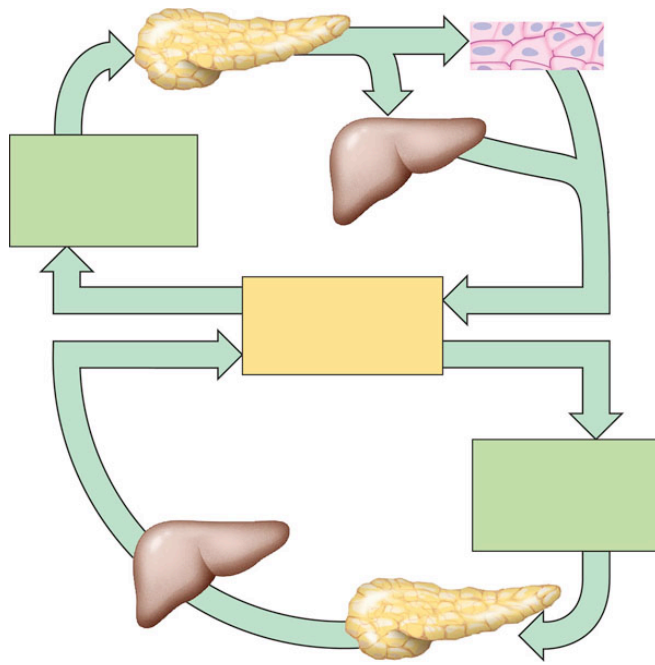
© 2014 Pearson Education, Inc.

1. How are essential amino acids obtained?
2. How can non-essential amino acids be obtained?

3. Label the 4 main stages of food processing on the diagram provided



© 2014 Pearson Education, Inc.



4. Complete the diagram below concerning animal homeostasis and blood sugar regulation.

5. How do hormones regulate appetite in humans?

6. Contrast vitamins and minerals.

7. Define the following terms:

a. Ingestion

b. Digestion

c. Enzymatic hydrolysis

d. Absorption

e. Elimination

8. Contrast intracellular and extracellular digestion.

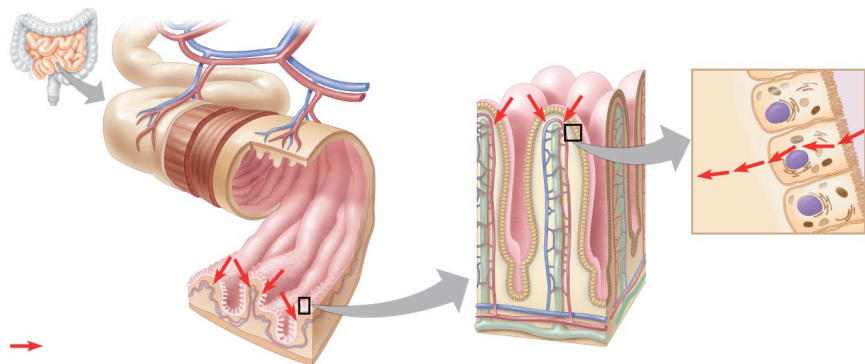
9. What is peristalsis?

10. What are the three cell types of the gastric glands and what does each of them secrete?

11. Why is it an advantage that pepsin is secreted in its inactive form

12. Complete the chart below – use it as a study guide for the process of enzymatic digestion and the respective enzymes.


13. Describe how surface area is maximized in each of the three parts of the diagram shown



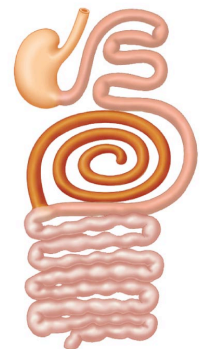
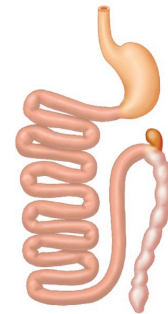
© 2014 Pearson Education, Inc.

14. What role does the liver play in homeostasis with regard to digestion?

15. Does the appendix have a role in the human body?

16. How can you infer an organism's diet based on it's teeth?

17. How do the different structures of digestive systems in carnivores and herbivores allow them to digest different food sources?



18. What is different about the ruminant's digestive system that adapts it to eating a diet of "cellulose"?

© 2014 Pearson Education, Inc.

19. How does symbiotic interactions impact digestion?