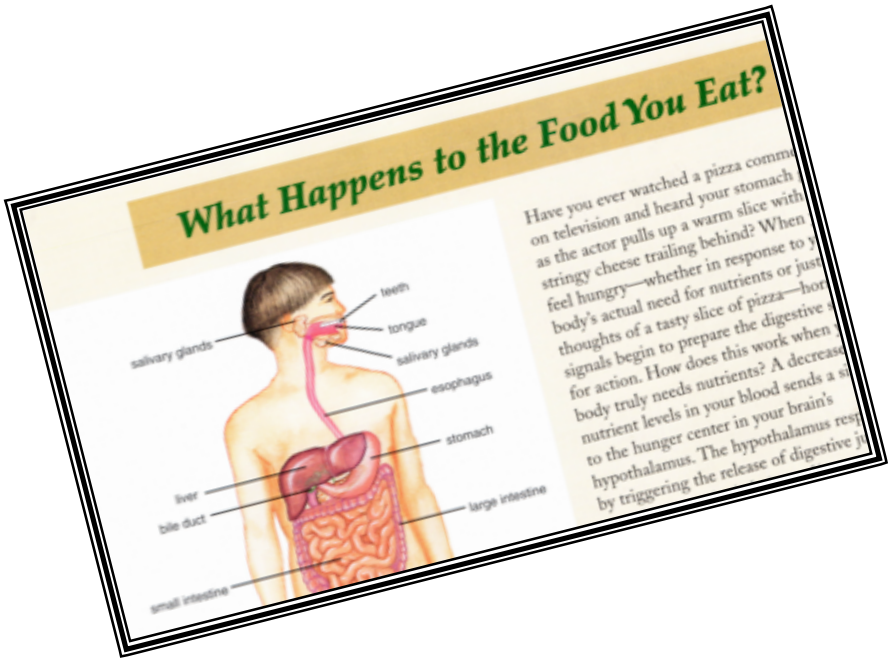
Close Reading and Text Dependent Questions in Science
What Happens to the Food You Eat (Biology – HS)

The text selection, *What Happens To the Food You Eat,* can be found in *BSCS Biology: A Human Approach, 2nd edition* pgs. 338-340.

We apologize that we cannot include this reading directly; it is copyrighted material and we do not have special permissions that would allow us to post it publically. If you have difficulty accessing this edition of the text, please check the **Science Page of Aspen/SIS** for assistance accessing it.



Look in the Student Learning Outcome (SLO) Documents for guidance on when this should be taught. These can be found on the BPS Science Department's website: http://bpsscience.weebly.com/ You will find the Student Learning Outcomes documents organized there by grade level.

What Happens to the Food You Eat (Biology – HS)
Student Questions

1. What additional information or evidence would most strongly support the author's reasoning in support of the claim that areas of the brain are involved in controlling eating?

2. What is the best explanation for how Figure E7.8b adds to and improves the author's explanation of the roles of enzymes in breaking down of food?

3. Based on the text, why is chewing your food important?

4. What is the meaning of the word manufactured in paragraph 6?

5. Choose the sentence that best describes the function of liver cells.

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Sample Answers

1. **What additional information or evidence would most strongly support the author's reasoning in support of the claim that areas of the brain are involved in controlling eating?**
   A decrease in nutrient levels in the blood signals the hunger center in the brain's hypothalamus. The hypothalamus responds by triggering the release of digestive juices into the stomach. This feeling of hunger motivates a person to find food. When not in need of nutrients, signals from sensory organs (smell, taste, sight of food) may trigger the perception of hunger. In either case, the response to hunger stimulates the secretion of hormones (ie. gastrin), which in turn stimulates further secretion of digestive juices in the stomach. Thus, this feedback system alerts the body to go find food.

2. **What is the best explanation for how Figure E7.8b adds to and improves the author's explanation of the roles of enzymes in breaking down of food?**
   Figure E7.8b visually represents the author's explanation by showing examples of enzyme action in breaking down food. It also shows the compartments in which the enzymes act. For example, the figure shows that in the small intestine, pancreatic lipases act on lipids to produce simple lipids and fats that are then absorbed into the bloodstream.

3. **Based on the text, why is chewing your food important?**
   Chewing provides the mechanical breakdown of food that we eat. It increases the surface area of food, allowing for chemical reactions to occur more quickly and it moistens food with saliva.

4. **What is the meaning of the word manufactured in paragraph 6?**
   Manufactured in this paragraph means made or produced.

5. **Choose the sentence that best describes the function of liver cells.**
   The sentence that best describes the function of liver cells is, "Liver cells monitor nutrient levels in the blood and adjust them as necessary." This means that substances that are in excess are removed/stored and substances that are needed are increased. The liver also removes and corrects potentially dangerous toxic substances such as alcohol and other drugs.