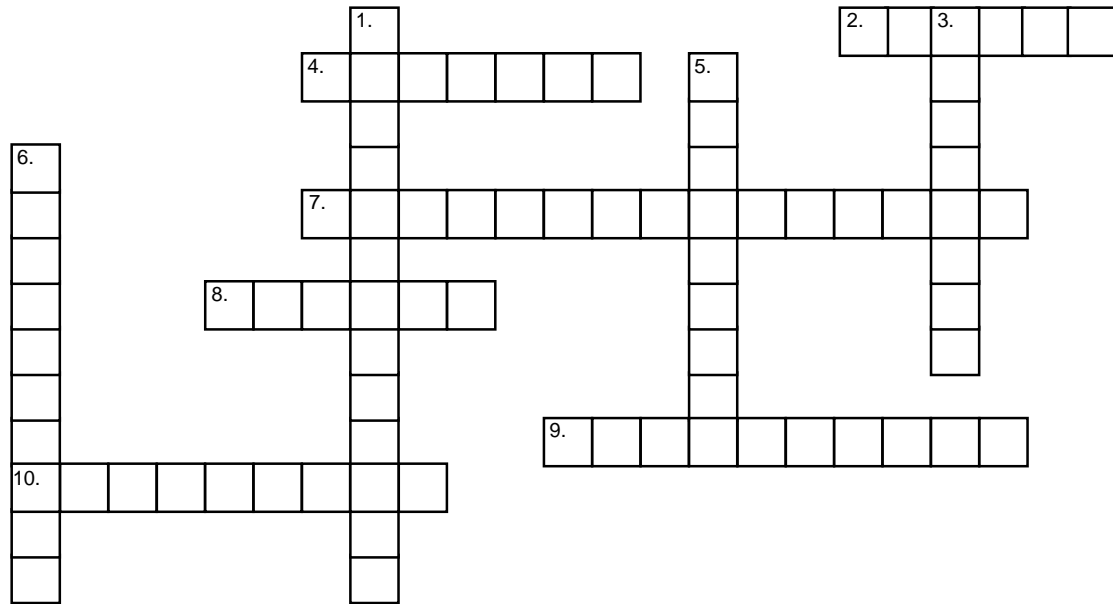


CHAPTER REVIEW

Chemistry of Food

I. Vocabulary Review

Solve the following crossword puzzle by using the clues provided.



Across

2. oils and fats
4. unit of energy
7. model for enzyme reaction (4 words)
8. catalyst for reactions
9. building blocks for proteins (2 words)
10. specific molecule that binds to a specific enzyme

Down

1. main energy source for humans
3. polymer chains of amino acids
5. process of breaking down food to smaller units
6. reaction that breaks apart molecules by adding water

II. Concept Review

If the underscored word or phrase makes the sentence true, write "TRUE" in the space provided. If the underscored word or phrase makes the sentence false, write the correct term in the space provided.

_____ 11. Carbon, oxygen, hydrogen, and nitrogen are the most important elements for living organisms.

_____ 12. The chemical energy of food is contained in the atomic nucleus.

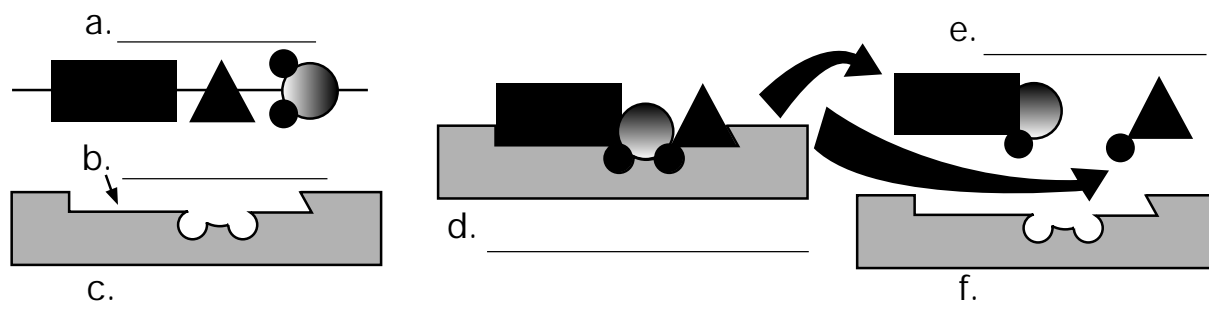
_____ 13. There are 100 000 calories of energy in a slice of bread that has 100 Calories.

Chapter Review 7 (continued)

- _____ 14. Covalent bonds form when atoms interact with each other by sharing electrons.
- _____ 15. Starch is a polymer chain of amino acids.
- _____ 16. Glucose is a complex starch that is stored in muscle cells and the liver.

III. Skills/Process Review

Use the figure to answer questions 17–19 in the spaces provided.



17. The figure depicts an enzymatic reaction. Write appropriate terms from the following list in the spaces provided. These terms may be used more than once: substrate, active site, enzyme, enzyme-substrate complex, products.
- _____ 18. Which of the following best describes the reaction depicted in the figure?
- Enzymes contribute to the splitting apart of a molecule by a chemical reaction that does not involve the addition of water.
 - Enzymes are stopped from their activities by inhibitor molecules.
 - Enzymes split a polymer into smaller molecules, and the H^+ and OH^- ions attach to the molecules.
 - The body is speeding up enzyme chemical reactions by increasing the energy available to them.
- _____ 19. If the substrate in the figure is a protein, the ultimate products of digestion are _____.
- glucose and amino acids
 - glycogen and fatty acids
 - glycerol and amino acids
 - amino acids

IV. Feature Review

20. **Science and Society: Food additives** Summarize an advantage and a disadvantage of using food additives in the American food supply. _____
