



Name _____

Period _____

Date _____

SECTION

4.4

OVERVIEW OF CELLULAR RESPIRATION

Study Guide

KEY CONCEPT

The overall process of cellular respiration converts sugar into ATP using oxygen.

VOCABULARY

cellular respiration

anaerobic

aerobic

Krebs cycle

glycolysis

MAIN IDEA: Cellular respiration makes ATP by breaking down sugars.

1. What is cellular respiration?

2. Why is cellular respiration called an aerobic process?

3. Where does cellular respiration take place?

4. What happens during glycolysis?

MAIN IDEA: Cellular respiration is like a mirror image of photosynthesis.

5. In what two ways does cellular respiration seem to be the opposite of photosynthesis?

6. In which two parts of a mitochondrion does cellular respiration take place?

7. Write the chemical equation for the overall process of cellular respiration.

8. Explain what the equation means. Identify the reactants, products, and the meaning of the several arrows.

STUDY GUIDE, CONTINUED

Use the space below to sketch and label a mitochondrion. On the sketch, write the four steps of the cellular respiration process that occur in the mitochondrion.

Cellular Respiration**Vocabulary Check**

9. The prefix *glyco-* comes from a Greek word that means “sweet.” The suffix *-lysis* comes from a Greek word that means “to loosen.” How are the meanings of these word parts related to the meaning of *glycolysis*?

10. What does it mean to say that glycolysis is an anaerobic process?

11. What is the Krebs cycle?
