



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?

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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?

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\_\_\_\_\_

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

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

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

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## 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*?

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

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11. What is the Krebs cycle?

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