

# CELLULAR RESPIRATION WEBQUEST

**OBJECTIVE:** I will be able to describe the function of, state the site and chemical equation for cellular respiration, and distinguish between two types of cellular respiration by completing a WebQuest.

**DIRECTIONS:** As you work through the WebQuest, click on the links to find answers to the questions.

## Part I: Function and Equation for Respiration

1. Click on the following three links and write a definition for cellular respiration in your own words.

[Miller and Levine Biology Book](#)  
[Biology Coach PH](#)

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2. What living things carry on the process of cellular respiration?

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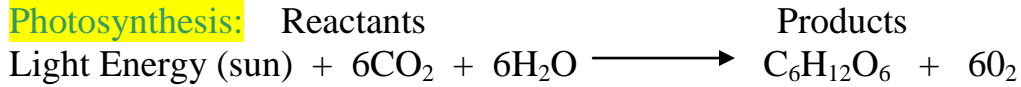
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3. Write the chemical equation for cellular respiration identifying the reactants and products.

[Equation for Cellular Respiration](#)



4. How does the equation for cellular respiration compare with the equation for photosynthesis?



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5. What is ATP? Why is it an important product of cellular respiration?

ATP

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6. Using the same link you used in Question 5, write the chemical equation for the breakdown of ATP. Does the reaction release energy (exergonic/exothermic) or absorb energy (endergonic/endothermic)? Support your answer.

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7. Using the same link you used for Question 5, write the chemical equation for the synthesis of ATP. Does the reaction release energy (exergonic/exothermic) or absorb energy (endergonic/endothermic)? Support your answer.

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## **Part II: Main Site of Cellular Respiration**

### Respiration organelle

8. What is the main site of cellular respiration in the cell?

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9. Make a sketch of the respiration organelle and label the parts.

10. What energy molecules are produced in this respiration organelle?

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### Part III: Aerobic and Anaerobic are Two Types of Cellular Respiration

#### Aerobic and Anaerobic

11. What is the difference between aerobic and anaerobic cellular respiration?

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Scroll down to Anaerobic Respiration-

12. What is lactic acid fermentation? Where does it occur?

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13. What does a build up of lactic acid cause?

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14. What is alcoholic fermentation?

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15. In what industry is alcoholic fermentation important?

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16. Which produces the larger amount of energy – aerobic or anaerobic respiration? Support your answer with information from the reading.

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17. Write a summary of cellular respiration. In your response:

- State the function of cellular respiration
- Identify the site of cellular respiration
- Compare aerobic and anaerobic forms of cellular respiration

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