**MCBD20088_0000[1] MCj02871050000[1]**

**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](http://www.millerandlevine.com/chapter/9/index.html)

[Biology Coach PH](http://phschool.com/science/biology_place/biocoach/cellresp/intro.html)

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

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

[Equation for Cellular Respiration](http://faculty.clintoncc.suny.edu/faculty/Michael.Gregory/files/Bio%20101/Bio%20101%20Laboratory/Cellular%20Respiration/cellular%20respiration1.htm)

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

Photosynthesis: Reactants Products

Light Energy (sun) + 6CO2 + 6H2O C6H12O6 + 602

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

[ATP](http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/A/ATP.html)

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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](http://projects.edtech.sandi.net/miramesa/Organelles/mito.html)

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](http://www.tutorvista.com/content/science/science-ii/respiration/types-aerobic-anaerobic.php)

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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MCj02299310000[1] 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. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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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