

# Cell Respiration Webquest

**Objective: Describe the function of, state the site and chemical equation for cellular respiration, and distinguish between anaerobic and aerobic respiration.**

## **Part I: Function and equation for respiration:**

1. Click on the following links and use the information provided to write a definition of cellular respiration in your own words.

- [BioCoach: Cell Respiration](#)

2. Identify which living things carry out the process of respiration.

3. Write the chemical equation for cellular respiration. Label the reactants and products. Where have you seen something like this equation before? Explain.

- [Find the equation](#)

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

5. What is ATP? Why is it an important product of cellular respiration? (Hint:ENERGY)

- [ATP Info](#)

6. Using the same link from #5, write the chemical equation for the breakdown of ATP. Does the reaction release energy (exothermic) or absorb energy (endothermic)? Support your answer.

7. Write the equation for the synthesis of ATP. Does the reaction release energy (exothermic) or absorb energy (endothermic)? Support your answer.

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

Use the following link to answer questions 8–10:

[organelle of respiration](#)

7. What is the main site of respiration in the cell?

8. Make a sketch of the respiration organelle and label its parts.

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

- [anaerobic vs. aerobic: Buzzle article](#)
- [Cellular respiration](#)

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

11. Click on the “Cellular respiration” link and scroll down to fermentation. What is lactic acid fermentation? Where does it occur?

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

13. What is alcoholic fermentation?

14. In what industry is alcoholic fermentation important?

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

### **Part III: Summary:**

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