

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Period: \_\_\_\_\_

### ATP, Photosynthesis and Cellular Respiration Web quest

**Objective:** In this web quest investigation, you will use the internet to research topics related to ATP, Photosynthesis and Cellular Respiration. Use the web links provided to answer the following questions. Happy searching!

#### What is Photosynthesis?

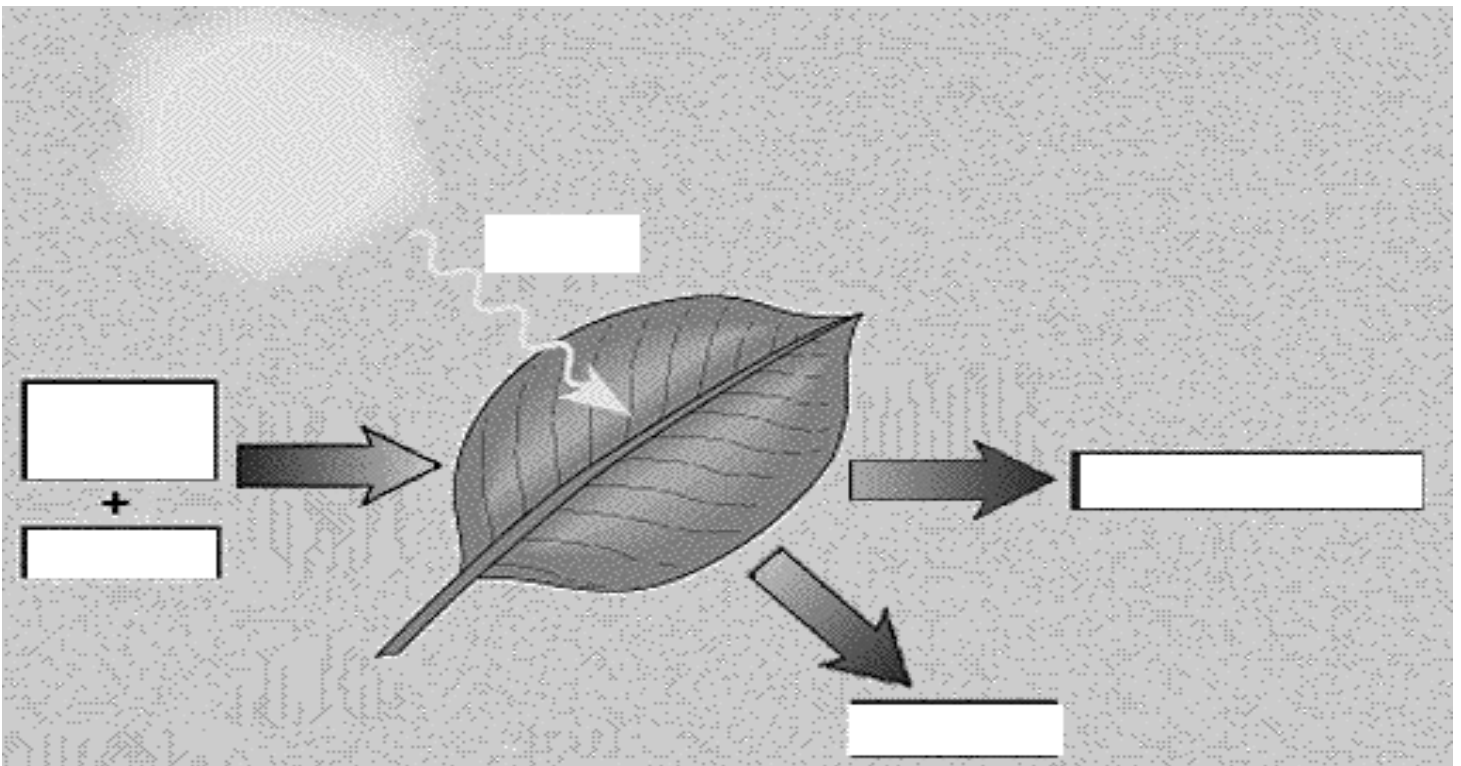
<http://www.biology.ualberta.ca/facilities/multimedia/uploads/alberta/Photo.html>

(Click on photosynthesis)

1. Where on the plant does photosynthesis take place? \_\_\_\_\_
2. The energy from the sun enters into what organelle in the plant? \_\_\_\_\_
3. How does the plant get water for photosynthesis? \_\_\_\_\_
4. What gas enters the plant for photosynthesis? \_\_\_\_\_
5. Where does it enter the plant? \_\_\_\_\_
6. What gas exits the plant during photosynthesis? \_\_\_\_\_
7. Where does it exit the plant? \_\_\_\_\_
8. What is the overall equation for photosynthesis? \_\_\_\_\_

#### Overview of Photosynthesis Labeling. Label the following picture below.

[http://www.phschool.com/science/biology\\_place/biocoach/photosynth/overview.html](http://www.phschool.com/science/biology_place/biocoach/photosynth/overview.html)



**What is ATP?** <http://www.biologyinmotion.com/atp/index.html>

1. How does energy get converted from food molecules to muscles? \_\_\_\_\_
2. According to the webpage, the analogy for ATP is that ATP works like a rechargeable \_\_\_\_\_.
3. Click on the arrow to the next page. Pull apart the ice cream. What happens when food is broken down in the body? \_\_\_\_\_

**The Mitochondria**

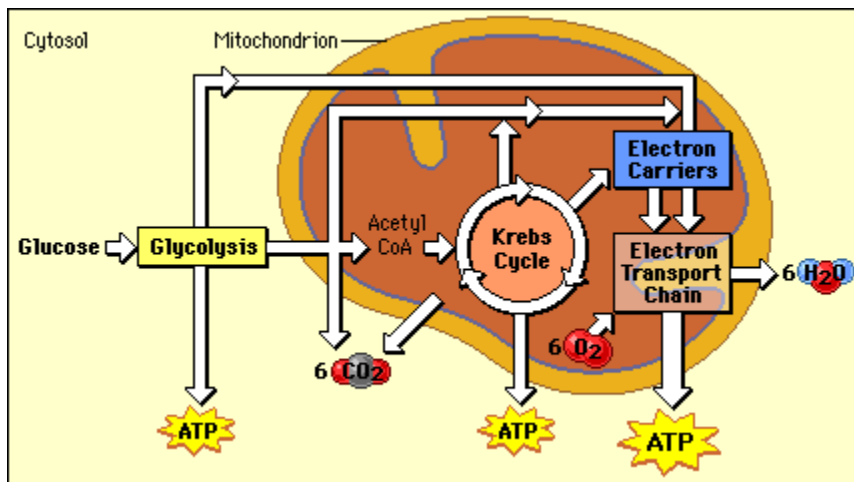
[http://www.biology4kids.com/files/cell\\_mito.html](http://www.biology4kids.com/files/cell_mito.html)

Draw and label the three main components of the mitochondria. Identify what each of the three components does.

**What is Cellular Respiration?**

[http://www.phschool.com/science/biology\\_place/biocoach/cellresp/intro.html](http://www.phschool.com/science/biology_place/biocoach/cellresp/intro.html)

Click on NEXT CONCEPT



What are the 3 steps of cellular respiration and where does each occur?

1. \_\_\_\_\_ - \_\_\_\_\_
2. \_\_\_\_\_ - \_\_\_\_\_
3. \_\_\_\_\_ - \_\_\_\_\_

## How Do Photosynthesis and Cellular Respiration Connect?

<http://www.ck12.org/book/CK-12-Life-Science-Concepts/r14/section/2.14/>

Write the equation for photosynthesis: \_\_\_\_\_

Write the equation for cellular respiration: \_\_\_\_\_

Scroll down and look at the Figure. Sketch the figure below (chloroplast and mitochondria)

The \_\_\_\_\_ of one process are the \_\_\_\_\_ of the other.

### Wrap-Up

For the following statements write P if it describes photosynthesis, or write R if it describes respiration.

- 1) Occurs in the chloroplast \_\_\_\_\_
- 2) Occurs in the mitochondria \_\_\_\_\_
- 3) Uses Oxygen \_\_\_\_\_
- 4) Produces Oxygen \_\_\_\_\_
- 5) Uses Water \_\_\_\_\_
- 6) Produces water \_\_\_\_\_
- 7) Relies directly on the sun \_\_\_\_\_
- 8) Producers are dependent on this process to produce food \_\_\_\_\_
- 9) Only plants do this process \_\_\_\_\_
- 10) Plant and Animals do this process \_\_\_\_\_
- 11) The goal of this process is to get ATP \_\_\_\_\_
- 12) The goal of this process is to make glucose \_\_\_\_\_