

Photosynthesis and Cell Respiration

Internet Activity

Illuminating Photosynthesis

- Type in the following link: <http://www.pbs.org/wgbh/nova/methuselah/photosynthesis.html#>
- Read the introduction entitled “Illuminating Photosynthesis” by Rick Groleau
- Click on the link that reads: “*Go to Illuminating Photosynthesis.*”
- Read the introductory poem.
- Click on “*The Cycle*” at the top of the box

1. Click on each of the following items, and explain what happens:

- a. The *shade* over the *window*: _____
- b. The *container* of *water*: _____
- c. The *child*: _____

2. a. What *gas* does the child provide for the plant to use? _____

b. What *gas* does the plant provide for the child to use? _____

c. Will the plant continue to produce this gas if the shade over the window is closed? (try it out to see!)

3. According to this animation, what 3 main things does the plant need for *photosynthesis* to occur?

(1) _____

(2) _____

(3) _____

Click on “*The Atomic Shuffle*” at the top of the box.

Read the introductory poem, and click on “*next*”

4. What type of molecule is shown in the leaf? _____

5. Draw one of the molecules below, as it is shown in the leaf.



6. According to the reading, these molecules “do not come from the tap.” What two places do they come from?

(1) _____ (2) _____

Click on “*next*” and watch carefully. You may click on “*replay*” to watch this again.

7. a. What is “stripped” from each water molecule?

b. From where does the cell get the energy to do this? _____

c. The stripped molecules form pairs. Where does it go after this?

Click on “*next*”

8. a. What gas enters the leaf? _____

b. This gas enters through “holes” in the leaf. What are they called? _____

Click on “*next*”

9. What molecule is formed *once again*? _____

Click on “*next*”

10. Another molecule is formed (“and boy is it sweet”). Draw this molecule below as shown.



11. What is the name of this molecule? _____

Click on “*Three Puzzlers*” at the top of the box.

12. Answer each of the following questions, and explain *in your own words*.

a. Can a tree produce enough oxygen to keep a person alive? Explain.

b. Can a plant stay alive without light?

c. Can a plant survive without oxygen? Explain.

Cell Respiration Webquest

Type in the following link: http://glencoe.mcgraw-hill.com/sites/dl/free/0078802849/383932/BL_25.html

Read the instructions and follow the steps on the left hand side. Use the guide to answer the questions below (you can skim through the review on photosynthesis):

1. Describe the relationship between photosynthesis and cellular respiration. What does this mean about them?
2. What is the equation for cellular respiration?
3. What two processes does cellular respiration include?
4. In what organelle does cell respiration take place in?
5. What are the two products of glycolysis?
6. What are the end products of the Krebs’ cycle? Why is this?

In the boxes below, draw the correct order of the tiles
