Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

**PHOTOSYNTHESIS**



1. What kind of organisms have photosynthesis?

\_\_\_\_\_***plants and algae***\_\_\_\_\_\_\_\_\_\_\_

2. Where does the energy come from for photosynthesis?\_\_***sun***

3. What is the main product of photosynthesis? \_\_***glucose***\_\_\_\_\_

4. What useful gas is released to the air during photosynthesis? \_\_\_\_\_***oxygen***\_\_\_\_\_\_\_\_\_\_

GIVE A CHEMICAL DEFINITION OF PHOTOSYNTHESIS using these chemical element symbols **C H O** which stand for Carbon, Hydrogen, and Oxygen.

7. ***light***

***energy***

9.

6CO2 + 6H2O + C6H12O6 + 6O2

Reactants PRODUCTS

10. In which plant part does photosynthesis take place? \_ ***leaves***\_\_\_\_\_\_\_\_\_

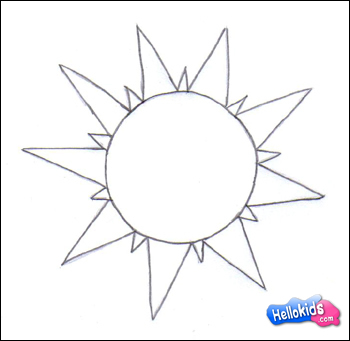
(The answer is NOT chloroplasts.)

11. What do chloroplasts do? \_make \_\_\_\_\_\_***glucose***\_\_\_\_\_\_\_\_

12. What happens to the energy from the sun? ***Light energy is transformed into chemical energy.***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

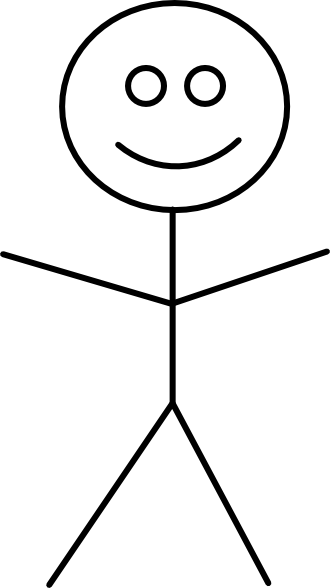
13-17. Sketch a plant and place arrows in the sketch showing the photosynthesis cycle. Label arrows with the chemical symbols you used in 5-9 above.

**H2O**





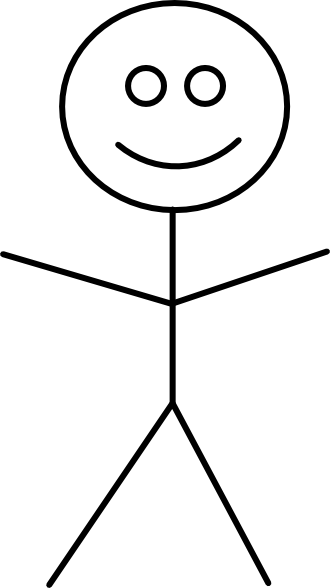
light energy



**CO2**



**O2**

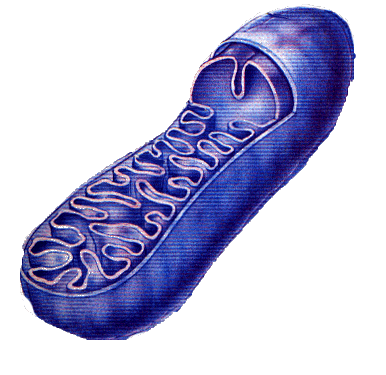


**C6H12O6 and**

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

**CELL RESPIRATION**



1. Cell respiration takes place in what organelle? \_\_***mitochondrion***

2. Cell respiration requires what gas to be present? ***oxygen***\_\_\_\_

3. 3. Cell respiration uses what food? \_\_\_***glucose from food we eat***

4. Cell respiration produces what waste and side product? ***\_\_CO2 + H2O***\_\_\_\_\_\_\_\_\_\_\_

5. Cell respiration accomplishes what (main product)? \_\_\_\_***energy--ATP***\_\_\_\_\_\_\_\_\_\_\_\_

GIVE A CHEMICAL DEFINITION OF CELL RESPIRATION using these chemical element symbols **C H O** which stand for Carbon, Hydrogen, and Oxygen.

C6H12O6 + 6O2 6CO2 + 6H2O + ATP (energy)

PRODUCTS

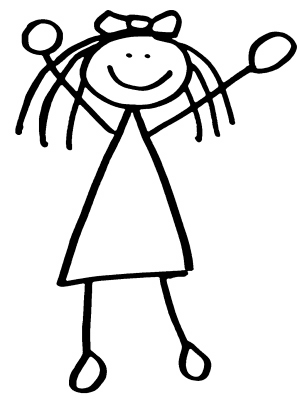
REACTANTS

10. Why do you need plants for energy? ***Plants give us O2 and sugar to convert to energy***.

11-15. Sketch a stick figure and place arrows in the sketch showing the cellular respiration cycle. Label the arrows with the chemical symbols you used in 5-9 above.

[](http://www.google.com/url?sa=i&source=images&cd=&cad=rja&docid=71UpUt94OgAifM&tbnid=BhLeAer_MVQCuM:&ved=0CAgQjRw&url=http://www.easy-drawings-and-sketches.com/draw-a-tree.html&ei=QVCmUuPiOYP3oATW84DACg&psig=AFQjCNGr6OHtv5LcXQYVazfZRrebb3Kq9g&ust=1386717633978140)

**O2**



**H2O**

**CO2**

[](http://www.google.com/url?sa=i&source=images&cd=&cad=rja&docid=71UpUt94OgAifM&tbnid=BhLeAer_MVQCuM:&ved=0CAgQjRw&url=http://www.easy-drawings-and-sketches.com/draw-a-tree.html&ei=QVCmUuPiOYP3oATW84DACg&psig=AFQjCNGr6OHtv5LcXQYVazfZRrebb3Kq9g&ust=1386717633978140)

**ATP (energy)**

**C6H12O6**

