

Photosynthesis Part I Notes

Where does Photosynthesis Begin?

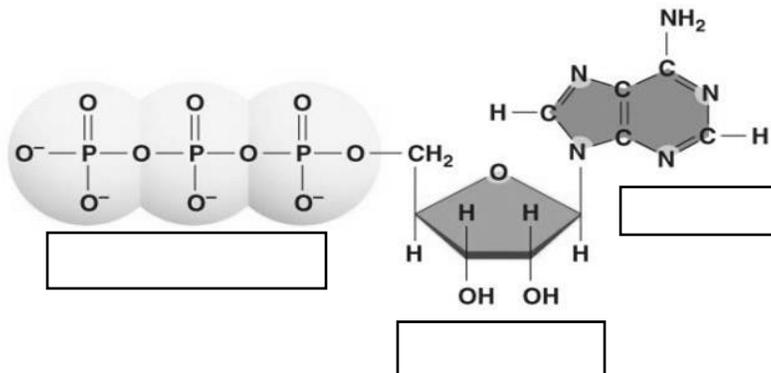
Name: _____ Date: _____ Block: _____

Autotrophs & Heterotrophs

1. Organisms such as plants, **which make their own food** are called what? _____
2. Give an example of an autotroph or give the other name that they are called. _____
3. Other organisms that **cannot** use the sun's energy directly are known as... _____
4. Give an example of a(n) heterotroph. _____

Chemical Energy & ATP

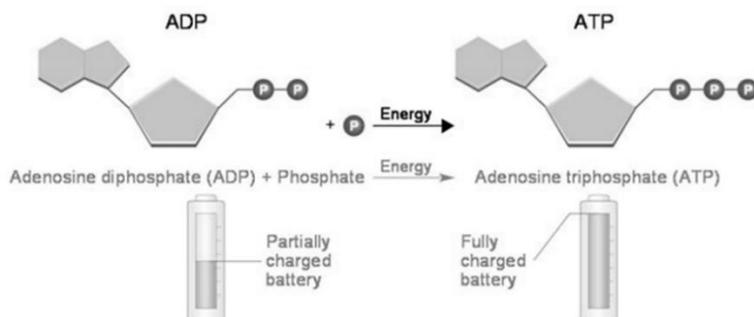
5. One of the main chemical compounds that cells use to **store** and **release** energy is called what?
6. Label the ATP (adenosine triphosphate) molecule below.



7. What macromolecule does ATP most resemble? _____ or _____

Storing & Releasing Energy

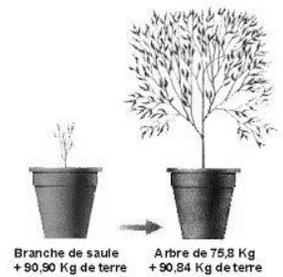
8. _____ is a compound that looks like ATP, except it has two phosphate groups instead of three.



9. When a cell **has energy** available, it can store small amounts of it by adding a
10. When energy is stored in ATP is released, it simply breaks the bond where?

11. Because a cell can subtract the **third** phosphate group, it can release energy when?

12. Name a couple of things that with enough energy, **ATP can power**.



Investigating Photosynthesis

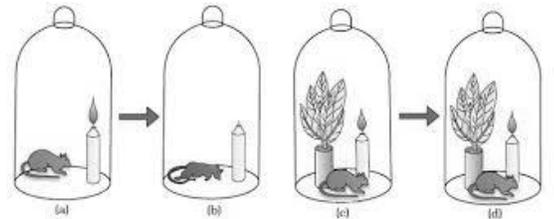
13. What is the key cellular process called identified with energy production? _____

14. Let's break down the word: **PHOTO** means: _____ **-SYNTHESIS** means: _____

15. Who was the Belgian scientist that found that plants grew by taking material out of the soil?

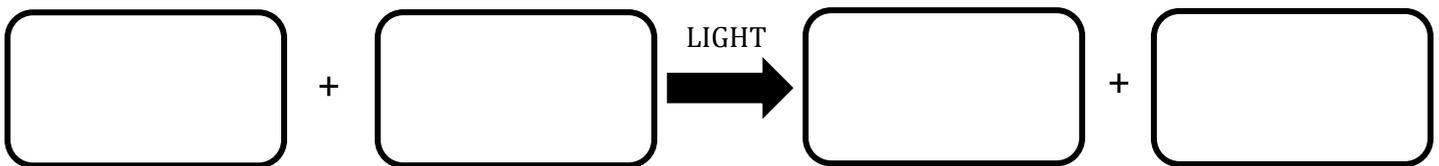
16. What was the name of the minister that performed experiments using mice and found that plants **give off oxygen**?

17. Name the scientist that later showed that the effects observed by the scientist above occurred only in the **presence of light**. _____



Photosynthesis Equation:

18. In the boxes below, fill in the Photosynthesis equation. **BE SURE TO KNOW THIS FORWARD AND BACKWARD!**



Light & Pigments

19. In addition to water and carbon dioxide, photosynthesis requires light and _____ a molecule in chloroplast.

20. A _____ is a substance that absorbs certain wavelengths of light and reflects others.

21. Chlorophyll **absorbs** what colors? _____ and **reflects**? _____

22. **Chlorophyll a** appears? _____ **Chlorophyll b** appears? _____

23. On an absorption spectrum, where the **curve peak** is, the light is being...._____, where the **curve dips**, light is being _____ (**most visible**).