Unit 4: Photosynthesis

\_\_\_\_\_\_\_\_\_\_\_\_\_- an organism able to make its own food through \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Ex:

\_\_\_\_\_\_\_\_\_\_\_\_- an organism that must take in food from another source Ex:

* Plants can make its own food [\_\_\_\_\_\_\_\_\_\_] by using light from the Sun. A by-product of this process is \_\_\_\_\_\_\_\_\_\_\_, which is the gas which all animals need to survive.

Draw cycle:



Photosynthesis- is the process by which plants use the energy from sunlight to produce sugar (\_\_\_\_\_\_\_\_\_\_)

* is also called “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”, as carbon from CO2 is “fixed” or incorporated by plants into organic glucose
* Occurs inside \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for eukaryotic cells

EQUATION:

|  |  |
| --- | --- |
| **Light Reactions** | **Dark Reactions** |
| * Happens only when light is present
* \_\_\_\_\_\_ is split apart and \_\_\_\_\_\_\_\_ is released
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ molecules are needed to capture light energy

Where do they occur? | * \_\_\_\_\_\_ require presence of light
* CO2 is “\_\_\_\_\_\_\_\_” and \_\_\_\_\_\_\_ is made
* Also called “light-independent” reactions or the Calvin-Benson Cycle

Where do they occur? |

Draw two stages:

Plants do not use all \_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of light for photosynthesis.

* Plants use mostly wavelengths of light from the blue and red spectrum and produce the most \_\_\_\_\_\_\_\_\_
* Plants reflect \_\_\_\_\_\_\_\_ light and make the least \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ Because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is green!