**Photosynthesis & Respiration**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**- A process by which plants convert sunlight, water, and carbon dioxide into food energy (sugar), oxygen and water.
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**- An elongated cell organelle containing chlorophyll where photosynthesis takes place.
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**- A green molecule which uses light energy from sunlight to change water and carbon dioxide gas into sugar and oxygen
* Photosynthesis Equation

**H20 + CO2 + light 🡪 O2 + C6H12O6**

\_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_ ( )

* The \_\_\_\_\_\_\_\_\_\_\_\_ absorbs the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Chlorophyll then uses sunlight to change water, carbon dioxide and, nutrients from the soil.

The chlorophyll processes the ingredients to make \_\_\_\_\_\_\_\_\_ (plant food) and \_\_\_\_\_\_\_\_\_\_\_\_.

But, what about animals?

* Animals make the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ that plants need, and plants make the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ that animals need.
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**- The process by which the chemical energy of "food" molecules is released and changed into ATP.
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**- Rod-shaped organelles with a double membrane which converts the energy stored in glucose into ATP for the cell.
* Respiration Equation

**O2 + C6H12O6 🡪 H20 + CO2 + ATP**

\_\_\_\_\_\_\_ \_\_\_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

( ) \_\_\_\_\_\_\_\_\_

* Animals & Plants Rely On Each Other

Animals use:

* + \_\_\_\_\_\_\_\_\_\_\_\_\_ (from producers/plants)
  + \_\_\_\_\_\_\_\_\_\_\_\_\_ (from producers/plants)

Plants use:

* + \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ (from animals)

The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ change the O2 and sugars (food) into CO2, H2O, and ATP

* Comparing Equations:

**Photosynthesis Equation:**

**H2O + CO2 + light 🡪 O2 + C6H12O6**

ATP=

**Respiration Equation:**

**O2 + glucose 🡪 H2O + CO2 + ATP**

What do you notice about the two?

\*They are \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of each other!