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

H_2O	+	CO_2	+	light	→	O_2	+	$C_6H_{12}O_6$
_____		_____		_____		_____		_____
		_____						( )

- 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 _____.

  <u>But, what about animals</u>?
- 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

O_2 + $C_6H_{12}O_6$ → H_2O + CO_2 + ATP
_____ _____ _____ _____ _____
( ) _____

- Animals & Plants Rely On Each Other

  Animals use:
  - _____ (from producers/plants)
  - _____ (from producers/plants)

  Plants use:
  - _____ _____ (from animals)

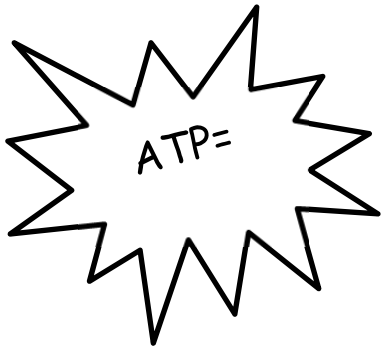
  The _____ change the O_2 and sugars (food) into CO_2, H_2O, and ATP
- Comparing Equations:

Photosynthesis Equation:

H_2O + CO_2 + light → O_2 + $C_6H_{12}O_6$

Respiration Equation:

O_2 + glucose → H_2O + CO_2 + ATP



What do you notice about the two?

*They are _____ of each other!