Photosynthesis / respiration / Transpiration

**Photosynthesis:**

Definition: Plants use the energy in sunlight to take in carbon dioxide and water to make their own food (glucose or sugar)

***sun energy + carbon dioxide + water = glucose (sugar) food + oxygen***

**Photosynthesis Formula!**

6CO2 + 6H2O + Sunlight Energy = C6H12O6 + 6O2

Carbon dioxide + Water + Sunlight = Glucose (sugar) + Oxygen

**Photosynthesis!**

-Photosynthesis takes place in the leaves of plants

-Chlorophyll (green stuff) in plants does the photosynthesis.

-Chlorophyll is found inside Chloroplasts

-Oxygen is released, and Carbon Dioxide enters   
 through the Stomata in leaves

**Respiration**

**Respiration Formula!**C6H12O6 + 6O2 = 6CO2 + 6H2O + Energy

Glucose + Oxygen = Carbon dioxide + Water + Energy

**Definition**: Respiration is the process by which the energy in glucose is broken down to be used.

-Both plants and animals use respiration to get energy!

-For glucose to be broken down, you need oxygen!

**Cellular Respiration**:   
**Definition**: Cellular Respiration is the process by which the energy in glucose is broken down to be used

-Respiration that takes place in cells.

*-Uses oxygen to convert glucose into ATP (energy for use)*

[**http://www.sumanasinc.com/webcontent/animations/content/cellularrespiration.html**](http://www.sumanasinc.com/webcontent/animations/content/cellularrespiration.html)

**Transpiration**:

**Definition**: Transpiration is the process that pulls water through plants.

-This begins with evaporation through the stomata of leaves.

-As water evaporates out, water from the roots flow through the plant to the leaves.

-As water flows through the plant, it brings nutrients, minerals, and sugars to every part of   
 the plant.

[**http://www.sciencemag.org/site/feature/misc/webfeat/vis2005/show/transpiration.swf**](http://www.sciencemag.org/site/feature/misc/webfeat/vis2005/show/transpiration.swf)

[**http://www.phschool.com/science/biology\_place/labbench/lab9/intro.html**](http://www.phschool.com/science/biology_place/labbench/lab9/intro.html)