**Photosynthesis, Cellular Respiration, and Transpiration Notes**

**Photosynthesis**

Equation for Photosynthesis:
6 CO2+ 6 H2O → C6H12O6 + 6 O2

* This is the process by which plants make their own \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Photosynthesis takes place in the \_\_\_\_\_\_\_\_\_\_\_\_!
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are found in the cells of the leaf and contain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (a green pigment that absorbs the light energy from the sun)
* Sunlight is used to provide the energy necessary for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to take place
* Plants use \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the air and water taken in through the roots to make sugar (food)
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is produced during the process of photosynthesis
* The oxygen is released into the air, through openings, or pores, in the leaf called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Photosynthesis provides the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the atmosphere that most living organisms need

**Cellular Respiration**

Equation for Cellular Respiration:
C6H12O6 + 6 O2 → 6 CO2 + 6 H2O + Energy

* Food=Energy
* The food (sugar) that is created through the process of photosynthesis is used to provide \_\_\_\_\_\_\_\_\_\_\_ needed by the plants to perform life functions
* To get the energy, plants must break down the \_\_\_\_\_\_\_\_\_\_\_\_\_ in a process called respiration

 In this process, \_\_\_\_\_\_\_\_\_\_\_\_\_ from the air combines with the sugar
 The sugar is then broken down into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is then released
 The released energy can then be used by the plant to perform \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
 Carbon dioxide and water that are formed are given off through the \_\_\_\_\_\_\_\_\_ (transpiration)

**Transpiration**

* Some of the water taken in through the \_\_\_\_\_\_\_\_\_\_\_\_ of plant is used in the process of photosynthesis
* MOST of the water is lost through the \_\_\_\_\_\_\_\_\_\_\_\_\_
* The loss of water through the leaves is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Without a way to control transpiration, plants would \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Plants are able to control transpiration by using \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Guard cells are located on the \_\_\_\_\_\_\_\_\_\_\_\_\_ of the leaf and open and close the stomata (pores)
* When the stomata are closed, no water is released.

**Plant Tropisms on the Back!**

Plant Tropisms:
STIMULUS🡪A change in the environment that causes a response or reaction.

RESPONSE 🡪The reply to the change in the environment or stimulus.

DORMANCY 🡪An inactive period when the plant or seed prepares for harsh conditions

Dormancy allows various species to survive in particular environments.

Dormancy helps to ensure seeds will germinate when conditions are favorable for survival of the small seedlings.

TROPISMS🡪Plants can change their growth in response to their environment.

PHOTOTROPISM🡪The way a plant grows or bends in response to LIGHT.

GRAVITROPISM🡪The way a plant grows in response to GRAVITY.

HYDROTROPISM🡪The way a plant grows in response to water.

THIGMOTROPISM🡪The way a plant grows or bends in response to touch.