**1. Classification:** Domain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, Kingdom: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2. Cells:** Prokaryotic or Eukaryotic?

Meaning?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What unique structures do plant cells have compared to animal cells?

A.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_B.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_C.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Does a plant cell have a plasma membrane?\_\_\_\_\_\_\_\_\_\_\_

**3. Obtaining Energy:** Autotroph or Heterotroph?

Meaning?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **4. What is the overall Photosynthesis equation?**

Can you balance this equation? (How many of each molecules are used/made?)

**5.** Where do plants get: **CO2? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

How does it get into the plant?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is the role of the guard cell? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Into the cells?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How does **O2** leave the plant?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**6.** Where in the plant does most of the P.S. take place? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What structure moves **C6H12O6** to the rest of the plant?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**7.** How do plants get: **H2O? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

What structure moves **H2O** up to the leaves?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**8. P.S. has two parts.**

|  |  |
| --- | --- |
| **I. Light Dependent Reaction:** | **II. Light Independent Reaction** |
| Energy from the sun splits \_\_\_\_\_\_\_\_\_\_\_ to form 🡪 \_\_\_\_\_\_\_\_\_\_\_ + ATP + NADPH | is also called: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Uses ATP + NADPH and fixes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (end product) |

**9.** All of the biomass in a 100 foot tree (the roots, stems, leaves, bark) came from where? (What is the carbon source??)

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

**10.** Do plant cells use Cellular Respiration? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Do they have an organelle that specializes in respiration?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**11. Evolution** in Plants- fill in the key features of these groups:



**12.** The life history of all land plants includes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
which means that **two** forms of the same plant exist.

**Gametophyte:** a (**haploid or diploid**?) plant which produces male & female \_\_\_\_\_\_\_\_\_\_\_\_\_\_

(= haploid sex cells) through the process of (**mitosis or meiosis**?).

Gametes fuse at fertilization, and grow into a sporophyte.

**Sporophyte:** a (**haploid or diploid**?) plant which produces spores (haploid cells) through the

process of (**mitosis or meiosis**?). Spores grow and develop into the gametophyte.



\_\_\_\_\_\_\_?