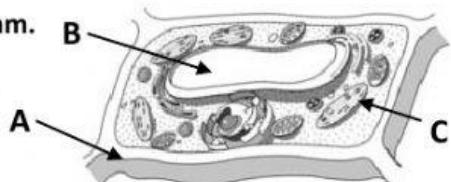


Name: _____ Date: _____ Period: _____

Homework: Plant Systems

Answer the following questions using the plant cell diagram.

1. Which letter is labeling the central vacuole? _____
2. Which letter is labeling the chloroplast? _____
3. Which letter is labeling the cell wall? _____



For each statement below, place the organ system in that blank that is related to the statement:

ROOT

STEM

LEAF

4. This organ is responsible for absorbing sunlight.

5. This organ is responsible for absorbing water.

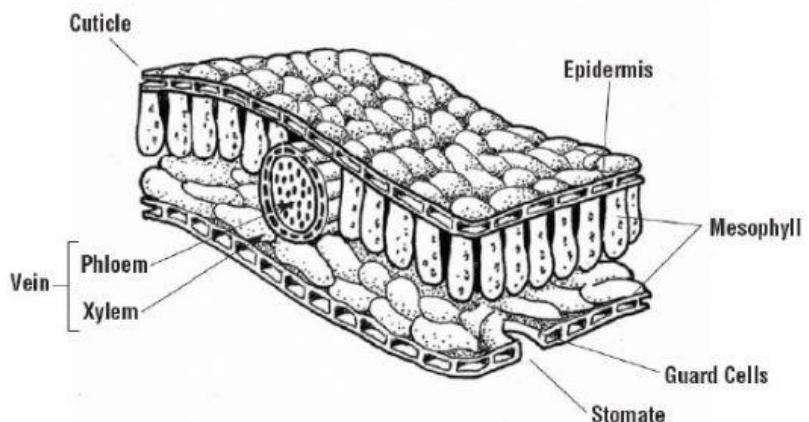
6. This organ helps support the leaves and flowers of a plant.

7. This organ is covered in stomata for gas transfers.

8. This organ is responsible for absorbing nutrients like nitrogen.

9. This organ has vascular tissue to distribute water throughout the plant.

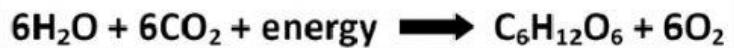
Leaf Tissue



10. Which part of the leaf carries water through the leaf? _____
11. What part of the leaf allows gases to enter and exit the leaf? _____
12. Which part of the leaf distributes organic nutrients like sugar? _____
13. What part of the leaf is a waxy covering that prevents water loss? _____
14. Which part of the leaf controls the size of the stoma? _____

Use your notes to complete the following questions about plants.

1. Which gas is *absorbed* by plants in order to perform photosynthesis?
A oxygen B nitrogen C carbon dioxide D helium
2. Which gas is *released* from plants as a result of performing photosynthesis?
A oxygen B nitrogen C carbon dioxide D helium
3. The gases being released and absorbed from the plant are coming out of tiny holes in the leaves. What are these tiny holes called?
A cuticles B xylem C stomata D phloem
4. Plants absorb solar energy during photosynthesis. This energy is converted to what form?
A mechanical B chemical C kinetic D electrical
5. To prevent water from evaporating from its leaves, a plant will keep its stomata closed during the heat of the day. What cells regulate this process by controlling the size of stomata?
A gamete cells B guard cells C root cells D vascular cells
6. What is the primary function of xylem tissue inside a vascular plant?
A absorbing nitrogen from the soil C absorbing solar energy
B producing seeds for new plants D distributing water and minerals
7. The root word *synthesis* means “*to create*”. Based on your vocabulary reference sheet, what energy source is used by plants which provides the reason for the prefix *photo-* in the word photosynthesis?
A water B oxygen C light D heat
8. Which organelle allows a plant to perform the process of photosynthesis?
A Golgi apparatus B nucleus C mitochondria D chloroplast
9. Which of the following sets of plant organs would be used during plant reproduction?
A flowers and cones C roots and flowers
B stems and cones D leaves and stems
10. Which of the following functions is *not* carried out by the root system of a plant?
A absorbing water from the soil C storing energy for later use
B producing food for the plant D anchoring the plant in the ground



Using the chemical equation above, write a brief description of photosynthesis.