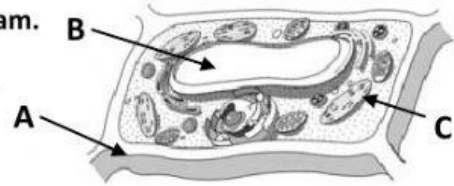


Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

## 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:

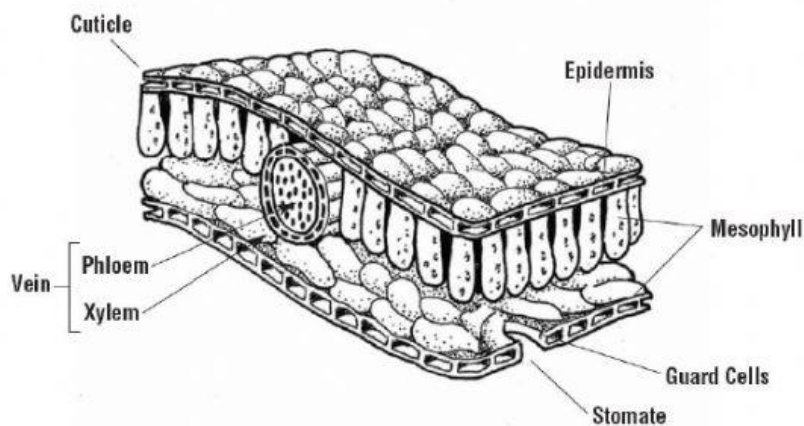
**ROOT**

**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?

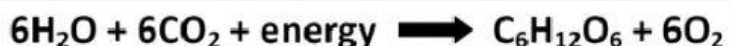
- A Golgi apparatus                      B nucleus                      C mitochondria                      D chloroplast

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.
