

Test date: \_\_\_\_\_

Name: \_\_\_\_\_

**BAT list – Regular Biology**  
**Botany: Photosynthesis and Respiration:**  
**Chapter 4**

**Vocabulary: Cell Energy**

Cellular respiration  
Product

ATP  
Reactant

Aerobic  
Photosynthesis

Anaerobic  
Pigment

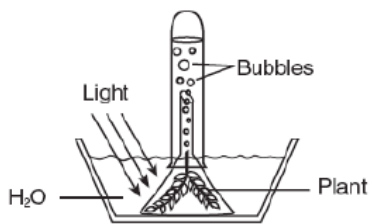
Chloroplast  
Chlorophyll

Chapter 4.2-4.3 Photosynthesis (pg 101-110)

1. Write out the balanced equation for photosynthesis. CIRCLE the products and BOX the reactants
2. What is this a diagram of?



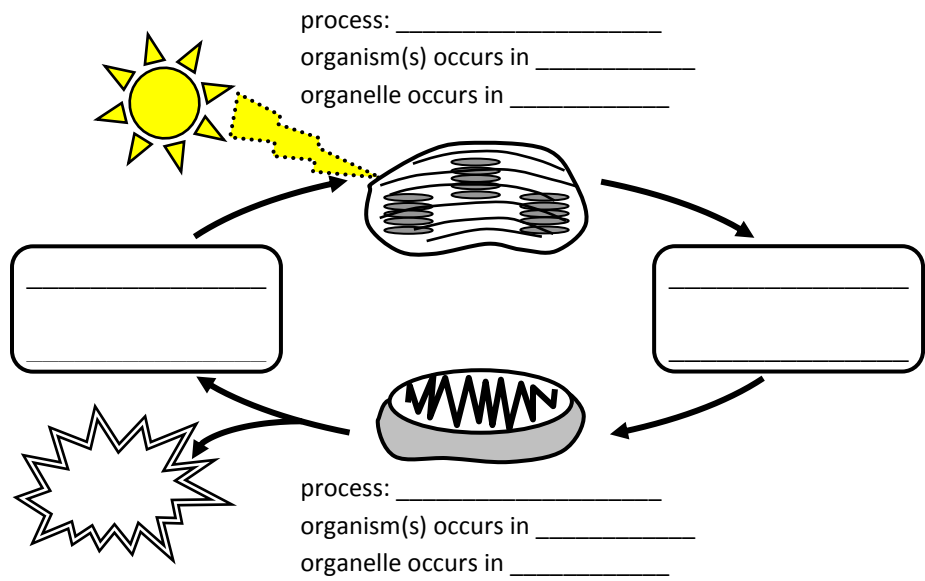
3. What is the pigment that absorbs light energy called?
4. Which product of photosynthesis is a starch?
5. What are some ways the amount of starch (glucose) produced could be increased?
6. Why are athletes told to eat a meal high in carbohydrates before a big game?
7. What factors affect the rate of photosynthesis and how (think about your labs)?
8. Look at the experimental set up below. Based on this experiment and what you know about cell processes, what gas must the bubbles be made up of? Justify your response.



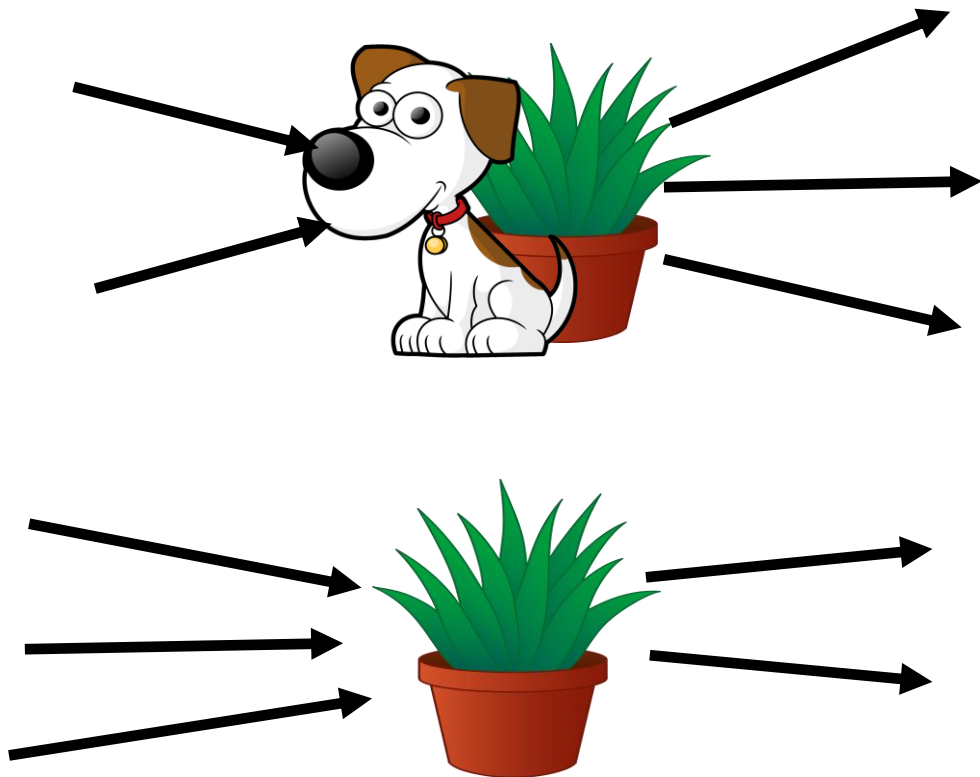
Chapter 4.4-4.6 Cell Respiration (pg 112-123)

9. Write out the balanced equation for cell respiration. CIRCLE the products and BOX the reactants
10. Identify the organelle that carries out cell respiration. What organisms cellular respire?
11. Explain how photosynthesis and cell respiration are dependent on each other.

12. Complete the diagram below.



13. Label the arrows:



## Botany: Plant Structures and Functions

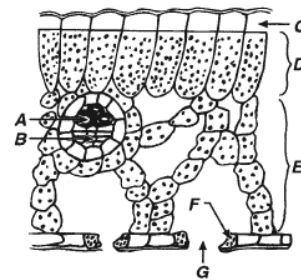
### Chapters 20-22

#### Botany Unit Vocabulary

Phloem	Xylem	Vascular bundle	Stoma	Cuticle	Pollen	Thigmotropism
Stamen	Filament	Anther	Pistil	Stigma	Style	Hydrotropism
Root	Stem	Leaf	Guard cell	Tropism	Phototropism	Geo/Gravitropism

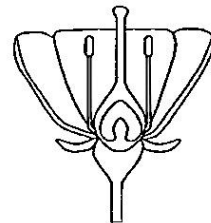
#### Ch 21 Plant Structure and Function (pg 618-633)

- Identify the 3 major organs of a plant.
- Xylem is used to primarily transport what substances in a plant? What direction are the materials transported in?
- Phloem is used to primarily transport what substances in a plant? What direction are the materials transported in?
- What can xylem and phloem be compared to in animal systems?
- If a plant doesn't have a vascular system (no roots, stem, xylem or phloem) where could it store water?
- What is the function of the cuticle?
- What is the function of the guard cell and stomata?
- How does the leaf get carbon dioxide for photosynthesis – where does it enter the plant?
- Why do stoma typically close?
- How can a plant slow dehydration?
- Label structures A, B, F, and G of the leaf in this leaf cross section. →
- Identify three major functions of roots.

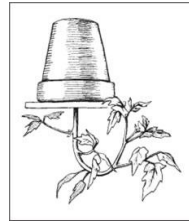
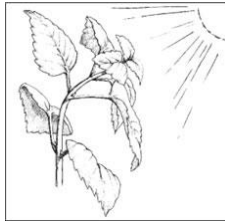


#### Ch 22 Plant Growth, Reproduction, and Response (pg 640-659)

- Label and identify the stamen, pistil and petals on the flower to the right. →



- Identify the images below as gravitropism (geotropism), thigmotropism, or phototropism.



- What type of tropism causes a tree on the side of a hill to still grow upright rather than lean with the hill?