Chapter 6 Photosynthesis Review Worksheet Name _____

Vocabulary Review. Explain the relationship between the terms in each of the following pairs.

1. granum, stroma

2. chlorophyll a, accessory pigments

3. leaf, photons

Multiple Choice. Finish the statement with the best word or phrase. Circle the correct letter.

4. Water participates directly in the light reaction of photosynthesis by
   A. donating electrons to NADPH. C. donation electrons to the light reaction.
   B. accepting electrons from ADP. D. accepting electrons from the dark reaction.
5. The energy used in the dark reaction of photosynthesis comes from the
   A. synthesis of ATP. C. splitting of water.
   B. synthesis of NADPH. D. direct absorption of light.
6. The Calvin cycle begins when CO_2 combines with the five carbon carbohydrate
   A. RuBP. B. PGA. C. PGAL. D. NADPH.
7. Chlorophyll a
   A. absorbs mostly orange-red and blue-violet light.
   B. absorbs mostly green light.
   C. is an accessory pigment.
   D. is responsible for the red color of many autumn leaves.
8. Organic compounds that can be made from the products of the Calvin cycle include
   A. only carbohydrates. C. only lipids.
   B. only proteins. D. carbohydrates, lipids, and proteins.
9. As light intensity increases, the rate of photosynthesis
   A. continues to decrease. C. initially decrease and then levels off.
   B. continues to increase. D. initially increases and then levels off.

Short Answer. Answer the question on the backside of this page.

10. Why is photosynthesis referred to as a biochemical pathway?
11. What are the energy-carrying end products of the light reaction?
12. What is the purpose of accessory pigments?
13. What wavelengths/ colors do each of the chlorophylls and carotenoid absorb?
14. Why does the rate of photosynthesis increase, peak, and then decrease as temperature increases?
15. Write the balanced chemical equation for photosynthesis.
16. Tell where each of the reactants in your equation for #15 comes from.
17. Tell where each of the products in your equation for #15 goes to.
18. Draw and label a chloroplast.