Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period\_\_\_\_\_\_\_\_\_\_

Chapter 4: Photosynthesis Review

**Define**

Autotroph Heterotroph ATP Granum

Stroma Chlorophyll Chloroplast Thylakoid

Light-Dependent Reaction Light Independent Reaction Pigments

**Study questions**

1. What are the 3 parts of an ATP molecule? How is energy released? What are the parts of an ADP molecule? Which bond is broken? How much ATP do cells keep on hand?
2. Describe the contribution Van Helmont made.
3. Describe the contribution Priestly made.
4. If Priestly used different species of plants, in addition to mint, and timed how long each candle stayed lit. What would a logical conclusion be?
5. Describe the contribution Ingenhousz made.
6. Write out the equation for photosynthesis in both words and symbols.
7. What is the gas that is released during photosynthesis?
8. Draw a chloroplast and label the thylakoid, granum, and stroma.
9. Why do plants appear green?
10. Where is chlorophyll found?
11. Where do light-dependent reactions take place?
12. What is the first step in the light-dependent reaction?
13. Where does the Light Independent Reaction take place?
14. What is another name for the Light Independent Reaction?
15. What would happen if CO2 was completely removed from the plants environment?
16. Where are photosystems II and I found?
17. Why does the inside of the thylakoid membrane become positively charged during the light-dependent reaction?
18. In most plants, what happens to the rate of photosynthesis when the weather becomes very cold?
19. What can affect the rate of photosynthesis?