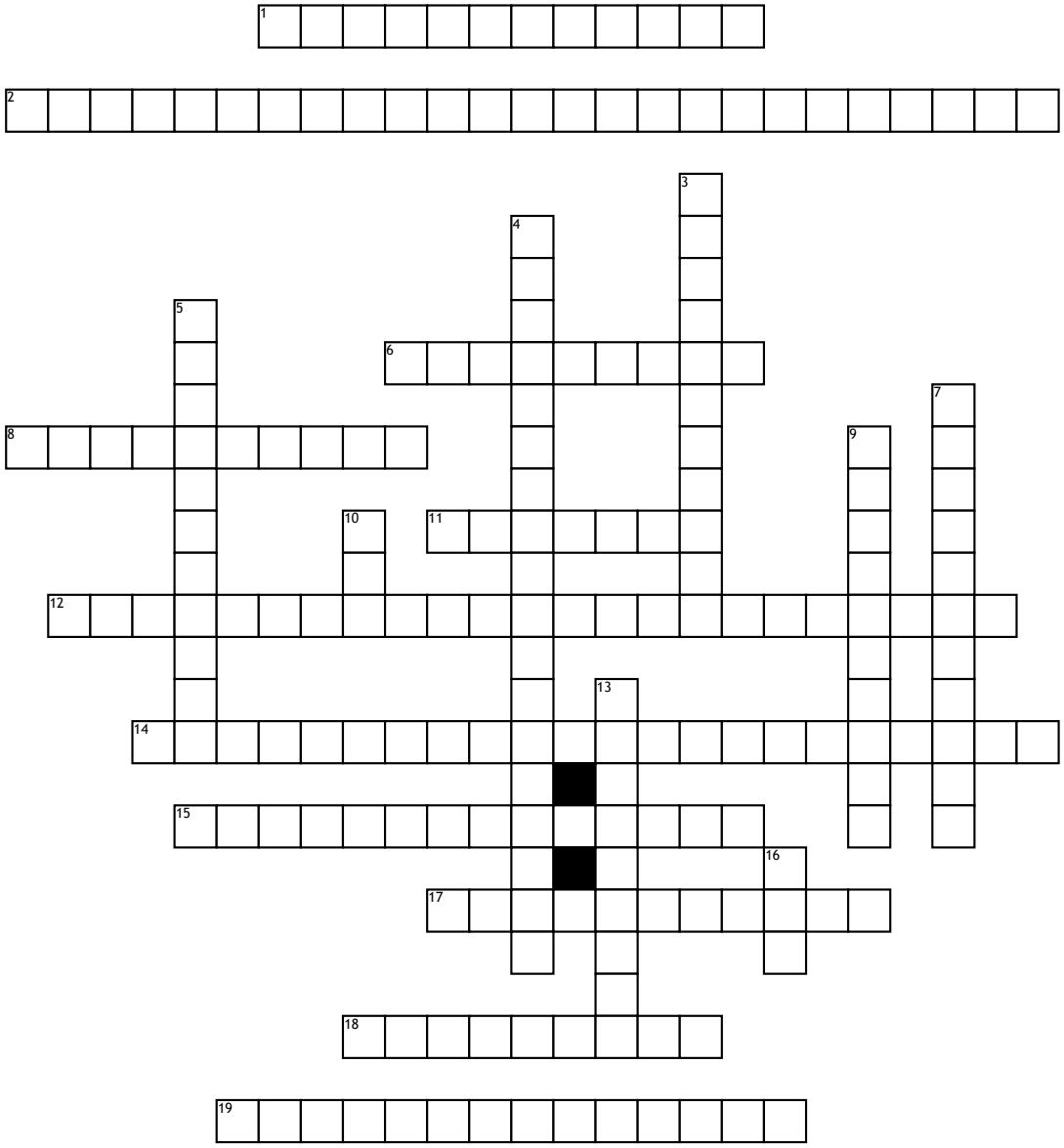
Name: _____ Date: _____

Chapter 4: Cells and Energy



Across

1. anaerobic process by which ATP is produced by glycolysis

2. part of photosynthesis that uses energy absorbed during the light-dependent reactions to synthesize carbohydrates

6. membrane-bound structure within chloroplasts that contain chlorophyll and other light-absorbing pigments used in the light-dependent reactions of photosynthesis

8. anaerobic proces in which glucose is broken down into two molecules of pyruvate and two net ATP are produced

11. process that requres oxygen to occur

12. part of photosynthesis that abosrbs energy from sunlight and transfers energy to the light-independent reactions

14. series of proteins in the thylakoid and mitochondrial membranes that aid in converting ADP to ATP by transferring electrons

15. process by which ATP is synthesized by using chemicals as an energy source instead of light

17. series of light-absorbing pigments and proteins that capture and trasnfer energy in the thylakoid membrane

18. process during cellular respiration that breaks down a carbon molecule to produce molecules that are used in the electron transport chain

19. process by which light energy is converted to chemical energy; produces sugar and oxygen from carbon dioxide and water

Down

3. process by which a photosynthetic organism uses unergy to synthesie simple sugars from CO2

4. process of producing ATP by breaking down carbon-based molecules when oxygen is present

5. light-absorbing pigment molecule in photosynthetic organisms

7. enzyme that catalyzes the reaction that adds a high-energy phosphate group to ADP to form ATP

9. product of fermentation in many types of cells, including human muscle cells

10. low-energy molecule that can be converted to ATP

13. process that does not require oxygen to occur

16. high-energy molecule that contains, within its bonds, energy that cells can use