Chp 4 Objectives
Honors Anatomy

1. Explain what is meant by the “energy of motion”
2. Distinguish between and give examples of anabolism & catabolism
3. Explain why these can be thought of the “yin & yang” of metabolism
4. Explain the role of dehydration synthesis in the formation of lipids, carbs & proteins
5. What is an enzyme? What is a substrate? What role do they play in the body’s metabolism?
6. Name the factors that can affect an enzyme’s effectiveness
7. Explain the Lock & Key Model of enzymes & substrates
8. Describe the conditions that can denature enzymes
9. What kinds of things can affect how fast enzymes work?
10. Explain what the cells “burn” through oxidation in the cell.
11. Why can’t the cell use glucose directly to drive the metabolic processes?
12. Be able to explain the structure & role of ATP in providing energy for the cell
13. Describe the conversion of ATP to ADP (also ADP to ATP).
14. What is cellular respiration? Know where each step of cellular respiration take place
15. Name the products of cellular respiration.
16. Explain what glycolysis is, its end products & what the term literally means.
17. Be able to draw/explain what occurs in the process of cellular respiration - using the following terms: *6 carbon glucose, cell membrane, 2 3-carbon pyruvic acid, anaerobic (or fermentation), ATP, mitochondria, electrons, Electron Transport Chain, aerobic, CitricAcid/Krebs Cycle, cytoplasm, glycolysis.*
17.5. Know the number of ATPs produced at each stage & the total number produced
18. Explain how genetic information is passed on from cell to cell.
19. Draw & describe a DNA molecule and label all parts.
20. Name the complements to DNA’s A,T,C & G.
21. Explain how RNA differs from DNA.
22. Know the steps in the process of protein synthesis.