Answer the following questions using the textbook chapter 2: 2.3 (45-50) and chapter 9:9.1-9.2.

1. What are some functions of proteins?

2. Protein shape is critical for the function of proteins. Explain this statement.

3. What is the monomer (building block) of proteins? Describe /draw the general structure.

4. What is the same in the structure of the amino acids and what is different?

5. How many different kinds of amino acids are there?

6. What portion of the structure of the amino acids is important in determining the function of that particular amino acid?

7. What type of bond is used to attach amino acids together? Describe this bond. (what type of reaction is used?)

8. What are the four levels of protein structure? Refer to figure 2.21 and describe/draw the general structure of these levels.

9. What can happen to a protein if it is subject to changes in temperature, pH etc.?

10. Explain denaturation. Is this reversible? Or irreversible? When might this be the case?

11. How does an egg represent denaturation?

NUCLEIC ACIDS (49-50)

12. What is the monomer (building block) for nucleic acids? Describe/Draw the basic structure.

13. What are the two main examples of nucleic acids?

Refer to Chapter 9.1-9.2 and lecture slides to answer the following:

14. Complete the chart comparing DNA and RNA (lecture slides)

	DNA	RNA
What is the complete name?		

What is the main function?		
What sugar is found in the backbone?		
What are the nitrogenous bases?		
What is the basic structure?		

15. What are the three types of RNA molecules?

16. Who were the scientists responsible for the discovery of the structure of DNA? What did they discover?

17. Describe the compaction of eukaryotic chromosomes. (refer to figure 9.7) or the animation linked through your textbook: DNA packaging