**Reading Guide Chapter 3 Proteins**

**Principles of Life Pages 42-49**

1. What are the functions of proteins?
2. What is the monomer found in proteins? Provide a diagram of the basic structure.
3. Briefly explain what the “R Group” of a protein is.
4. How many amino acids are found in all organisms?
5. What characteristics are common between Serine, Threonine, Asparagine, Glutamine, and Tyrosine?
6. What characteristics are common between Aspartic Acid and Glutamic Acid?
7. What characteristics are common between Arginine, Histidine and Lysine?
8. What characteristics are common between Alanine, Isoleucine, Methionine, Phenylalanine, Tryptophan and Valine?
9. Why are Cysteine, Glycine and Proline considered to be special cases?
10. What type of bond holds together amino acids?
11. How is this bond formed?
12. Briefly describe each of the four levels of protein structure.
13. Define denatured.
14. What factors influence protein structure?
15. What role do enzymes play in organisms?