The Structure and Function of Large Biological Molecules
Chapter 5

1. Identify some important characteristics of each of the four main types of macromolecules.
2. Imagine you eat a big plate of pasta. Describe the reactions that must occur for the glucose in the pasta to be stored as glycogen in your liver.
3. Distinguish between carbohydrates, monosaccharides, and polysaccharides.
4. Identify the functions of starch and glycogen. Describe the structural differences between them.
5. Compare and contrast starch and cellulose.
6. Distinguish between saturated and unsaturated fats.
7. Suggest a reason phospholipids and human sex hormones are considered lipids.
8. Draw and label a typical amino acid.
9. Explain the importance of having amino acids with different properties.
10. Find the structures of valine and glutamic acid. Propose an explanation for the dramatic effect on protein function that occurs when valine is substituted for glutamic acid.
11. Describe the relationship between protein structure and function.
12. Where would you expect a polypeptide region containing several valine, leucine and isoleucine monomers to be located in a folded polypeptide?
13. What parts of a polypeptide participate in the bonds that hold together the secondary and tertiary structures?
14. What are some possible results of changing the primary structure of a protein?
15. Compare and contrast DNA and RNA in both structure and function.