

Macromolecules Webquest

- I. Go to www.chem4kids.com click on BIOCHEMISTRY
Read the introduction then proceed with the button "Next Stop on Tour."
Move from macromolecule to macromolecule by clicking on the words near the top left of the window.
- II. **Answer all questions with complete sentences on a separate sheet of lined paper.**

Carbohydrates

1. What is the difference between a monosaccharide and a disaccharide? Provide examples of each.
2. Why is sugar considered an organic compound?
3. What are the three elements found in all sugars?
4. According to the web site what do potatoes, wood and lobster shells have in common?

Lipids

5. What are the two main parts of a lipid?
6. Explain what makes a fat saturated or unsaturated?
7. How does the basic structure of a steroid differ from other macromolecules such as carbohydrates?
8. What is the role of waxes?
9. Compare the energy values of a carbohydrate molecule versus a fat molecule.

Amino Acids

10. How many essential amino acids are there?
11. What are some things proteins are used for in your body?
12. What is formed when amino acids form long chains or polymerize?
13. Choose one amino acid and draw its structure. Circle the part of the molecule that is the "amino group."

Proteins

14. How many steps or structures are involved in folding a protein?
15. What is meant by the scientific term "blob?"

Nucleic Acids

16. What are the five monomer units of a NA?
17. What is a double helix?
18. What are the three parts to a nucleotide?
19. What about our DNA makes us different?
20. What is the full name of DNA?

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