Macromolecules

Chapter 2b

I. Organic Substances
  A. Carbon
    1. electroneutral
      a. 4
    2. small
    3. molecules

II. Macromolecules of Cells
  A. Carbohydrates
      a. Uses
    1. Monosaccharide
      a. examples
    2. Disaccharides
      a. examples
          1) sucrose, lactose, maltose
    3. Polysaccharides
          1) monomers
          2) polymers
      a. examples
          1) starch, cellulose, glycogen, agar, chitin
  B. Lipids
      a. Uses
      b. exception
    1. Triglycerides
      a. composition
          1) fatty acids
          2) glycerol
      b. fats and oils
          1) saturated
          2) unsaturated
    2. Phospholipids
      a. amphipathic
    3. Steroids
    4. wax
  C. Proteins
    1. uses
    2. monomers
      a. amino acids
          1) amino group
          2) carboxyl group
          3) R group
    3. assembly
      a. peptide bond
    4. Structure
      a. Primary (1°) structure
      b. Secondary (2°) structure
          1) alpha α helix
          2) beta β sheet
      c. Tertiary (3°) structure
      d. Quaternary (4°) structure
    5. denatured

D.Nucleic Acids
1.uses
2.composition
a. monomers = nucleotides
1)pentose sugar
2)base
a)Adenine = A
b)Guanine = G
c)Cytosine = C
d)Thymine = T
e)Uracil = U
3)phosphate group
3.DNA
a. composition
1)sugar backbone = deoxyribose
2)bases = AGCT
3)double stranded
-complementary base pairing
4.RNA
a. composition
1)sugar backbone = ribose
2)bases = AGCU
3)single stranded
5.ATP
a. Composition