

Chapter 5 - Molecules of Life

Unit Expectations

Vocabulary	Be able to...
<p>organic molecule inorganic molecule hydrocarbon functional group hydrophilic monomer polymer carbohydrate monosaccharide disaccharide polysaccharide starch glycogen lipid hydrophobic fat saturated fat unsaturated fat steroid cholesterol protein amino acid polypeptide denaturation activation energy catalyst enzyme substrate active site</p> <p>Know these prefixes and suffixes</p> <p><u>Prefixes</u> di = two hydro = water mono = one poly = much</p> <p><u>Suffixes</u> ase = enzyme hydrate = water ose = full of philic = loving phobic = fearing</p>	<p>5.1 Carbon is the Main Ingredient of organic molecules</p> <ul style="list-style-type: none"> Explain how polymers are composed of repeating units of monomers Describe the process of condensation and hydrolysis reactions which are used to build up or break down polymers Concept Ck, 2 & 3 <p>5.2 Carbohydrates provide fuel and building material</p> <ul style="list-style-type: none"> Identify the elements that compose carbohydrates Identify the monomers of carbohydrates and give example Explain how a disaccharide is formed and give an example Identify 3 polysaccharides and describe their functions Concept Ck 1-3 <p>5.3 Lipids include fats and steroids</p> <ul style="list-style-type: none"> Identify the elements that compose lipids Identify the components of lipids (fats and oils) describe the general characteristics of lipids Explain the structure and function of fats and oils Contrast Saturated and unsaturated fats Describe the general structure and function of steroids and give an example Concept Ck 1,2,4 <p>5.4 Proteins perform most functions in cells</p> <ul style="list-style-type: none"> Identify the elements that compose proteins Identify the monomers of proteins and give examples List the functions of proteins Describe the general structure of proteins Describe factors that influence protein shape Explain denaturation and the factors that may cause it to occur Concept Ck 3,4 <p>5.5 Enzymes are proteins that speed up specific reactions in cells</p> <ul style="list-style-type: none"> Explain why an enzyme is called a catalyst Explain how enzymes affect activation energy Describe how an enzyme's shape is important to its function Describe how an enzyme is involved in the condensation or hydrolysis of polymers Identify the type of biomolecule that composes enzymes Concept Ck 1 & 2