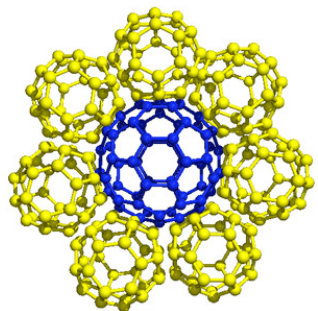
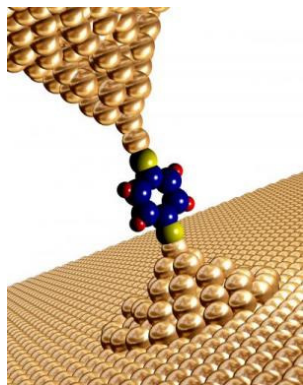


Biology I

Unit 2: Structure and Function Part 1: Essential Chemistry and the Molecules of Life



Monday	Tuesday	Wednesday	Thursday	Friday
August/September 2011				
29 How Matter is Organized and Classified <ul style="list-style-type: none"> • Atoms • Periodic table HW: Drawing Atoms worksheet due Wed.	30 <ul style="list-style-type: none"> • Periodic table continued • Direct Instruction on how to draw atoms 	31 <ul style="list-style-type: none"> • Drawing Atoms • Atom Stability • Introduction to Bonding HW: Read Section 2.1; complete worksheet	1 <ul style="list-style-type: none"> • Ionic Bonding • Covalent Bonding • Hydrogen Bonding HW: Read Section 2.2	2 <i>Properties of Water lab</i> - How does the structure of the water molecule relate to its properties?
5 LABOR DAY – NO SCHOOL	6 <i>Properties of Water Lab</i> Follow-up - direct instruction & discussion HW: Complete Section 2.2 worksheet	7 <i>pH Lab</i> – Effects of buffers in biological systems	8 pH lecture Review for Quiz HW: Study for Quiz	9 Quiz – Atoms, Bonding, Water & pH INFO on Nutrition Report Card provided HW: Read Section 2.3
12 YOU ARE WHAT YOU EAT! How are carbon atoms put together to make YOU? <i>Constructing Molecular Models</i> Activity	13 Formation & Breakdown of Polymers <ul style="list-style-type: none"> • Dehydration Synthesis • Hydrolysis HW: Complete Section 2.3 pg 39 wkst	14 CHEW ON THIS! What macronutrients do foods contain? <ul style="list-style-type: none"> • Reading labels activity HW: Finish worksheet	15 Carbohydrates <ul style="list-style-type: none"> • Monosaccharides • Disaccharides • Polysaccharides 	16 Lipids <ul style="list-style-type: none"> • Triglycerides • Phospholipids • Steroids • Waxes
19 Project Research time	20 Project Research time	21 Proteins <ul style="list-style-type: none"> • Amino Acids • Protein Structure HW: Finish Section 2.3 wkst	22 The Role of Enzymes in cellular reactions	23 Enzyme Lab- What are the factors that affect enzyme activity? HW: Finish Lab
26 Review HW: Study for Test!	27 Biomolecules Test	28	29 Nutrition Report Cards due	30

SC Science Standards covered in this unit

B-3.4 Summarize how the structures of organic molecules (including proteins, carbohydrates, and fats) are related to their relative caloric values.

B-3.5 Summarize the functions of proteins, carbohydrates, and fats in the human body.

B-2.8 Explain the factors that affect the rates of biochemical reactions (including pH, temperature, and the role of enzymes as catalysts).

NOTE: Here the focus will be on enzyme structure and how it related to enzyme function. The role of enzymes in the energy economy of a cell may also be covered in the Cell Energy Unit.

