**CHAPTER 2 STUDY OUTLINE**

**THE CHEMISTRY OF LIFE**

1.3Studying Life (pg. 17-19)

1. Characteristics of Living Things

2.1 The Nature of Matter (pg. 34-37)

1. Atoms
	1. Protons and Neutrons
	2. Electrons
2. Elements
3. Chemical Compounds
4. Chemical Bonds
	1. Ionic Bonds
	2. Covalent Bonds

2.2 Properties of Water (pg. 40-41)

1. The Water Molecule
	1. Polarity
	2. Hydrogen Bonding
		1. Cohesion
		2. High Surface Tension
		3. Adhesion
		4. High Specific Heat
		5. Water as a Solvent
		6. Density of WAter

2.3 Carbon Compounds (pg. 45-49)

1. The Chemistry of Carbon
2. Macromolecules
	1. Carbohydrates
	2. Lipids
	3. Nucleic Acids
	4. Proteins

2.4 Chemical Reactions and Enzymes (pg. 50-53)

1. Chemical Reactions
2. Energy in Reactions
	1. Energy Changes
	2. Energy Sources
	3. Activation Energy
3. Enzymes
	1. Nature’s Catalysts
	2. The Enzyme-Substrate Complex
	3. Regulation of Enzyme Activity