

Chemistry Unit 3 Outline: Ionic and Covalent Compounds

Chapter 5: Ions and Ionic Compounds

Classes	Topics	Suggested Reading	✓	Assignments	✓
1	Ions, Octet Rule, Chemical Properties of Alkali Metals, Alkaline Earths, Halogens and Noble Gases, Valence Electrons, Bohr Energy Level Diagrams of Ions, Cations versus Anions, Characteristics of Stable Ions, Ionic Equations of the Formation of Ions from Parent Atoms, Electron Configurations of Ions, Ionic Bonding and Electron Transfer, Lattice Energy, Ionic Compounds Energy Profile for the Formation of Ionic Compounds (Exothermic Reaction), Properties of Ionic Compounds	5.1 Simple Ions (pg. 159 – 165) 5.2 Simple Ions (pg. 166 – 175)		pg. 165 #1 to 13 pg. 175 #1 to 6; 8 to 11	
2 and 3	Monoatomic (Simple) Ions, Polyatomic Ions, Transition Metal Ions (with Roman Numeral – Stock System), Nomenclature of Ionic Compounds, Hydrates	5.3 Names and Formulas of Ionic Compounds (pg. 176 – 180)		pg. 180 #1 (Practice) pg. 180 #1 to 8 Worksheet: Nomenclature of Ionic Compounds	
4	Chapter 5 Quiz (C Block: November 19, Thurs; D & F Blocks: November 20, Fri)	Chapter 5 Review		pg. 183–184 #1 to 28 Chapter 5 Practice Test	

Chapter 6: Covalent Compounds

Classes	Topics	Suggested Reading	✓	Assignments	✓
1	Covalent Bond (Sharing Electrons), Molecular Orbital, Covalent (Molecular) Compounds, Bond Length and Bond Energy, Electronegativity and Covalent Bonding, Non-polar and Polar Covalent Bond, Dipole, Bond Strength and Polarity, Different Bond Types (Metallic, Covalent and Ionic) and Ionic Character, Properties of Covalent Compounds	6.1 Covalent Bonds (pg. 190 – 198)		pg. 198 #1 to 14	
2	Nomenclature of Covalent Compounds, Valence electrons, Lewis Structures, Unshared Electron Pairs (Lone Pairs), Single Bond, Double Bond, Triple Bond, Lewis Structures of Molecules and Polyatomic Ions, Resonance Structures, Exceptions to Octet Rule	6.2 Drawing and Naming Molecules (pg. 199 – 207)		pg. 202 #1 and 2 (Practice) pg. 203 #1 and 2 (Practice) pg. 205 #1 and 2 (Practice) pg. 207 #1 to 13	
3	Molecular Shapes and Geometry, Valence Shell Electron Pair Repulsion (VSEPR) Theory, Effective Electron Pairs and Lone Pairs around Central Atom, Polarity of Molecules due to Shapes, Properties of Molecular Compounds due to Polarities	6.3 Molecular Shapes (pg. 208 – 213)		pg. 211 #1 (Practice) pg. 213 #1 to 11 Worksheet: Molecular Geometry and VSEPR Theory	
4	Lab #3: Molecular Geometry (C & D Blocks: December 3, Thurs; F Block: December 2, Wed)			Lab #3 Due: (C Block: Dec 10, Thurs; D & F Blocks: Dec 11, Fri)	
5	Unit 3 Test (C Block: December 9, Wed; D Block: December 10, Thurs; F Block: December 8, Tues)			pg. 216 – 218 #11 to 40, 42, 44 to 46, 48 & Chapter 6 Practice Test	