

Chemistry ([Distant Learning](#)) Unit 3 Outline: Ionic and Covalent Compounds

Chapter 5: Ions and Ionic Compounds Must Do Underlined HW Questions Green Fonts - *Synchronous Blue Fonts - **Asynchronous

Wk/Class	Topics	Suggested Reading	✓	Assignments	✓
Nov 9 / Day 2	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) [5-1 Video Lesson – 47:41] 5.2 Properties of Ionic Compounds (pg. 166 – 175) [5-2 Video Lesson – 28:42]		pg. 165 #1 to 13; pg. 141 #8 and 13 pg. 175 #1 to 6, 8 to 11	
Nov 16 / Day 2	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) [5-3 Video Lesson – 37:17]		Worksheet: Nomenclature of Ionic Compounds	
	Chapter 5 Take-Home Quiz (C Block: November 30, Monday) (F & G Blocks: December 1, Tuesday)	Chapter 5 Review (Optional) pg. 183–184 #1 to 28		Chapter 5 Take-Home Quiz Due: (C Block: December 3, Thursday) (F & G Blocks: December 4, Friday)	

Chapter 6: Covalent Compounds

Classes	Topics	Suggested Reading	✓	Assignments	✓
Nov 24 / Day 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, 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	6.1 Covalent Bonds (pg. 190 – 198) [6-1 Video Lesson – 26:47] 6.2 Drawing and Naming Molecules (pg. 199 – 207) [6-2A Video Lesson – 22:53] [6-2B Video Lesson – 21:53]		pg. 198 #1 to 14 (Odd Only) pg. 202 #1 and 2 (Practice) pg. 203 #1 and 2 (Practice) pg. 205 #1 and 2 (Practice) pg. 207 #1 to 13 (Odd Only)	
Nov 30 / Day 1 & 2	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) [6-3A Video Lesson – 38:42] [6-3B Video Lesson – 38:49]		Worksheet: Molecular Geometry and VSEPR Theory <i>(Pick 10 Questions of your Choice)</i>	
Dec 7 / Day 1	Lab #3: Molecular Geometry (C Block: December 7, Monday) (F & G Blocks: December 8, Tuesday)	Lab #3 Handout Lab #3 Video		Lab #3 Due: (C Block: Dec 15, Tuesday) (F Block: Dec 17, Thursday) (G Block: Dec 18, Friday)	
Dec 7 / Day 2	Unit 3 Review	Chapter 5 Take-Home Quiz Unit 3 Practice Test		(Optional) pg. 216 – 218 #11 to 40, 42, 44 to 46, 48	
	Unit 3 Test (C Block: Dec 15, Tuesday) (F Block: Dec 17, Thursday) (G Block: Dec 18, Friday)				