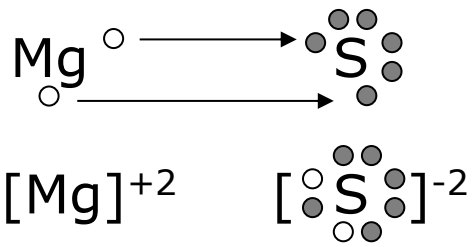
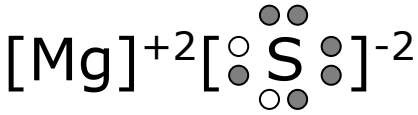
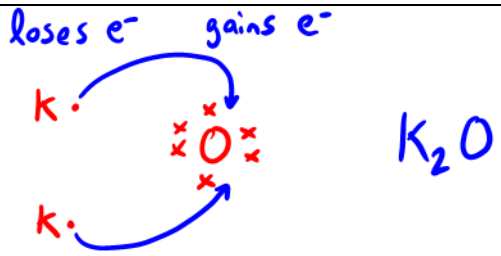
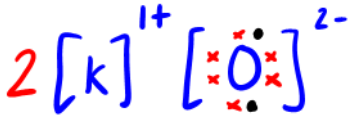
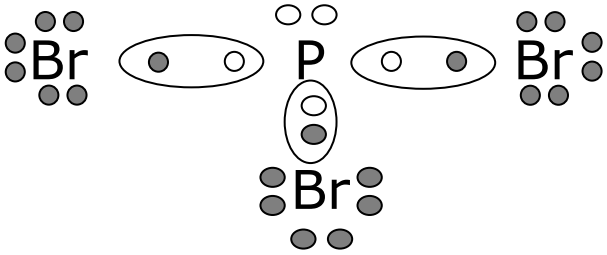
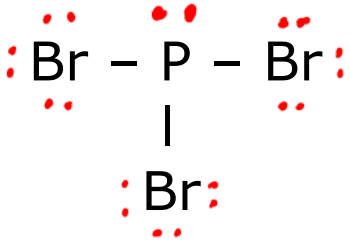
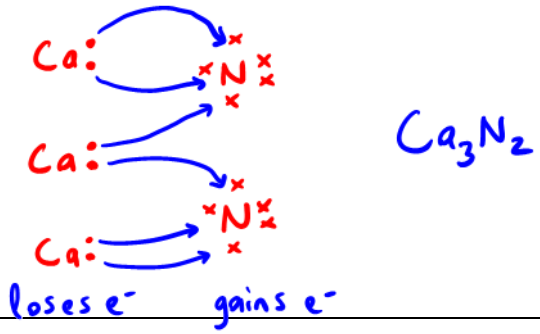
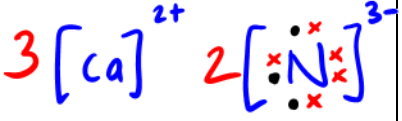
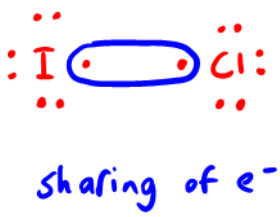
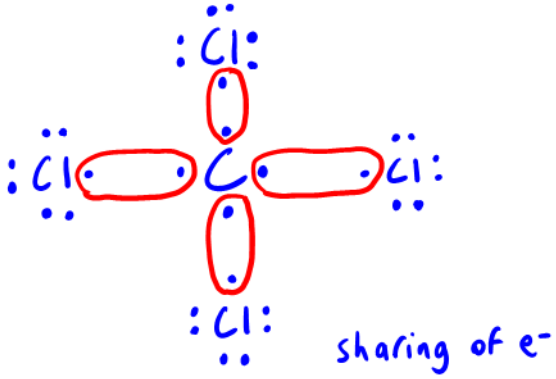
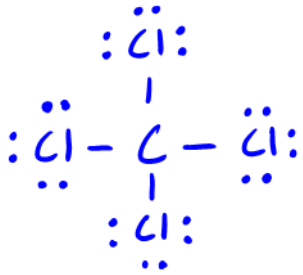
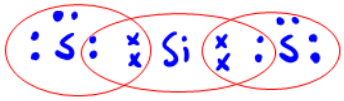
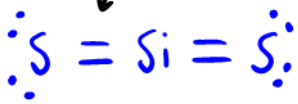
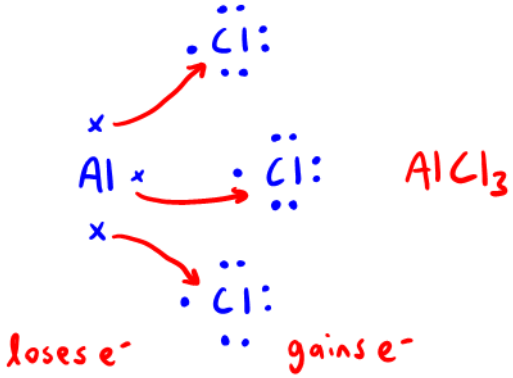
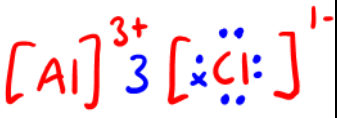
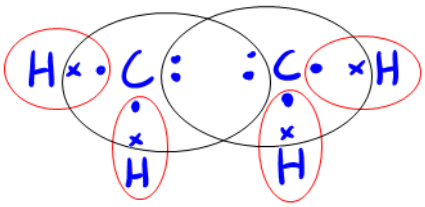
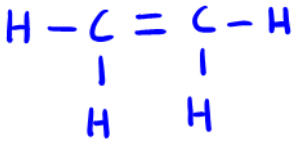
NAME:

CHAPTER 7

Lewis Dot Diagrams for Ionic & Molecular/Covalent Compounds

SNC 1D

Compound	Is this compound Ionic or Molecular?	Use the Lewis dot structures of the atoms to show how electrons are: (1) gained or lost [ionic] or (2) shared [molecular]	Show the final form of the Lewis dot structures for the compound: (1) ionic – ions with electron in brackets with + / - charge (2) molecular – atoms showing covalent bonding – H =O ≡N
Magnesium + Sulphur	Mg is a metal & S is a non-metal so, this is ionic	Mg will lose 2e- S will gain 2e-  	
metal ↑ Potassium + Oxygen ↓ nonmetal	ionic	 	
PBr_3	P & Br are both non-metals so it is molecular	electrons are shared to fill valence shell  	
metal ↑ Calcium + Nitrogen ↓ non-metal	ionic	 	
non-metal ↑ ICl ↓ non-metal	molecular	 	

Compound	Is this compound Ionic or Molecular?	Use the Lewis dot structures of the atoms to show how electrons are: (1) gained or lost [ionic] or (2) shared [molecular]	Show the final form of the Lewis dot structures for the compound: (1) ionic – ions with electron in brackets with + / - charge (2) molecular – atoms showing covalent bonding – H =O ≡N
non-metal ↓ CCl_4 ↑ non-metal	molecular		
metalloid ↓ SiS_2 ↑ non-metal	molecular	 or you can show it like this 	double bond ↓ 
metal ↓ Aluminum + Chloride ↑ non-metal	ionic		
non-metal ↓ C_2H_4 ↑ non-metal	molecular	 2 pairs of e⁻ shared between Carbon Atoms	

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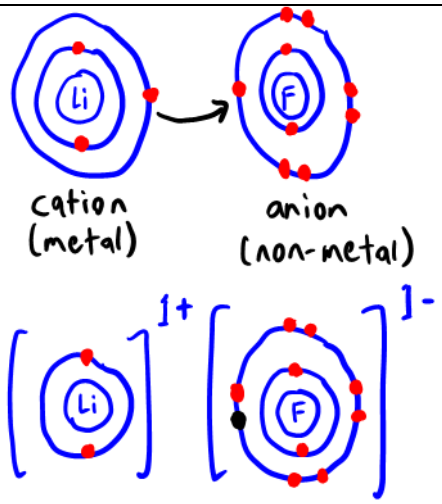
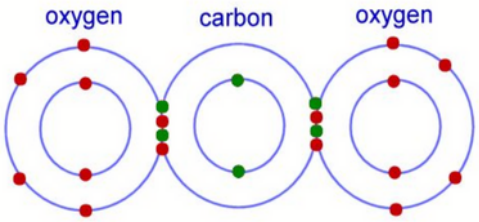
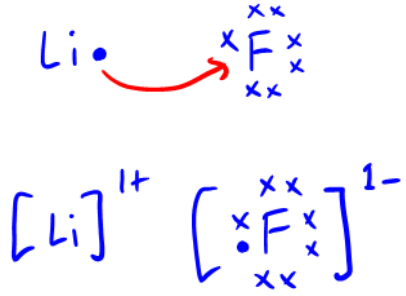
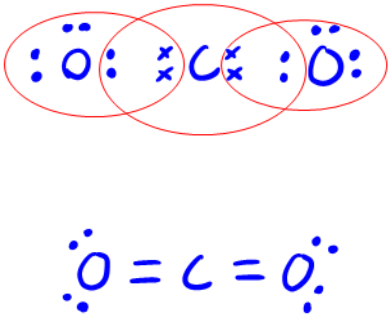
CHAPTER 7

Ionic vs. Molecular/Covalent Compounds

SNC 1D

	Ionic	Molecular/Covalent
Composed of...	metal + non-metal	non-metal + non-metal
Electrons are...	lost + gains e^- (+ charge / - charge)	sharing (sharing is caring)
Elements held together due to...	opposite charges attract	bond of shared e^- (covalent bond)
Choose one example of an ionic and molecular compound and complete the table below		
Example	Lithium + Fluorine	Carbon + Oxygen
Naming	metal + nonmetal + change ending to "ide" → Lithium Fluoride	need to use prefixes → Carbon dioxide
Formula	LiF	CO_2
Bohr – Rutherford Diagram		
Lewis Dot Diagram