Name: _____ Period: _____

Lewis Structures Guided Notes:

Review:

1. What kind of elements make up an ionic compound?

2. What does an ionic compound do with its valence electrons?

3. What kind of elements make up a molecular (covalent) compound?

4. What does a molecular compound do with its valence electrons?

Vocab:

Lone pairs –

Shared pairs –

Steps to Drawing a Lewis Structure:

1. Determine the number of _____ for each atom.
2. Calculate the _____ (sets of 2) of valence electrons by dividing by 2.
3. Place the chemical symbols in order based on:
   -- the _____ element goes in the middle
   -- the element with the _____ goes in the middle
   -- _____ ALWAYS goes in the middle
   -- _____ can NEVER go in the middle (Why?)
   -- _____ can NEVER go in the middle (Why?)
   -- place the other elements around the _____
4. Determine how many _____ you need (each element wants 4 pairs --octet)
5. For every pair you are _____, that is how many _____ you need to _____ (double bond, triple bond)

Practice:

HCl CH_2O HCN H_2O C_2H_2

Reflection: Which elements can never have a double or triple bond?

Resonance Structures:

-- have the _____ of elements, but a different arrangement of _____

-- need to have at least _____ and at least 1 other place for the electrons to move

Example: SO_2

Polyatomic Ion Lewis Structures:

-- same as drawing other Lewis Structures

-- negative ions, _____ electrons

-- positive ions, _____ electrons

-- _____ and put the charge in the _____

-- may also have _____

Practice:

NO_3^-

NH_4^+

SO_3^{2-}

NO_2^-