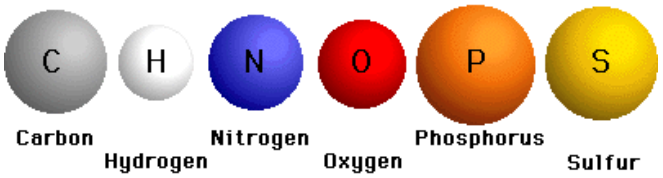
Bonding Basics - Covalent Style



Cut out the chart below and glue it into your notebook. Using your periodic table of elements, determine the number of protons in each element. From there, figure out the numbers for the rest of the chart.

Element	# of Protons	# of Electrons	# of Valence Electrons	# of Electrons to Fill Outer Shell
Carbon				
Hydrogen				
Nitrogen				
Oxygen				
Phosphorus				
Sodium				
Sulfur				
Chlorine				

Follow your teacher's directions to complete each covalent bond in your notebook. Draw the bond structure using symbols and lines. Use one line for each pair of electrons shared. WRITE the chemical formula for each molecule

(1) Hydrogen + Hydrogen

(2) Hydrogen + Oxygen

(3) Chlorine + Chlorine

(4) Oxygen + Oxygen

(5) Carbon + Oxygen

(6) Carbon + Hydrogen

(7) Now draw the ionic bond between Chlorine and Sodium. This makes the molecule of table salt. They swap an electron.

Cut out the section below and glue it into your notebook. Then fill in the blanks by using the periodic table. Make sure you know how to calculate the atomic mass, know how to find the atomic number, and infer that all elements are NUETRAL

Carbon:

Symbol_____ Atomic #_____ Atomic Mass_____

Protons_____ Neutrons_____ Electrons_____

Oxygen:

Symbol_____ Atomic #_____ Atomic Mass_____

Protons_____ Neutrons_____ Electrons_____

Sodium:

Symbol_____ Atomic #_____ Atomic Mass_____

Protons_____ Neutrons_____ Electrons_____

Lead:

Symbol_____ Atomic #_____ Atomic Mass_____

Protons_____ Neutrons_____ Electrons_____

Question:

Find the element on the table that has the symbol AG (silver). It has an atomic mass of 108 and an atomic number of 47. How many neutrons does this element have?

How many electrons does it have in a neutral atom?

Bonding Basics - Part II

Please Use Your Book to answer these questions. Write the Answer AND the question in your notebook!

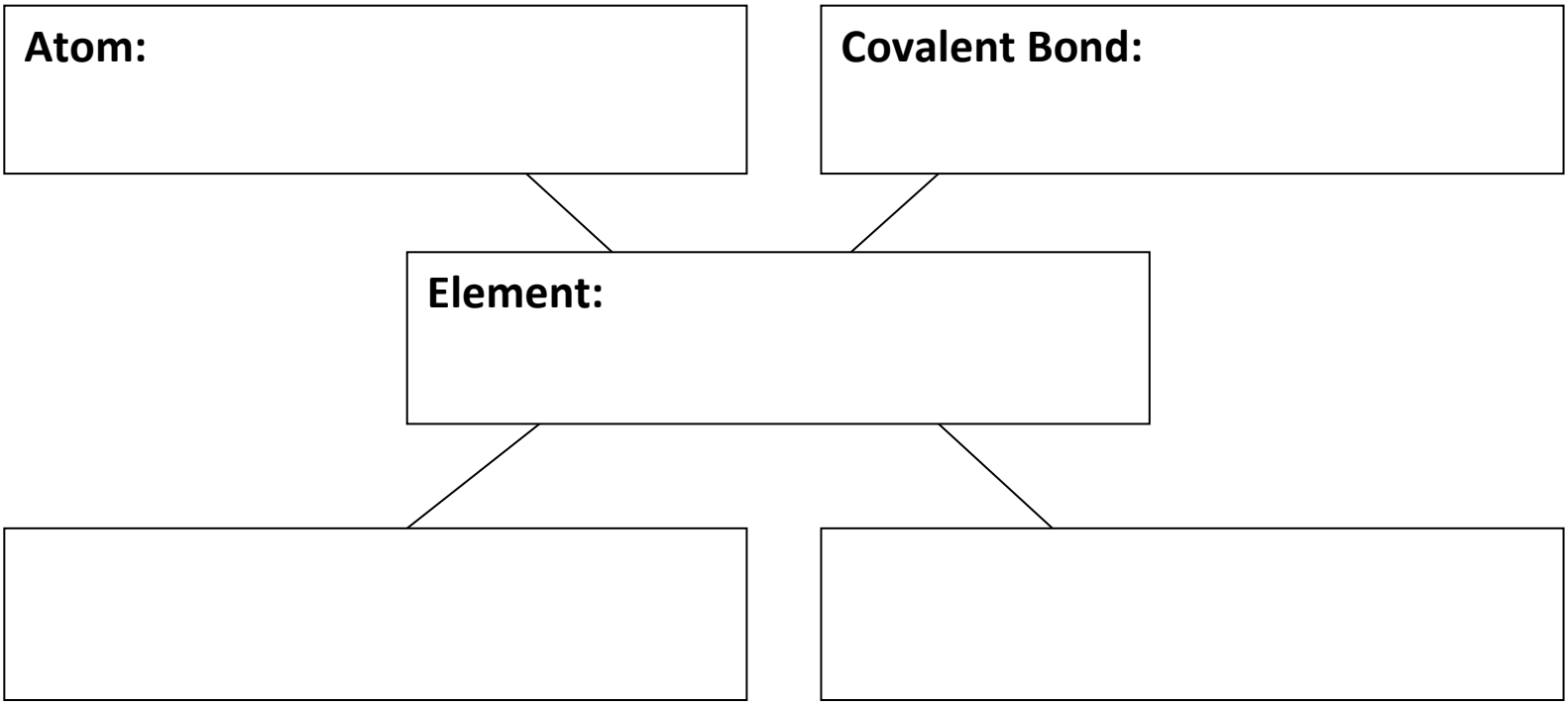
Starting on Page 36:

What distinguishes one element from another?

Describe the formation of an ionic compound:

What is the difference between an ionic bond and a covalent bond?

How does a molecule differ from an atom?

What does co- mean?
What does -valent mean?

Draw this diagram (it's a main idea web!) in your notebook. Use the web to help you make connections among elements, atoms, ions, compounds, and molecules.