Naming Ws #5: More Molecular Compounds

Sometimes a compound is known by a common name rather than by it's chemical name. Here are a few examples. Fill in the chemical name and formulas.

	Common Name	Chemical name	Formula
21.	Laughing gas		N_2O
22.	Water		
23.	Hydrogen Peroxide		
24.	Ammonia		NH_3

Most elements can be written by just using the symbols. However, the most stable form for many elements is a compound rather than the individual atom. Write the binary form and the state (at 25°C) of each of the following elements.

	Element	Diatomic formula	State of matter (at 25°C)
25.	hydrogen		
26.	nitrogen		
27.	oxygen		
28.	fluorine		
29.	chlorine		
30.	bromine		
31.	iodine		

In naming the compounds one has to first decide whether you are looking at an ionic compound or a molecular compound. We know that metals combined to non-metals will produce compounds that are ionic. Non-metals combined with non-metals will produce compounds that are molecular.

You must be able to identify from the formula given whether you are looking at an ionic or a molecular compound. If the formula has both symbols from non-metals, then the compound would be classified as a molecular compound. If the formula has the symbols of a metal and a non-metal, then the compound would be classified as an ionic compound.

	Compound	Molecular or Ionic	Name
32.	$CaSO_4$		
33.	CO_2		
34.	N_2O_4		
35.	$LiCl$		
36.	P_2O_5		
37.	$Cu_3(PO_4)_2$		
38.	$AlCl_3$		
39.	PCl_5		
40.	CCl_4		