

Making Ions – Ionic Bonds are made of Ions. A strong understanding of Ions is needed.

Notes: Remember that Metals tend to lose their electrons, falling back to their inner octet, becoming smaller, forming positive “cations”. Nonmetals tend to gain electrons, filling up their current energy levels, becoming larger, forming negative “anions”. *Complete the chart below.*

Element	Lewis Dot	# of Valance e-	Gain/Lose ___ e-	Valance Charge
Na	Na	1	L 1	+1
Be				
Cl				
S				
Al				
Ne				
K				
N				
O				
Ca				
P				
B				
Mg				

Write the Formula / Formula Unit for the following Compounds

Determining the formula for Magnesium Fluoride?

1. Identify the charges = $\text{Mg}^{2+} \text{F}^{-1}$
2. Cross the Charges, $\text{Mg}^{\cancel{2+}} \text{F}^{\cancel{1-}} = \text{Mg}_1\text{F}_2$
3. If the subscript is a 1 it does not need to be written.
4. If there is a common subscript such as 2 as in Mg_2O_2 , reduce it to Mg_1O_1 which is also MgO .

Write Formula Unit For the Below Ionic Compounds

	Name	Cation (+)	Anion (-)	Formula
1	Sodium Chloride	Na^{1+}	Cl^{1-}	$\text{Na}^{\cancel{1+}} \text{Cl}^{\cancel{1-}} = \text{NaCl}$
2	Aluminum Chloride	Al^{3+}	Cl^{1-}	
3	Aluminum Phosphide			
4	Magnesium Oxide			
5	Cesium Fluoride			
6	Strontium Nitride			
7	Lithium Sulfide			
8	Calcium Chloride			
9	Sodium Bromide			
10	Beryllium Iodide			
11	Strontium Fluoride			
12	Aluminum Fluoride			
13	Potassium Nitride			
14	Sodium Sulfide			
15	Lithium Oxide			
16	Calcium Oxide			