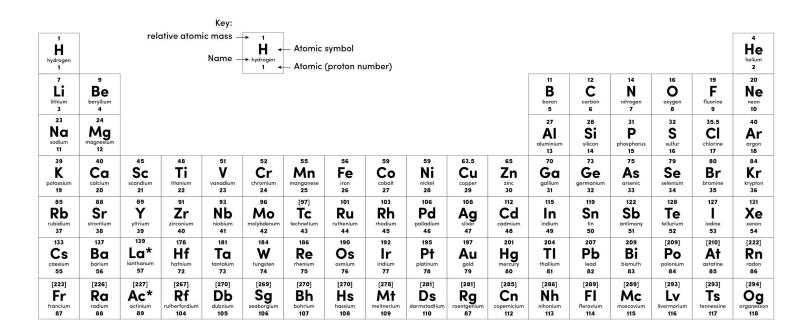
Structures and bonding Further Ionic Bonding Worksheet

Combined science - Chemistry - Key Stage 4

Mr Robbins



Periodic Table of Elements





^{*} The lanthanides (atomic numbers 58 – 71) and the Actinides (atomic numbers 90 – 103) have been omitted.

Relative atomic masses for **Cu** and **Cl** have not been rounded to the nearest whole number.

Draw a diagram to show what happens when Calcium (Ca) Reacts with Chlorine (Cl)

- 1. Show the atoms outside shells
- 2. Draw arrows to show how the electrons move
- 3. Draw the ions with brackets and charges
- 4. Ca is in group 2 and Cl is in group 7



Giant ionic lattice

Ionic compounds form giant ionic lattices

- Giant = Big
- Ionic = Made of oppositely charged ions
- Lattice = Repeating structure

E.g. NaCl



Independent practice:

Copy and complete the table. The first one has been completed for you.

Name	Positive ion	Negative ion	Formula
sodium oxide	Na⁺	O ²⁻	Na ₂ O
Magnesium oxide			
Potassium iodide			
Magnesium chloride			
Aluminium chloride			
Calcium chloride			
Calcium oxide			

Hint	
Group No.	lon charge
1	+]
2	+2
3	+3
6	-2
7	-1



Your turn

Magnesium Oxide contains Magnesium (Mg²⁺) ions and Oxide (O2⁻) ions.

Describe in terms of electrons what happens when Magnesium reacts

- Change in the metal
- Change in the non-metal
- Attraction between opposite charges
- Ionic formula



Your Turn

Magnesium Bromide contains Magnesium (Mg²⁺) ions and Bromide (Br⁻) ions.

Describe in terms of electrons what happens when Magnesium reacts with Bromine

- Change in the metal
- Change in the non-metal
- Attraction between opposite charges
- Ionic formula

