## **Chemical Equations**

HCI + NaOH → NaCI + H<sub>2</sub>O

"reactants" (starting materials)

"products" (finishing materials)

1

# **Balancing Chemical Equations**

Skeleton Chemical Equation

Represents the chemical reaction, connecting the reactants to the products.

Ex. methane + oxygen 
$$\Rightarrow$$
 carbon dioxide + water

$$CH_4 + O_2 \Rightarrow CO_2 + H_2O$$

#### Count the Atoms!

<b>ATOM</b>	PRODUCTS	REACTANTS
C		1
H	2	4
0	3	2

#### Tips for balancing chemical equations:

- You can only add coefficients (number in front of formula)
- Balance each atom individually, unless it appears to be a polyatomic compound
- Choose the 'easy' atoms first

### Balance the following chemical equations:

$$2 \text{Mg}_{(s)} + O_{2(g)} \longrightarrow 2 \text{MgO}_{(s)}$$

$$3H_2 + N_2 \longrightarrow 2NH_3$$

$$2Al +3CuO \longrightarrow Al_2O_3 +3Cu$$

$$\downarrow K_2O + \downarrow H_2O \longrightarrow KOH$$

$$CaCl_2 + 2AgNO_3 - 2AgCl + Ca(NO_3)_2$$

# **Balancing Equations Worksheet**