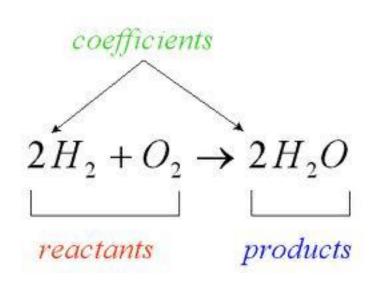
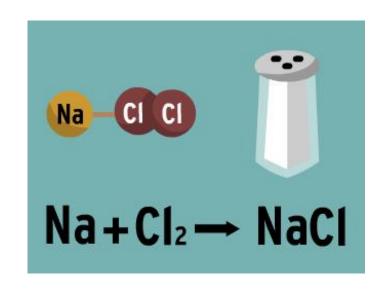
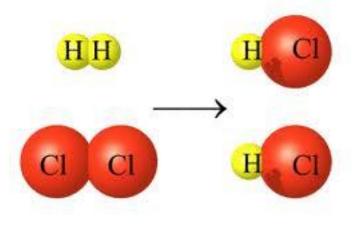
### **Chemical Equations**



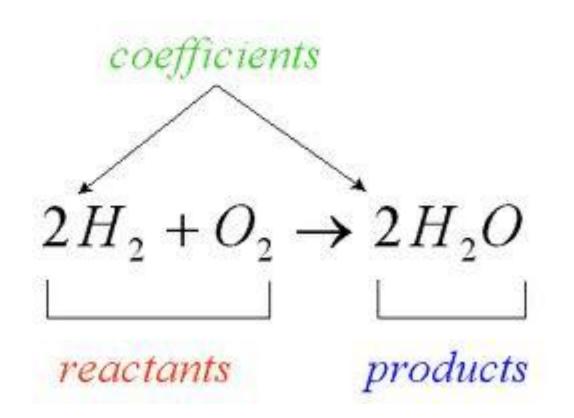






# **Chemical Equations**

A way to represent chemical reactions.



### Examples

 $2 H_2O \rightarrow 2 H_2 + O_2$  (electrolysis of water)

 $C_{10}H_8 + 12 O_2 \rightarrow 10 CO_2 + 4 H_2O$  (combustion)

#### **Chemical Reactions**

 Combining or breaking apart molecules to create new substances.



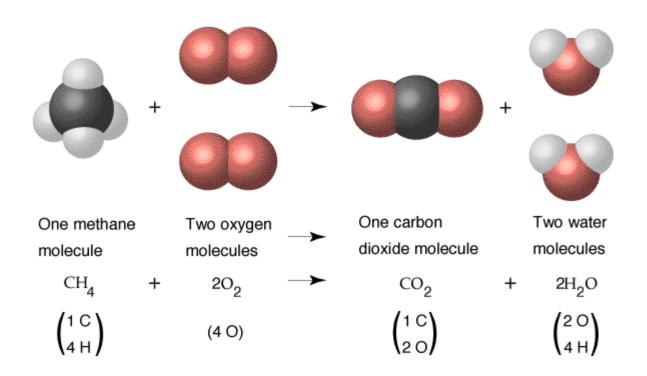
### **Conservation of Mass**

Matter cannot be destroyed or created.



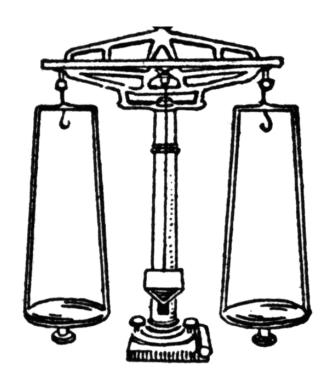
### **Balancing Chemical Equations**

 The number of a particular atom must be the same before and after a chemical reaction.



# Stoichiometry

Another term for balancing chemical equations.



# Examples

$$2K + Cl_2 \rightarrow 2KCl$$

$$4 \text{ Al} + 3 \text{ O}_2 \rightarrow 2 \text{ Al}_2 \text{O}_3$$

$$4 \text{ Al} + 3 \text{ O}_2 \rightarrow 2 \text{ Al}_2 \text{O}_3$$