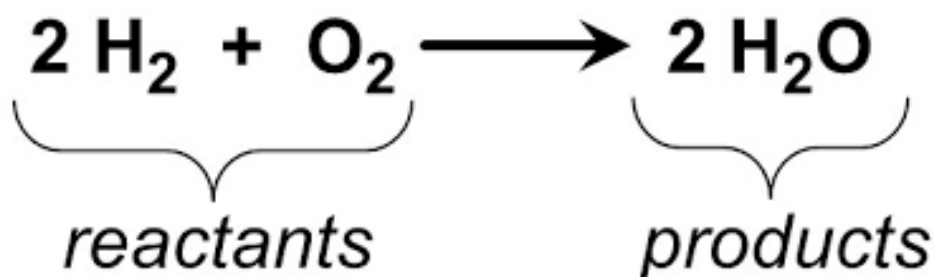


**Reactions - Types of Reaction KEY LEARNING**

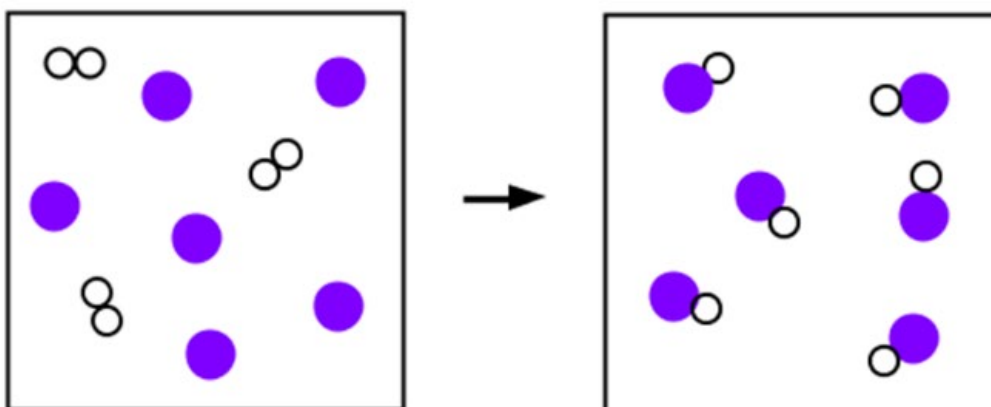
Chemicals that react together are called reactants.

Chemicals that are made in a reaction are called products.

Hydrogen + Oxygen  $\rightarrow$  Water



Chemical changes can be described by a model where atoms and molecules in **reactants** rearrange to make the **products** and the total number of atoms is conserved.

**Keywords**

**Chemical reaction:** A change in which a new substance is formed.

**Physical change:** One that changes the physical properties of a substance, but no new substance is formed.

**Reactants:** Substances that react together, shown before the arrow in an equation.

**Products:** Substances formed in a chemical reaction, shown after the reaction arrow in an equation.

**Conserved:** When the quantity of something does not change after a process takes place.

## Reactions - Chemical Change KEY LEARNING

Reactions usually give out heat (thermal energy).

Burning (combustion) is a very common reaction that gives out heat. It uses oxygen as well as a fuel.



**Fuel + Oxygen → Carbon dioxide + Water + Heat**  
**REACTANTS** **PRODUCTS**

Key Learning Questions	Year 8 Reactions
Physical change or Chemical reaction? Melting ice.	Physical change
Physical change or Chemical reaction? Using a Bunsen burner.	Chemical change
Which type of change is reversible? Chemical or Physical?	Physical change
What is a simpler name for combustion?	Burning
Which gas is essential for combustion?	Oxygen
Which type of energy is usually released by a reaction?	Heat/Thermal
What do we call substances formed in a reaction?	Products
What do we call substances that react together in a reaction?	Reactants
Name one product. Hydrogen + Oxygen → Water	Water
Name one reactant. Nitrogen + Hydrogen → Ammonia	Nitrogen or hydrogen