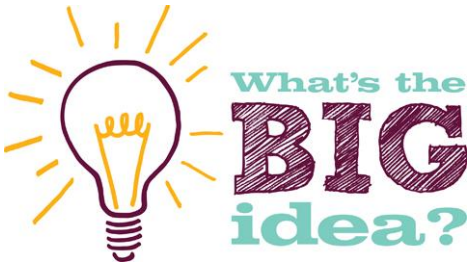
You need to know the content of this sheet. 100%

100% Sheet
Types of Reaction



Chemical reactions
involve rearrangement of atoms in substances to form new substances.

In a CHEMICAL reaction, one or more new products are made.

Reactants → Products

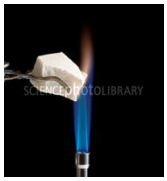
In a physical reaction, nothing new is made, it just changes state (solid to liquid when melting etc)

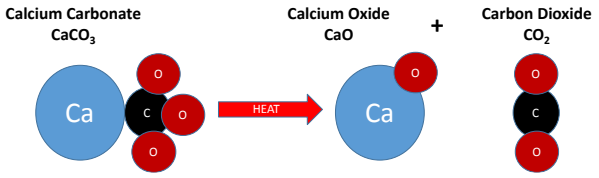
Thermal Decomposition

Using Heat (Thermal) to make two products from one reactant

A → B + C

Calcium Carbonate → Calcium Oxide + Carbon dioxide





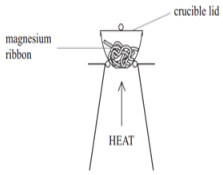
The mass appears to have gone down because the Carbon dioxide gas has escaped into the air

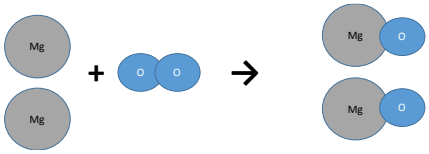
Oxidation of Metals

Using Heat (Thermal) to make one product from two reactants (1 reactant is oxygen)

A + B → C

Magnesium + Oxygen → Magnesium Oxide





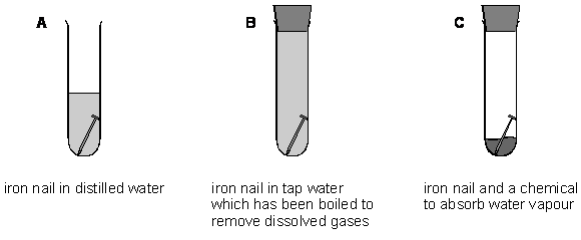
The mass appears to have gone up because the Oxygen gas from the air has combined with the metal

Combustion

Fuel + Oxygen → Carbon Dioxide + Water

Corrosion (Rusting)

Requires both water AND oxygen



You need to apply your knowledge

100% Sheet
Types of Reaction

WORK FOR PROGRESS

Chemical reactions
involve rearrangement of atoms in substances to form new substances.

Working Towards

Expected

Greater Depth

(i) Explain why opening the air hole of a Bunsen burner makes the flame hotter.

(ii) Complete the word equation for the chemical reaction in the clear blue flame.

methane + ... → ..... + ...

A pupil heated 1.24 g of copper carbonate strongly. The chemical reaction which took place is represented by the equation:

$$CuCO_3(s) \rightarrow CuO(s) + CO_2(g)$$

After the solid which remained had cooled, he weighed it.
He found that its mass was 0.80 g.

(iii) Why did the pupil find a decrease in mass in this experiment?

(iv) He then heated the 0.80 g of solid again. When he weighed it after cooling, its mass was still 0.80 g. Explain why it had not changed in mass this time.

(v) In another experiment, he burnt magnesium ribbon in air. He found that the mass of the powder formed was greater than the original mass of the ribbon. Explain this.

(vi) Write the word equation for the reaction which takes place when magnesium burns in oxygen.