

Knowledge I need to know by the end of this topic:

- Compounds have different properties than the elements they are made up of.
- When two elements join together, the name ending of the second element changes to -ide.
- When three elements, one of which is oxygen, join together, the ending of the second element changes to -ite or -ate. Oxygen does not appear in the name of the compound.
- There is never any overall change in mass when a chemical reaction takes place. This is called Conservation of Mass.
- An exothermic reaction gives out energy to the surroundings. An endothermic reaction takes in energy from the surroundings.
- Metals can be arranged in order of how they react with water, oxygen, and acids. This is called the Reactivity Series.
- Reactions of metals can be summarised using word equations.
- Alkali metals react violently with water to produce hydrogen gas and an alkali.
- Hydrogen gas burns with a pop.
- Metals above copper in the reactivity series react with dilute acid to produce hydrogen gas
- Very unreactive metals at the bottom of the reactivity series are found un-combined in nature.
- Metals can be extracted from their ores by heating alone (least reactive), heating with carbon or electrolysis (most reactive).
- A blast furnace is used to extract iron from iron ore. Coke, iron ore and limestone are put in the top. The limestone helps to extract the impurities (slag).
- Electrolysis is used to separate a metal from its ore (compound)., e.g. CuCl_2 . The metal will form on the negative electrode (e.g. Cu). Often a gas will form on the positive electrode (e.g. Cl_2).