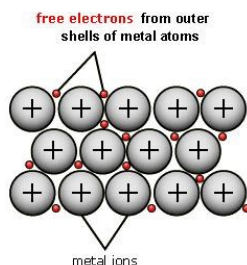


### Higher only

Metallic bonding is the electrostatic attraction between positive metal ions and a



Metal	Reaction with water	Reaction with acid
Most reactive		
Potassium	Reacts violently	Reacts violently
Sodium	Reacts quickly	Reacts violently
Calcium	Reacts less strongly	Reacts vigorously
Magnesium		Reacts vigorously
Zinc		Reacts less strongly
Iron		Reacts less strongly
Hydrogen		
Copper		
Least reactive		

## Metal and metal compounds

### Neutralisation reactions

A neutralization reaction is a reaction between a base and an acid to form a

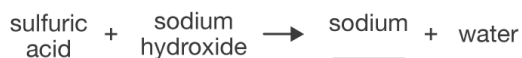
- 1) metal + acid → salt + hydrogen
- 2) metal oxide + acid → salt + water
- 3) metal hydroxide + acid → salt + water
- 4) metal carbonate + acid

→ salt + water + carbon dioxide

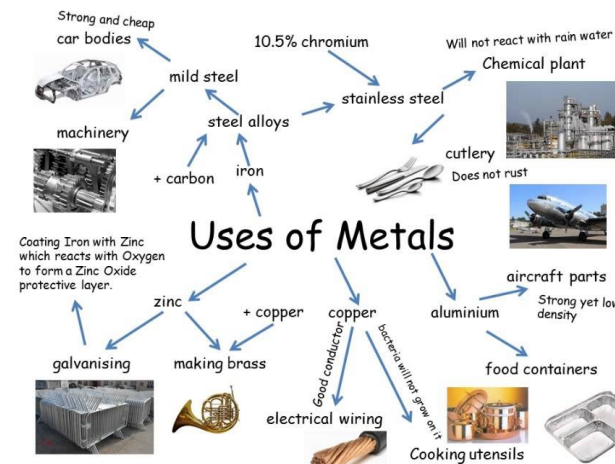
### Naming Salts

The first part of the name comes from the **metal**. The second part of the name comes from the **acid**.

acid	salt formed
hydrochloric acid	chloride
sulfuric acid	sulfate
nitric acid	nitrate



**Conservation of mass** : Mass is never lost or gained in chemical reactions. The total mass of the products is equal to the total mass of the reactants.



### Gas tests

The test for hydrogen is hold a lighted splint in gas and it burns with a squeaky pop.

The test for oxygen is hold a glowing splint in the gas and the splint re-lights.

The test for carbon dioxide is to bubble the gas through lime-water and it turns

