Reaction Definitions

Reactivity: how reactive a given element or substance is

Chemical Change: a process in which a new compound is formed

eg $2Mg(s) + O_2(g) \rightarrow 2MgO(s)$

eg $NH_3(g) + HCl(g) \rightarrow NH_4Cl(s)$

Physical Change: a process in which a given substance changes state or particle size

(s) = solid
(l) = liquid
(g) = gas
(aq) = aqueous (a solution with a water solvent)

Chemical Property: any property of a substance that can be observed during a chemical change (in order to observe a chemical property, you must destroy the substance)

Physical Property: any property of a substance that can be measured without destroying the substance (includes: melting point (M.P.), boiling point (B.P.), density (d), colour, hardness, luster, conductivity etc. Numerical physical properties can often be used to identify a substance.

Qualitative: any observation that does not require the use of numbers

Quantitative: any observation that requires the use of numbers (eg mass, M.P.)

Evidence of a Chemical Change:

- heat or energy is involved
- change in colour
- formation of a precipitate
- light is given off
- evolution of gas

A NEW SUBSTANCE IS FORMED