

Stuff to know when writing BCE

- Metals are placed first in a compound (ionic cpd). Always use charges when metals are involved.
 $M-NM \quad NaCl \rightarrow NaCl$
- Use subscripts.
 you can determine whether a precipitate might form using your solubility chart
 $G_1B_1 + G_2B_3 \rightarrow G_1NaNO_3 + PbI_2(s)$
 Remember all group 1A and NH_4^+ and NO_3^- cpds are soluble in water i.e. (aq)
 e.g. $NaCl(aq)$
 $Pb(NO_3)_2(aq)$
 $(NH_4)_2CO_3(aq)$
 you should know the state of certain chemicals at room temperature and pressure conditions
 e.g. $H_2O(l)$ all $M=(s)$ except $Hg(l)$
 $Cl_2(g)$
 $Al(s)$
- P S I H ave N O Bright O r Cl ever F riends } ele
 $7 8 2 2 2 2 2 2 2 2 2$
 diatomic molecules

- Be able to determine the type of chemical reaction.
 Refer to pages 25 - 27 in your textbook. Make notes for yourself if need be.
 Types:
 Acid + Base = Salt + Water
 $(neut)(DD) \quad HCl(aq) + NaOH(aq) \rightarrow NaCl(aq) + H_2O(l)$
 Synthesis = a cpd forming from elements or cpds
 $A+B \rightarrow AB \quad Cu(s) + O_2(g) \rightarrow CuO(s)$
 Decomposition = a cpd breaking apart into elements and/or simpler cpds
 $AB \rightarrow A+B \quad 2H_2O(l) \rightarrow O_2(g) + 2H_2(g)$
 Precipitation
 $G_1B_1 + G_2B_2(aq) \rightarrow G_1B_2 + G_2B_1(s)$
 Single Displacement = 1 element and 1 cpd
 Remember Metals bump out Metals.
 Remember Nonmetals bump out Nonmetals
 $Cu(s) + AgNO_3(aq) \rightarrow Ag(s) + Cu(NO_3)_2(aq)$
 $Fe(s) + 2KI(aq) \rightarrow 2KF(aq) + I_2(s)$
 Double Displacement = 2 cpds becoming 2 new cpds (usually in solution)
DD

- Oxidation and Combustion = for now, requires oxygen (more info later this year)
 Slow oxidation = rusting
 $4Fe(s) + 3O_2(g) \rightarrow 2Fe_2O_3(s)$
 Fast oxidation = burning/combustion
 $CH_4(g) + 2O_2(g) \rightarrow CO_2(g) + 2H_2O(g)$
 Photosynthesis and Respiration
 $6CO_2(g) + 6H_2O(l) \xrightarrow{photo} C_6H_{12}O_6(s) + 6O_2(g)$
 ← resp
- Endothermic and Exothermic
 Endothermic = More energy is absorbed during the reaction than is released.
 $chem_1 + E \rightarrow chem_2$
 Exothermic = More energy is released than is absorbed during the reaction.
 $chem_1 \rightarrow E + chem_2$
- Fire Triangle
