Happy World Fisheries Day, World Television Day, and World Hello Day!

(It's NOT Jake John James birthday:|)

Homework Questions?

Chemical Reactions

IV. Single Replacement Reaction

Reaction of an element with a compound to produce a new element and an ionic compound.

⇒usually occurs in aqueous solution

⇒ reaction will only occur if the element is replacing a less

reactive element (see table 11.2)

$$Cu_{(s)} + ZAgNO_{3(aq)} \longrightarrow ZAg + Cu(W_3)_2$$

metal compound metal compound

$$Cl_{2(g)} + 2 NaI_{(aq)} \longrightarrow I_2 + 2 NaI_{(aq)}$$

nonmetal compound nonmetal compound

Table 11.2		
Activity Series of Metals		
	Name	Symbol
Decreasing reactivity	Lithium	Li
	Potassium	K
	Calcium	Ca
	Sodium	Na
	Magnesium	Mg
	Aluminum	Al
	Zinc	Zn
	Iron	Fe
	Lead	Pb
	(Hydrogen)	(H)*
	Copper	Cu
	Mercury	Hg
	Silver	Ag

Practice Problems

$$Zn_{(s)} + Pb(NO_3)_{2(aq)} \longrightarrow Pb + Zh(NO_3)_2$$

$$F_{2(g)} + 2HCl_{(aq)} \longrightarrow Cl_2 + 2HF$$

$$A^{34} + SO_4$$

$$2Al_{(s)} + 3CuSO_{4(aq)} \longrightarrow 3Cu + Al_2(SO_4)_3$$

Chemical Reactions

displacement

V. Double Replacement Reaction

Reaction that occurs between two ionic compounds in solution. Ions will "change partners".

⇒if one of the products has low solubility, it may form a precipitate (solid). This double replacement reaction is called **precipitation**.

A second type of double replacement reaction is a **neutralization** reaction, which is a reaction between an acid and a base, to form water and an ionic compound.

Practice Problems

$$BaCl_{2(aq)} + Na_{2}SO_{4(aq)} \rightarrow BaSO_{4} + 2NaC$$

$$3NaOH_{(aq)} + FeBr_{3(aq)} \rightarrow 3NaOH_{3(aq)} + Fe(OH)_{3}$$

$$2KI_{(aq)} + Pb(NO_{3})_{2(aq)} \rightarrow 2KNO_{3} + PbI_{2}$$

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p. 335 #18,19
p. 339 #22-27