

### 3.4 Double Displacement Reactions

#### Definitions

- Double displacement reaction
- Solute
- Solvent
- Solubility
- Precipitate
- Neutralization reaction

#### Double Displacement Reactions

- $AB + CD \rightarrow AD + CB$
- E.g.  $HCl_{(aq)} + NaOH_{(aq)} \rightarrow NaCl_{(aq)} + H_2O_{(l)}$

#### Solubility

- A solution is a solute dissolved in a solvent to produce a homogenous mixture.
- Solubility tables help us determine if something is soluble and if a precipitate will form.

#### Types of Reactions

- Precipitation Reactions
  - E.g.  $CaCl_{2(aq)} + Na_2CO_{3(aq)} \rightarrow CaCO_{3(s)} + 2NaCl_{(aq)}$
- Reactions Producing a Gas
  - E.g.  $Na_2S_{(aq)} + 2HCl_{(aq)} \rightarrow 2NaCl_{(aq)} + H_2S_{(g)}$
- Neutralization Reactions
  - E.g.  $HCl_{(aq)} + NaOH_{(aq)} \rightarrow NaCl_{(aq)} + H_2O_{(l)}$

#### Homework

- Practice Questions: 1,2,3,4,5,6,7,8,9,10,11,12
- Section Questions: 1,2

#### Other Homework

- Do review sections for chapters 1,2,3 to prepare for unit test.