

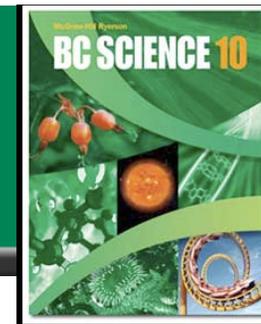
These notes are posted on my site for the following reasons:

- for students to copy in their own hand-writing
 - ◆ in order to complete their class notes
 - ◆ if student did not have enough time in class
 - ◆ if student was away and missed this section
- for assistants and tutors to follow progress of the concepts taught

Photocopied/printed notes can not be used during the Unit Notebook Check in class.

ndupuis@sd61.bc.ca dupuis.shawbiz.ca

5.2 Salts



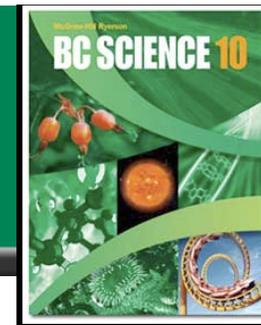
- **Salts are ionic compounds formed when acids and bases react.**
 - ◆ Salts are also produced when oxides or carbonates react with acids, or when metals react with acids.
- **Table salt, NaCl, is found in seawater, salt lakes or rock deposits.**
 - ◆ Salt was once very valuable as a commodity.
 - ◆ Iodine is now added to salt to minimize goiter (a disease of the thyroid)
- **NaCl is only one kind of salt**
 - ◆ A salt is made up of a positive ion from a base and negative ion from an acid.
 - ◆ Salts are found in many things
 - In batteries, explosives and fertilizers
 - In multivitamins
 - In many living cells

Salt crystals in Death Valley

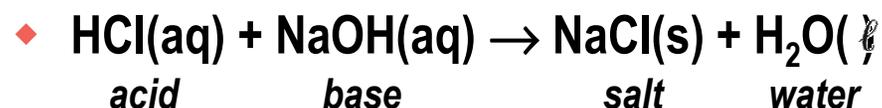


See pages 234 - 235

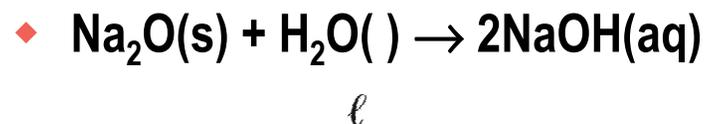
Acid-Base Neutralization, and Metal Oxides and Non-Metal Oxides



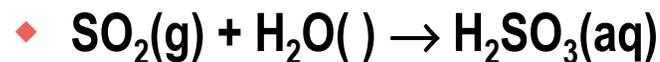
- Neutralization reactions occur when an acid and a base react to produce a salt and water.



- Metal oxides react with water to form bases.



- Non-metal oxides react with water to form acids



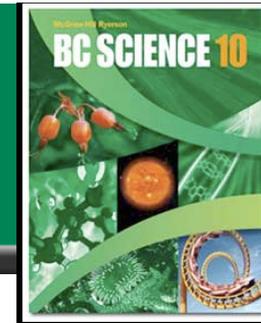
- Non-metal oxides are formed from the burning of fossil fuels
 - Add water in the atmosphere = acid precipitation



The effects of acid rain on a forest

See pages 236 - 237

Acids and Metals, and Acids and Carbonates



- **Acids and Metals**

- ◆ The most reactive metals, at the bottom of groups 1 and 2, react vigorously with water and acids.
- ◆ All other metals are less reactive than those in groups 1 and 2.
- ◆ When metals do react with acids, H₂ gas is usually released
- ◆ $2\text{HCl}(\text{aq}) + \text{Mg}(\text{s}) \rightarrow \text{MgCl}_2(\text{s}) + \text{H}_2(\text{g})$

- **Acids and Carbonates**

- ◆ Carbonates (-CO₃) neutralize acids, protecting locations with natural carbonate supplies from acid precipitation.
- ◆ $\text{H}_2\text{SO}_4(\text{aq}) + \text{CaCO}_3(\text{s}) \rightarrow \text{CaCO}_3(\text{s}) + \text{H}_2\text{O}(\text{l}) + \text{CO}_2(\text{g})$
sulphuric calcium calcium water carbon
acid carbonate carbonate dioxide

See pages 238 - 239

[Take the Section 5.2 Quiz](#)

(c) McGraw Hill Ryerson 2007