## Section 6.3 Reactions of Acids and Bases

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## Acid and Base Reactions

- Most reactions involving acids and bases are a type of
- The $\qquad$ will displace one another and bind to the anion
- When acids and bases are involved, these reactions are known as , ,


## Neutralization Reactions

In neutralization reactions the reactants and products consist of the following:


## Let's Practice

Write a balanced chemical equation and determine the products of the following reactions:
a) Phosphoric acid neutralized a potassium hydroxide solution.
b) Hydrobromic acid neutralizes a calcium hydroxide solution.
c) Sulfurous acid neutralized a lithium hydroxide solution.

## Application 1: Antacids



The cells that line your stomach release HCl to help in the process of digestion. At times there can be an overproduction of HCl which causes it to move up the esophagus and cause acid reflux (i.e heart burn)

## Application 2: Acid Spills



The railroad tanker derailed and spilled 150 000 L of sulfuric acid into the river. Calcium hydroxide was added to the ricer to help neutralize the spill.

An alkaline product can be added to the acid spill in order to neutralize it.

## Application 3: Acid Rain

## What is Acid Rain?

Acid rain:

Reaction 1:
$\mathrm{CO}_{2(\mathrm{~g})}+$
 $\mathrm{H}_{2} \mathrm{CO}_{3}$ (aq)

Reaction 2: $\mathrm{NO}_{2(\mathrm{~g})}+\mathrm{H}_{2} \mathrm{O}_{(\mathrm{l})} \longrightarrow \mathrm{HNO}_{3}(\mathrm{aq})$

## Effects of Acid Rain

Acid Rain tends to greatly affect the regions of the $\qquad$ . Most of the soils in the Canadian shield are made of granite which do not have basic (alkaline) properties to counteract the effects of acid rain.

## Western Canada has

which has a
natural basicity and can neutralize the effects of acid rain.


## Homework

- Complete the worksheets given in class

Complete the review package for the Unit Test

