**1.2 Acids and Bases**

p. 191-195

pH scale- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Acid- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Base- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**0--------------7---------------14**

**Acid Neutral Base**

**ACIDS**

Often taste sour \*

Is a measure of the concentration of hydrogen ions in a solution

Strong acids can burn skin & eyes

Strong acids can dissolve metals

Examples:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**BASES**

Can taste bitter, sweetish, or salty \*

Often feel slippery or “soapy” \*

Strong bases can burn skin & eyes

Bases react more easily with protein than with metal; they are often used for cleaning

Examples:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**pH scale**

pH 0.5 is battery acid

pH 12.6 is ammonia

pH 7 is neutral (distilled neutral)

**HOW TO TEST:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- they are substances that change color in the presence (you need to use a color chart to indicate the correct pH)

Can be a universal indicator, or a red/blue pH strip

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- digital indicator

**We will also be using LITMUS PAPER**

Litmus paper is blue or red paper that will test the pH of a substance.

**Red litmus** paper will turn blue in a base and **STAY RED in an acid**

**Blue litmus** paper will turn red in an acid and **STAY BLUE in a base**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**The pH scale**

Careful measurement is important

A mistake of *\_\_\_\_\_\_\_\_\_\_\_\_\_\_* unit means *\_\_\_\_\_\_\_\_\_\_\_\_\_\_* too much or too little!

**Neutralization**

Neutralization- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The process produces a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ always (not always NaCl).

HCl + NaOH 🡪 NaCl + H2O

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Acid Rain**

Central Canada gets acid rain in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Lakes become acidic therefore killing the organisms within the lake.

Lakes treated with \_\_\_\_\_\_\_\_\_ in order to neutralize it.

 Ca(OH)2 + H2SO4 🡪 CaSO4 + 2 H2O

Calcium hydroxide + sulfuric acid 🡪 calcium sulfate + water