

Chemical Compounds

Chapter 15 – 2
Acids and Bases



Essential Questions

- What are four properties of acids?
- What are some uses of acids?
- What are four properties of bases?
- What are some uses of bases?



Definitions

- Acid – any compound that increases the number of **hydronium** ions when dissolved in water
- Indicator – compound that can reversibly change color depending on conditions such as pH
- Base – any compound increases the number of **hydroxide** ions when dissolved in water



Acids & their Properties

- increases the hydronium ions: H_3O^+ in water (extra hydrogen ion)
- have a sour flavor (lemons);
many are corrosive and/or poisonous
- change colors in **indicators**
 - Litmus paper is one indicator: acid turns **blue** litmus **red**



Acids & their Properties cont.

- React with some metals to produce hydrogen gas
- When dissolved, conduct electrical current



Uses of Acids

- Industry & home: paper, paints, detergents, fertilizer, rubber & plastics
- Body: hydrochloric acid is in the stomach to aid in digestion
- Food: citrus fruits & soft drinks



Bases & their Properties

- Any compound that increases the number of hydroxide ions, OH^- , when dissolved in water
- Bitter taste and slippery feel (ex: soap)
- Can be corrosive and dangerous
- Changes color in an indicator
 - Turns **red** litmus paper **blue**
- Solutions of bases conduct electric current



Uses of Bases

- Industry & home: helps make soap, paper, oven cleaner, cement, plaster, household cleaners
- Used to treat heartburn
- REMEMBER: BOTH ACIDS AND BASES CAN BE EXTREMELY HARMFUL. BOTH CAN CAUSE **SERIOUS** BURNS.

