pH

the measure of the acidity or basicity (alkalinity) of an aqueous solution.

Acid

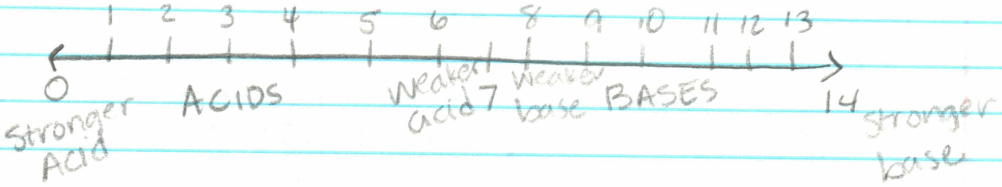
pH - 0 - 7
Sour taste
Donates H^+ ions

Bases

pH 7 - 14
Bitter taste
Slippery feel
Accepts OH^- ions

Neutral

pH - 7
pure water



lements

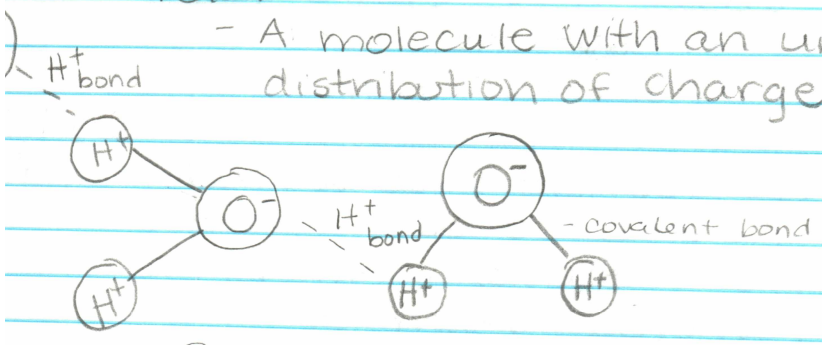
- Pure substances - Gold, copper, hydrogen
- Carbon, hydrogen, nitrogen, oxygen = 96% of human body
  - CHNOP (phosphorus is found in NA)
- Trace elements
  - < 0.1%
  - important in maintaining homeostasis
- Carbon is awesome
  - 4 bonds
  - Double, triple bonds

ompounds

2+ more atoms bonded together

Water : H_2O

- It's great! (70-95% of most organisms!)
- Polar
  - A molecule with an unequal distribution of charges



- Because of polarity, water molecules are attracted to each other and undergo hydrogen bonding

- Cohesion
  - Water molecules stick to each other (overfill glass of water)
- Adhesion
  - water molecules stick to other substances
- High surface tension
  - water molecules on outside H^+ bond to create a net

* Capillary action
  - Able to creep up thin tubes against gravity

- Universal Solvent
  - Polarity makes it ideal to disolve ionic compounds and other polar compounds - sugar, salts
  - Main component of our blood - water

- Resists temperature change
  - Insulator
- Water expands as it freezes
  - Most dense @ 4°C
  - Think icebergs

Organic Compounds (Biomolecules)

- All made up of Carbon
- Monomers (single base units) combine to make polymers
- Water can be used to synthesize or breakdown polymers
  1. Condensation
     - Water leaves to form a bond between monomers
  2. Hydrolysis
     - Water enters to break bonds

- 4 Biomolecules
  - Carbohydrates
  - Lipids
  - Nucleic Acids
  - Proteins

(To the foldable!)