

25 Random words form the 66 that we had.

Even though you submit a review question, you can go back and change it.

Water and Mixtures

- **Solution**
 - Particles of matter called solute mixed with a more abundant substance (usually water) called solvent
- **Water 50% to 75% of body weight**
 - Depends on age, sex, fat content, ect.
 - **Hydrophilic**
 - Substances that dissolve in water
 - **Hydrophobic**
 - Substances that do not dissolve in water
- **Polar covalent bonds and V-shaped molecule**
 - **Solvency**
 - The ability to dissolve other chemicals
 - **Cohesion**
 - Tendency of molecules of the same substance to cling to each other.
 - **Adhesion**
 - Tendency of one substance to cling to another
 - **Chemical reactivity**
 - pH
 - Hydrogen concentration
 - **Thermal stability**
 - Helps stabilize the internal temperature of the body
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pH - Acids Bases

- **Acid**
 - Proton donor
 - Releases H⁺ in water
- **Base**
 - Proton acceptor
 - Accepts H⁺
- Our body uses **buffers** to resist changes in pH
- pH is a measurement of molarity of H⁺
 - pH scale invented by Soren Sorensen
 - Had to do with Alcohol
- A **change of one number** on the pH scale represents a 10-fold (10¹ or 10², 10³) change in H⁺ concentration

- 3 pH to 4pH
 - Decrease the hydrogen concentration
 - 4 pH to 3 pH
 - Increase the hydrogen concentration
- Acidic - low number - 1
 - Banana
 - Coke
- Neutral - 7
- Basic - high number - 14
 - Eggs
 - Bleach
 - Ammonia
 - Sodium hydroxide
- Body's range
 - Blood
 - 7.35 to 7.45

Metabolism

- All the chemical reactions of the body
- Catabolism
 - Energy-releasing (exergonic) decomposition reaction
 - Breaking down molecule
 - Eating something and breaking it down
- Anabolism
 - Energy-storing (endergonic) synthesis reactions
 - Using those break down materials to synthesize other materials
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- Catabolism and anabolism are inseparably linked

Carbon Compounds and Functional Groups

- Organic chemistry - the study of compounds containing carbon
- Four categories of carbon compounds
 - Names associated with all 4 categories
 - Monomers
 - The single unit
 - Polymers
 - Having several Monomers together
 - Macromolecules
 - Very large in molecular weight
 - Proteins and Nucleic acids
 - Carbohydrates
 - Hydrophilic (easily dissolved in water) organic molecule
 - General formula
 - $(CH_2O)_n$
 - n = number of carbon atoms

- o 2:1 ratio of hydrogen to oxygen
- Names of carbohydrates often built from:
 - Word root **sacchar-**
 - Suffix **-ose**
 - **Both mean sugar**
- Monosaccharide
 - Simplest carbohydrate
 - Monomer
 - Simple sugar
 - 3 Primary
 - o Glucose
 - o Fructose
 - o Galactose
 - **C₆H₁₂O₆ _ FORMULA** for all three
 -
- Disaccharide
 - Sugar molecule composed of two monosaccharides
- 3 Disaccharides
 - Sugar molecule composed of two monosaccharides
 - o Sucrose
 - Table sugar
 - Glucose plus fructose = sucrose
 - Produced by sugarcane and sugar beets used as common table sugar
 - o Lactose
 - Sugar in milk
 - Glucose +galactose
 - o Maltose
 - Product of starch digestion and present in a few foods such as germinating wheat and mal beverages
 - Glucose + Glucose
- Oligosaccharides
 - 10 to 20 monosaccharides
 - Signifying that they are Polymers
- Polysaccharides
 - Long chains of monosaccharides
 - 3 Polysaccharides
 - o Glycogen
 - The storage form of glucose
 - Polymer of glucose
 - o Starch
 - Also a polymer of glucose
 - The energy storage of glucose in plants
 - We don't make starch, we have to get it from our diet