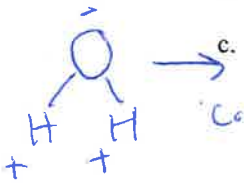
# Chapter 2 Review Guide

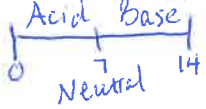
1. Know your vocabulary words especially the ones NOT on the vocabulary quiz.

2. **BONDING**
   a. Explain how a covalent bond works Shares e⁻
      i. What is an example? $H_2O$
   b. Explain how an ionic bond works e⁻ are taken or given
      i. What is an example? Salt
   c. Draw a water bond
      i. Explain the charges Oxygen is − Hydrogen is +
      ii. What type of bond does this create? Covalent Polar
      iii. Explain how it is polar has a +& − end




3. **WATER PROPERTIES**
   a. What is Adhesion? forms bonds with other surfaces
      i. What does it create? breaks H-bonds
      ii. How does it do this? capillary action
      iii. Examples Water going up stems
   b. What is Cohesion? $H_2O$ is attracted to itself
      i. What does it create? surface tension
      ii. How does it do this? water bonds tight together
      iii. Examples things can float
   c. Explain a solution, solute and solvent. Solute is what gets dissolved Solvent is what does the dissolving
   d. Explain how polarity affects a compound has a +& − end → can be dissolved in $H_2O$

4. **ACID and BASES**
   a. What is the range of the pH scale? 0-14
   b. Identify 3 facts about an acid. burns, sour, 0-6.9
   c. Identify 3 facts about a base. Slippery, bitter, 7.1-14
   d. Draw and label the parts of the pH scale.
   e. What is a buffer? Give an example of how this works in our bodies. Tums - brings pH range back to normal




5. Explain the difference between an organic compound and an inorganic compound. has C & from living things does not have C in it & does not come from living things

6. **CARBOHYDRATES**
   a. Name 3 foods. pasta, rice, potato
   b. What is the general purpose? quick energy
   c. What are the basic building blocks? monosaccharides
   d. What elements do they contain? CHO
   e. What does the basic building blocks structure look like?
   f. What are some of the polysaccharides? starch, cellulose

7. **LIPIDS**
   a. Name 3 foods. butter, oil, lipid
   b. What is the general purpose of them? stored energy
   c. What are the basic building blocks? fatty acids, glycerol
   d. What elements do they contain? CHO
   e. What does the basic structure of a lipid look like?
   f. Compare and contrast a saturated and unsaturated fat using 4 facts for each.

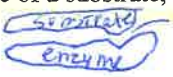
| | sat | unsat |
|---|---|---|
| | White | yellow |
| | from animal | from plants |
| | Bad | good |
| | straight | crooked/double bonds |

8. **PROTEINS**
   a. Name 3 foods. chicken egg fish
   b. What are the 4 general purposes of them? enzymes, collagen, antibody, transport
   c. What are the basic building blocks? amino acids

   d. What elements do they contain? CHON
   e. What does a lipid structure look like? protein

9. **NUCLEIC ACID**
   a. Is it in foods we eat? NO
   b. What is the general purpose of DNA? RNA? heredity - make proteins
   c. What are the basic building blocks? nucleotide
   d. What makes up the basic building block? sugar, base, phosphate
   e. What does the structure of the basic building block look like?
   f. What elements do they contain? CHONP

10. **ENZYMES**
    a. What is the purpose of it? speed up reactions
    b. What organic molecule is it? Protein
    c. What is another name for it? catalyst
    d. List the steps of how an enzyme functions
    e. What 2 things affects it? pH, temp
    f. What is a substrate? what it acts on
    g. What is an active site? binding site b/w enzyme & substrate
    h. Draw a picture of a substrate, active site, and enzyme.




11. **PERIODIC TABLE**
    a. What is the atomic number? # of p⁺ or e⁻
    b. What is atomic mass/weight? p⁺ + n°
    c. Name the 3 particles in an atom. p⁺, n°, e⁻
    d. Where are each of these particles found in an atom? p⁺/n° = nucleus e⁻ = energy levels
    e. How do you found the amount of protons in an element? atomic #
    f. How do you found the amount of electrons in an element? atomic #
    g. How do you found the amount of neutrons in an element? Atomic mass − p⁺
    h. How would you find the following for Hydrogen, Chlorine, Sulfur, and Sodium
       i. Symbol H, Cl, S, Na
       ii. Proton number 1, 17, 16, 11
       iii. Electron number 1, 17, 16, 11
       iv. Neutron number 1, 17, 16, 11
       v. Atomic number 1, 17, 16, 11
       vi. Atomic mass 1, 35, 32, 23

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