

Chemistry of Life Vocabulary

1. **Acid** – compound that donates a proton (H^+) when dissolved in a solution
2. **Activation Energy** – energy input necessary to initiate a chemical reaction
3. **Amino Acids** – molecule that makes up proteins; compound of carbon, hydrogen, oxygen, nitrogen, and sometimes sulfur
4. **Atoms** – smallest basic unit of matter
5. **Base** – compound that accepts a proton (H^+) when dissolved in solution
6. **Carbohydrates** – molecule composed of carbon, hydrogen, and oxygen; includes sugars and starches
7. **Catalyst** – substance that decreases reaction rate in a chemical reaction
8. **Chemical Reactions** – process by which substances change into different substances through the breaking and forming chemical bonds
9. **Covalent Bonding** – chemical bonds formed when two atoms share one or more pairs of electrons
10. **Enzyme** – protein that catalyzes chemical reactions for organisms
11. **Fatty Acids** – hydrocarbon chain often bonded to glycerol in a lipid
12. **Functional Group** – the portion of a molecule that is active in a chemical reaction and that determines the properties of many organic compounds
13. **Glycerides** – a fatty acid ester of glycerol
14. **Glycerol** - a clear, colorless, viscous, sweet-tasting liquid belonging to the **alcohol** family of organic compound
15. **Hydrogen Bonding** – attraction between slightly positive hydrogen atom and a slightly negative atom
16. **Induced Fit** – the binding of the substrate to the enzyme must cause a change in the shape of the enzyme that results in the proper alignment of the catalytic groups surface
17. **Inorganic** – compounds that do not contain carbon
18. **Ionic Bonding** – chemical bond formed through the electrical force between oppositely charged ions
19. **Ions** – atom that had gained or lost one or more electrons

20. **Lipids** – nonpolar molecule composed of carbon, hydrogen, and oxygen; includes fats and oils
21. **Lock and Key Theory** – enzyme-substrate interaction suggesting the enzyme (lock) and the substrate (key) must fit exactly into one another
22. **Nucleic Acids** – polymer of nucleotides; the genetic material of organisms
23. **Nucleus** – center of the atom, contains protons and neutrons
24. **Organic** – compound containing carbon
25. **Peptides** – a molecule consisting of two or more amino acids
26. **pH** – measurement of acidity; related to free hydrogen ion concentration in solution
27. **Products** – substance formed by a chemical reaction
28. **Proteins** – polymer composed of amino acids linked by peptide bonds; folds into a particular structure depending on bonds between amino acids
29. **Reactants** – substance that is changed by a chemical reaction
30. **Substrate** – reactant in a chemical reaction upon which an enzymes acts

