Nucleic Acids:

* Dna and RNA: Inherited genetic material found in a cell; it is a double stranded Helix
  + Genes: Segements of DNA That determine the amino acid sequence (primary structure) of protiens
  + RNA: Dna is transccriibed into the process of protein creation
* Structural Differences:
  + Both have a nucleotides ( 5-C Sugar, Phosphate Group, Nitrogenous Base)
    - However, DNA has Deoxyribose as its sugar and uses GATC for its bases
    - RNA: uses only ribose for its sugar and uses GAUC
* Added Notes
  + Phosphate Group: Sugar of one of the nucleotide bonds to the next one
  + Nucleotide is sugar phosphate, and a nitrogenous base
  + Nucleotide is the monomer of nucleic acids.

Enzymes:

* Primary
  + Amino acid sequence, it determines the structure of the protein
* Secondary: Alpha helix or bleated sheets, coil and fold together by H-honds
* Tertiary: 3D Shape of a polypeptide, folded due to hydrophobic/phallic interactions of R-Groups, disulfide bridges and ionic bonds, global or fibrous describes this level.
* Quarternary- Protiens that consist of 2 or more polypetides have this structure, not present in all protiens
* Active Site: Site of a reaction
* Function of Enzymes: Lower activation energy of a reaction without being consumed in the process
* Induced Fit Model- The Enzyme and substrate fit together in a specific way in which enzyme stresses the bonds of the substrate or brings it closer
  + Lipase- “Breaks down lipids”
  + Protease- “Breaks down Protein”
  + Lactase- “Breaks down Lactose”
* Denaturation of polypeptide chains in a protein resulting in a loss of function due to:
  + Low PH, Salinity, Mechanically pounding them (Pestles), or temperature