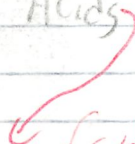


# Michael Plasmeier

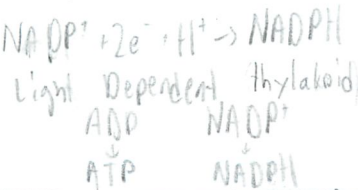
1. Carbohydrates  
Lipids
  2. Sugars  
Amino acids
  3. Nucleic Acids  
Starch
- Nucleic Acids  
Proteins
- Hemoglobin - HbH
- Nucleotides  
Glucose  
fatty acids
- fructose  
galactose
- Cellulose  
glycogen
- 

Photosynthesis



Calvin Cycle (stroma)  
 ATP + NADPH

High Energy Sugar



Glucose  
 Glycolysis  $\rightarrow$  Pyruvate  
 2ATP  
 Lactic Acid - allows glycolysis to continue - builds up lactic acid  
 pyruvic acid + NADH  $\rightarrow$  lactic acid + NAD<sup>+</sup>  
 pyruvic acid + NADH  $\rightarrow$  ethanol + CO<sub>2</sub> + NAD<sup>+</sup>  
 Alcoholic - forms ethyl alcohol + carbon dioxide  
 fermentation  
 Respiration  
 $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O + \text{Energy}$

Cohesive  
 Moderates temp  
 Expands on freezing  
 Versatile as solvent

Kingdom  
 Phylum  
 Class  
 Order  
 Family  
 Genus  
 Species

Protein monomer: amino acid  
 - build cells  
 R group structures  
 regulate cell process

Lipids - store fat  
 substrate = max H

Carbs - break down sugar  
 main energy source

Nucleic acid - DNA + RNA  
 Nucleotide

base pH > 7 OH<sup>-</sup>  
 acid pH < 7 H<sup>+</sup>

Purines - Guanine + Adenine  
 Pyrimidine - Cytosine + Thymine

6 - Trans, makes organelles // lives  
 5 - DNA replication  
 6 - Organelles needed for replication  
 M - Mitosis + Cytokinesis

Anaphase = Telophase → (Cytokinesis)  
 Interphase → Prophase → Metaphase → Anaphase → Telophase → Cytokinesis  
 line up  
 envelope breaks down

ATP - Adenosine triphosphate  
 Adenine  
 - ribose  
 - phosphate  
 hyper - ↑ outside - rushes out  
 hypo - ↓ outside - rushes in

Nice Mike!

10/10

Vessel