

# Organic Molecules Poster

- Title your poster “Organic Molecules Necessary for Life”
- Divide your Poster into four section and give each section the following headings:
  - Carbohydrates
  - Lipids
  - Proteins
  - Nucleic Acids

Title	
Carbs	Lipids
Protein	NA

- For each section create a flip book that will contain the following information (Make each bulleted topic a title for each page of your flip book):
  - ❖ Carbohydrates:
    - **Monosaccharides**- Diagram the ring form of D-Ribose, Alpha-D-Glucose, Beta-D-Glucose (list their uses)
    - **Disaccharides**- Diagrams of Sucrose, Lactose, and Maltose (list where they are found)
    - **Polysaccharides**- Print 3D images of Cellulose, Starch (include Amylose and Amylopectin), Glycogen (list functions)
    - **Human Health Issues**- Describe how refined sugar intake effects diabetes.
  - ❖ Lipids
    - **Types of Lipids** – Diagram and list functions of Triglycerides, Phospholipids, Waxes, Steroids, Fats, Oils
    - **Monomers of Triglycerides**- Diagram
    - **Fatty Acids**- Diagram saturated, monounsaturated, and polyunsaturated forms
    - **Human Health Issues**- Describe issues with Trans Fats and Saturated Fatty Acids
  - ❖ Proteins
    - **Amino Acids**- Diagram an example of Amino Acid structure (explain R group)
    - **Peptide Bonds**- Diagram the formation of a peptide bond
    - **Protein Structure**- Diagram the 4 levels of protein structure
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    - **Uses and Functions**- Use Rubisco, insulin, immunoglobulins, rhodopsin, collagen, spider silk
    - **Current Models**- Print 3D images of 2 proteins, list where found, and their function
  - ❖ Nucleic Acids
    - **DNA**-Diagram and label the molecular structure of DNA using circles for phosphates, pentagons for pentose sugars, and rectangles for nitrogen bases
    - **RNA**-Diagram and label the molecular structure of RNA using circles for phosphates, pentagons for pentose sugars, and rectangles for nitrogen bases
    - **3 Differences**- List the three differences between DNA and RNA
    - **Functions**- Describe the functions of DNA and RNA
    - **Sequencing Use**- Describe current or future use of DNA sequencing information