

Warm-up: Pick up a carb vs. lipid warm-up sheet and paste it into your notebook and get started!

# Warm-up: Answers

1. T or F: glycogen is a monomer
  - False – glycogen is a polymer
2. What is the difference between the functions of lipids and carbohydrates?
  - Carbs are quick energy sources and lipids are long term energy storage

# Warm-up: Answers

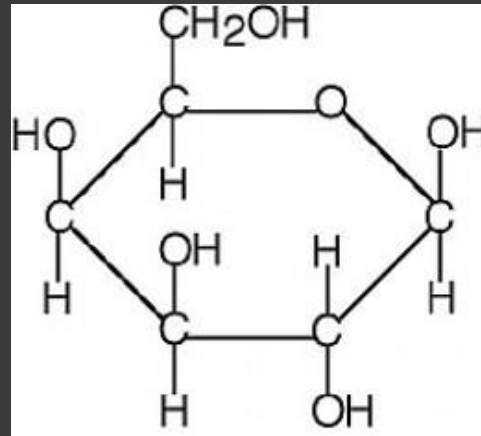
3. Identify the following as either a lipid or a carbohydrate:

a.  $C_6H_{12}O_6$  Carb

b.  $CH_2O$  Carb

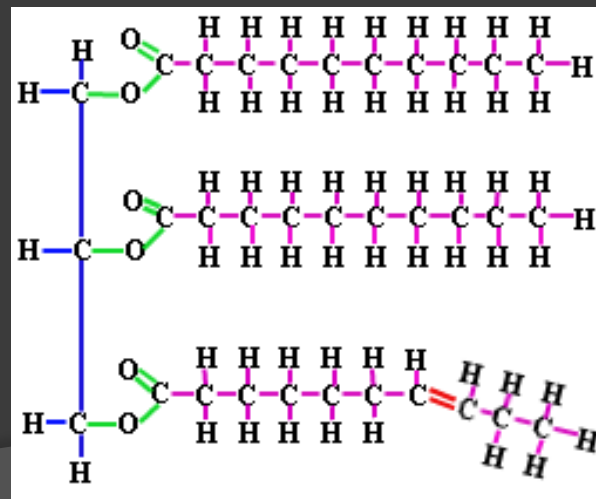
c.  $CH_3(CH_2)_{10}CO_2H$   
Lipid

d.



Carb

e.



Lipid

# Nucleic Acids

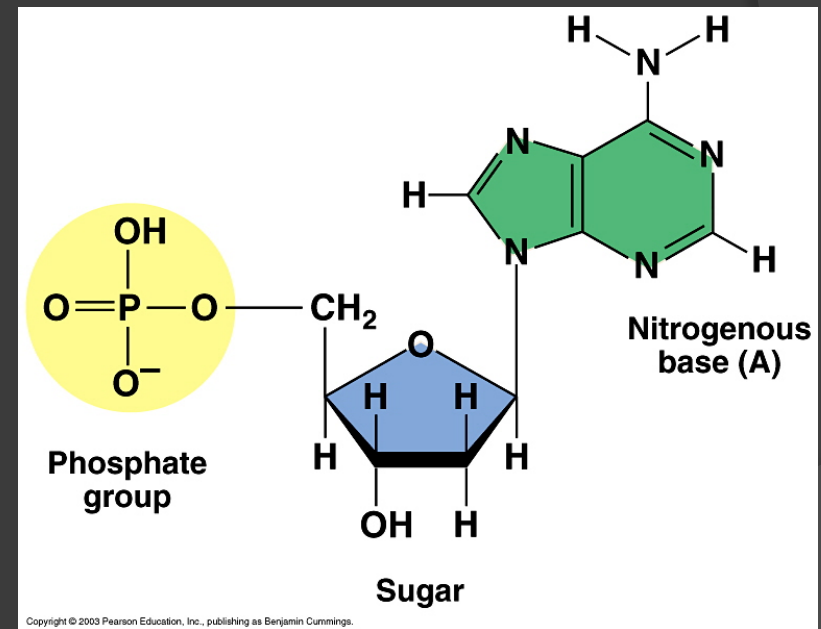
Composition: carbon, hydrogen, oxygen, nitrogen, and phosphorous

Nucleotides consist of 3 parts:

1. 5-carbon sugar
2. Phosphate group
3. Nitrogenous base

Monomer: Nucleotide

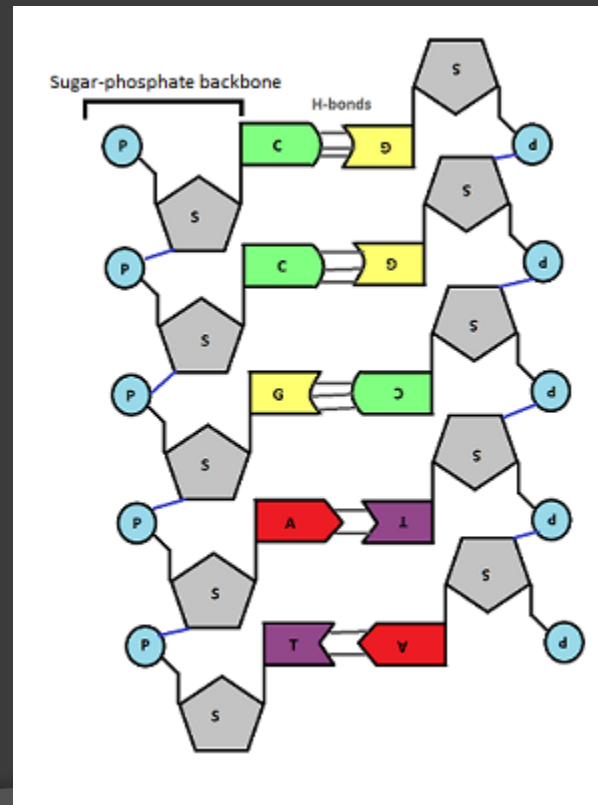
Polymer: DNA and RNA



# Nucleic Acids

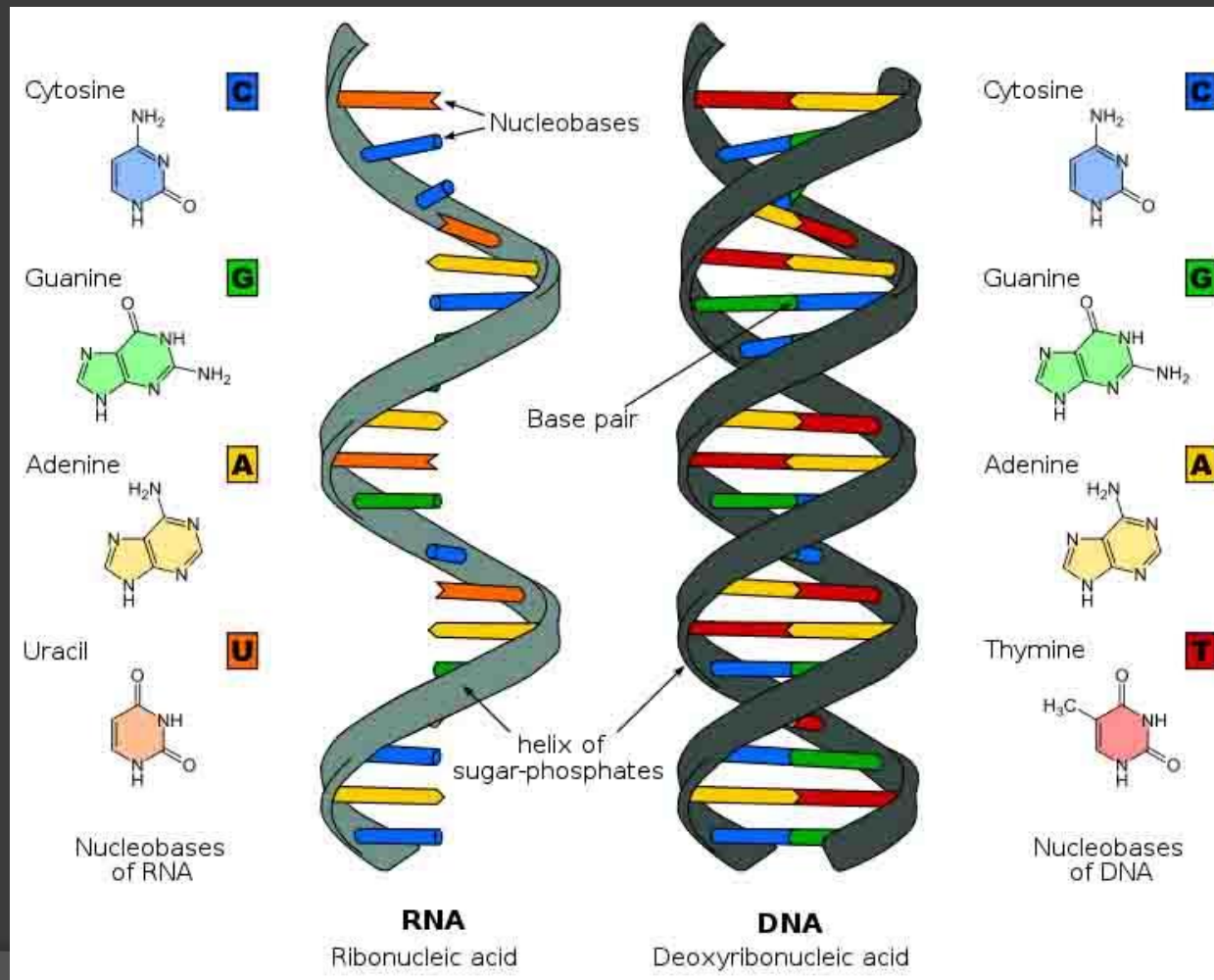
## Functions:

- Store and transmit hereditary (genetic) information



# Nucleic Acids

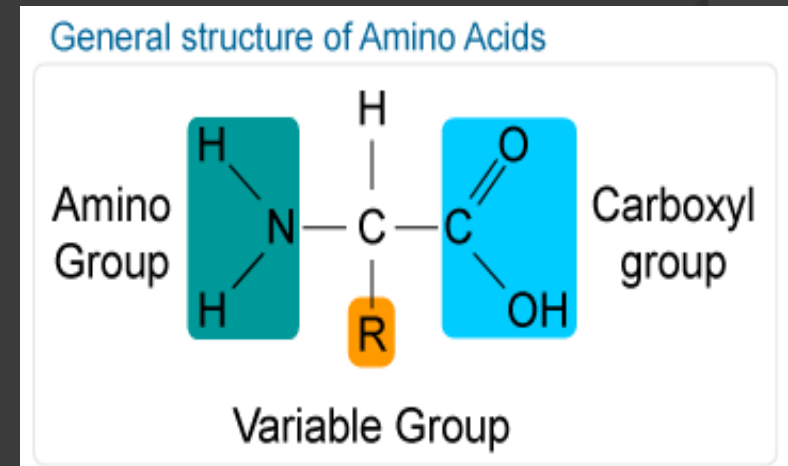
## Structure:



# Proteins

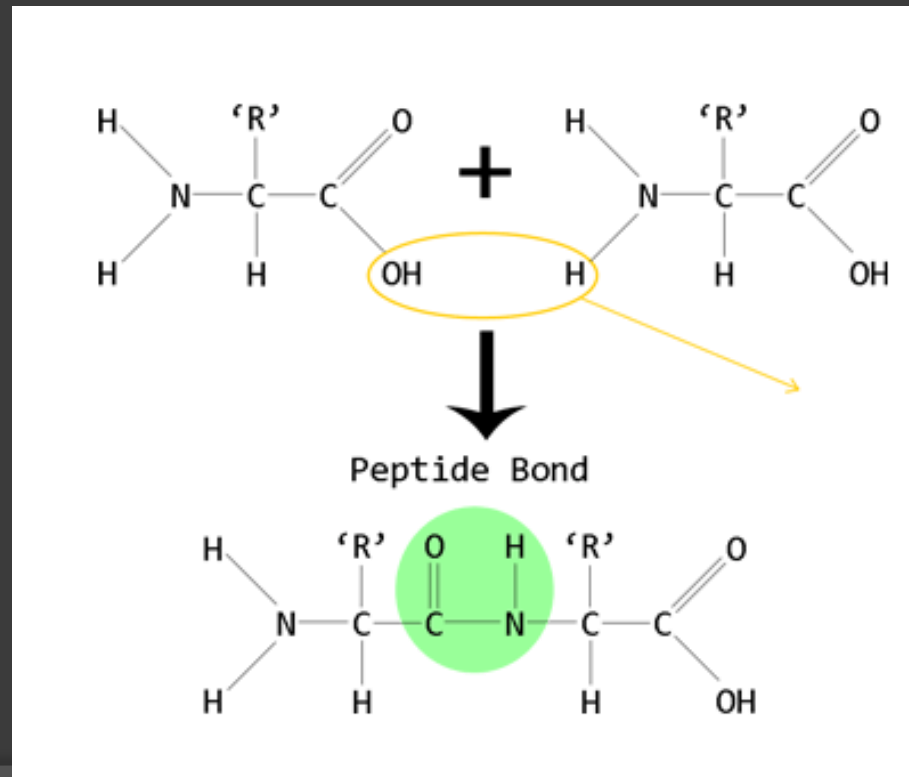
- Composition: Carbon, hydrogen, oxygen, and nitrogen
  - Amino acids are compounds with:
    - an amino group (-NH<sub>2</sub>)
    - A carboxyl group (-COOH)

- Monomer: Amino acid
- Polymer: Protein



# Proteins:

- Amino acids are held together by peptide bonds

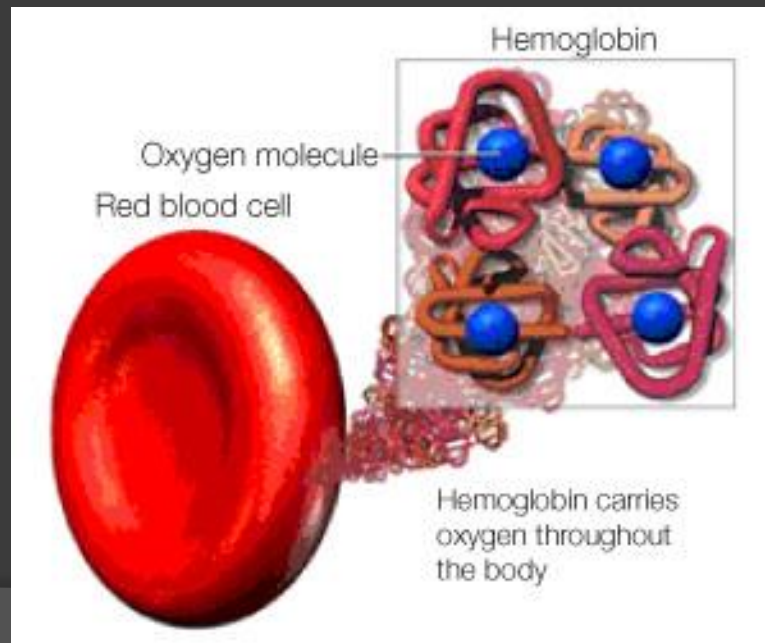




# Proteins

## Examples:

- Insulin – regulates blood glucose levels
- Enzymes – catalysts that speed up reactions
- Hemoglobin – in red blood cells, transports oxygen from blood cells to tissues



# Proteins

- The way a protein is folded determines the shape, which determines function.



- Nucleic acids contain instructions for building proteins

# Proteins:

## ● Functions:

1. Act as a catalysts and speed up reactions
2. Used to form bones and muscles
3. Transport substances in and out of cells

# Proteins

- Structure:

