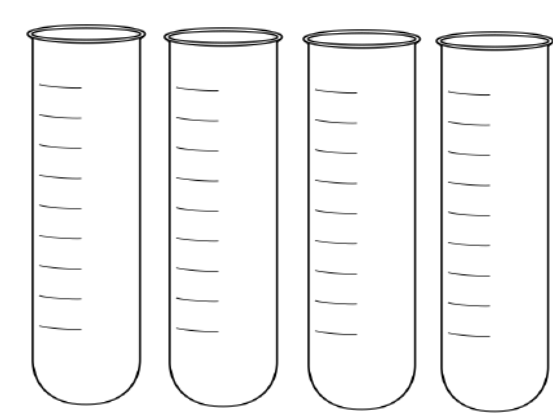
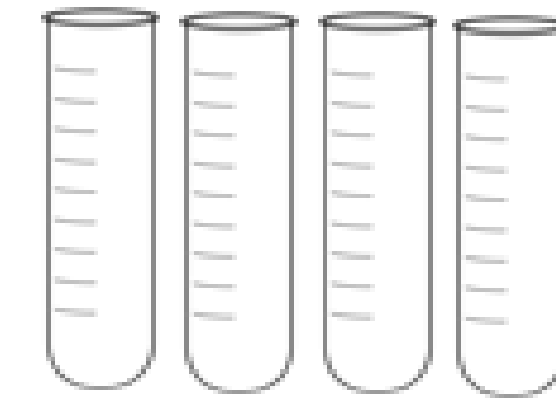




Test with: _____
Add Heat: Monosaccharides
- Test: Blue
+ Test: Green, Red, Orange, Yellow

Macromolecules



Test with: _____
Lipids
- Test: Red
+ Test: Orange, Pink

CARBOHYDRATES

LIPIDS

Types
Large Organic molecules
CHONPS
Essential elements



Polymer

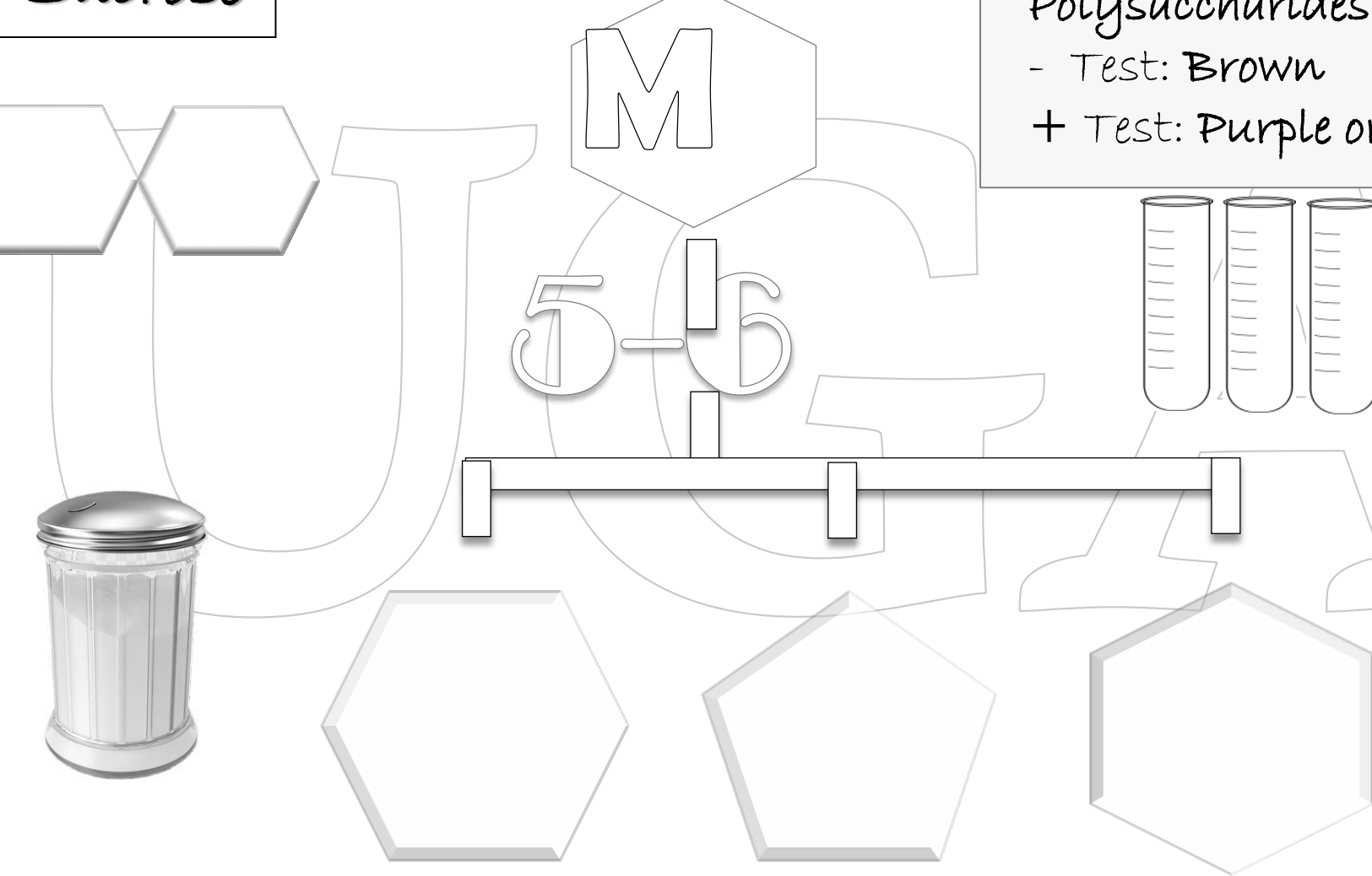
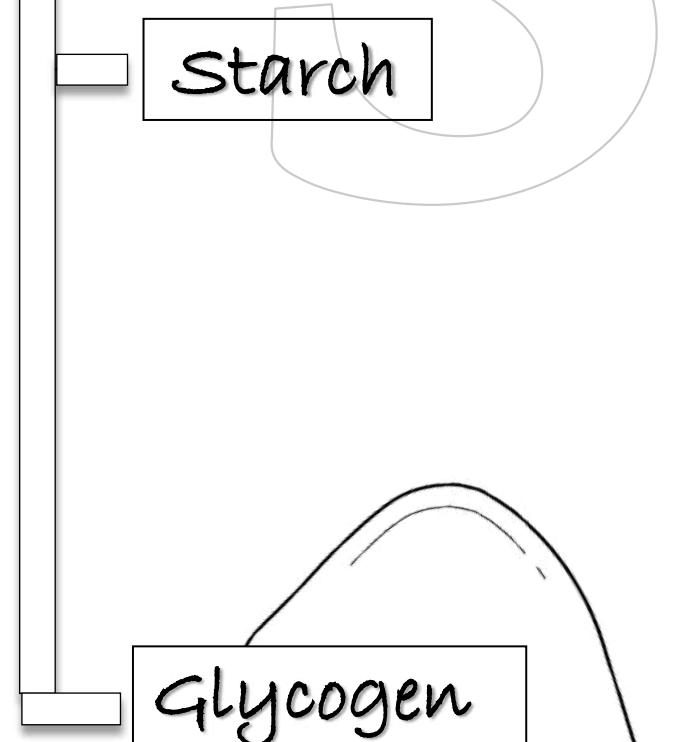
saccharides

Monomer

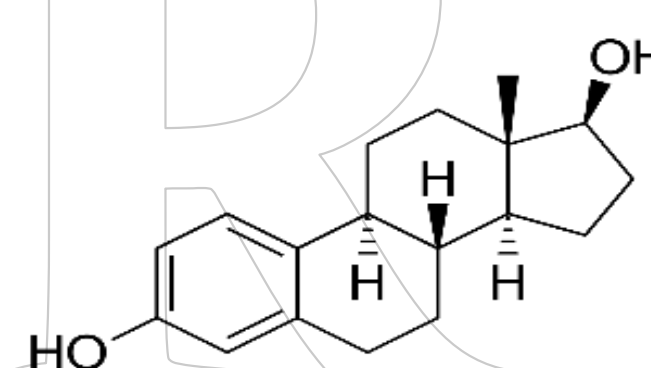
poly 2

di 2

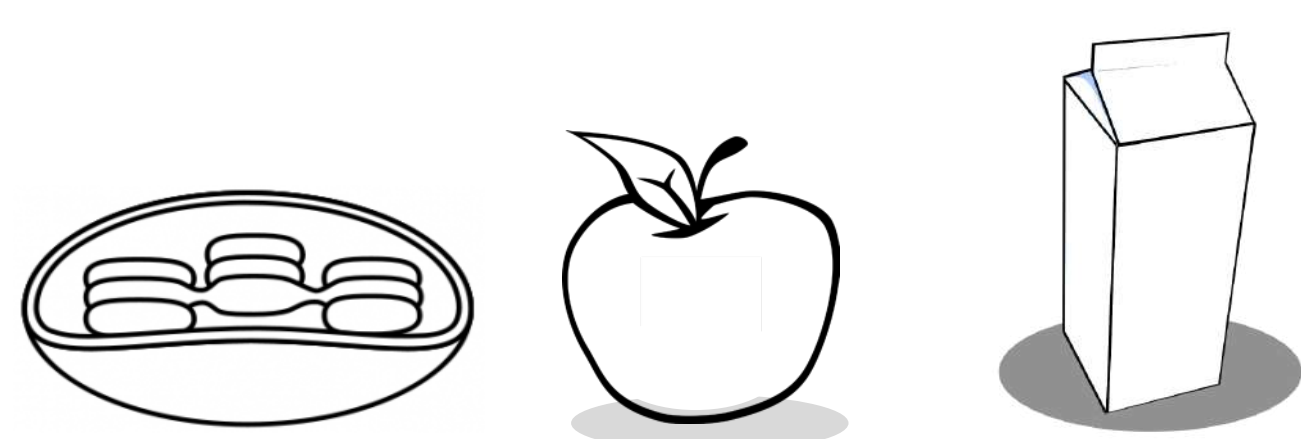
mono



Test with: _____
Polysaccharides
- Test: Brown
+ Test: Purple or Black



Hormones & Waxes



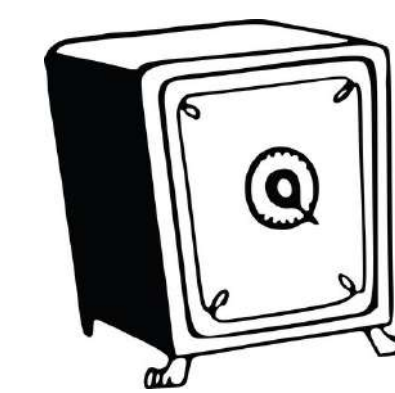
Function

Structure

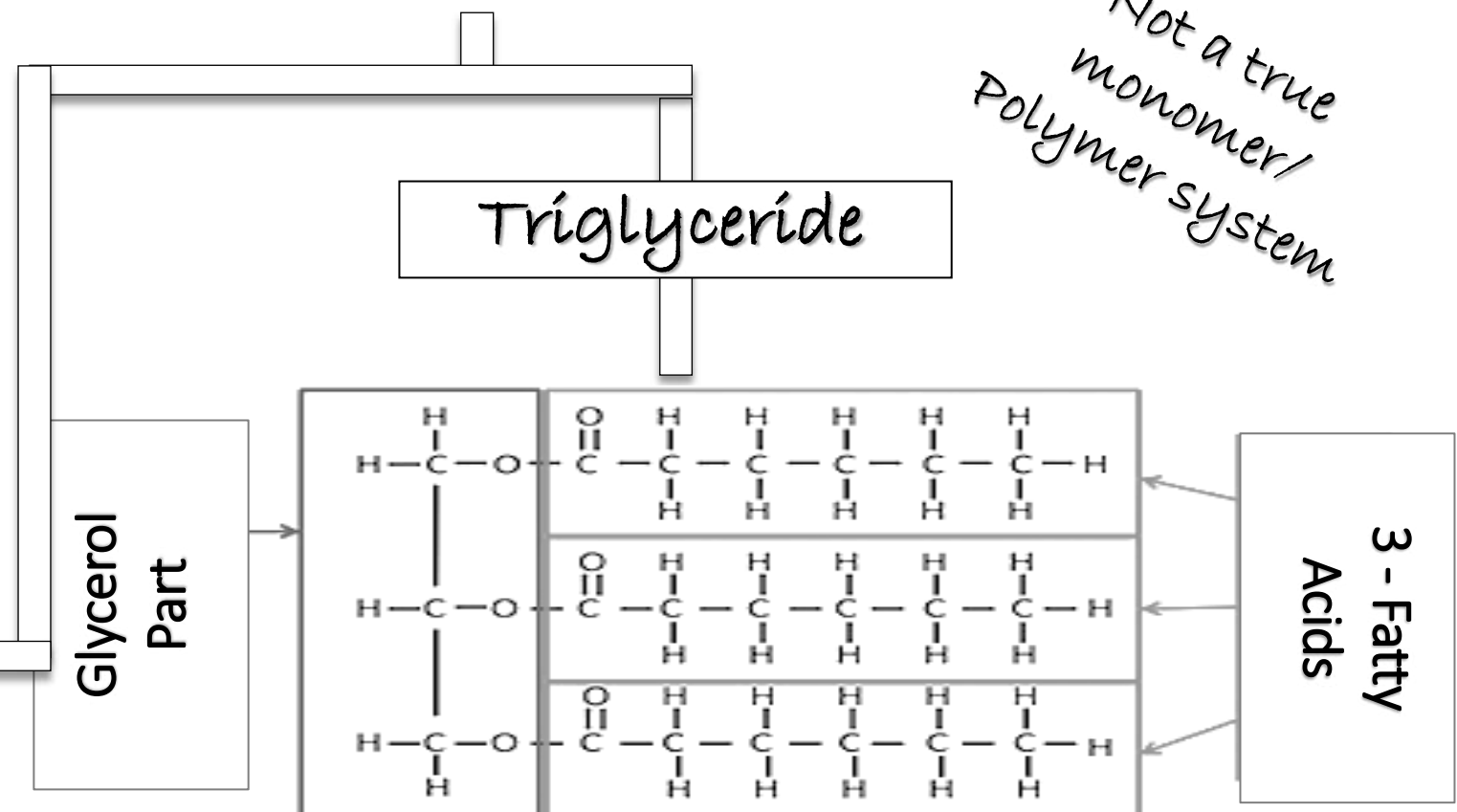
CHO

Triglyceride

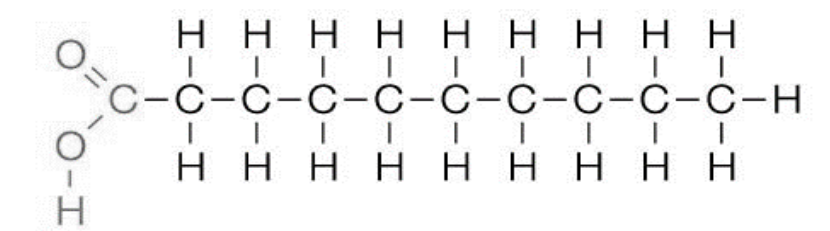
Not a true monomer/ Polymer system



Polymers

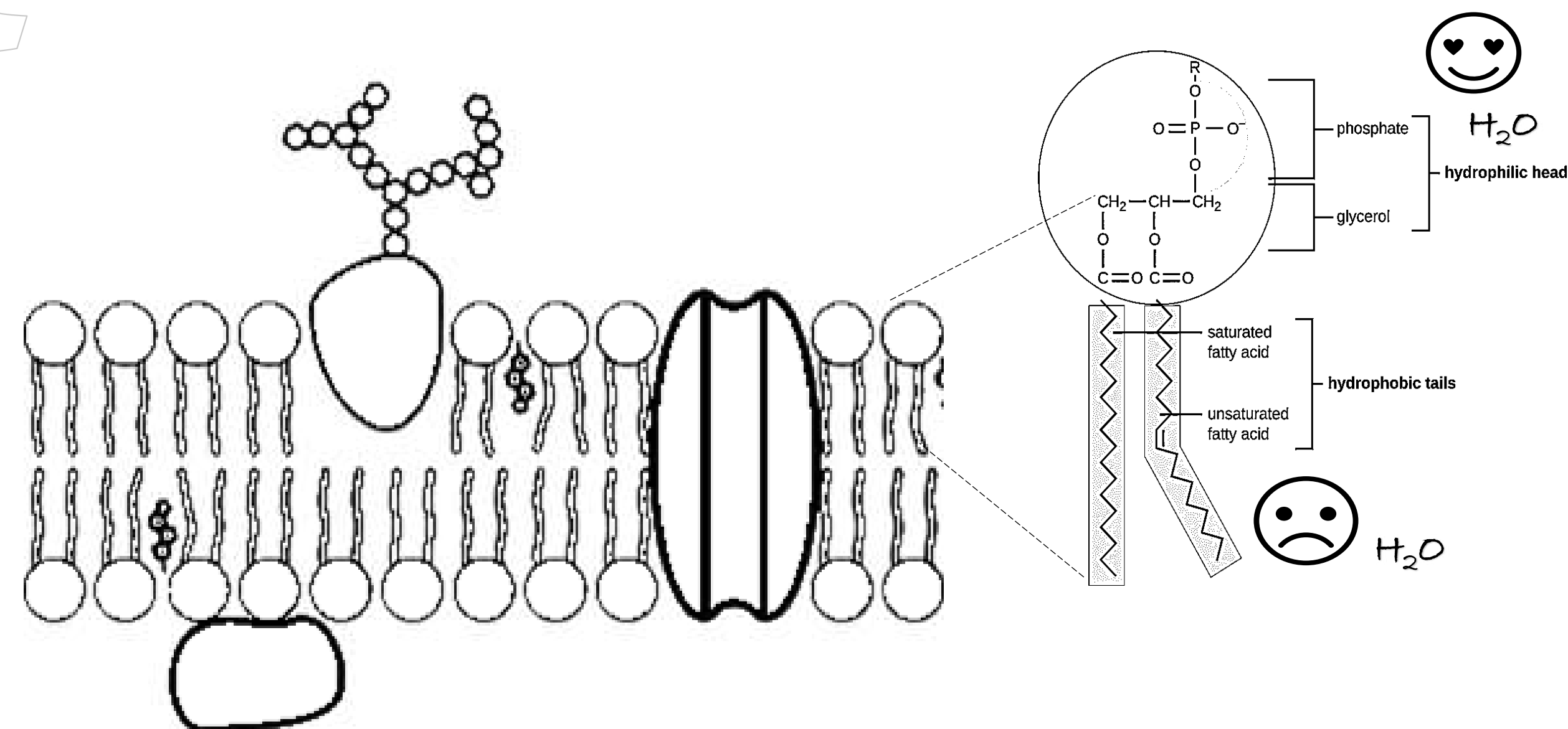


Fatty Acids

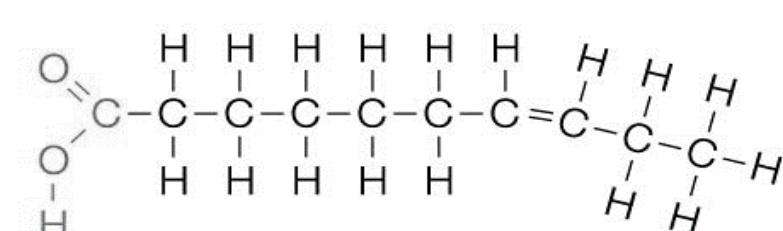


Saturated

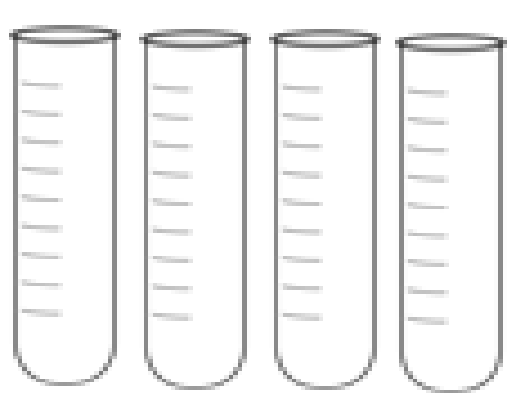
Phospholipids



Unsaturated



C
H
O
N
S



Test with: _____
Proteins
- Test: Blue
+ Test: Lavender

Proteins

Function

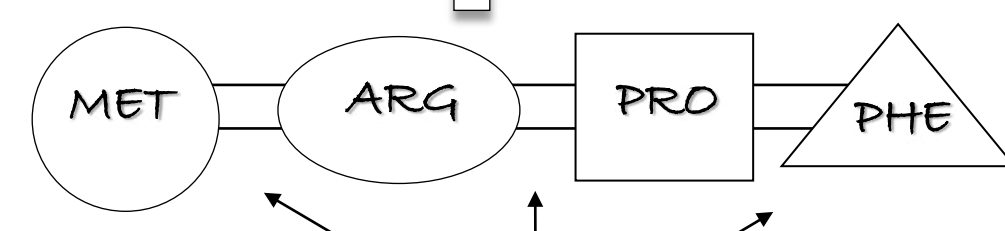
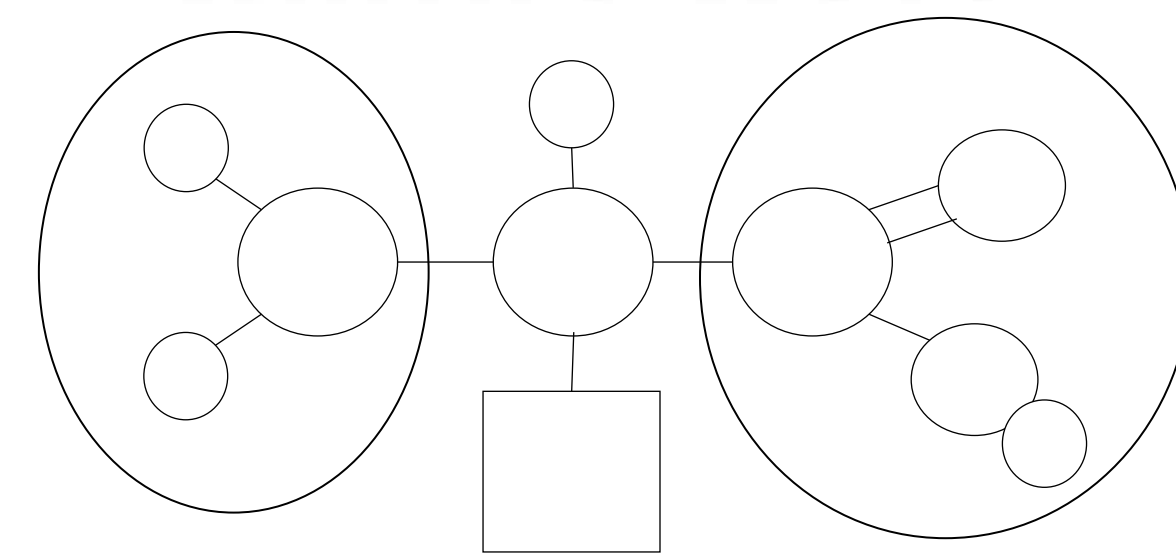
Structure

Monomer

Polymers

Amino Acid

Polypeptide



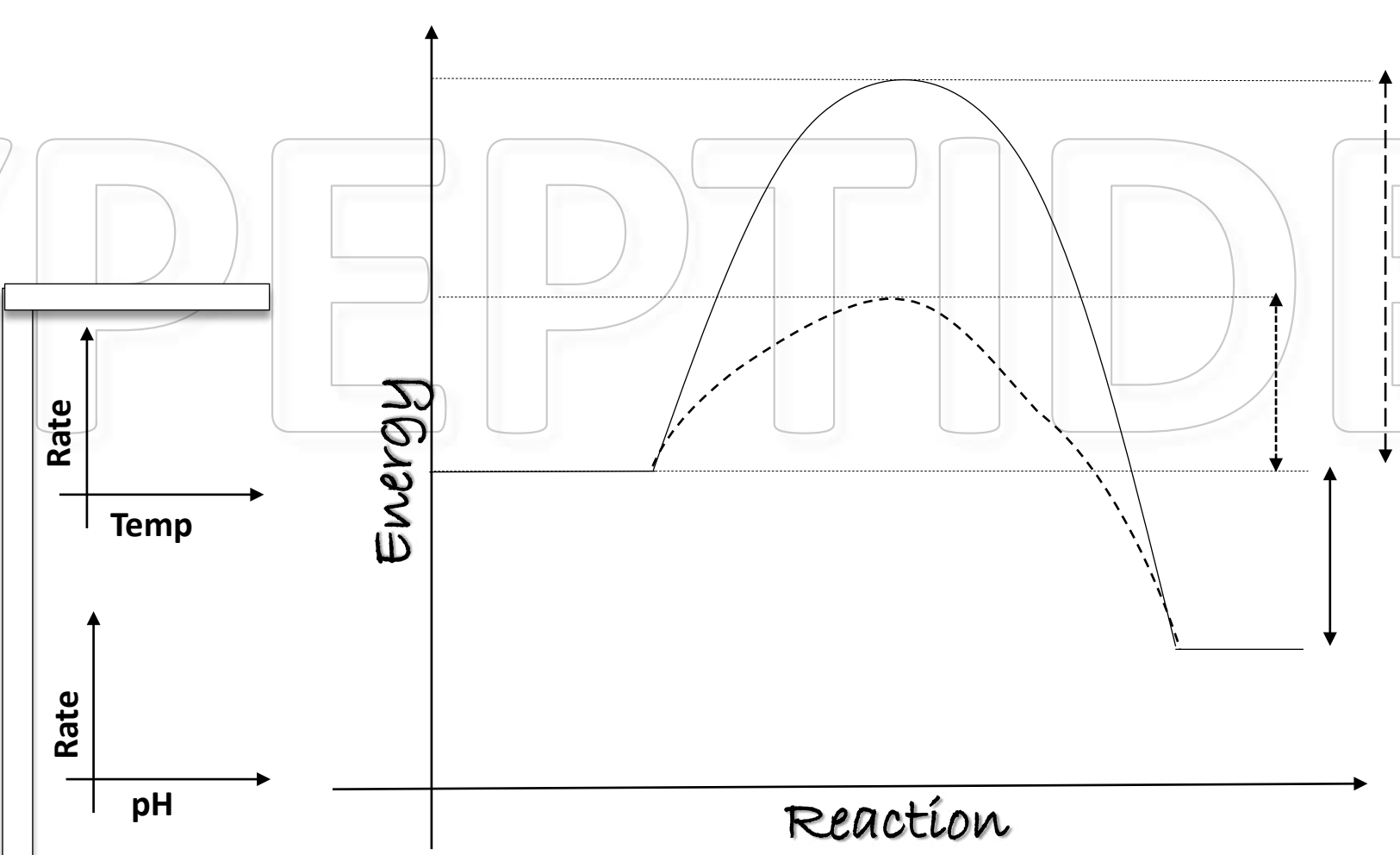
Peptide Bonds

Cellular Activity

Wound / Tissue Repair

Enzyme Activity

Enzyme Specificity

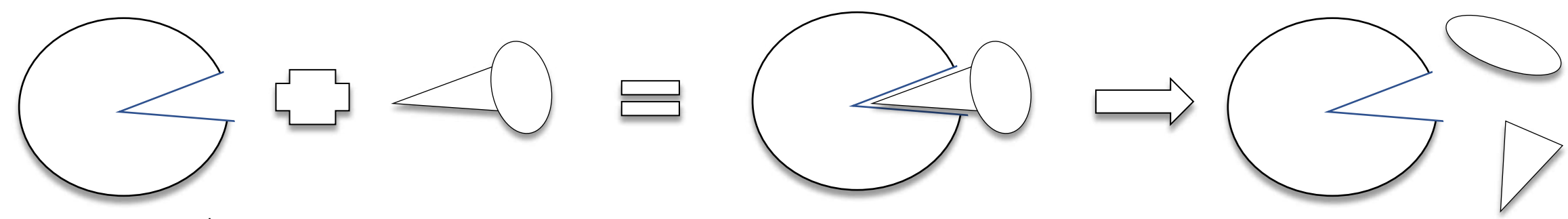


Induced Fit

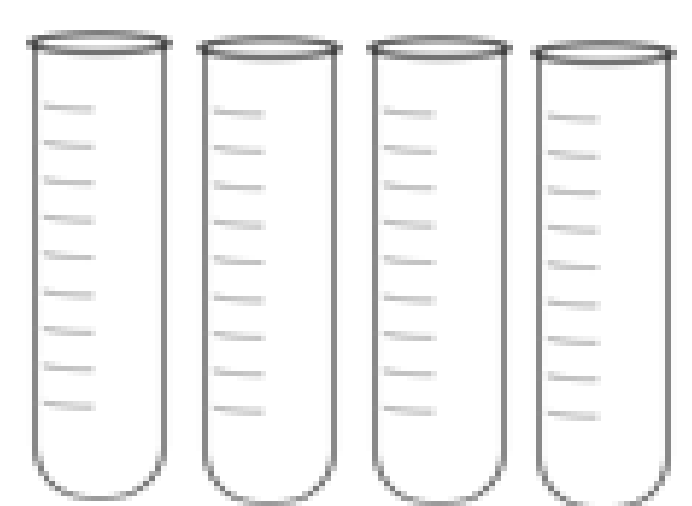
Inhibition

Competitive

Non-competitive



Nucleic Acids



Tube 1: Glucose
Tube 2: Potato Juice
Tube 3: Cream
Tube 4: Albumin

Function

Structure

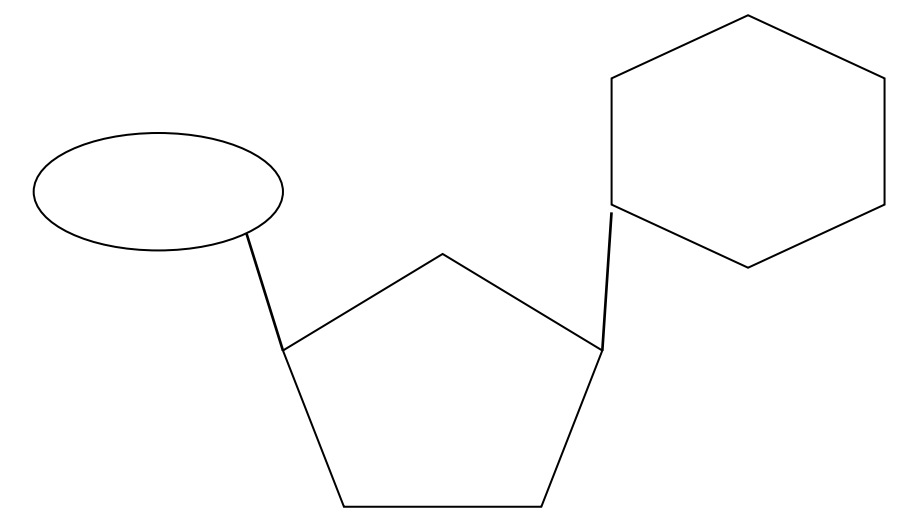
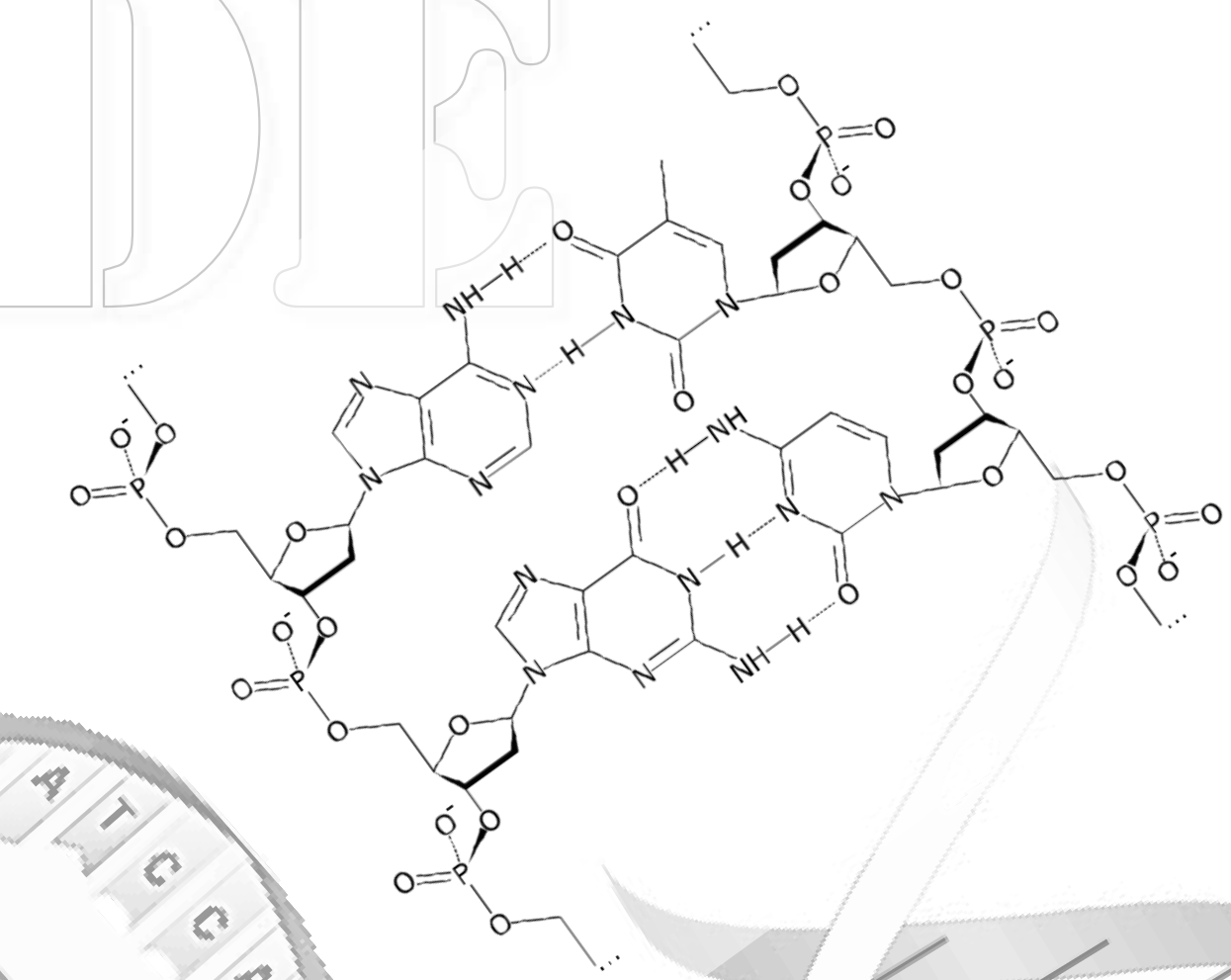
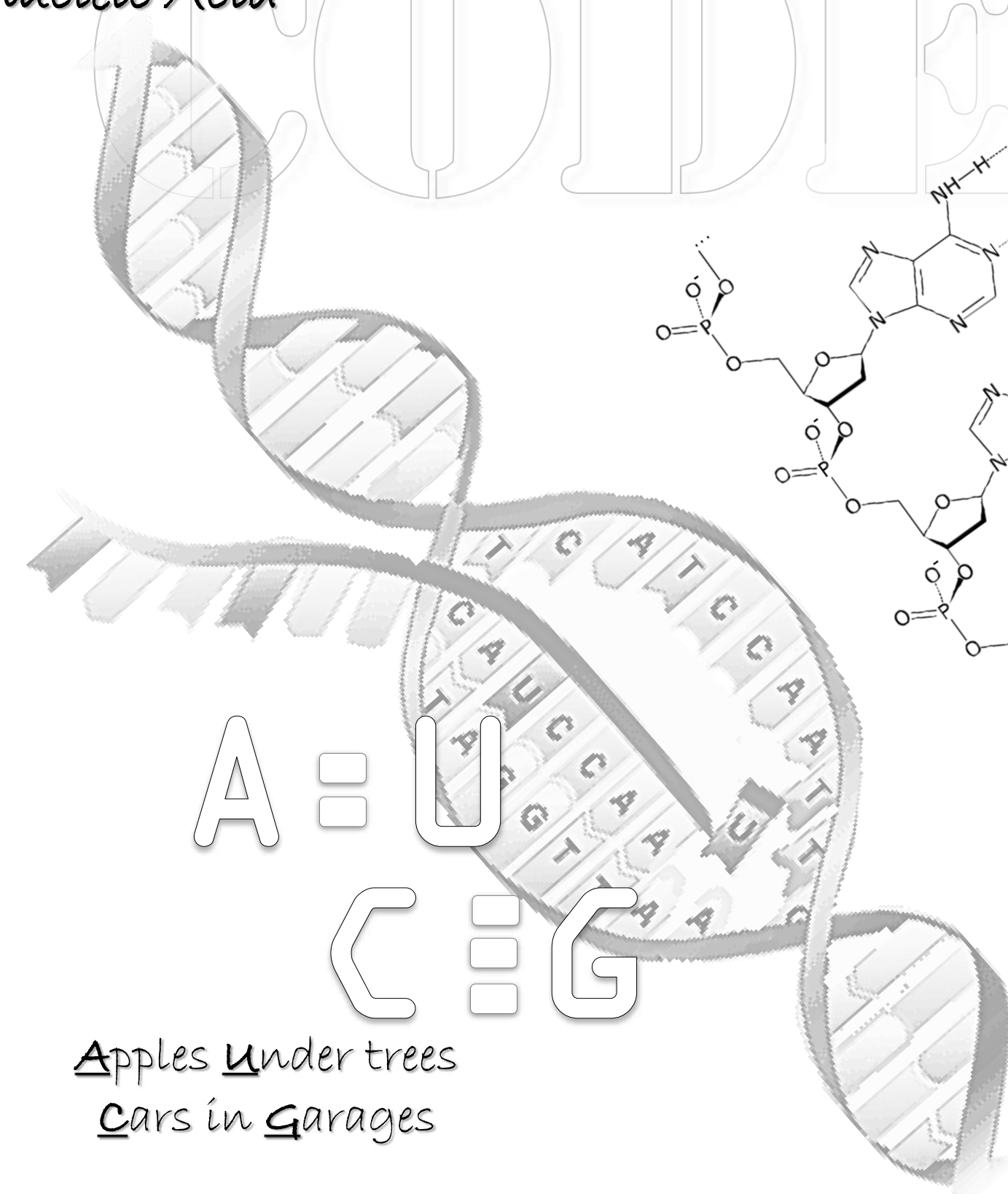
Polymers

Monomer

RNA
Ribonucleic Acid

DNA
Deoxyribonucleic Acid

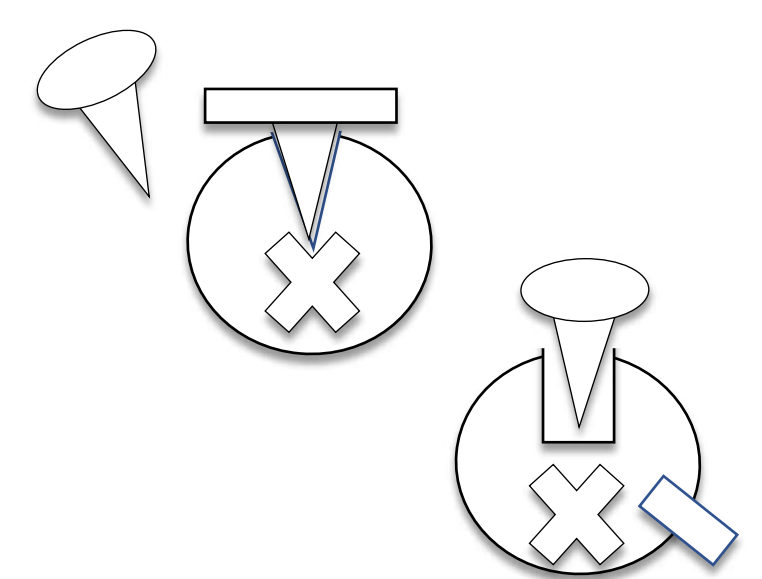
Nucleotide



A = T
C = G
Apples in Trees
Cars in Garages

A = U
C = G
Apples Under trees
Cars in Garages

A
T
C
G
U



MACROMOLECULES

CARBS

SUFFIX "-OSE"



FUNCTION

STRUCTURE

CELLULAR ENERGY

POLYMER

MONOMER

SACCHARIDES

poly 2 di 2

CELLULOSE

- plant cell walls
- plastics
- > 3000

STARCH

- plant energy storage
- paper products
- tape / < 300

GLYCOGEN

- animal energy storage / liver / 2000 - 60,000

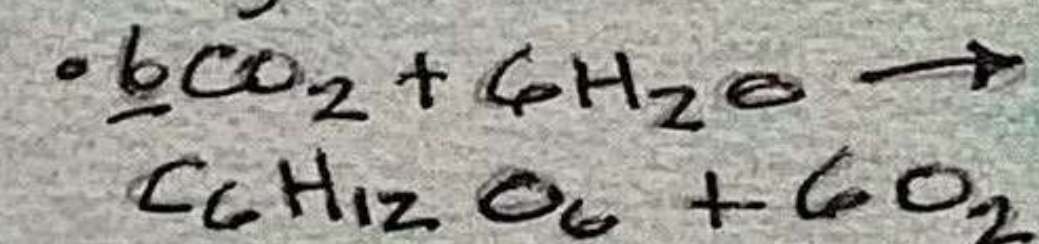


SUCROSE



GLUCOSE

- made in plants during photosynthesis



5 SIDED SINGLE RING

FRUCTOSE



GALACTOSE



large

ORGANIC MOLECULES

CHOMPS

LONG TERM ENERGY STORAGE

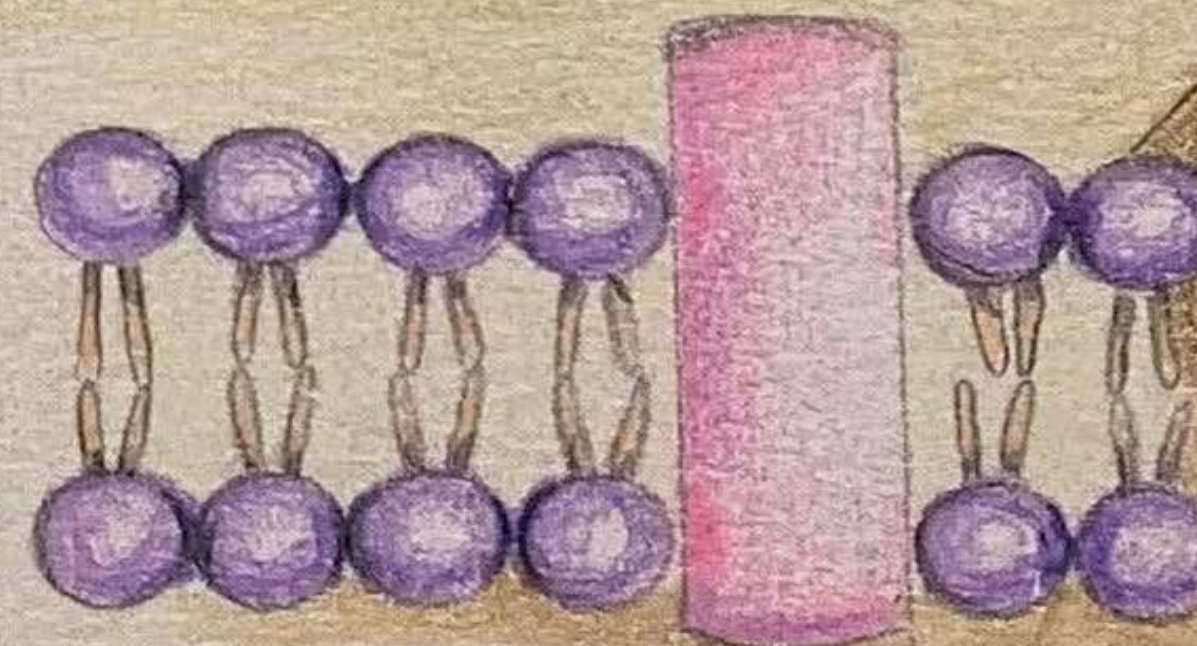
FUNCTION

STRUCTURE

lipids



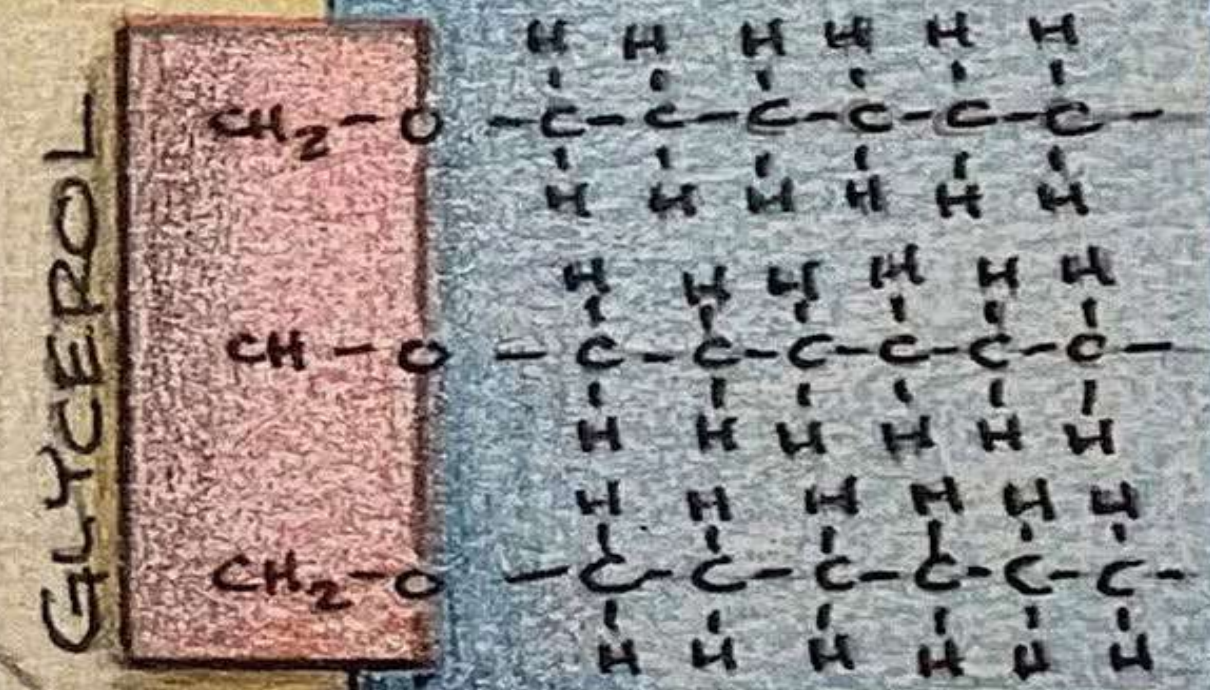
PHOSPHOLIPIDS



- major structural component of cell membranes.
- regulation of materials across the membrane
- Heads = Hydrophilic
- Tails = Hydrophobic

TRIGLYCERIDE

3 FATTY ACIDS



TYPES

SATURATED

- only single bonds between carbons / C-C
- solid

UNSATURATED

- @ least 1 double bond between C=C
- liquid / oils



chomss

PROTEINS

FUNCTION

STRUCTURE

CELLULAR ACTIVITY

- Homeostasis
 - proper pH
 - oxygen transport
 - hormonal balance
 - immunity/antibody
 - metabolism

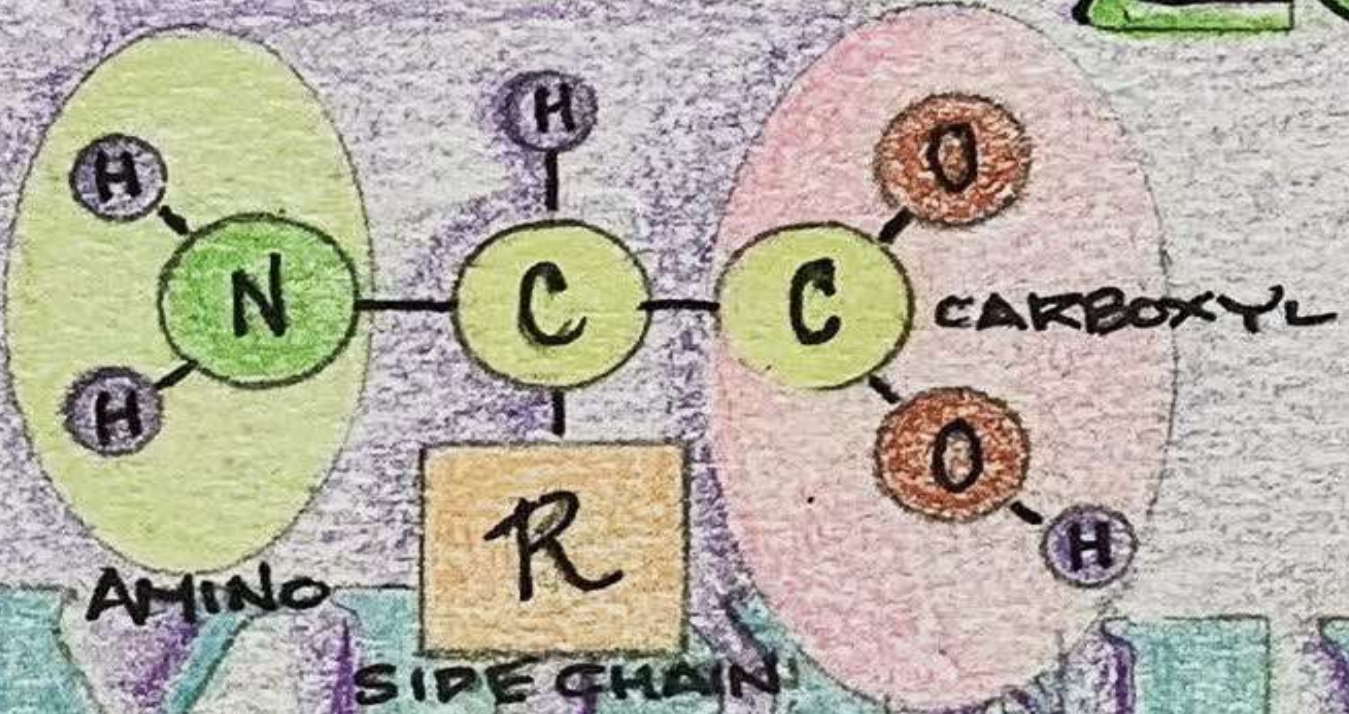
WOUND/TISSUE REPAIR

- Healing
 - inflammation
 - proliferation
 - regeneration
- Tissue Regeneration
 - skin, hair, nails
 - muscle tissues

ENZYME ACTIVITY

- biological catalyst that increases Reaction Rates and lowers **ACTIVATION ENERGY**
- breaks down a **SUBSTRATE** into **PRODUCTS**

AMINO ACIDS

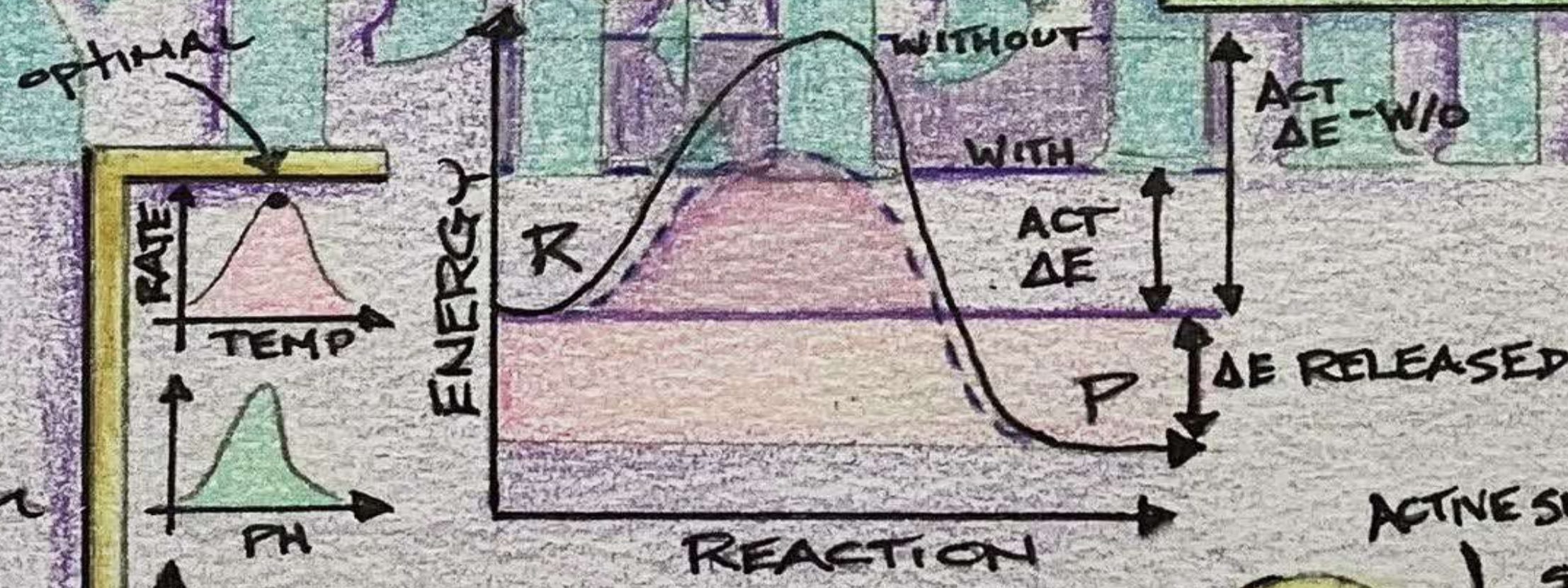


POLYPEPTIDE

o chain of amino acids held together by peptide bonds

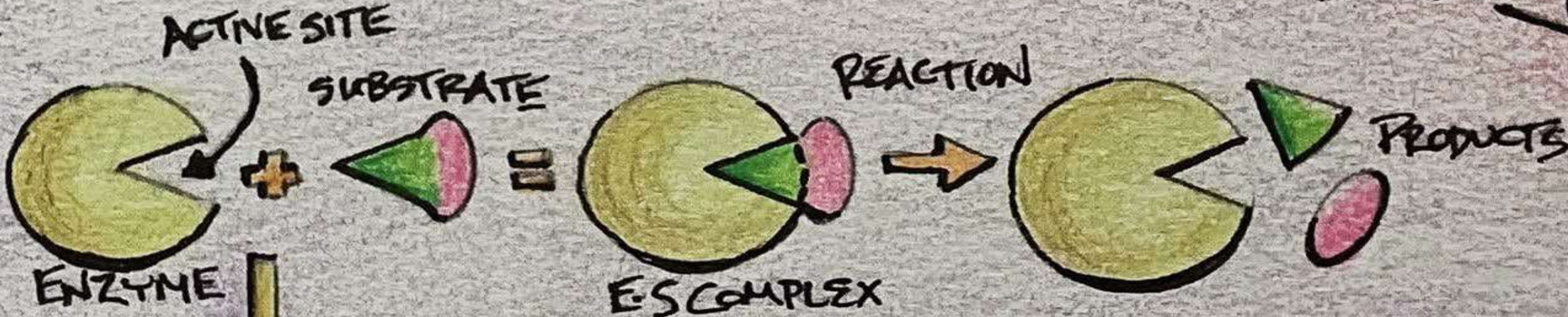


PEPTIDE BONDS



ENZYME SPECIFICS

- Enzymes work on specific substrates
- can be changed, but not Destroyed.
- **LOCK & KEY FIT**



INHIBITION

COMPETITIVE

- Inhibitor binds to active site prevents substrate binding

NON-COMPETITIVE

- Inhibitor changes shape of active site

NUCLEIC ACIDS

chomp

FUNCTION

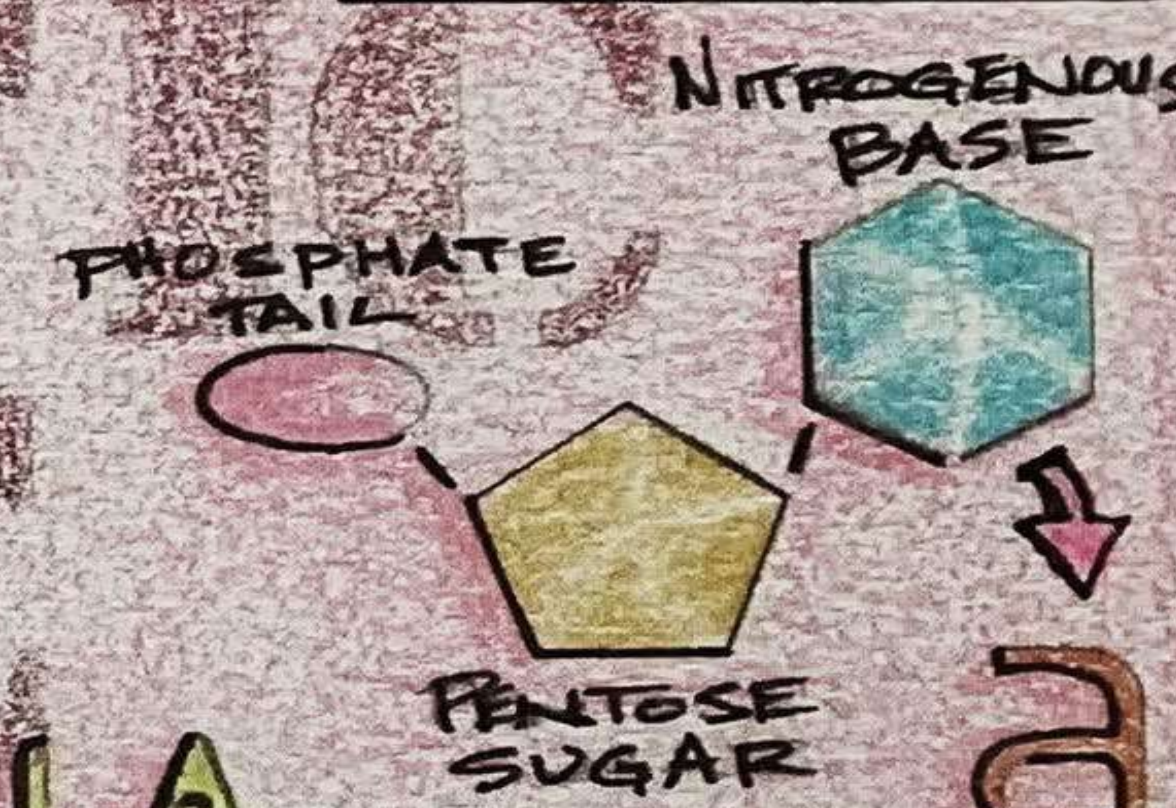
- transmits genetic or hereditary information
- makes proteins

STRUCTURE

POLYMERS

MONOMER

NUCLEOTIDES



- Ribonucleic Acid
- Single stranded
- Thymine is replaced by URACIL
- DNA makes RNA

RNA

DNA

DEOXYRIBONUCLEIC ACID

- Codes for PROTEINS

- double stranded
- genetic code



ADENINE

THYMINE

CYTOSINE

GUANINE

URACIL

URACIL