



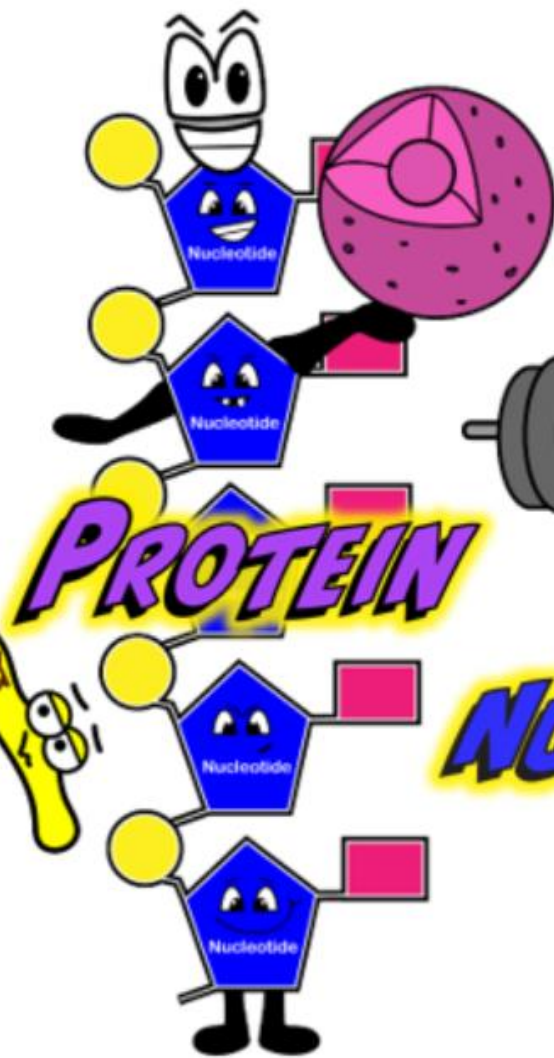
BIOLOGY

Unit 2

MACROMOLECULES

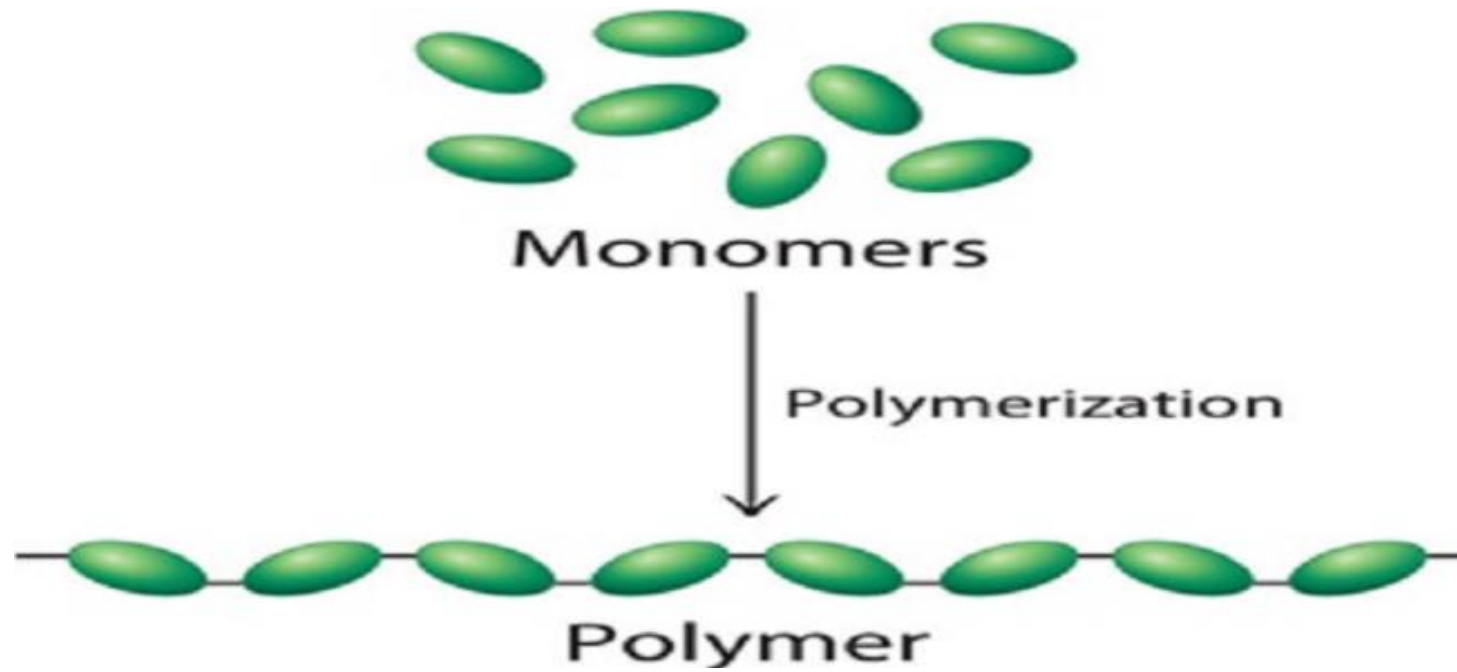
HYDE







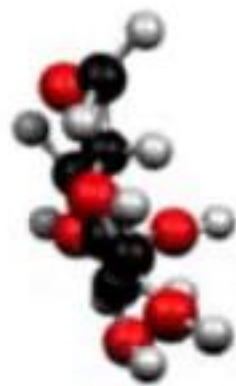
MACROMOLECULES ARE BIOLOGICAL POLYMERS



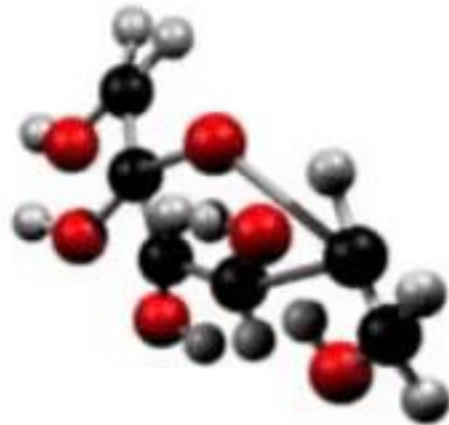
Polymer: a chain of monomers (repeating subunits)

Monomers are like the building blocks of Polymers

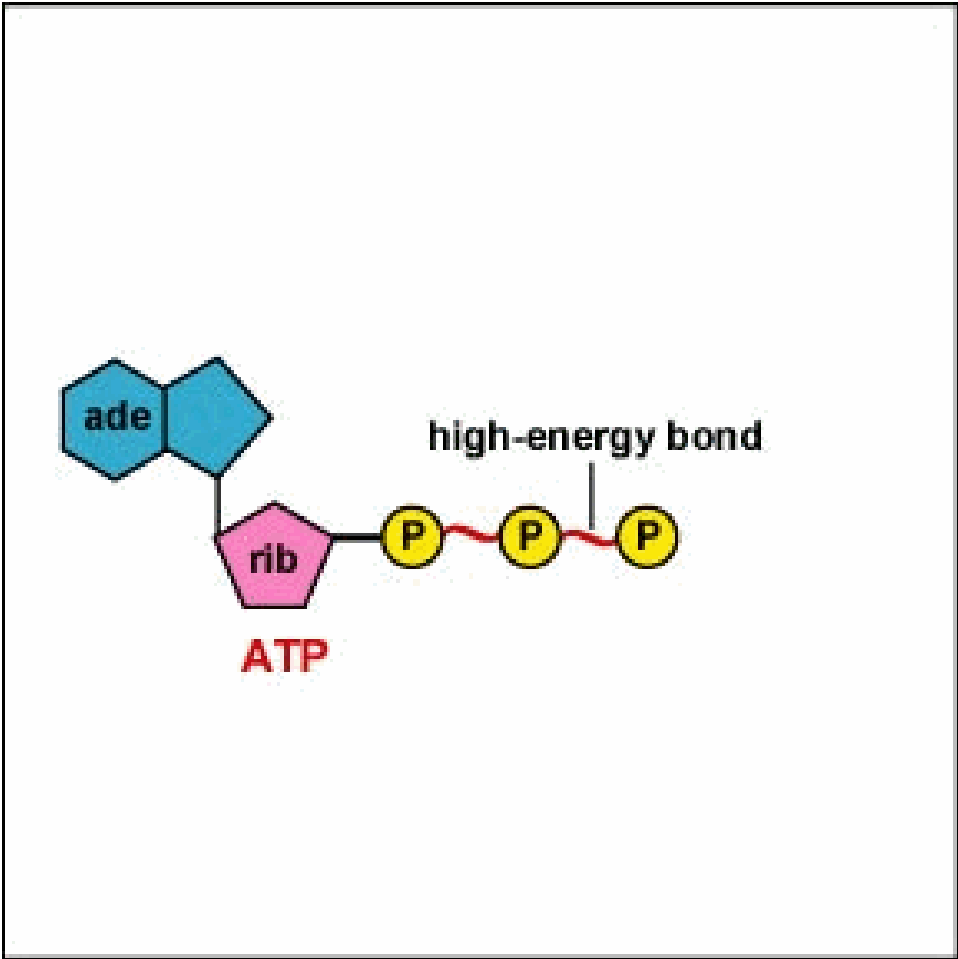
Glucose

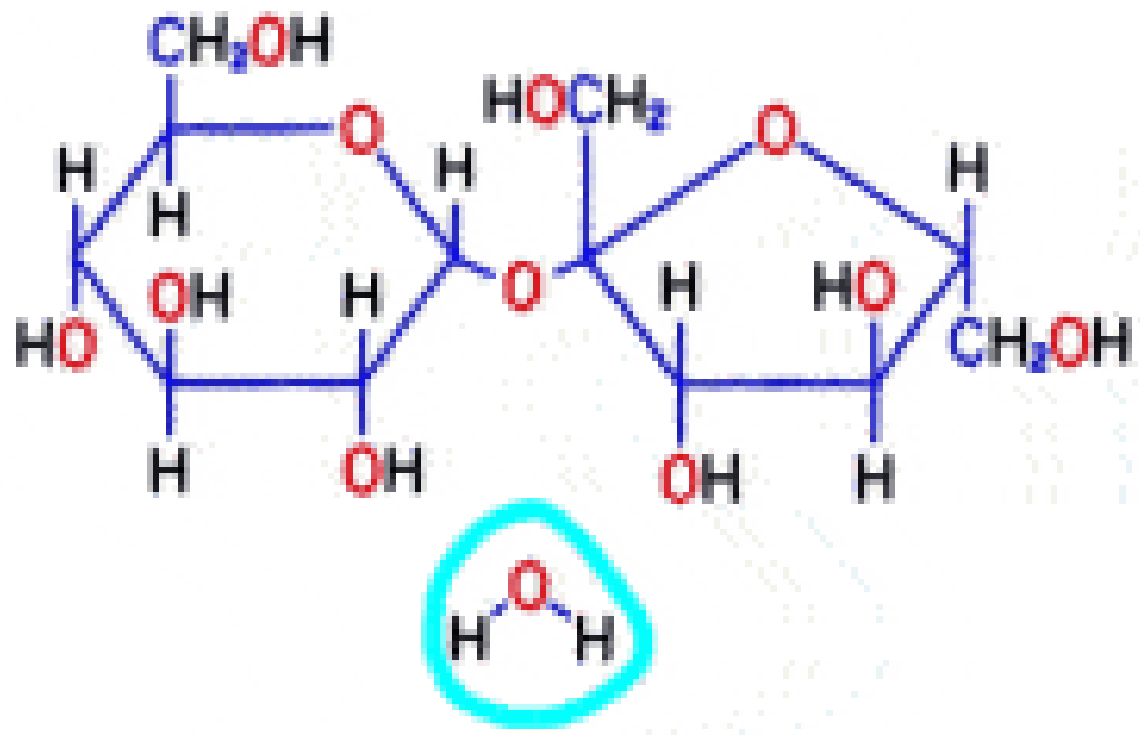


Fructose

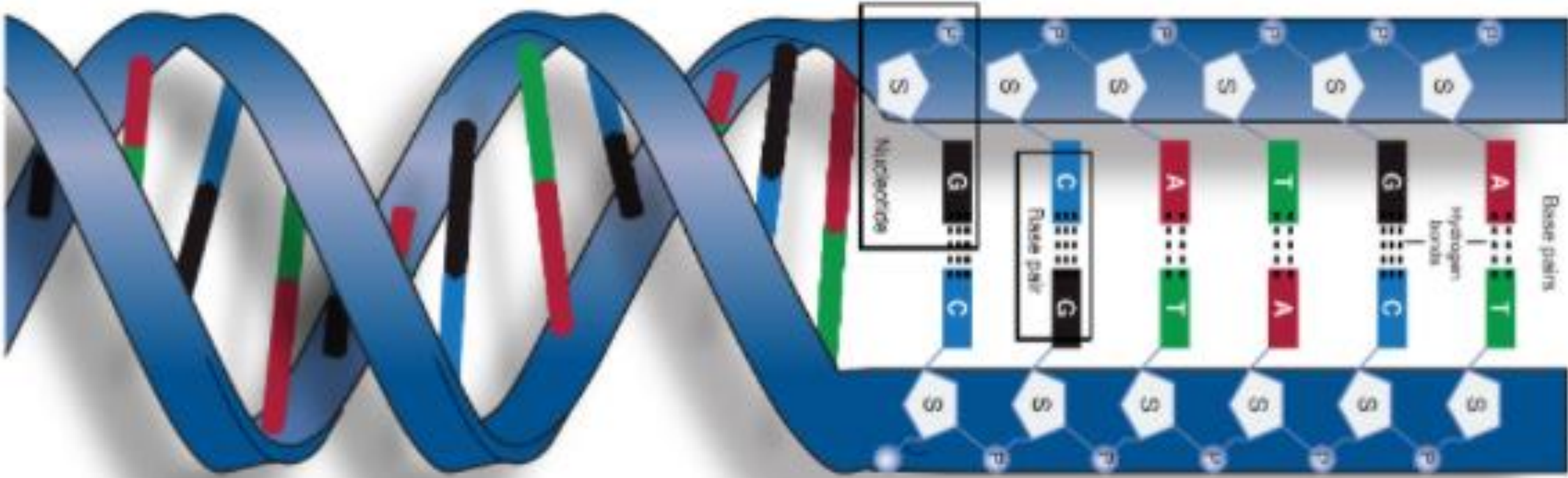


POLYMERIZATION VIA DEHYDRATION SYNTHESIS





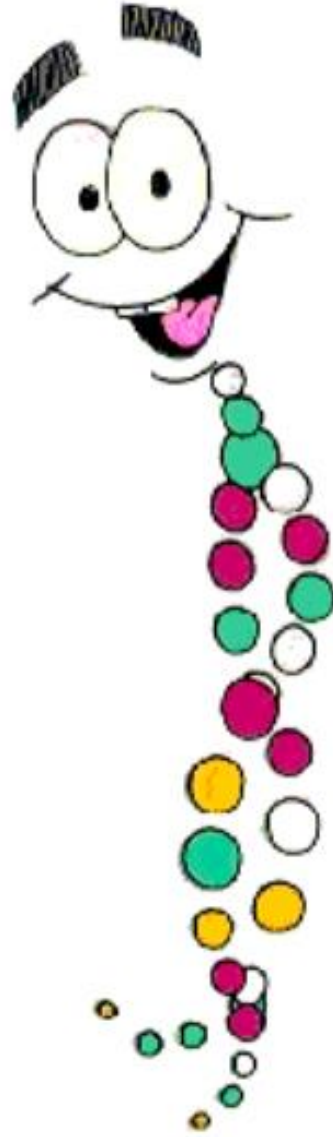
- **Monomer:** a molecule that can be bonded to other identical molecules to form a polymer.
- **Polymer:** A polymer is a substance or material consisting of very large molecules, or macromolecules, composed of many repeating subunits.
- **Polymerization:** is a process of reacting monomer molecules together in a chemical reaction to form polymer chains or three-dimensional networks.
- **Dehydration Synthesis:** is the process by which monomers are attached together into polymers, releasing water molecules as byproducts.
- **Hydrolysis:** is the process by which polymers are broken apart into monomers, as a result of coming into contact with water.
- **ATP:** (adenosine triphosphate): Present in ALL living tissue. It is the Energy Storage molecules of Life. ATP = ENERGY



DNA Song

We love DNA
Made of nucleotides
Sugar, phosphate and a
base
Bonded down one side

Adenine and Thymine
Make a lovely pair
Cytosine without Guanine
Would feel very bare



AIGHT, 500000....

- ✓ **DNA** IS ONE OF THE FOUR **MACROMOLECULES** WE WILL BE LEARNING ABOUT IN UNIT 2
- ✓ **MACROMOLECULES** ARE **BIOLOGICAL POLYMERS**.
- ✓ *Polymers are long chains of repeating units we refer to as monomers*
 - ✓ *Polymers are made by bonding together monomers via Dehydration Synthesis*
 - ✓ *Polymers can be broken back down into monomers via Hydrolysis*
- ✓ **DNA RNA** are a category of **Polymers** we call **Nucleic Acids**
 - ✓ **DNA** is **Deoxyribonucleic Acid**
 - ✓ **RNA** is **Ribonucleic Acid**
- ✓ **Nucleic Acids** are **polymers** made of nucleotide **monomers**
 - ✓ Nucleotide **monomers** refer to the sugar, phosphate back bone and a nitrogenous base that make up NA
- ✓ **ADENINE = THYMINE, GUANINE ≡ CYTOSINE** ARE ALL NITROGENOUS BASES.
 - ✓ ADENINE BONDS WITH THYMINE **A = T**
 - ✓ CYTOSINE BONDS WITH GUANINE **< ≡ >**

