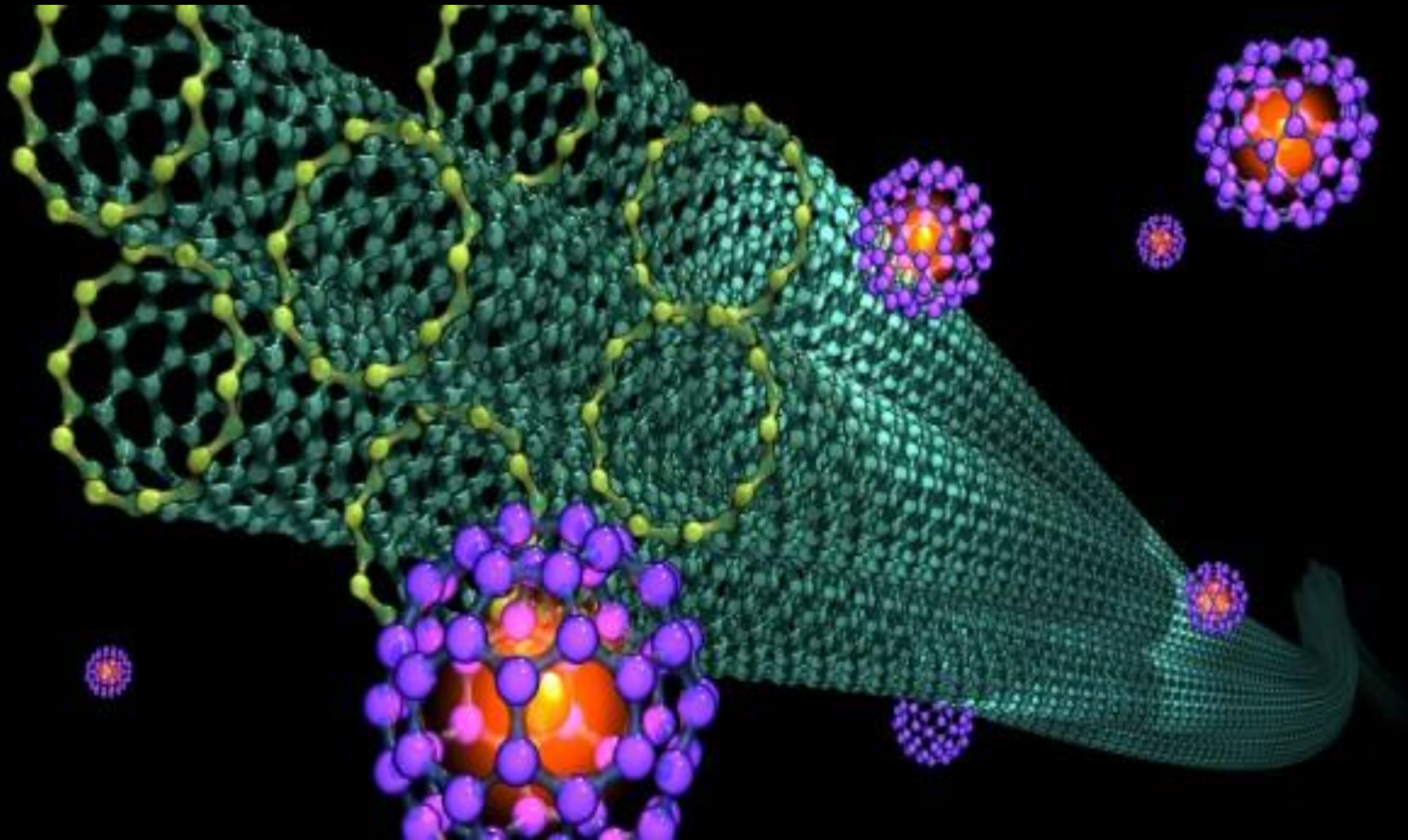


Carbon Compounds

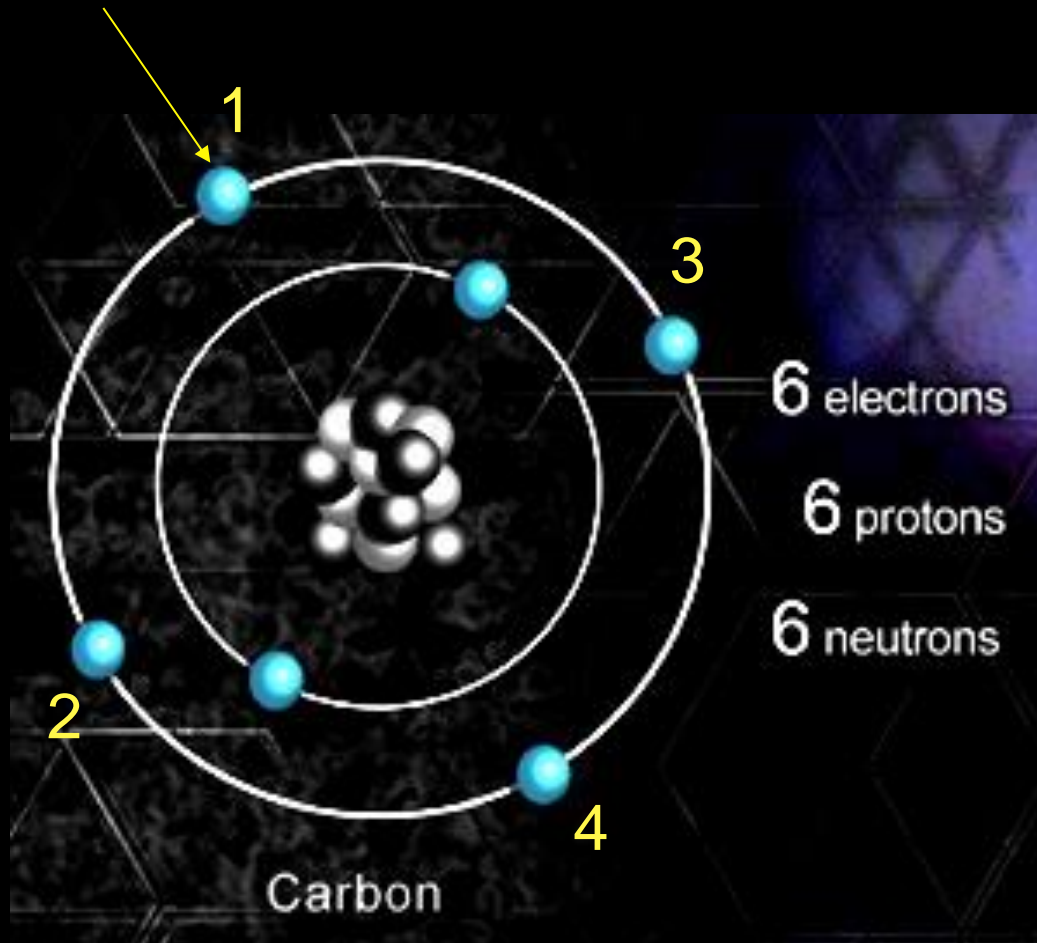


Learning Objectives

- Define the following terms:
covalent bond, valence electron,
macromolecule, monomer, polymer
- Describe the relationship
between monomers and polymers

Carbon Atom

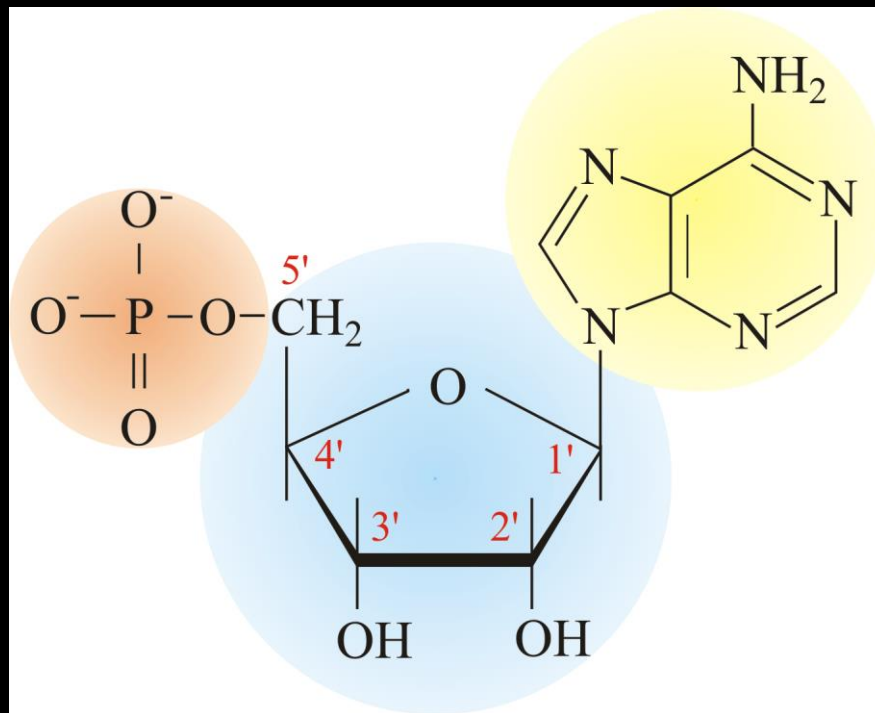
Valence
Electrons



Carbon atoms have 4 valence electrons for forming strong covalent bonds

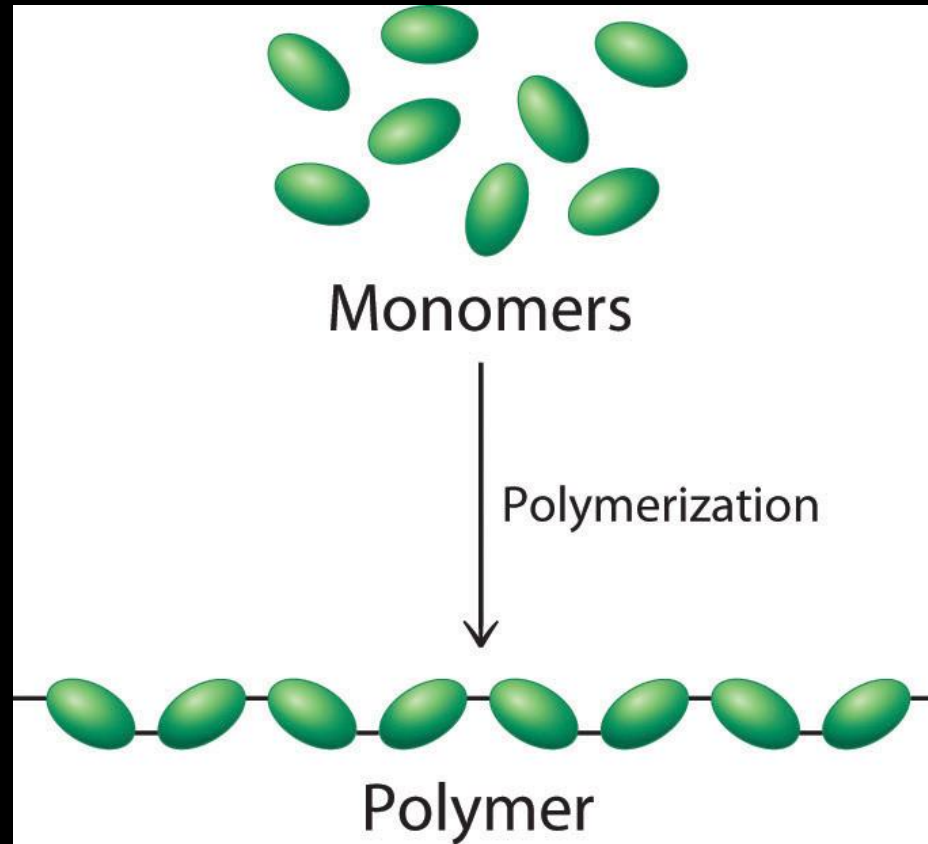
Carbon Bonds

Carbon can bond with many elements, including hydrogen, oxygen, phosphorus, nitrogen and itself to form larger molecules.



Living things are made of carbons and other elements.

Monomers & Polymers



The smaller units, or **monomers**, join together to form **polymers**.

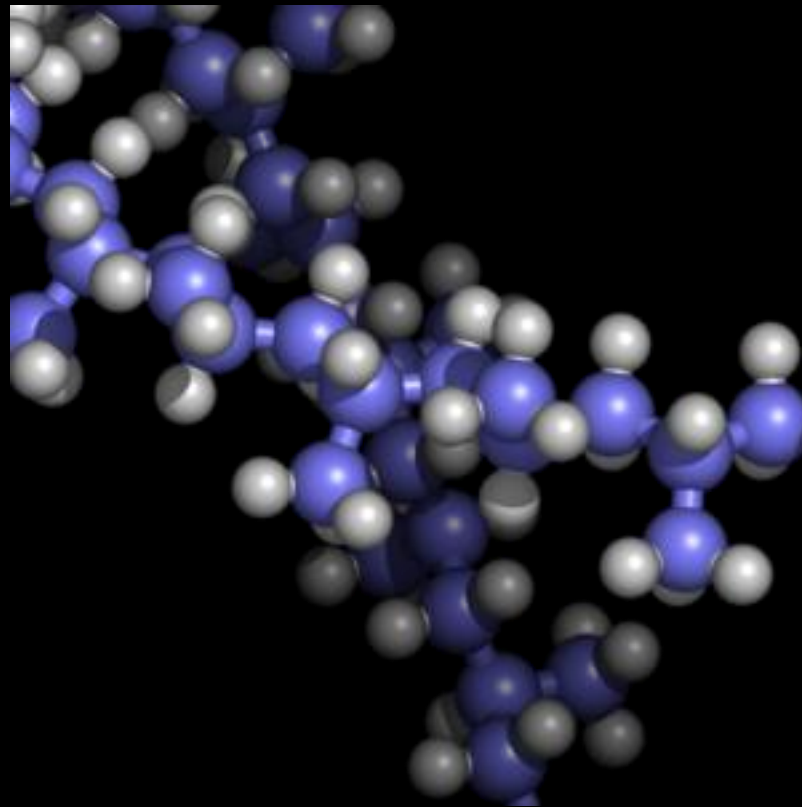
Monomers & Polymers



Monomers in a polymer can be identical or different.

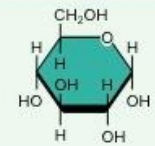


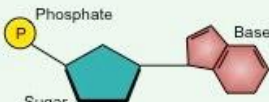
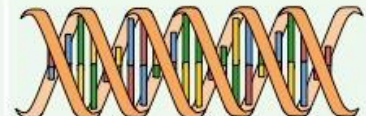

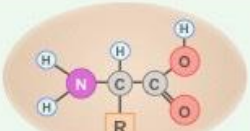


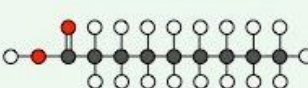
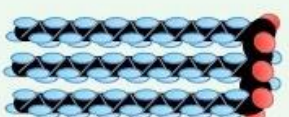

Macromolecules

“Giant Molecules”



Macromolecules are made from large numbers of smaller molecules.

Organic Compounds

	Monomer / Subunit	Polymer	Cellular Structure
Carbohydrate	 <p>Monosaccharide</p>	 <p>Starch</p>	 <p>Granules in Chloroplasts</p>
Nucleic Acid	 <p>Nucleotide</p>	 <p>Double Helix (DNA)</p>	 <p>Chromosome</p>
Protein	 <p>Amino Acid</p>	 <p>Polypeptide</p>	 <p>Intermediate Filaments</p>
Lipid	 <p>Fatty Acid</p>	 <p>Triglyceride</p>	 <p>Adipose Cells</p>

Organic compounds are macromolecules needed for organisms to function.

4 Types of Organic Compounds



Carbohydrates
Lipids
Nucleic Acids
Proteins



YouTube
Organic Biomolecules

Stop Here

