Living organisms are made out of large organic molecules. → Large molecules are made of small subunits called monomers. → Lots of monomers together are called polymers. → polymers put together are called macromolecule

LIPIDS: (fats)

>> made up of carbon, hydrogen, and oxygen

>> used for:
- long term energy storage
- parts of the cell membrane (phospholipids)
- insulation (blubber in animals)
- steroids - are chemical messengers

>> examples: Oils, butters, waxes, phospholipids

>> has a waxy outer covering on plants and on animals
not all plants and animals

>> can be SATURATED or UNSATURATED

polypeptides
joined by peptide bonds!
AA — AA

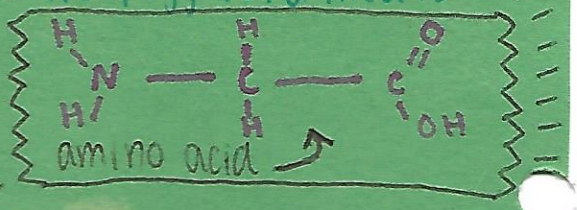
monomer

PROTEINS: (amino acids)

>> made up of carbon, hydrogen, oxygen, nitrogen, sulfur

>> used for:
- to form bones and muscles
- regulate cell processes
- transport materials like hemoglobin and proteins
- insulin

>> examples: fish, eggs, and meats



monomers | Polymers

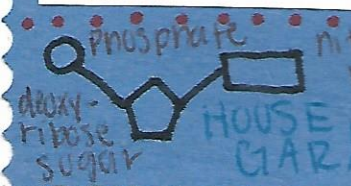
Nucleic Acid

>> made up of hydrogen, oxygen, nitrogen, carbon, and phosphorus

>> used for:
- storing and transmitting genetic information
- instructions for making proteins

monomers | polymers

TWO TYPES
1. Deoxyribonucleic Acid (DNA)
2. Ribonucleic Acid (RNA)



HOUSE, POOL, GARAGE

DNA → PROTEIN → TRAIT

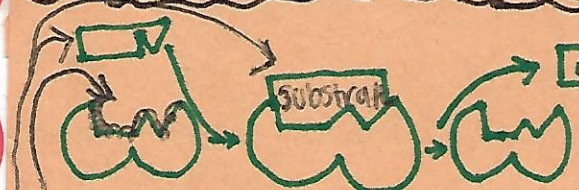
NITROGEN BASES

- Adenine (both)
- Thymine (DNA)
- Guanine (both)
- Cytosine (both)
- Uracil (RNA)

INDICATORS!

- benedicts
  - simple carbs
  - light blue → orange/green
- brown paper bag
  - lipids (fats)
  - leaves greasy spot
- iodine/lugols
  - complex carbs
  - amber yellow → blackish blue
- biurets
  - proteins
  - blue → purple

ENZYMES!



active site - where enzyme binds to substrate
substrate - reactant
product - final outcome of reaction
enzyme =