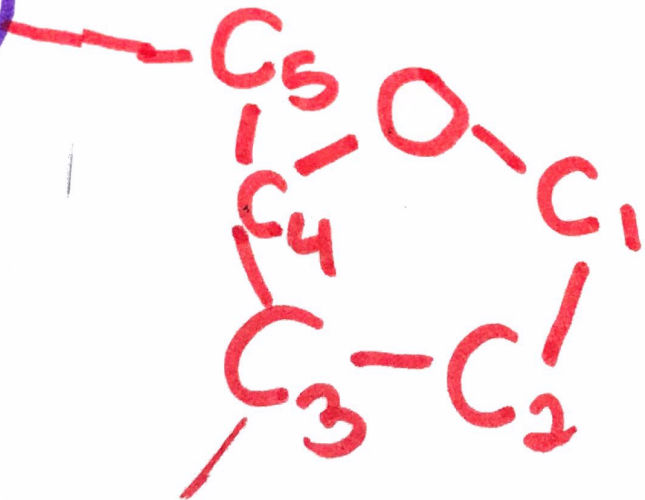


P



—

N

Covalent Bonds

Strong

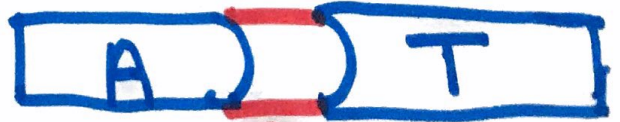
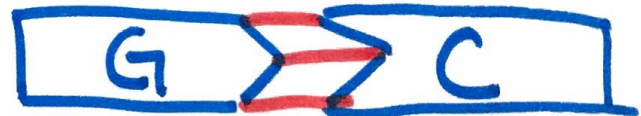
Phosphate Group

- always attached to sugar

Deoxyribose pentose sugar (5-carbon)

- connects to P & Nitrogen base

Nitrogen Base



Hydrogen Bond weak

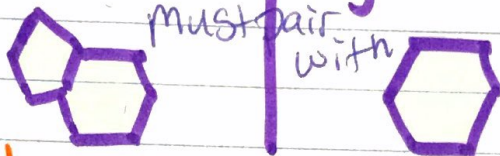
Backbone

DNA Structure

- DNA is universal
- found in all living things
- share same 4 bases
A T C G
- Order of the bases changes
- bases determine traits

Nitrogen Bases

Purine / Pyrimidine



Adenine = Thymine 2 bonds
Guanine = Cytosine 3 bonds

Base Pair (Chargaff's) Rule #1

^{single} A = T ^{double} C = G
20 + 20 + 30 + 30 = 100%

DNA is a double helix "twisted ladder"

backbone
sugar + phosphate

Nitrogen bases

DNA is antiparallel

5' → 3'
3' ← 5'

