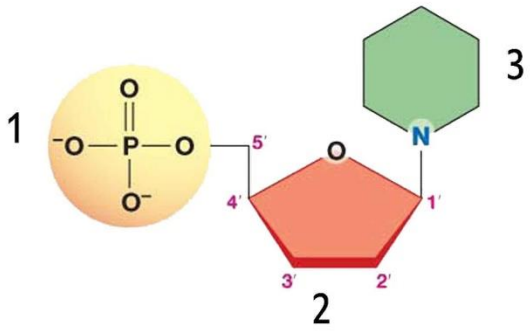
Name_____ Block_____ Date_____

History and Structure of DNA

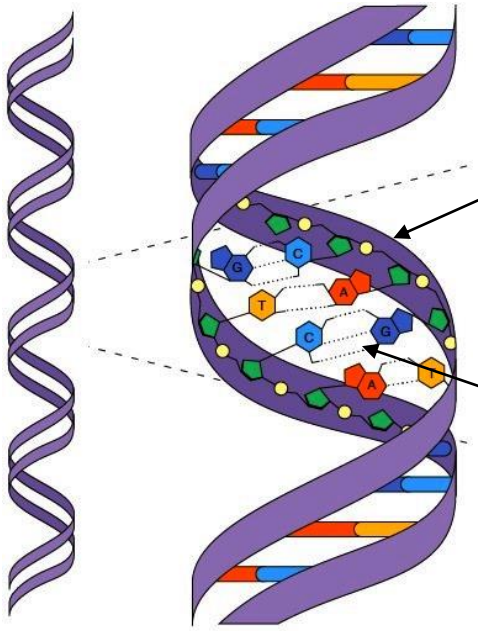
Scientist(s) Name(s)	Role
Chargaff	Realized in all organisms: %A = %T %G = %C
Franklin	Used X-ray crystallography to determine that DNA is a double-helix
Watson & Crick	1st built accurate model of DNA molecule w/ complimentary base-pairing btwn 2 strands

~~Nucleic Acid~~ Nucleotide (nucleotide)

- A ~~nucleic acid~~ is a monomer of DNA
- Identify the 3 parts of a nucleic acid and label the image below



DNA Structures



1. Double Helix
2. Strong covalent bonds (sugar-phosphate backbone)
3. weak hydrogen bonds btwn nitrogenous bases

1. *Label the name for the overall structure of DNA*
2. *Label the type of bonds that makeup the backbone of DNA*
3. *Label the type of bonds between the base pairs*

DNA Base Pairs

List the 4 nitrogen base pairs:

1. Guanine (G)
2. Cytosine (C)
3. Adenine (A)
4. Thymine (T)

Identify the complementary base pairs:

ATCGGAT
TAGCCTA

A ⟷ T

G ⟷ C

Complimentary base-pairing

DNA Functions

Molecule of heredity
↳ copied & passed on from generation to generation

Molecule of evolutionary change
↳ mutations cause changes in DNA → new traits or even new species to appear