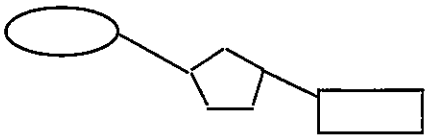
Name: _____ **Period:** _____

DNA Notes

1. Structure of DNA

A. DNA stands for:

B. Building blocks are _____

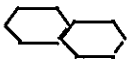


Made of:

1.
2.
3. Nitrogen Bases
   a.
   b.
   c.
   d.

C. Nitrogen base pairing

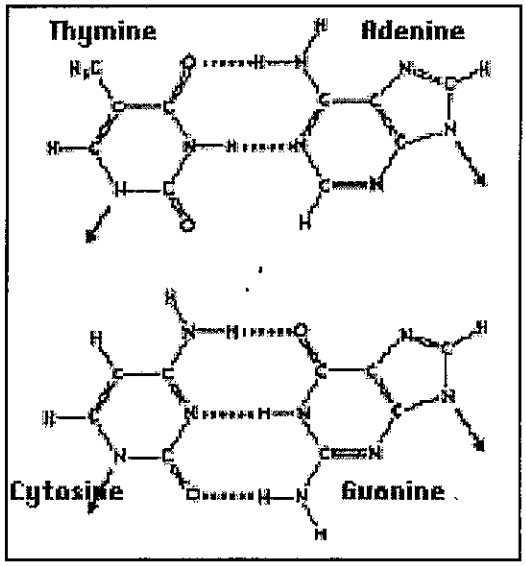
1. Hydrogen bonding



2. Purines (A and G)

3. Pyrimidines (T and C)

4. Complementary Pairing



D. Shape:

1. Discovered by: _____ & _____ in _____

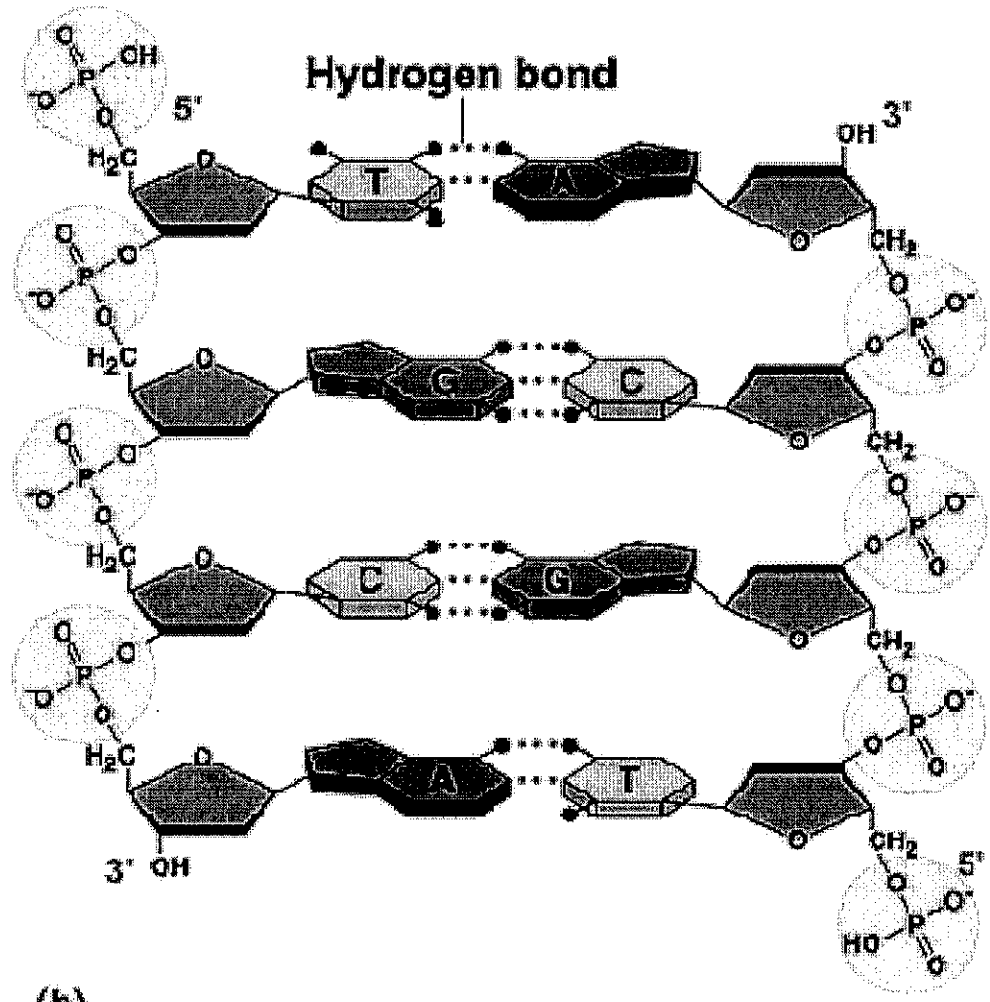
2. Rosalind Franklin:

3. Chargaff:

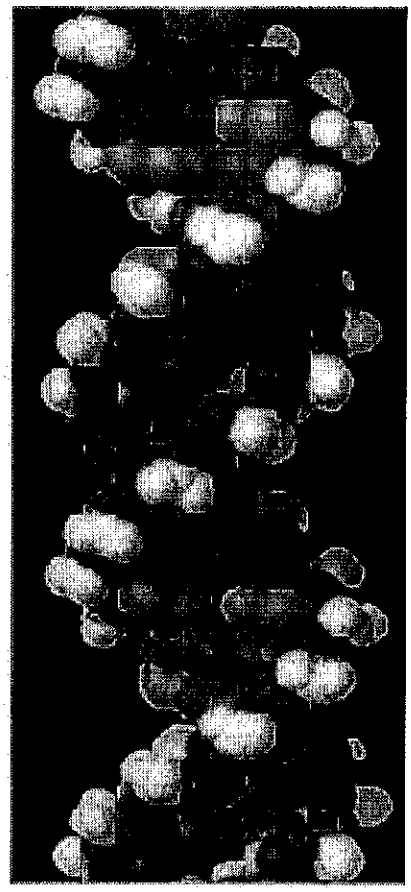
4. Antiparallel:
   3' (three prime) and 5' (five prime)

3. Supercoiled around histones

E. Charge:



(b)



(c)

2. Replication

A. Purpose:

B. Occurs before.....

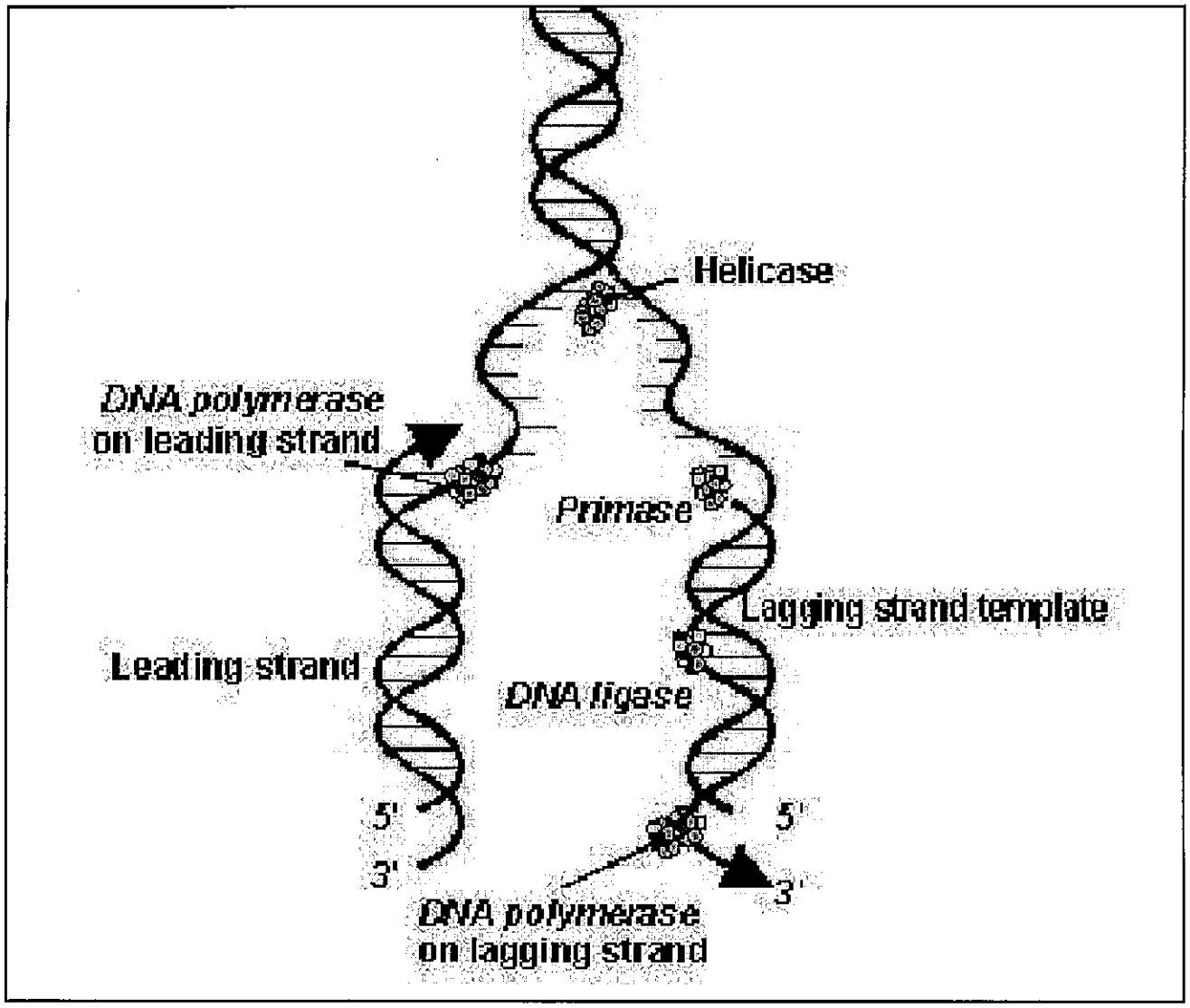
C. Mutations

D. Steps with enzymes

1. Unwinding and Unzipping with DNA helicase (enzyme)

2. 2 Complimentary strands are made from free nucleotides with DNA polymerase

3. Result: Two identical copies



3. Spooling DNA (DNA extraction)

A. Purpose:

B. Function of:

a. Salt

b. Detergent

c. meat tenderizer

d. EDTA

4. Protein Synthesis

A. Purpose:

B. Why proteins?

C. Structure of a protein:

1. Amino Acids

D. The Genetic Code:

1. DNA Codons

2. Start and Stop codons

E. Transcription in the nucleus:

1. mRNA

a. Uracil

F. Translation in the cytoplasm at the ribosome

1. tRNA

a. D

2. Amino acid chain

5. Mutations

A. Point mutation

B. Frame shift mutation

C. Chromosome mutation