Deoxyribonucleic Acid
DNA

Name_____
Date _____
Block _____

What is DNA?

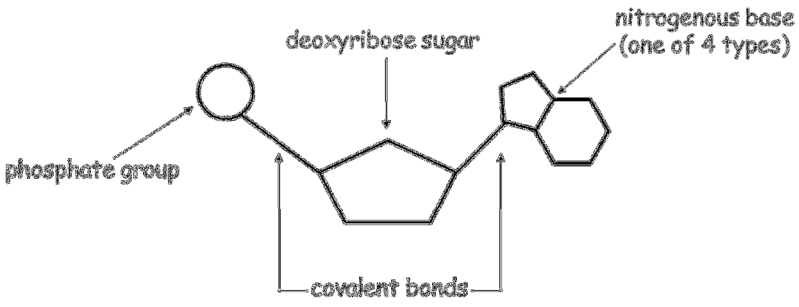
- _____that stores and transmits genetic information from one generation to the next
- material that _____
- capable of _____ of itself
- contains information to _____

What is the Structure of DNA?

- **large compound composed of _____ of REPEATING units _____ held together by _____**

Nucleotide Structure

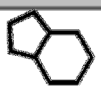
- **5-carbon sugar (_____)**
- _____
- _____ **(there are 4 types)**



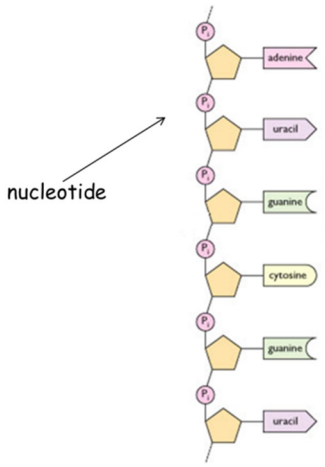
Nitrogenous Bases

- 4 types of nitrogenous bases:
  - _____ (A) - _____ (T)
  - _____ (C) - _____ (G)

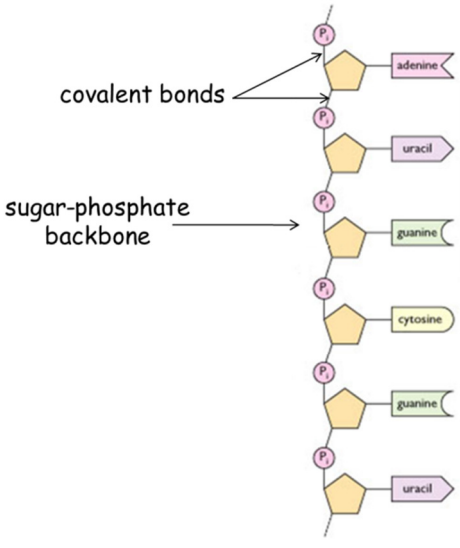
- All 4 nitrogenous bases can be divided up into 2 families: _____ and _____

Family	Description of Family	Nitrogenous Bases Belonging to Each Family
purines	nitrogenous bases composed of 2 rings 	adenine (A) guanine (G)
pyrimidines	nitrogenous bases composed of 1 ring 	thymine (T) cytosine (C)

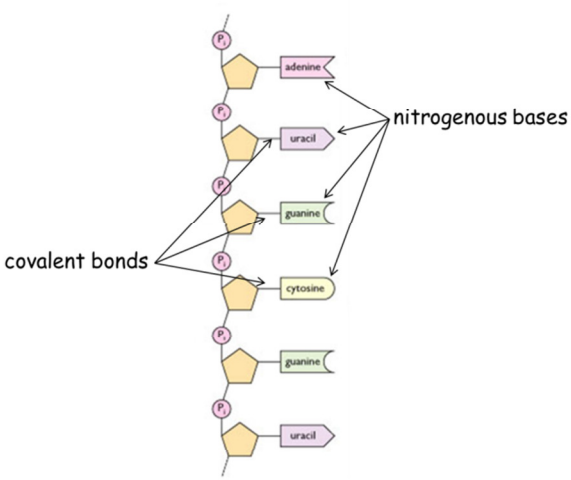
DNA Model
(as proposed by Watson & Crick)



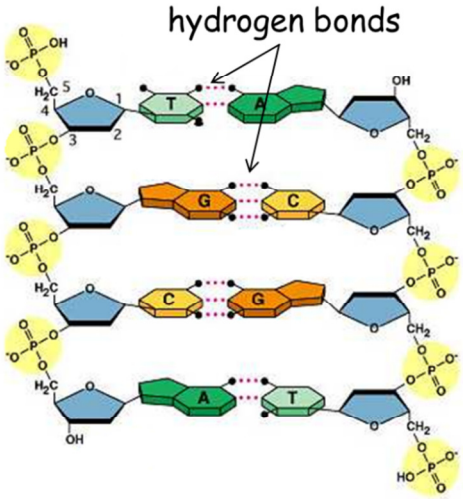
2. The BACKBONE of this long chain is formed by alternating sugar (_____) and _____ groups (joined by _____).



3. A nitrogenous base (adenine, guanine, thymine, or cytosine) is attached to each sugar via a _____.



4. DNA is composed of two strands held together by weak _____ (H-bonds). These bonds occur BETWEEN the nitrogenous base pairs. The nitrogenous bases on one strand are paired with the nitrogenous bases on the other strand.



NOTES:

1. _____***(A) always pairs with THYMINE (T) (held together by _____ H-bonds), and _____(C) with GUANINE (G) (held together by _____H-bonds).***

2. ***A _____ always bonds to a _____.***

5. The two strands are twisted into a structure called a right-handed _____.