

B. Model and label the basic structure of DNA

**DNA**

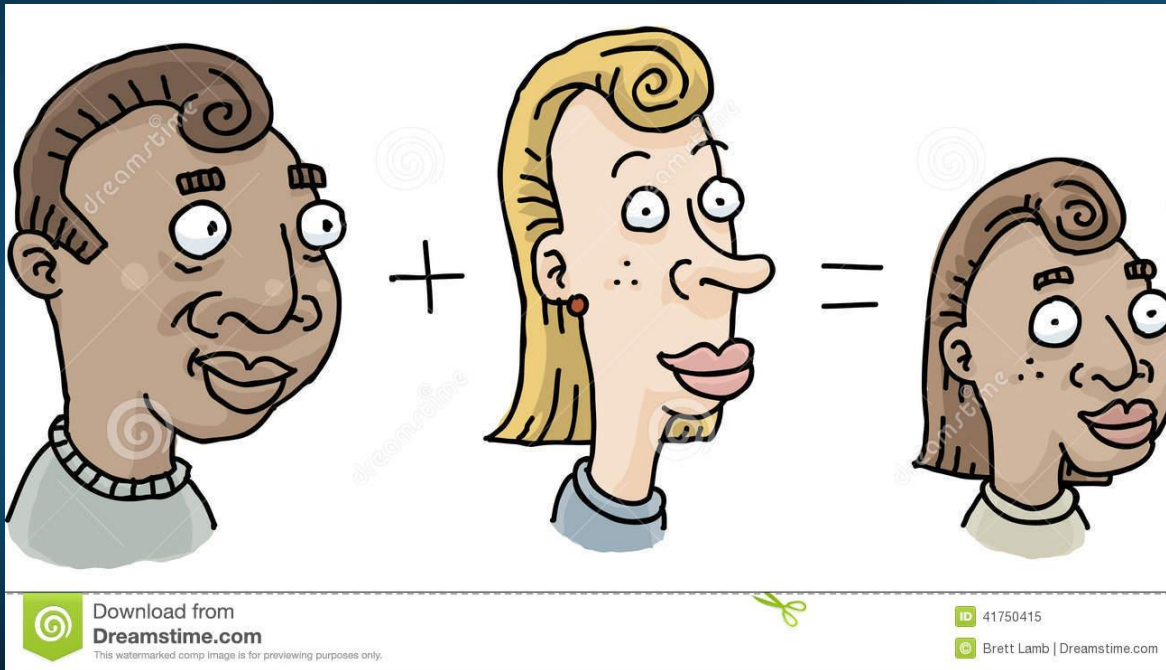
AKA

**D**eoxyribo**n**ucleic  
**A**cid



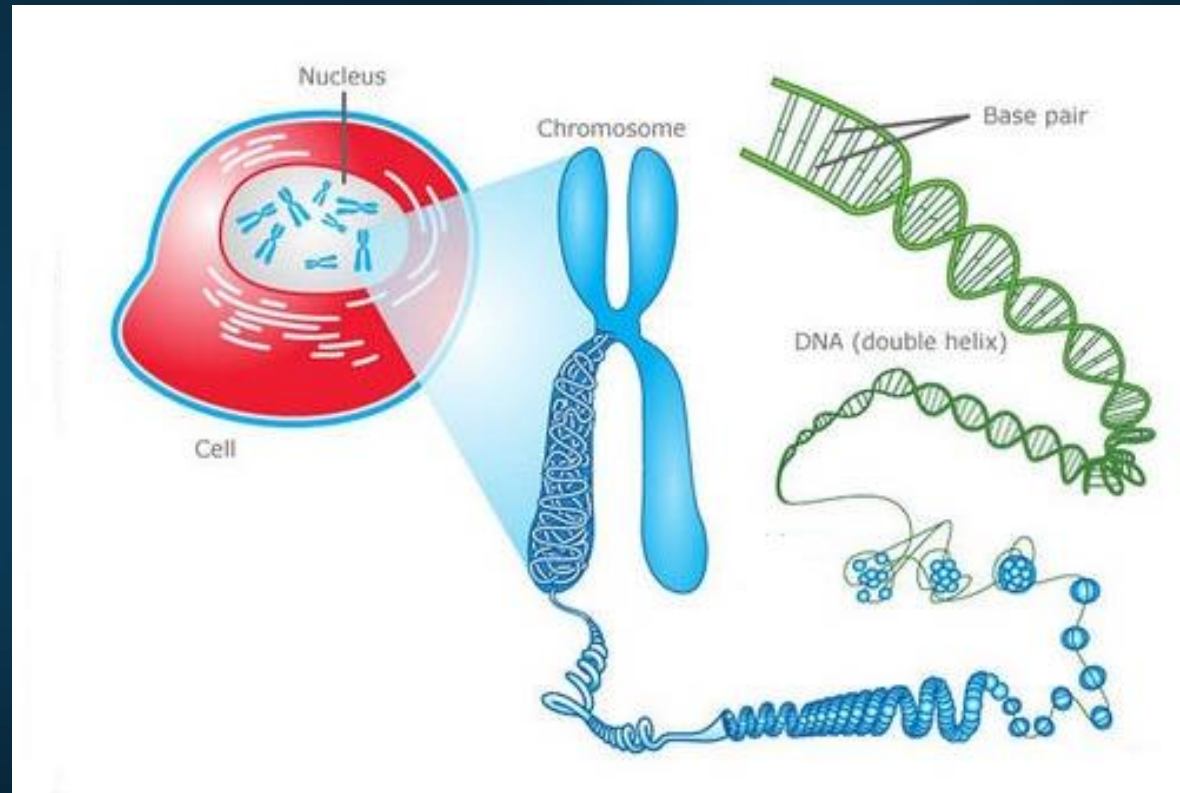
# DNA Function

- The hereditary molecule controlling the activities of the cell



# Found Where?

- NUCLEUS of the cell (DNA is in ALL living organisms)



A. Identify the scientists who discovered the DNA structure

# Discovery of DNA

- WATSON and CRICK
- In 1953
- At Cambridge University in England





# DNA Structure

- NUCLEOTIDE

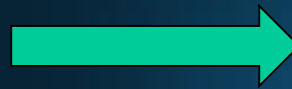
- The **BUILDING** block of the DNA ladder



# NUCLEOTIDE

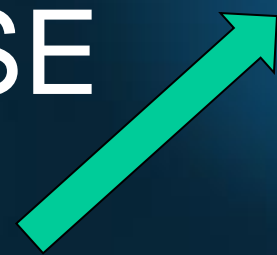
- Composed of

–PHOSPHATE



Form the  
sides of  
“ladder”

–DEOXYRIBOSE



SUGAR

–NITROGENOUS

BASE



Forms the  
rungs of  
“ladder”

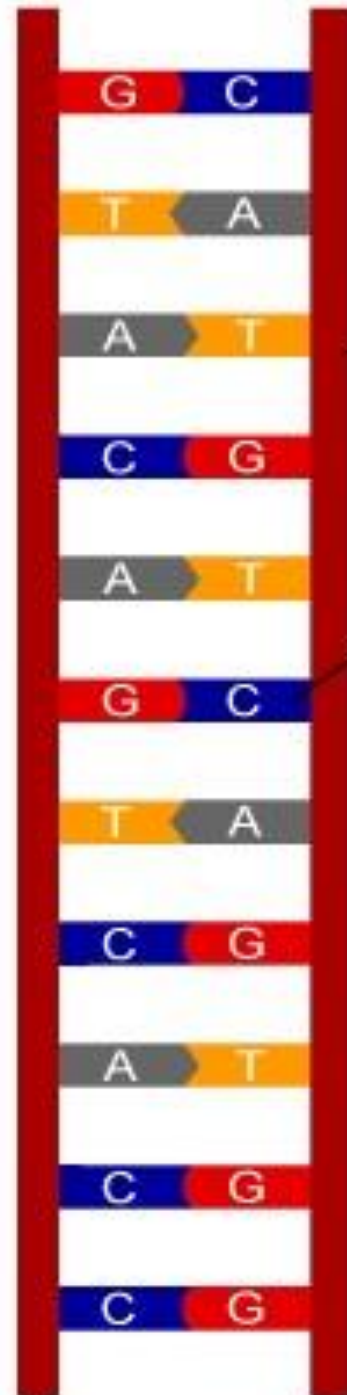


# Nitrogenous Bases

- There are 4 nitrogenous bases
  - Adenine (A)
  - Cytosine (C)
  - Guanine (G)
  - Thymine (T)
- *2 bases form the rungs of the ladders*

# Base Pair Rule

- A always pairs with T
- C always pairs with G







- Strand

#1    #2

- A --   T  

- C --   G  

- C --   G  

- G --   C  

- T --   A  

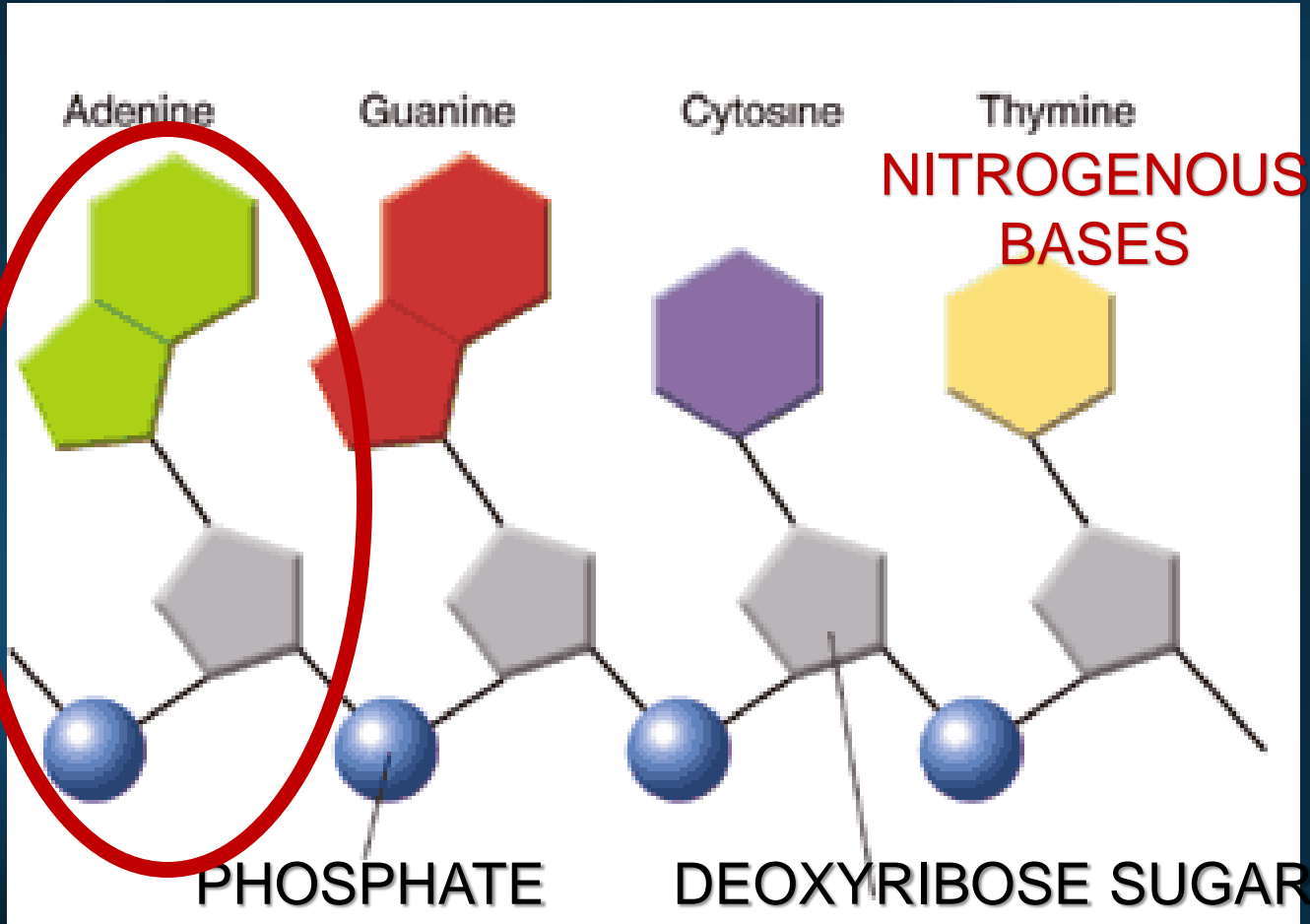
- A --   T  

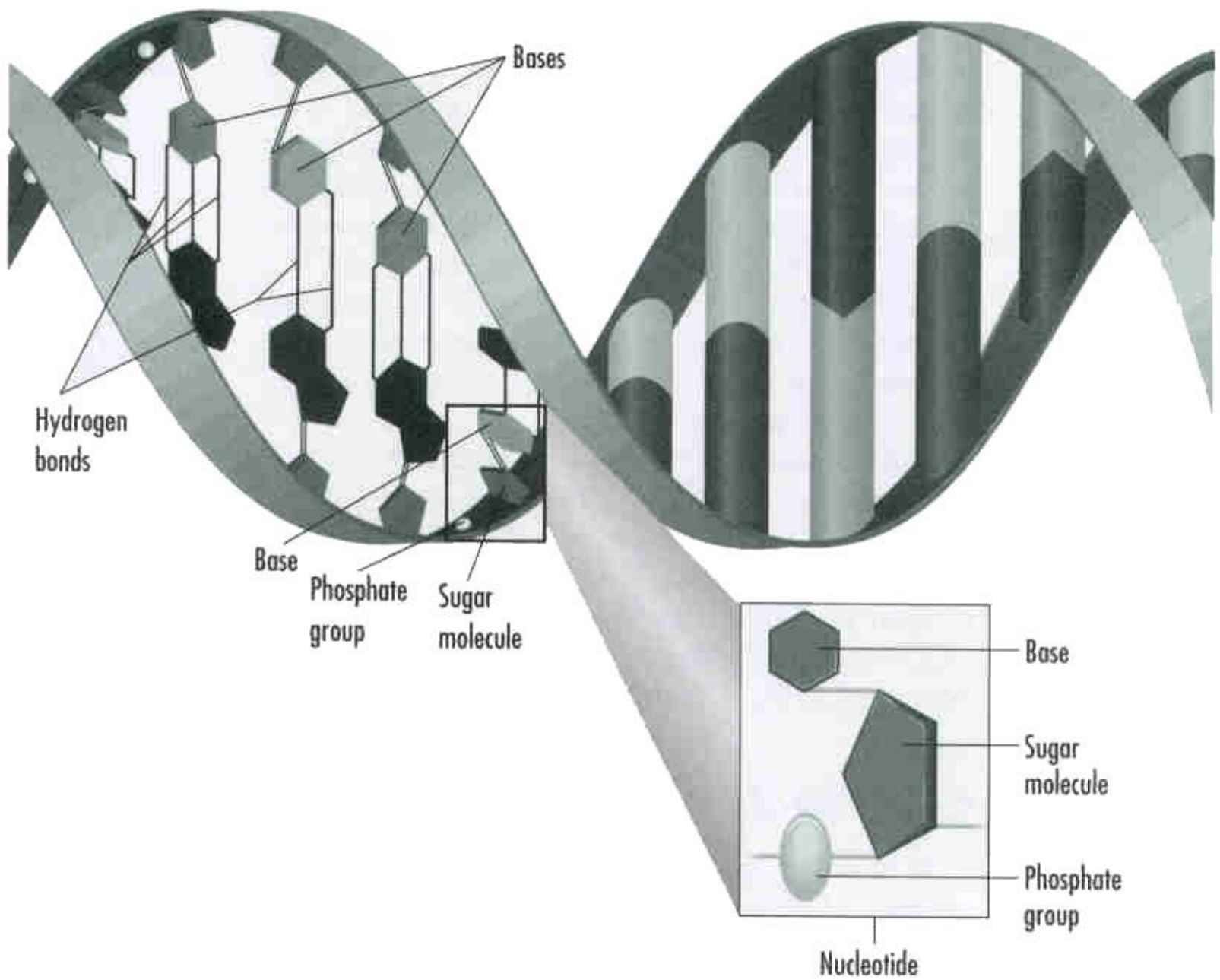
- C --   G  

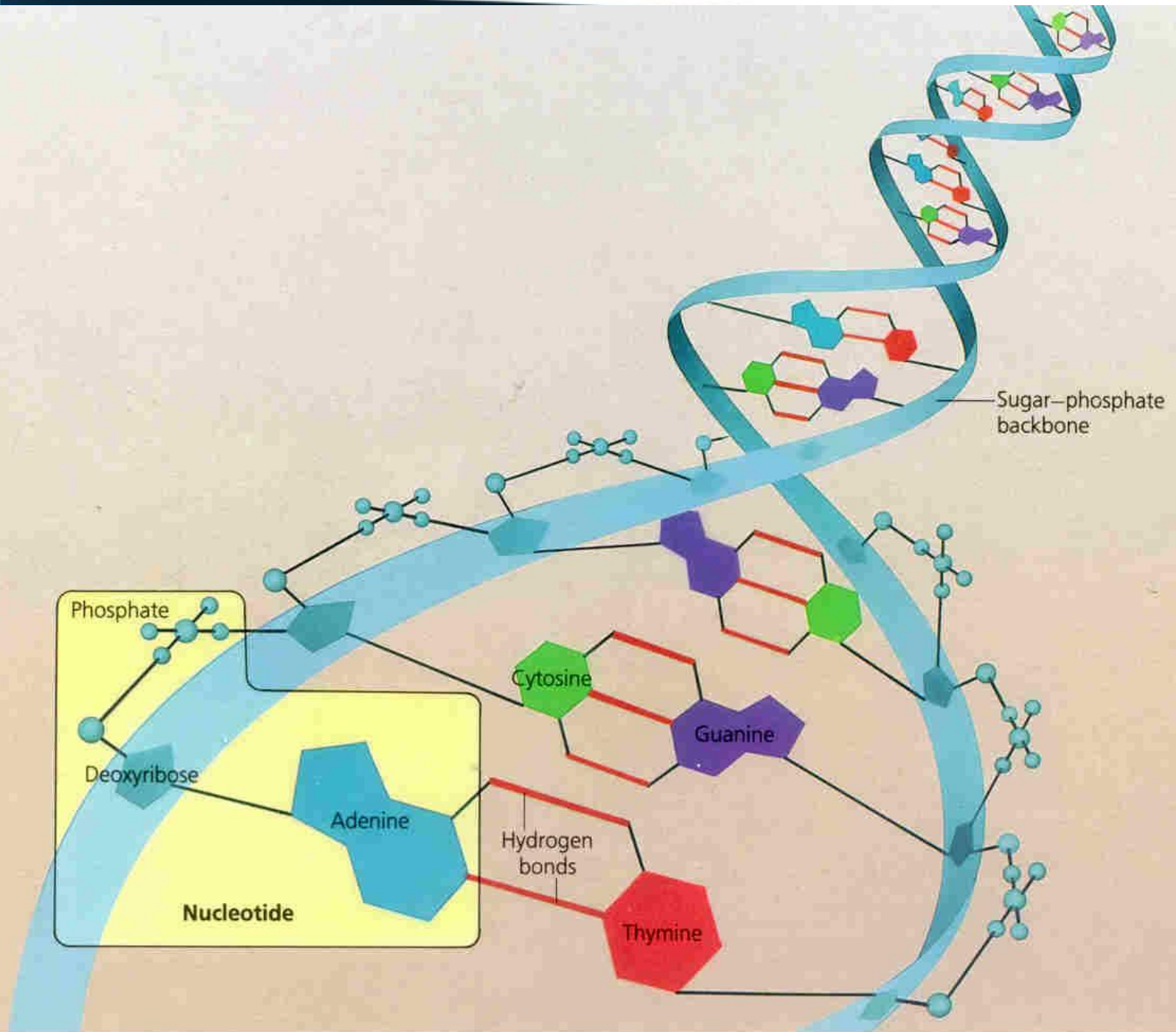
- T --   A  

- G --   C

# NUCLEOTIDE







# Sequence of bases:

- The order or sequences of bases are what make different genes.
- Humans share 99.9% of the same DNA sequences. (3.1 billion base pairs)
- <http://genetics.thetech.org/online-exhibits/genes-common>

