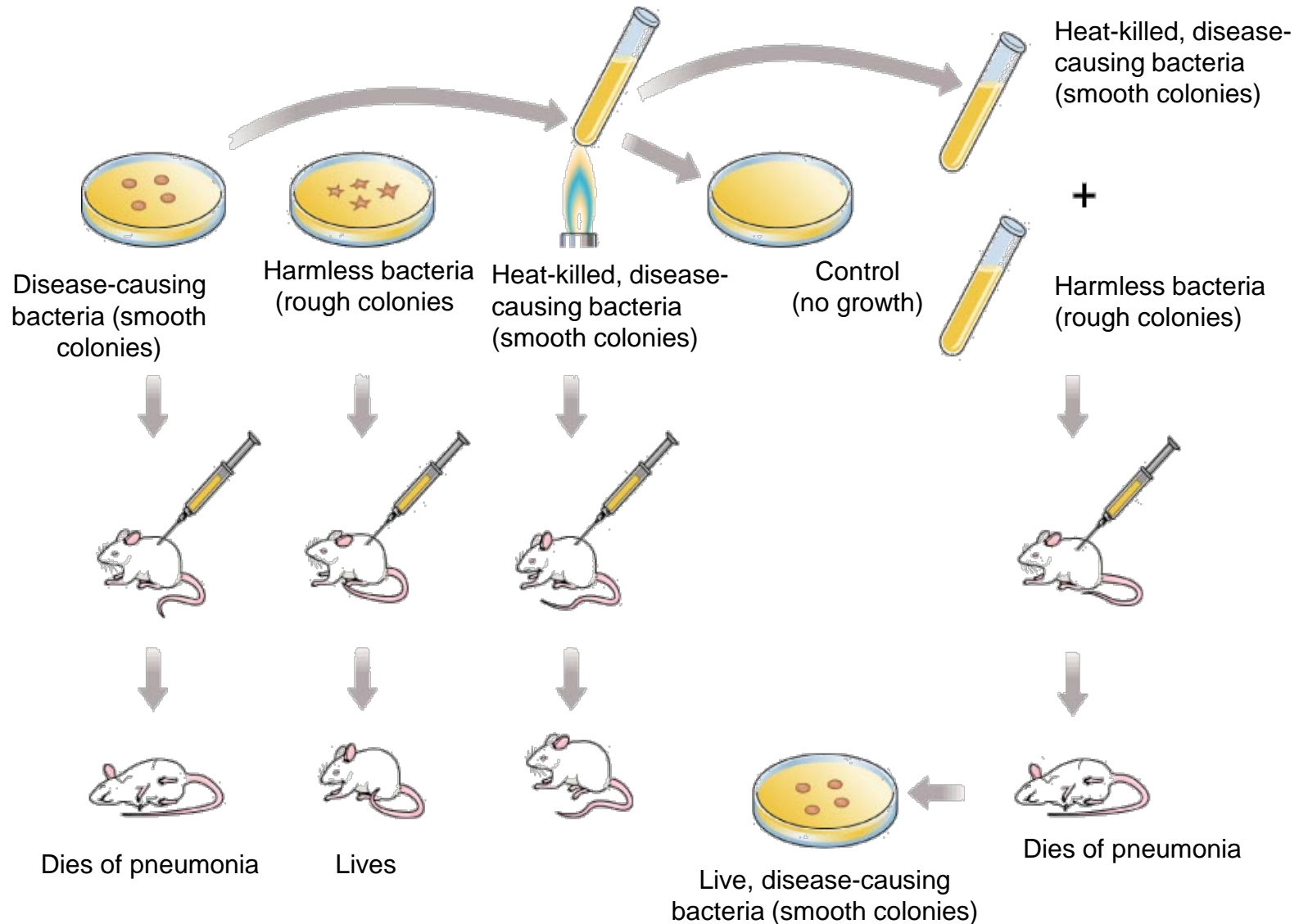


# DNA Structure

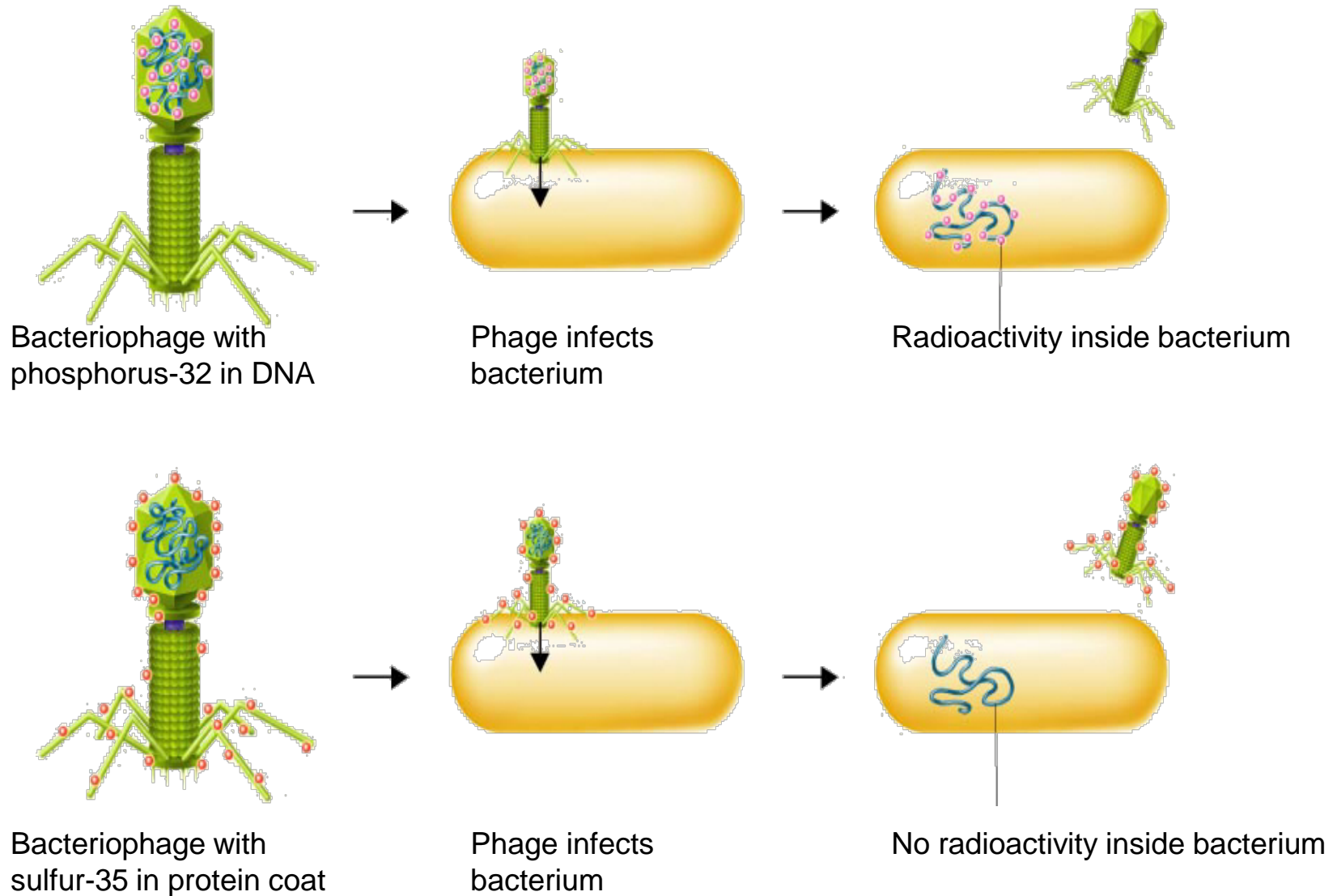
12-1



# Griffith's Experiment

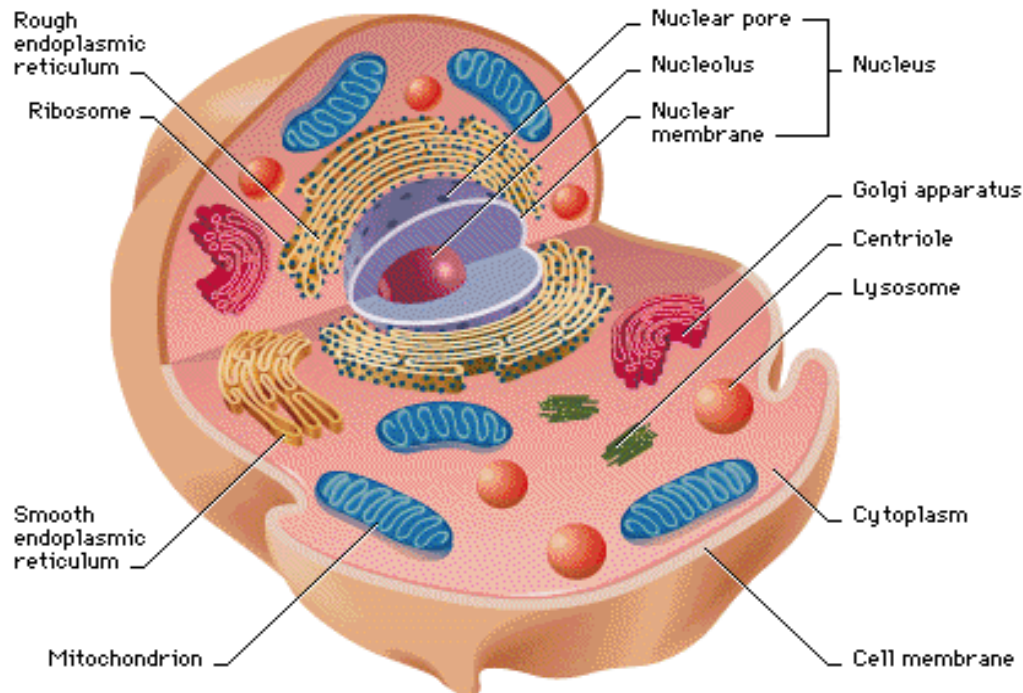


# Hershey-Chase Experiment

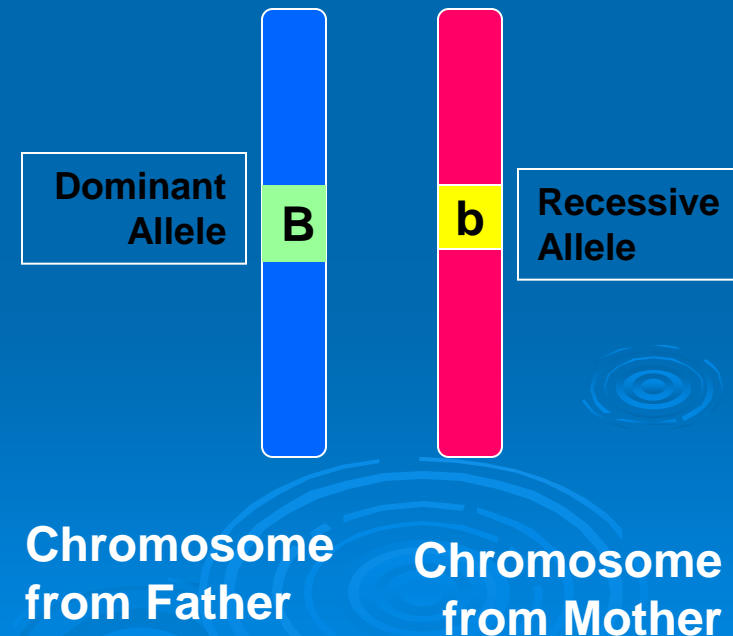


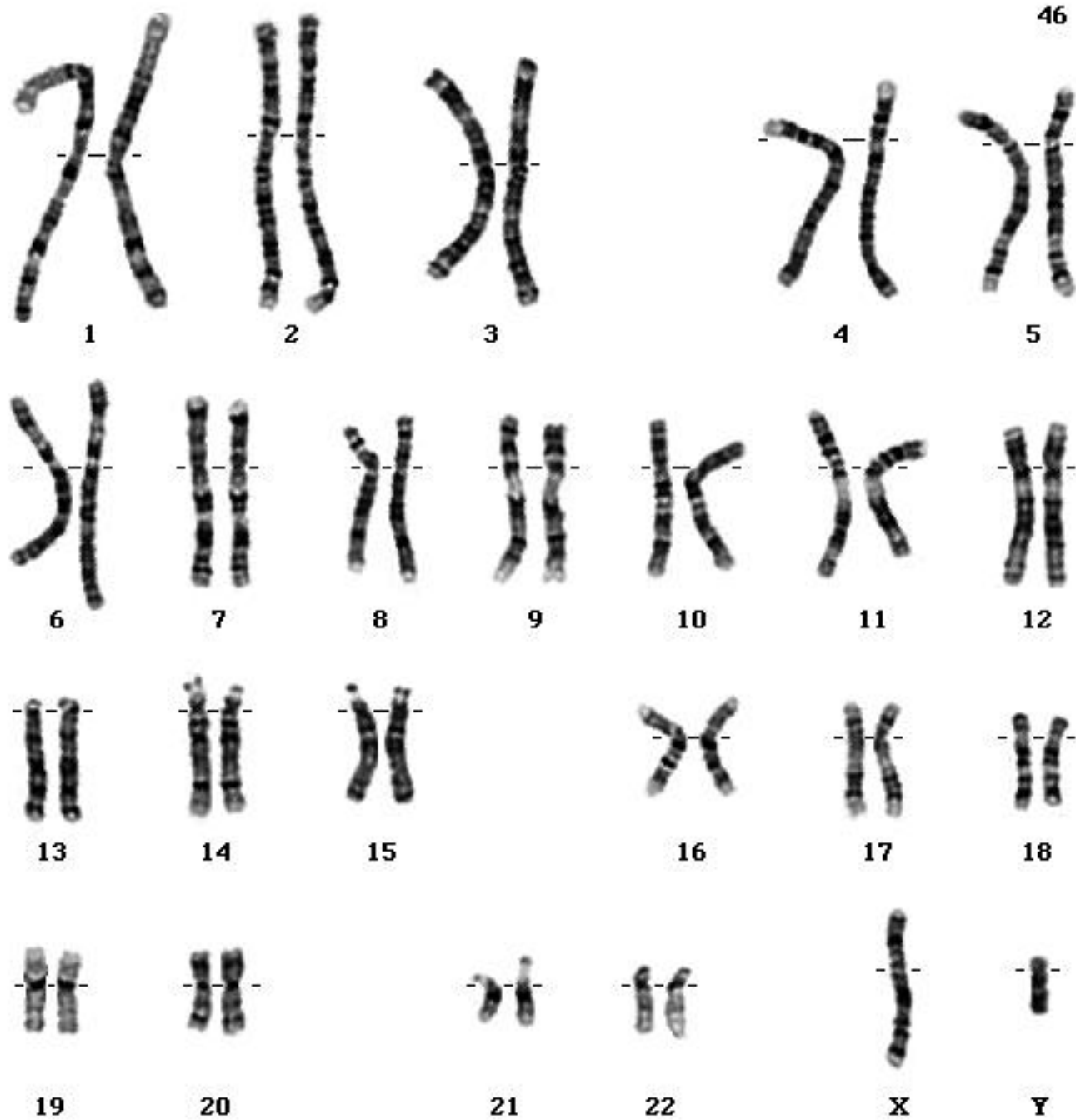
# Function of DNA

- Stores Genetic information
- Located in nucleus of cell



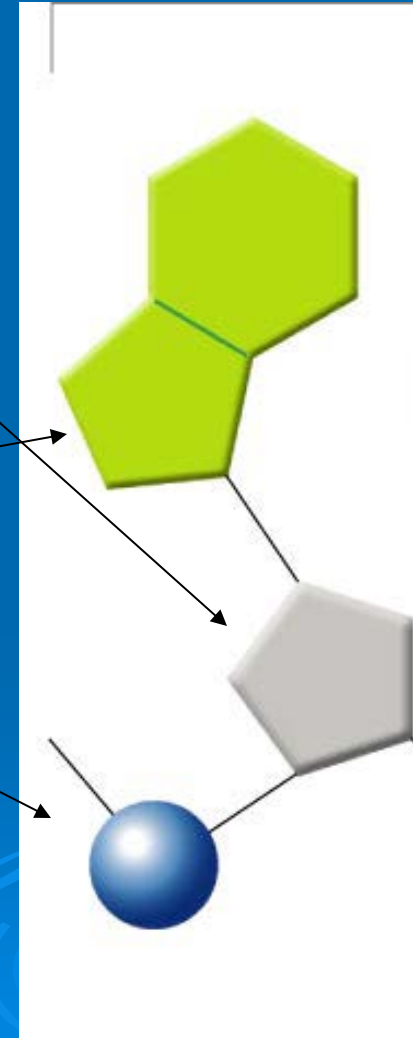
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# Structure of DNA

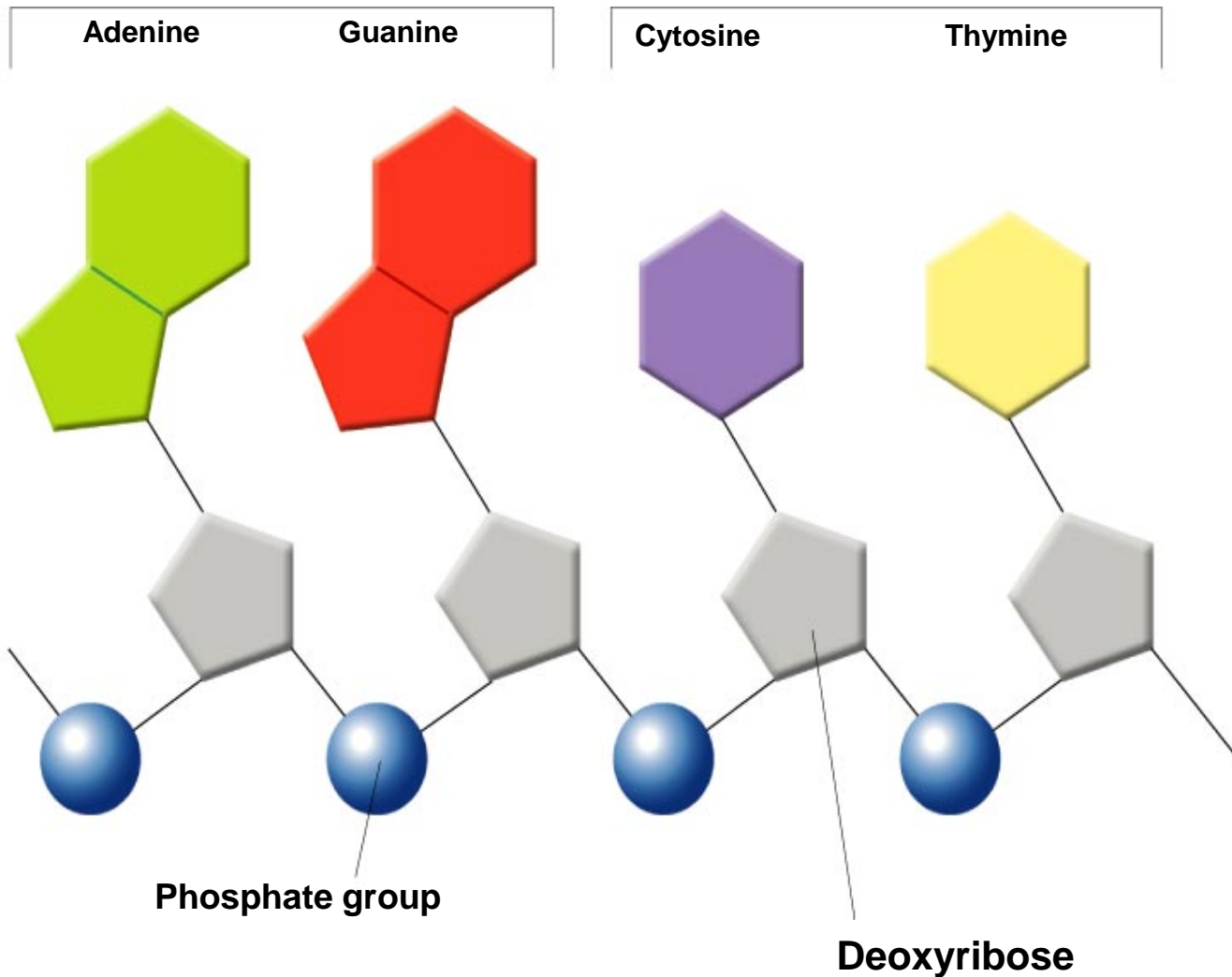
- Nucleic Acid
- Nucleotide monomers
- Nucleotide
  - 5-carbon sugar called deoxyribose
  - Phosphate group
  - Nitrogenous Base
- All Living Organisms have the same DNA



# Nucleotides

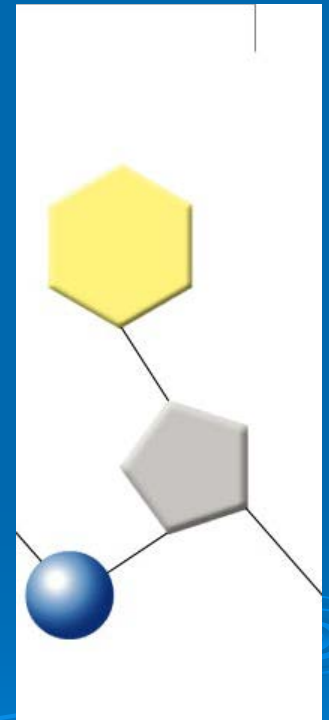
## Purines

## Pyrimidines



# Nitrogenous Bases

- 4 different bases
- Purines – 2 rings
  - Adenine
  - Guanine
- Pyrimidines – 1 ring
  - Cytosine
  - Thymine





# DNA Backbone

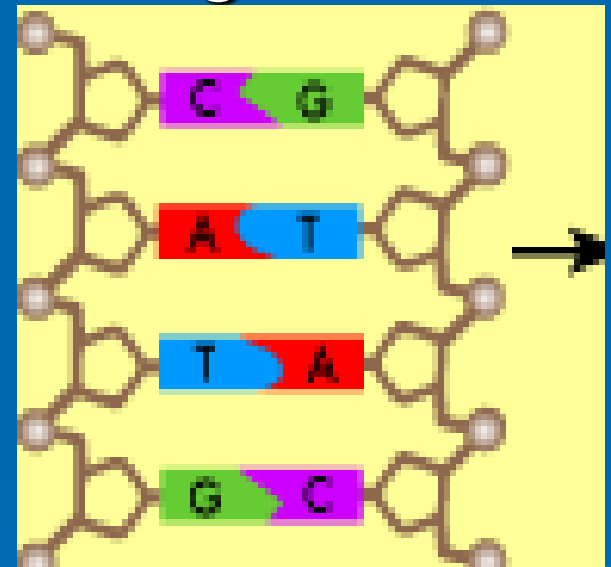
➤ Phosphate groups bonded to sugar

➤ Like a ladder

➤ Sides

- Sugar
- Phosphate
- Sugar

➤ Rungs = bases bonded to each other side by side



# Chargaff's Rules

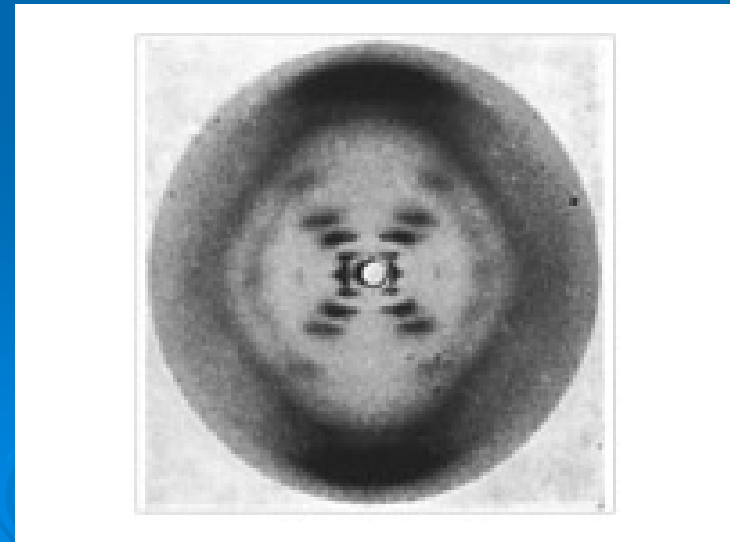
- Certain bases always bond to each other
- Hydrogen bonds
- Adenine – Thymine
- Guanine – Cytosine
- G-C; A-T = GCat



# Race for the Shape!

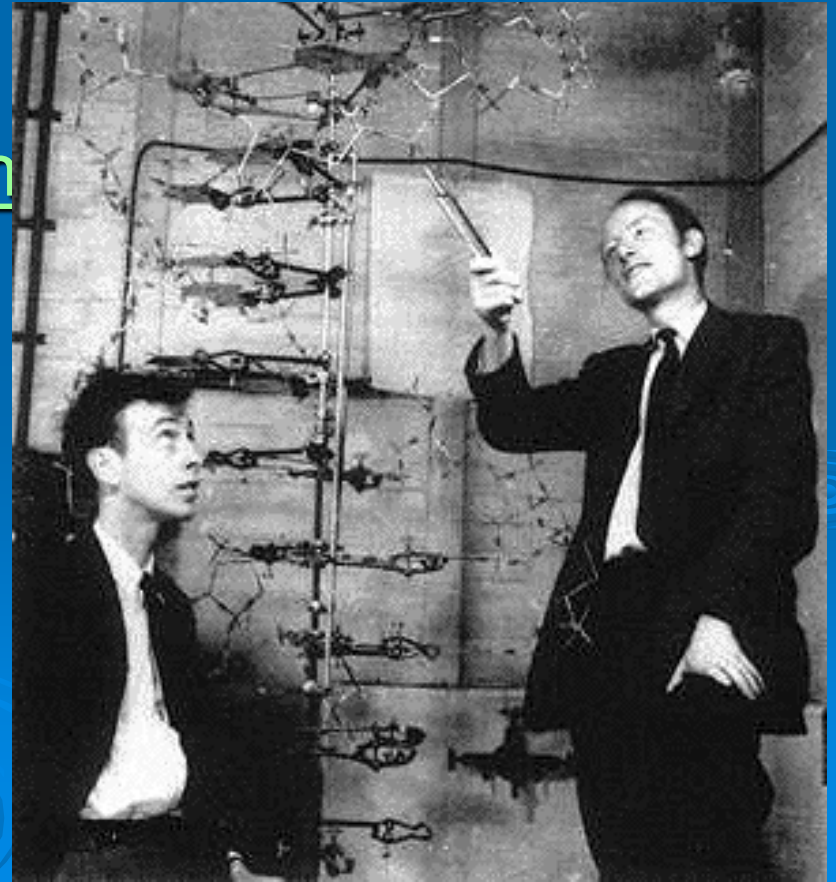
## ➤ Rosalind Franklin

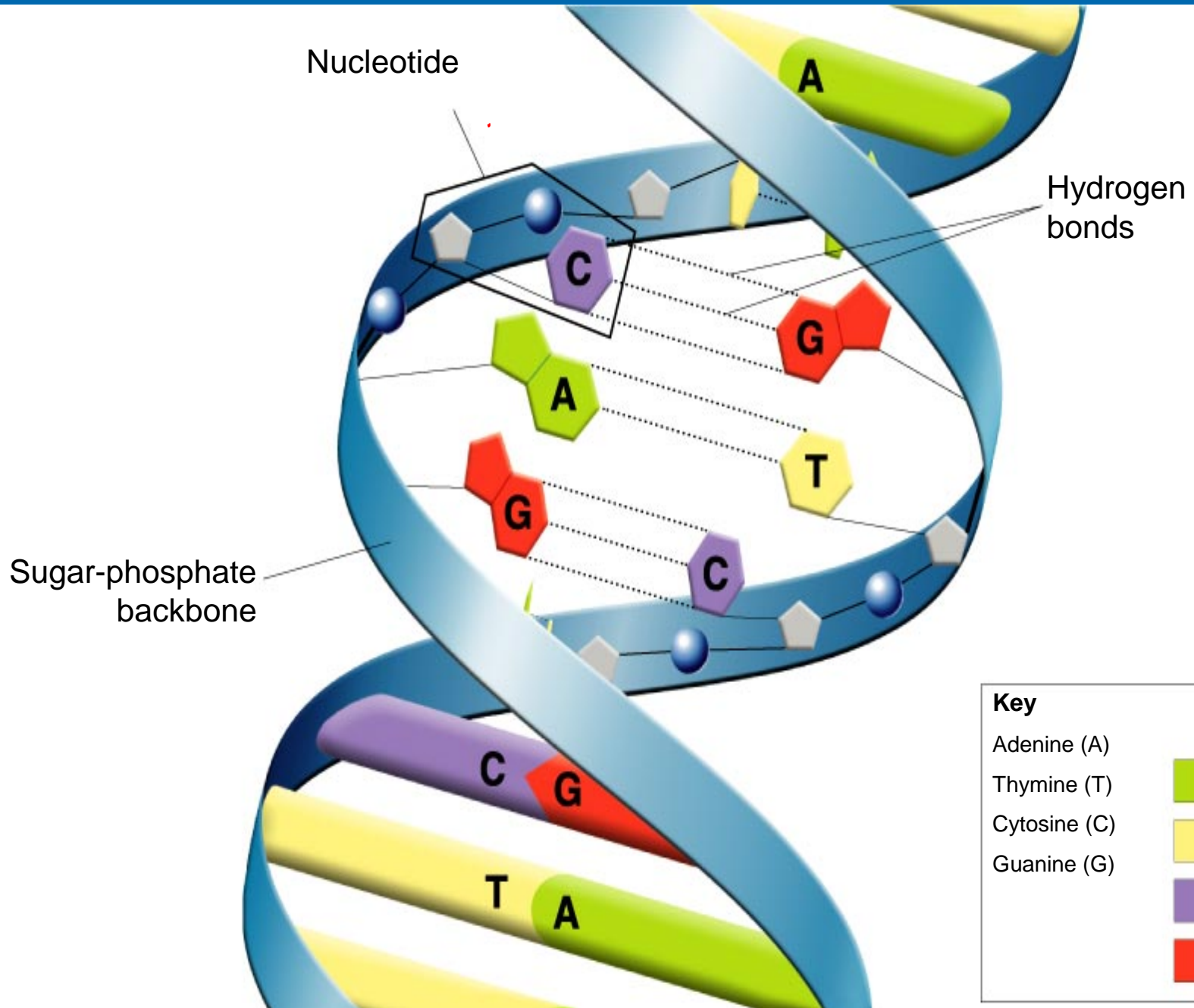
- 1950's
- X-ray diffraction of DNA
- Revealed important clues about shape



## ➤ Watson and Crick

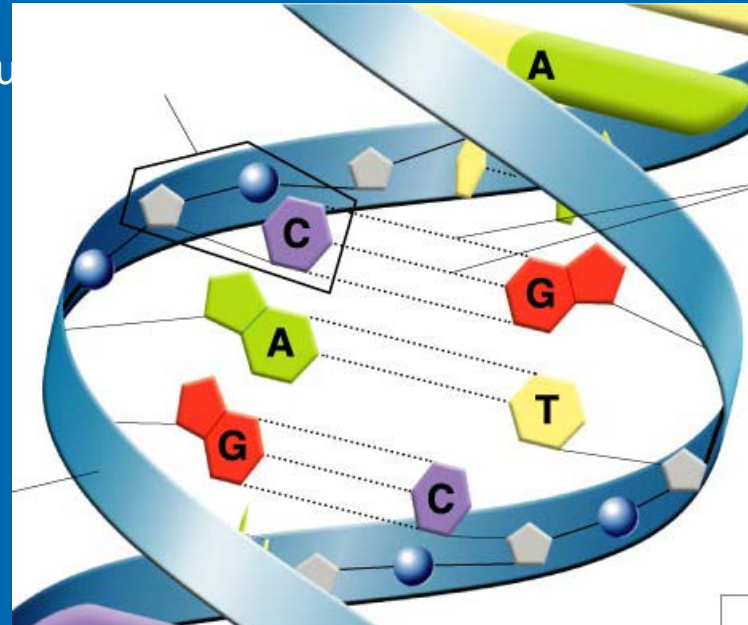
- Used Franklin's x-ray to discover shape
- Double Helix
- <https://youtu.be/35Fwn>





Nu

Sugar-phosphate  
backbone



Hydrogen  
bonds

Key

Adenine (A)

Thymine (T)

Cytosine (C)

Guanine (G)