



# **What is DNA?**



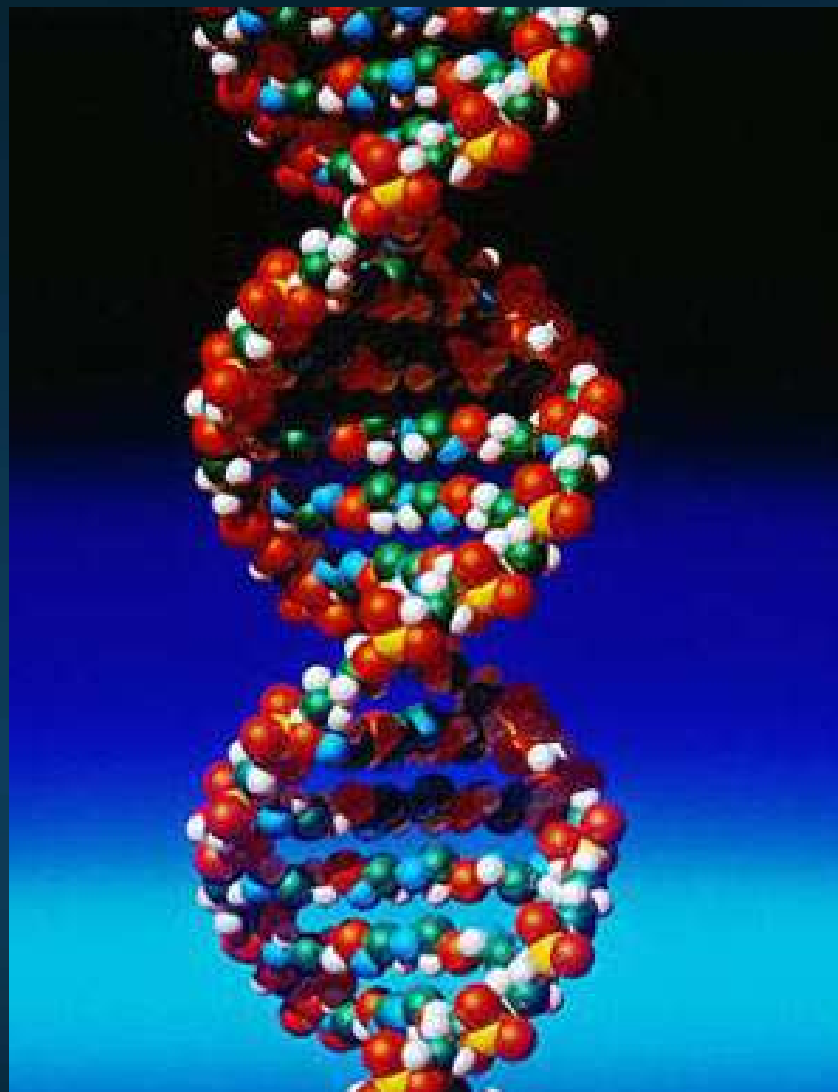
**DNA stands  
for:**

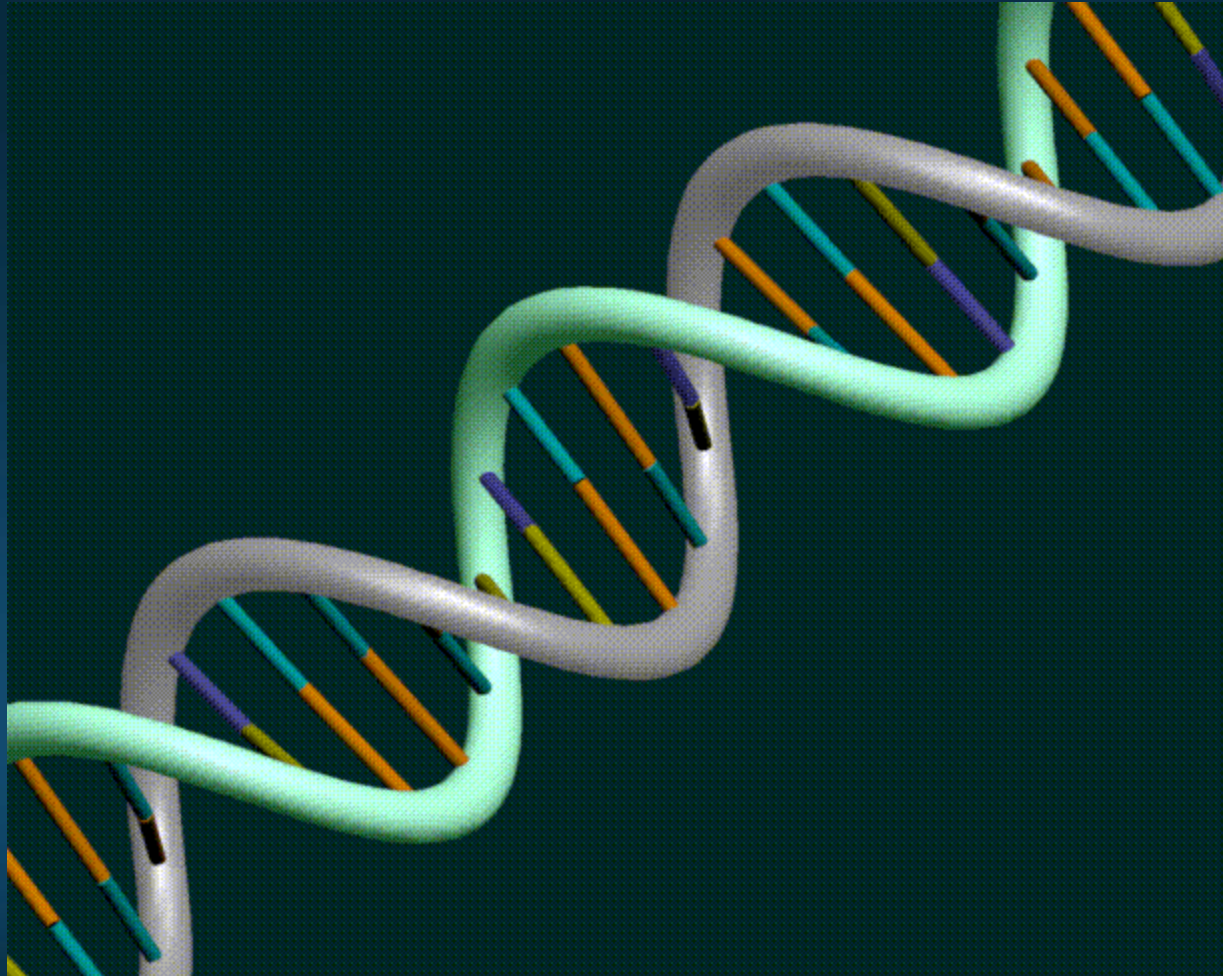
DEOXYRIBONUCLEIC  
ACID



# **DNA is:**

- A chemical code that is stored in a cell's hereditary material
- Contains information for an organisms growth and function.









This shape is called  
a

Double Helix



# What is DNA made of?

- The “steps” of the ladder are made of other molecules called nitrogen bases
  - 4 Kings of Nitrogen Bases
    - Adenine (A)
    - Guanine (G)
    - Cytosine (C)
    - Thymine (T)





- Each ladder step contains a pair of nitrogen bases:
  - Adenine only pairs with Thymine (A & T)
  - Guanine only pairs with Cytosine (G & C)




# Pairing of Nitrogen Bases

T pairs with A

A pairs with T

C pairs with G

G pairs with C



What happens if something goes wrong and the DNA doesn't get copied in the right sequence?

A mutation occurs.



# Mutations

- Mutations can change the traits of an organism
- Add variety to a species when the organism reproduces- **VARIATION**
- Many are harmful to organisms and can cause their death
- Some mutations do not have any effect on an organism
- Some mutations can be beneficial





