**DNA**: **Deoxyribonucleic Acid Notes Organizer**



* DNA belongs to the class of organic molecules known as *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.*
* Made up of monomers called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Remember the other molecules we learned:
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Where is it found in the cell?

* DNA condenses to form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Remember that chromosomes are in the \_\_\_\_\_\_\_\_\_\_\_\_ of a cell
* *There is also a little bit of DNA found in the mitochondria*.

What does it look like?

* A twisted ladder, known as a *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*.
* There are \_\_\_\_\_ strands of DNA that make up the double helix

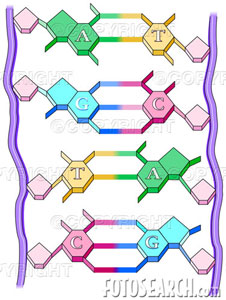
A *Closer* Look at a DNA Nucleotide

* Deoxyribose + Phosphate + Nitrogenous Base
* 4 Different Nitrogenous Bases
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Bases are Grouped by Structure

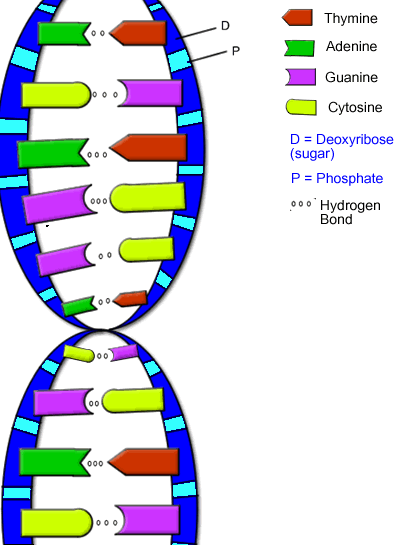
* \_\_\_\_\_\_\_\_\_\_\_\_\_- 2 rings
  + Adenine
  + Guanine
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- 1 ring
  + Cytosine
  + Thyamine

Purines Always Pair to Pyrimidines



* Adenine to \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (2 rings + 1 ring= 3 rings)
* Guanine to \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (2 rings + 1 ring= 3 rings)
* This keeps the lengths of the “rungs” the same length.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ bonds form between the purines and pyrimidines.

What does the Ladder Look Like?



* The “rungs” of the ladder are made up of \_\_\_\_\_\_\_\_\_\_\_\_.
* The sides of the ladder are made up of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ part of the nucleotide
* Notice the deoxyribose and phosphate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Rosalind Franklin

* Was the first to *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* DNA
  + But she is rarely given much \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!

Q: Who gets the credit?

* A: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* In 1953, they used Franklin’s photograph and other experimental evidence to come up with the idea that DNA is in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* We now have lots of evidence to show that Watson, Crick and Franklin were correct about DNA!
* Watson and Crick won the Nobel Peace Prize in 1962 for their discovery of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of DNA