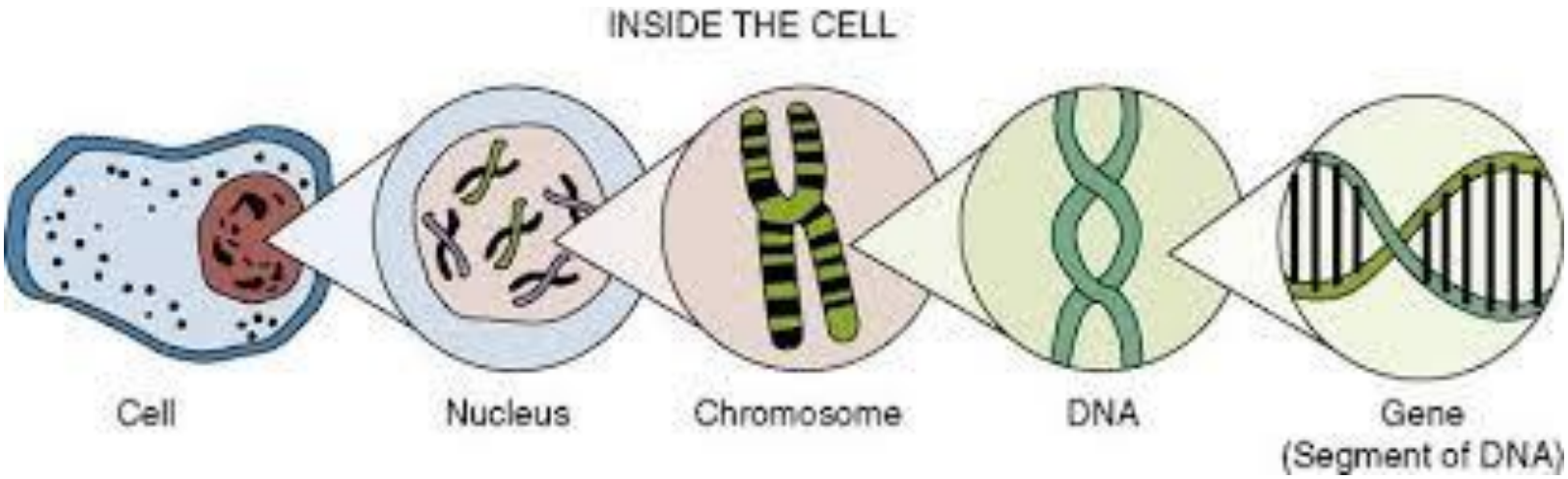
DNA

What is DNA?

- DNA stands for **D**eoxyribo**n**ucleic **A**cid
- It is located in the nucleus, in the form of a chromosome.
- It is our Genetic Code – Way that cells store info (in nucleus) to be passed to the next generation.



What does DNA look like?

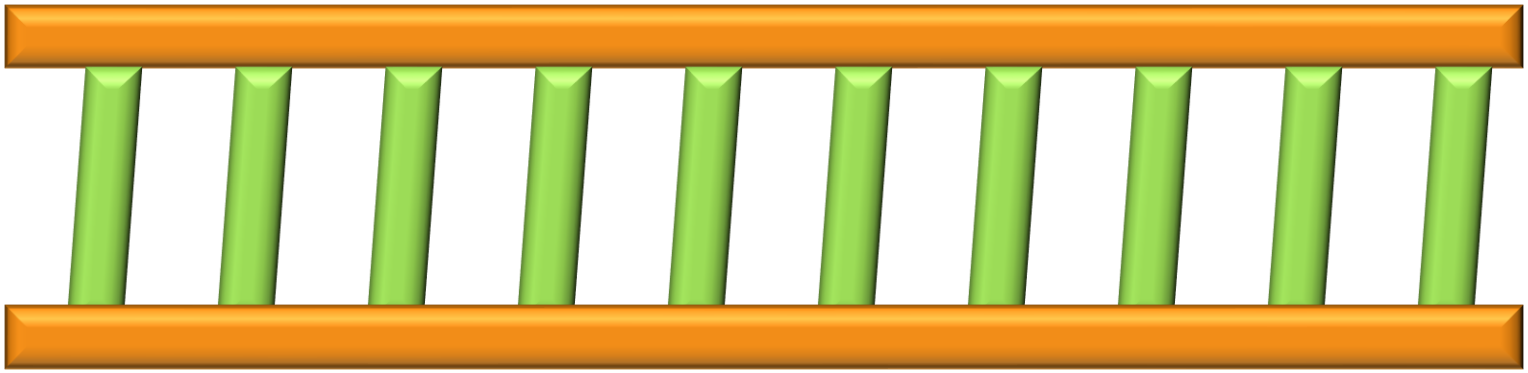
- DNA consists of two molecules that are arranged into a ladder-like structure called a Double Helix.

- A molecule of DNA is made up of Nucleotides.

- Each nucleotide consists of:
  1. Phosphate group
  2. Pentose sugar
  3. Nitrogenous base

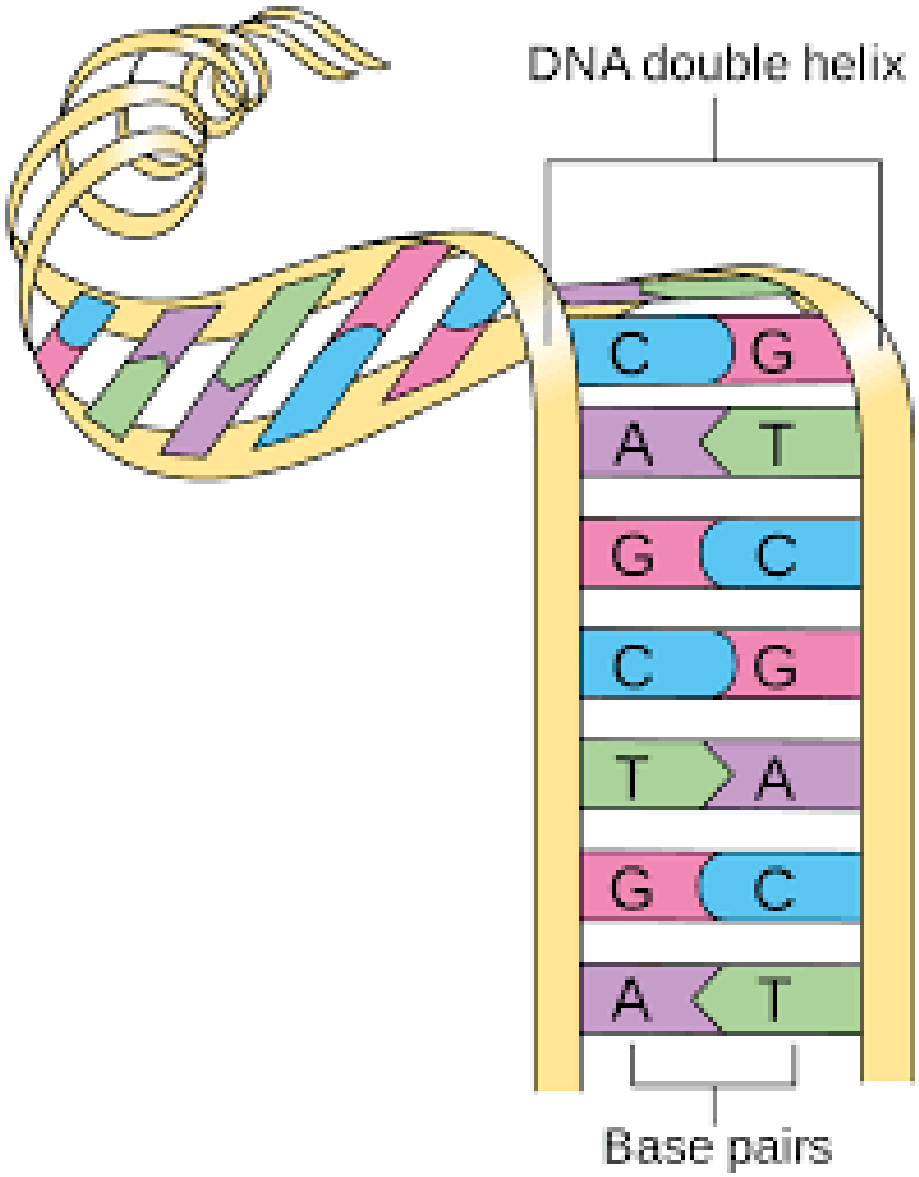
What does DNA look like?

- A phosphate and sugar form the backbone of the DNA molecule, whereas bases form the “rungs”.



How do nucleotides bond?

- Each base will only bond with one other specific base.
  - Adenine (A) and Thymine (T) make a base pair
  - Cytosine (C) and Guanine (G) make a base pair
- Because of this base pairing, the order of the bases in one strand determines the order of the bases in the other strand.



Example DNA segment

What are genes?

- DNA coils tightly to make chromosomes.
- In our chromosomes are all of our genes.
- A gene is a section of DNA that codes for a protein.
- Each unique gene has a unique sequence of bases.
- Our genes are what makes us unique!

What do bases tell us?

- Each strand of DNA can be millions of base pairs long.
- To crack the genetic code found in DNA we need to look at the sequence of bases.
- The bases are arranged in triplets called codons.

A G G - C T C - A A G - T C C - T A G

- Multiple codons make up a gene.