

DNA

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- **Number:** The number of DNA molecules in eukaryotic cells corresponds to the number of chromosomes per cell.
- **Chemical Compositions:** DNA is made up of three chemical components, namely
 1. **Sugar**
 2. **Phosphoric Acid**
 3. **Nitrogenous Bases**

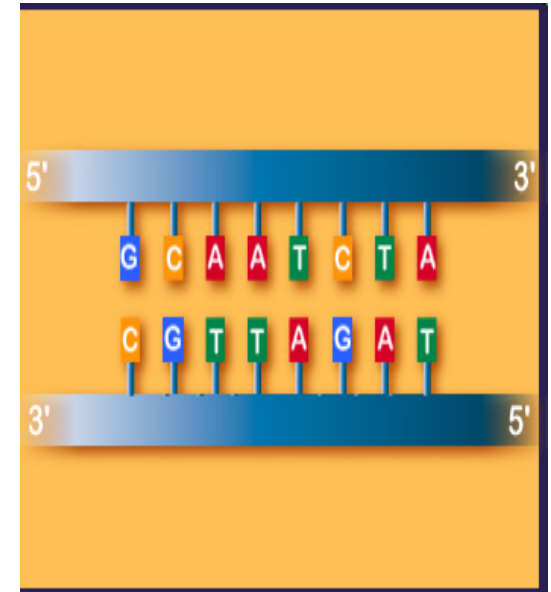
DNA

- **Nitrogenous Bases:** These are nitrogen containing organic ring compounds.
- There are two types, namely **Purines** and **Pyrimidines**
- **Purines:** Two ringed nitrogen compounds. They are of two types namely **ADENINE** and **GUANINE**

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The two chains of DNA are complementary to each other. If the sequence of base in one chain is A, G, A, T, then the sequence of base in the second chain is T, C, T, A.



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- In a double helix the direction of the nucleotides in one strand is opposite to their direction in the other strand.
- This arrangement of DNA strands is called **antiparallel**.
- The asymmetric ends of DNA strands are referred to as the **5'** (**five prime**) and **3'** (**three prime**) ends, with the 5' end being that with a terminal phosphate group and the 3' end that with a terminal hydroxyl group.

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- DNA can be twisted like a rope in a process called DNA Supercoiling.
- With DNA in its "relaxed" state, a strand usually circles the axis of the double helix once every 10.4 base pairs, but if the DNA is twisted the strands become more tightly or more loosely wound