

DNA: The Code of Life

-deoxyribonucleic acid

-contained in the chromosomes

-humans have 46, dogs-78, mice-40, some bacteria-only one

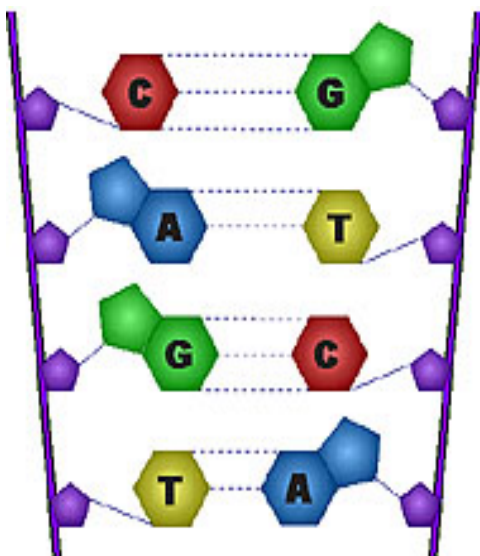
-DNA gives the cells specific instructions to create proteins for the organism they belong to



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-DNA is made up of 4 nitrogen bases

-Guanine (G), adenine(A), thymine(T), cytosine(C)



-these bases are arranged in 3 letter "words" which together form the gene "stories"

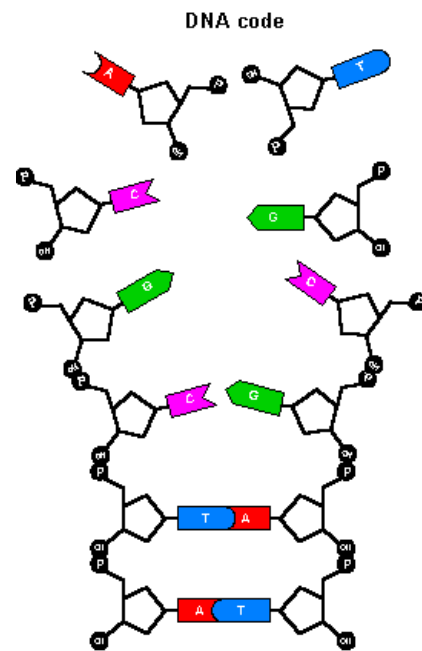
NOTE: only certain bases will pair with others
adenine ALWAYS pairs with thymine
cytosine ALWAYS pairs with guanine

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DNA Replication

-DNA can make a copy of it itself BECAUSE of the way the bases pair up

- 1) the DNA strand will 'unzip' as the chemical bonds are broken between each of the nitrogen bases
- 2) 'loose' nitrogen bases of the correct type will adhere to the free one
- 3) the ends of the newly attached nitrogen bases come together and the molecule is now a perfect copy of the DNA strand it originated from



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