

Name _____

Date _____

DNA Guided Notes

DNA is found in the nucleus of a cell on chromosomes. Each person's DNA is unique (except for identical twins), so therefore it is considered to be individual evidence. DNA is inherited from both parents. (1/2 from mom, and 1/2 from dad).

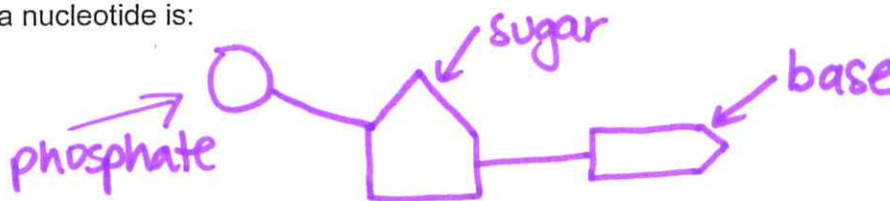
DNA stands for deoxyribonucleic acid. DNA is called a double helix because it is made up of two complementary strands that are twisted. DNA is said to resemble a ladder, with the sides being made up of the sugar and phosphate (the backbone), while the rungs are made up of the bases.

The structure of DNA was discovered by Watson and Crick (Rosalind Franklin).

DNA is a type of polymer because it is a large molecule made up of (many) smaller subunits called monomers (one) the smaller subunits are called nucleotides.

Each DNA nucleotide is made up of three parts. The three parts are sugar, phosphate and base.

An example of a nucleotide is:



There are 4 different nucleotides in a DNA molecule. They are different because of the bases. The 4 nitrogenous bases are A adenine, T Thymine, C Cytosine and G Guanine.

~~Nitrogenous bases that are made up of double-ring structures are called _____ and _____ have double-ring structures.~~

~~Nitrogenous bases that are made up of single-ring structures are called _____ and _____ have single-ring structures.~~

The two strands are held together by hydrogen bonds between the base pairs. (Remember that this is the weakest type of bond.) The type of bond holding the backbone together is a nitrogen bond. (Remember this is a strong bond.)

A → T G → C

A principal called complementarity states that adenine pairs with thymine, and guanine pairs with cytosine. This is also called the complement rule.

The complement to this DNA strand is:

AAATGCAGGCCATAGCCC

TTTACGTCCGGTATCGGG

** Very important **