**DNA and RNA Worksheet**



* What is the entire molecule to the right called?

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# DNA:

* DNA stands for .
* DNA is located in the of the cell.
* A DNA molecule is made up of long chains of nucleotides. A DNA nucleotide consists of a , a

 , and a nitrogenous base.

* In DNA, the four bases are , , , and . These bases are called complimentary bases as Adenine (A) bonds only with ( ) and Guanine (G) bonds only with ( ).
* The double-stranded DNA structure is called a .
* The sides of the DNA “ladder” are made up of and .
* The rungs of the DNA “ladder” are made up of the .
* Why is DNA called the "Blueprint of Life"?

# RNA:

* RNA stands for . RNA moves genetic information from in the nucleus, to the cytoplasm of the cell and is involved in many cellular activities like the building of .
* RNA contains a 5 Carbon sugar called .
* An RNA molecule is made up of long chains of nucleotides. An RNA nucleotide consists of a , a

 , and a nitrogenous base.

* In RNA, the bases are ( ), ( ), ( ) and ( ). These bases are called complimentary bases as Adenine bonds only with ( ) and Guanine bonds only with ( ).
* What are the three types of RNA and their functions?
* What places in the cell would you find RNA? (and what types are where?)

# DNA vs RNA:

* + DNA and RNA are both this type of macromolecule:
	+ The single stranded nucleic acid is .
	+ The double stranded nucleic acid is .
	+ What are the two differences that can be found in a DNA and RNA nucleotide?

1.

 2.

* + Only can be found outside of the nucleus. *Why do you think that is?*

***Fill in the below Venn Diagram to compare DNA & RNA using ALL of the words below***

## Deoxyribonucleic Acid Double Helix Uracil Double Stranded Deoxyribose Sugar Thymine Pyrimidines Copy the Instructions and Make Proteins Ribose Sugar Instructions for making proteins Located in Nucleus of Eukaryotes Cytoplasm Ribosomes Nucleic Acid 3 Types Adenine Nucleotide is the monomer 5-Carbon Sugar Phosphate Group Guanine Cytosine Single Strand Genetic Information Ribonucleic Acid

 **DNA RNA**