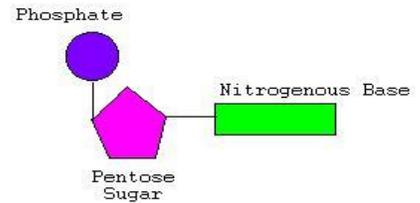


Name: \_\_\_\_\_

## DNA and RNA Worksheet

- What is the entire molecule to the right called? \_\_\_\_\_
- Name 2 purines. \_\_\_\_\_
- Name 2 pyrimidines. \_\_\_\_\_



### DNA:

- DNA stands for \_\_\_\_\_.
- DNA is located in the \_\_\_\_\_ of the cell, and makes up the \_\_\_\_\_ found there.
- 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?
  
- 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

