

Name: _____ Period: _____

DNA vs. RNA

1. Draw and label the **3** parts of a nucleotide.



2. List the **three** types of RNA and give the **functions** of each.

- a. _____: _____
- b. _____: _____
- c. _____: _____

3. What is a double helix?

4. Explain the base pairing rule in **DNA** and in **RNA**.

DNA: _____ pairs with _____ RNA: _____ pairs with _____
_____ pairs with _____ _____ pairs with _____

5. Answer the following questions for **DNA**:

- a. What does DNA stand for? _____
- b. What is the monomer of DNA? _____
- c. Number of strands in DNA? _____
- d. Type of sugar in DNA? _____
- e. 4 Nitrogen bases in DNA? _____
- f. Nitrogen base not present in DNA? _____
- g. Where is DNA located in eukaryotic cell? _____

6. Answer the following questions for **RNA**:

- a. What does RNA stand for? _____
- b. What are the monomers of RNA? _____
- c. Number of strands in RNA? _____
- d. Type of sugar in RNA? _____
- e. 4 Nitrogen bases in RNA? _____
- f. Nitrogen base not present in RNA? _____
- g. What two places in the cell is RNA located? _____

7. Answer the following questions.

- a. DNA duplication can also be called DNA _____
- b. In replication, DNA splits between pairs of what? _____
- c. The structure of RNA is called a _____

- d. Nucleotides are made of a phosphate, sugar, and _____
- e. The structure of DNA is a _____
- f. If the sequence of nucleotides on the original DNA strand was A – G – G – C – T – A, what would be the nucleotide sequence on the complementary strand of DNA? _____
- g. What about the DNA that determines the different traits of an organism?

Draw the DNA ladder with a minimum of 6 nucleotides.

Draw the RNA helix with a minimum of 4 nucleotides.

Venn Diagram: Use the Venn Diagram to compare DNA and RNA. Fill in the following terms to the appropriate location.

Nucleotide, adenine, thymine, cytosine, guanine, uracil, genetic information, single strand, double stranded, ribose sugar, deoxyribose sugar, helix, double helix, nucleus, cytoplasm, phosphate group, biomolecule

