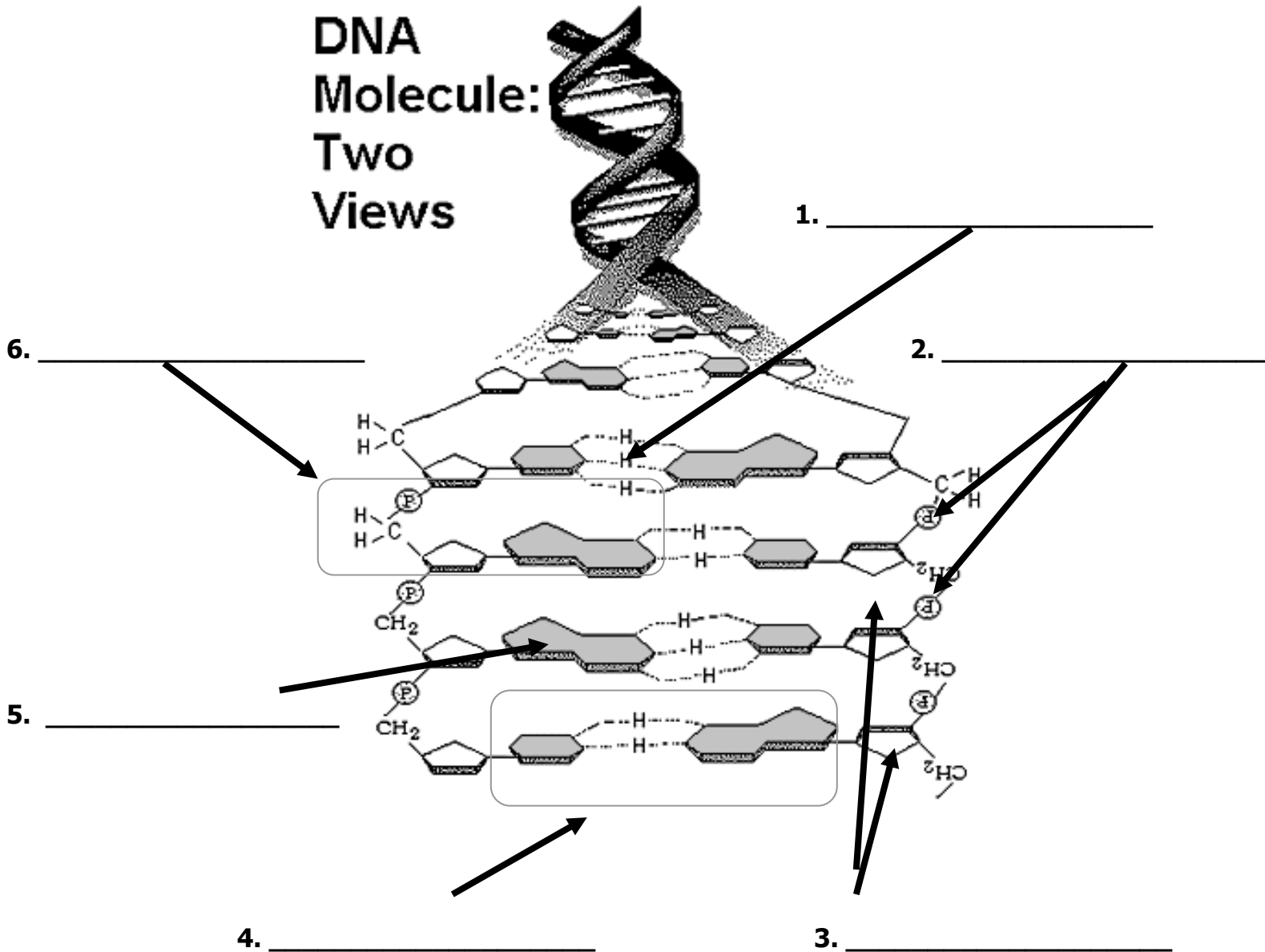


Name: \_\_\_\_\_ Date \_\_\_\_\_ Section \_\_\_\_\_

Directions: Label the diagram below with the following choices:

- Nucleotide
- Deoxyribose
- Phosphate group
- Base pair
- Hydrogen bond
- Nitrogenous base

## DNA Molecule: Two Views

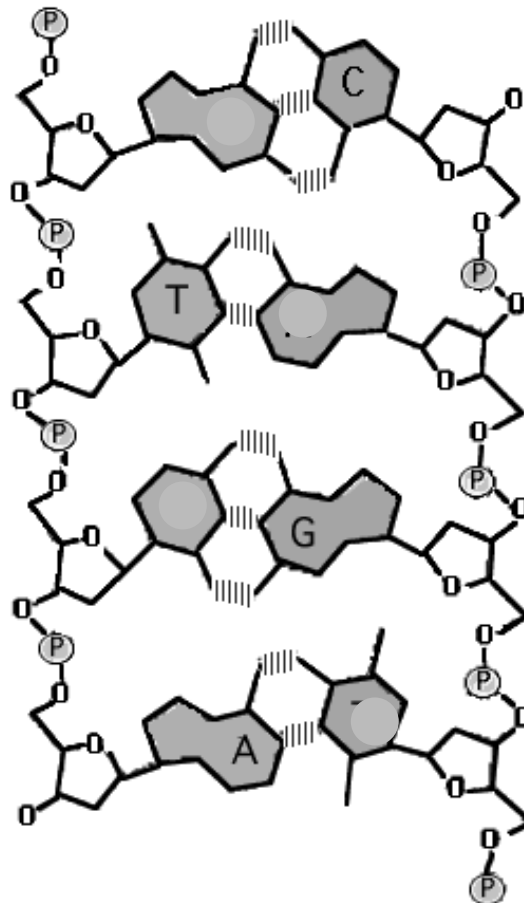


Directions: Complete each sentence.

7. Guanine, cytosine, thymine, and \_\_\_\_\_ are the four \_\_\_\_\_ in DNA.
8. In DNA, guanine always forms hydrogen bonds with \_\_\_\_\_.
9. The process of \_\_\_\_\_ produces a new copy of an organism's genetic information, which is passed on to a new cell.
10. The double coiled, "staircase" shape of DNA is called a \_\_\_\_\_.

Directions: Answer each question

11. What do the letters DNA stand for?
12. Where is DNA found?
13. Label the **nucleotides** (A, T, G, C) in the DNA molecule below:



15. What is the first step in the process of DNA replication?
16. Which enzyme is responsible for “unzipping” the DNA double helix?
17. Which enzyme is responsible for facilitating the hydrogen bonding between nucleotides in a new DNA molecule?
18. If the sequence of one single strand of DNA is C-A-A-G-T-A-G-G-C-T, what is the sequence of the complementary strand?
19. Why is DNA replication important to the growth and development of a multi-cellular organism?
20. List the 3 basic steps of DNA replication:

Label the following in the image: DNA polymerase, Leading Strand, Lagging Strand, Okazaki Fragment, Replication Fork, Ligase

