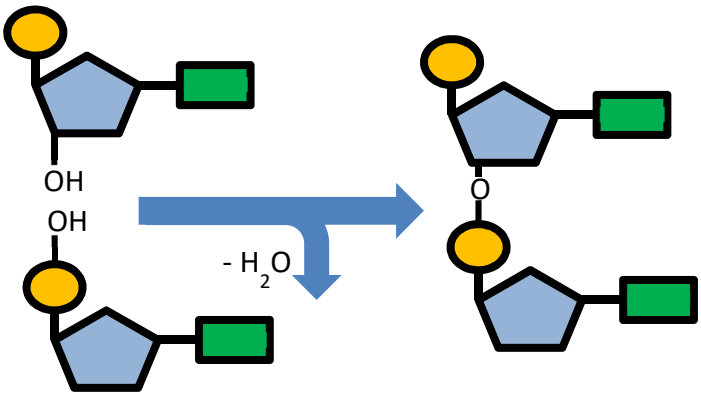
Name:
Date:

QA6 – DNA Summary Sheet

1. Which group 5 element do all of the DNA bases contain?
   Nitrogen.

2. Describe the type of bonding which forms between two nucleotides.
   Two nucleotides join in a condensation reaction which forms a phosphodiester bond. This bond forms when the -OH groups on the phosphate of one nucleotide condenses with the -OH group from the sugar on another nucleotide. This releases a molecule of H_2O, and forms like this:

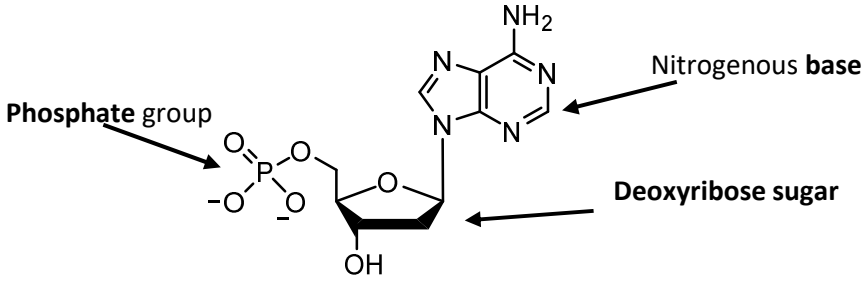


3. Explain why DNA exists as a double helix structure.
   The bases within nucleotides interact using **complementary base pairing**. As the bases pair up, the **DNA strands wind** around each other, forming a **double helix**.

4. Which base is complementary to guanine? What is the name of the interaction between the two bases?
   Cytosine. It forms **three hydrogen bonds** to cytosine.

5. State the complementary sequence of bases to the following section of DNA:
   ATGGCTCATTCA
   TACCGAGTAAGT

6. Name and label the three components of this nucleotide:
   This is the adenine nucleotide



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