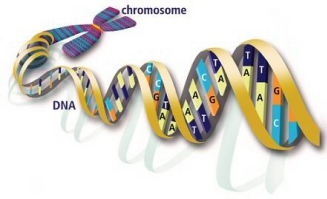


## Nucleic Acids: DNA



Directions: Use the information from the DNA coloring activity to complete the questions below.

1. What is the term used for the **building blocks** of nucleic acids such as DNA?

NUCLEOTIDE

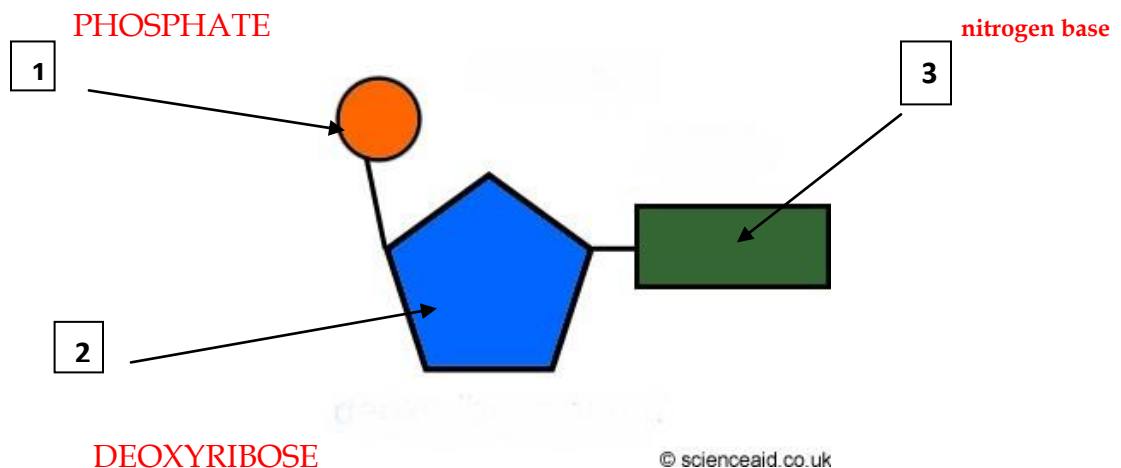
2. Identify the three components of this building block:

DEOXYRIBOSE (5-CARBON SUGAR)

PHOSPHATE

NITROGEN BASE

3. Label the diagram below, which is a building block of DNA with its three components:



4. Which part of the building block varies from one to the next?

NITROGEN BASE

5. Identify the four versions of this component.

THE FOUR NITROGEN (MOLECULAR) BASES ARE:

ADENINE (A)

THYMINE (T)

CYTOSINE (C)

GUANINE (G)

6. Illustrate below how the bases pair with each other:

A --- T                      &                      G --- C (HINT: AT GARDEN CITY)

7. What term is used for the structure of DNA? Explain.

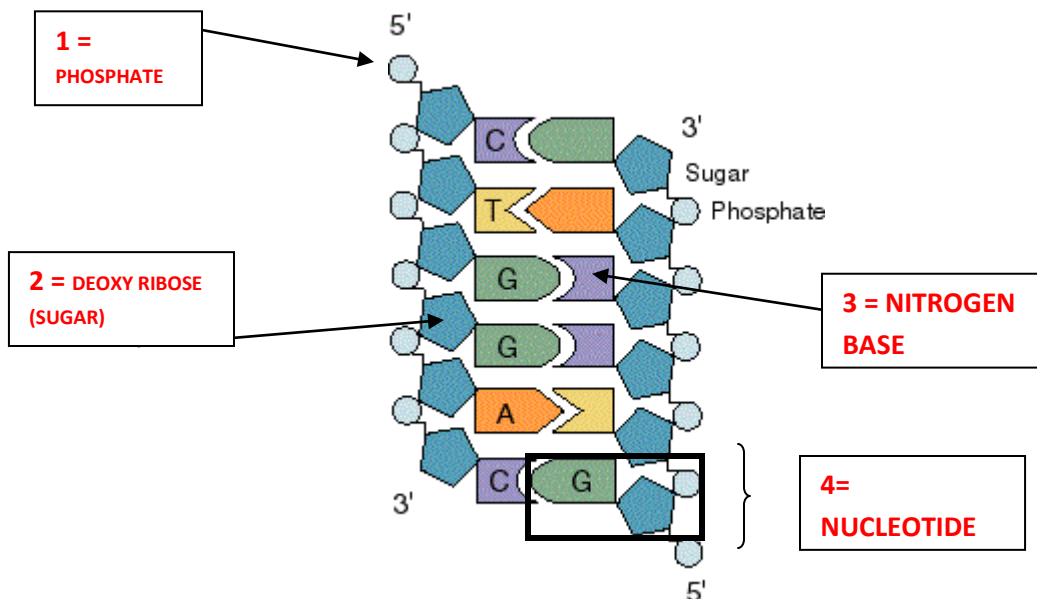


THE STRUCTURE OF DNA (DISCOVERED PARTIALLY BY JAMES WATSON AND FRANCIS CRICK AT OUR OWN COLD SPRING HARBOR LABS!) IS A DOUBLE HELIX.

IT IS DESCRIBED AS SUCH BECAUSE DNA IS DOUBLE STRANDED AND THE TWO STRANDS TWIST AROUND EACH OTHER LIKE A SPIRAL STAIRCASE

8. Complete the complimentary sequence for the second strand of the DNA molecule in the diagram below and label the numbered parts:

COMPLIMENTARY SEQUENCE: G-A-C-C-T-G



9. What is the role of DNA in living things?

DNA IS THE GENETIC CODE OF THE CELL THAT DIRECTS ALL CELLULAR  
ACTIVITIES AND DETERMINES CHARACTERISTICS OF ORGANISMS  
(IT IS THE HEREDITARY MATERIAL)