

Directions

Answer the following questions about the nature of DNA.

1. Write out the full name for DNA. _____.
2. All organisms possess DNA. What is its purpose?
3. The basic chemical building blocks for nucleic acids are _____. Name the three components that make up one of these building blocks:
 - a) _____
 - b) _____
 - c) _____

Figure 1

4. In Figure 1, circle a single nucleotide.
5. Determine the number of nucleotides visible, either partially or totally. How many are partially visible? _____.
How many are totally visible? _____.
6. In Figure 1, color the purine bases blue and the pyrimidine bases red.
7. Using A for adenine, C for cytosine, G for guanine, and T for thymine, complete the labeling of the bases in Figure 1.
8. On the double helix or twisted ladder diagram on the next page, label the parts that are representing the deoxyribose sugar, the phosphate, and a nitrogen base. See Figure 2.
9. Alongside each half of the separated portion of the DNA molecule in Figure 3, draw the missing sequence of nucleotides that might become attached to the open strands. The duplication of chromosomes is called replication and must be done before a cell divides during mitosis or meiosis.

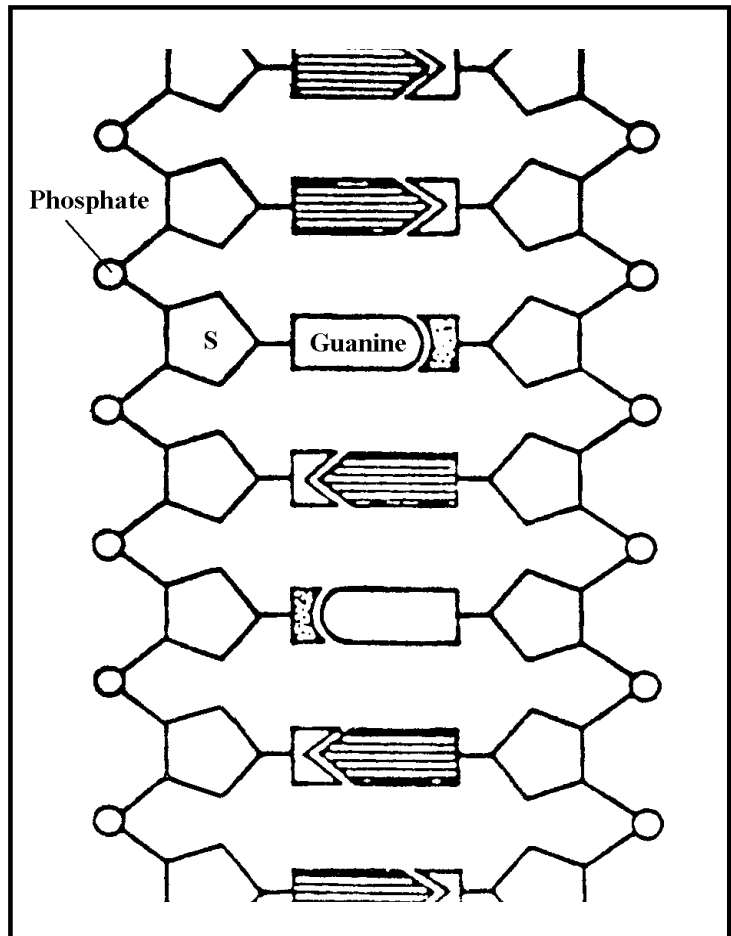


Figure 2

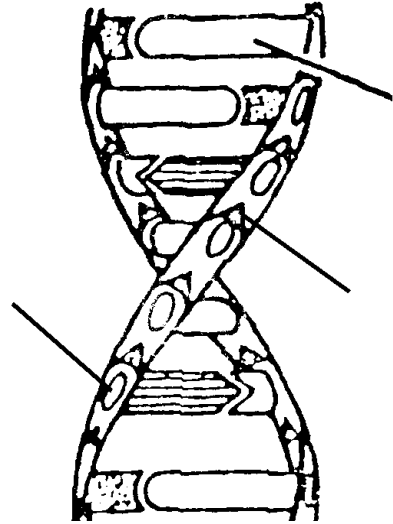


Figure 3

