

DNA and Genetics

Directions: Use your textbook to answer each question or respond to each statement.

1. Chromosomes contain the genetic code that controls inherited traits.

Describe the typical set of human chromosomes in each cell in terms of the number of chromosomes and explain what each parent contributes to each set.

2. The strands of DNA in chromosomes are shaped like a twisted ladder. DNA's shape is due to the nucleotides that form it.

What is a nucleotide, and how does it determine the structure of DNA?

3. The copying of a DNA molecule to make another DNA molecule is called replication.

What are the steps of replication?

4. Mutation occurs when there is a change in the nucleotide sequence in a gene.

Describe the different types of mutations.
