

Skills Worksheet

Directed Reading

Section: Replication of DNA

In the space provided, write the letter of the description that best matches the term or phrase.

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|----------------------------|--|
| _____ 1. DNA replication | a. add nucleotides to the exposed bases according to the base-pairing rules |
| _____ 2. DNA helicase | b. process of making a copy of DNA |
| _____ 3. replication forks | c. two Y-shaped areas that form when the double helix separates in DNA replication |
| _____ 4. DNA polymerases | d. opens up the double helix by breaking the hydrogen bonds between nitrogen bases |
| _____ 5. new DNA strand | e. each double-stranded DNA helix is made up of one of these after DNA replication |

Read each question, and write your answer in the space provided.

6. Identify two major enzymes used during DNA replication.

7. What prevents the separated DNA strands from reattaching to one another during DNA replication?

8. What prevents the wrong nucleotide from being added to the new strand during DNA replication?

Directed Reading continued

Complete each statement by writing the correct term or phrase in the space provided.

9. Prokaryotic DNA is reproduced with _____ replication forks.
10. Each human chromosome is replicated in about _____ hours and in about _____ sections.
11. The number of nucleotides between each replication fork in human DNA is approximately _____.