Name _____

Unraveling the Mystery of DNA Replication

Open-Ended Response Answer Key

1. Answers may vary. Example: "Understanding DNA replication could lead to the development of new cancer treatments by targeting specific enzymes involved in replication to prevent cancer cells from dividing."
2. It's important for DNA replication to be accurate to ensure that genetic information is faithfully transmitted from one generation to the next without errors or mutations.
3. As a scientist studying DNA replication, I would want to investigate how environmental factors or chemical exposures might influence the accuracy of replication and how cells respond to replication errors.
4. Errors in DNA replication can lead to mutations in the genetic code, which may disrupt normal cellular processes and contribute to the development of genetic disorders such as cystic fibrosis or sickle cell anemia.

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