

**CLASS SET! DON'T WRITE ON ME!!**

**Model Sheet**

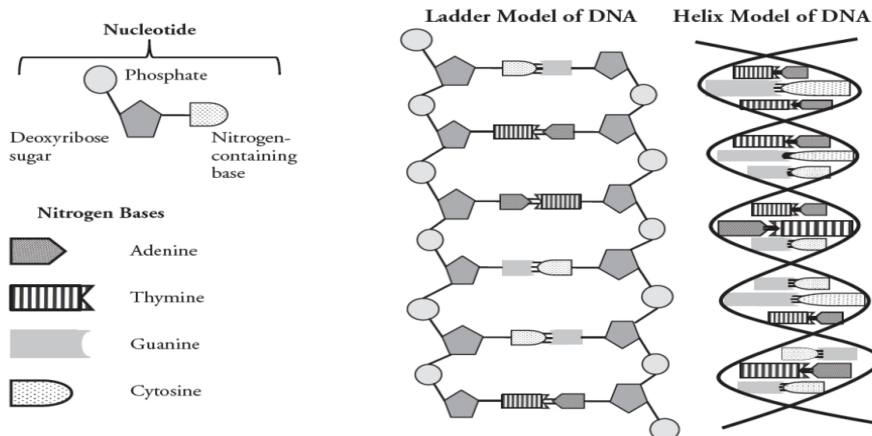
**DNA Structure and Replication**

How is genetic information stored and copied?

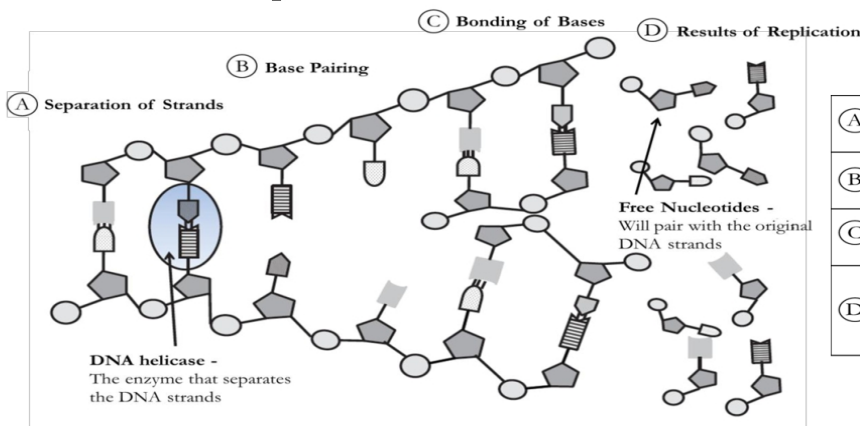
**Why?**

Deoxyribonucleic acid or **DNA** is the molecule of heredity. It contains the genetic blueprint for life. For organisms to grow and repair damaged cells, each cell must be capable of accurately copying itself. So how does the structure of DNA allow it to copy itself so accurately? In this activity, we will explore the answer to this question.

**Model 1 – The Structure of DNA**



**Model 2 – DNA Replication**



(A)	The 2 nucleotide strands of a DNA molecule separate as the hydrogen bonds break.
(B)	Free nucleotides pair with the original DNA strands following the complementary-base pair rule.
(C)	New hydrogen bonds form between the original bases and the bases of the new strand.
(D)	The process produces 2 molecules of DNA. Each new molecule has 1 strand from the original molecule and 1 strand that has been newly synthesized.