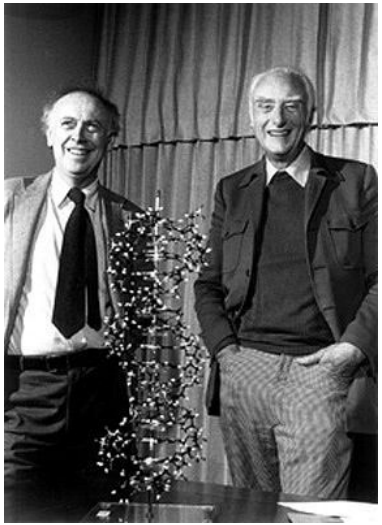
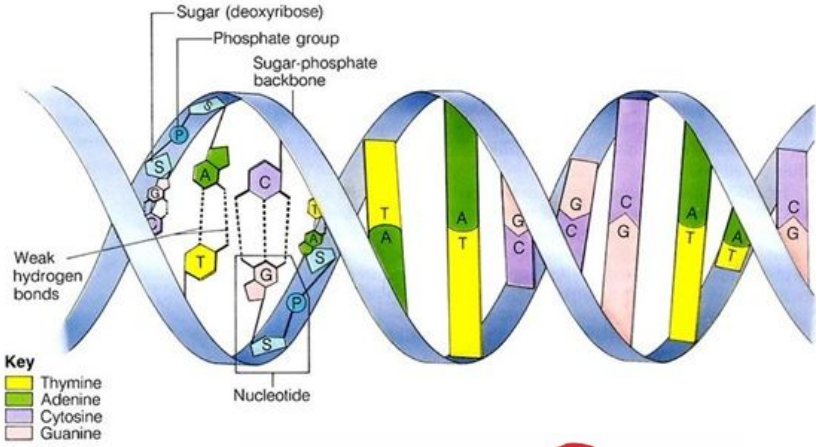
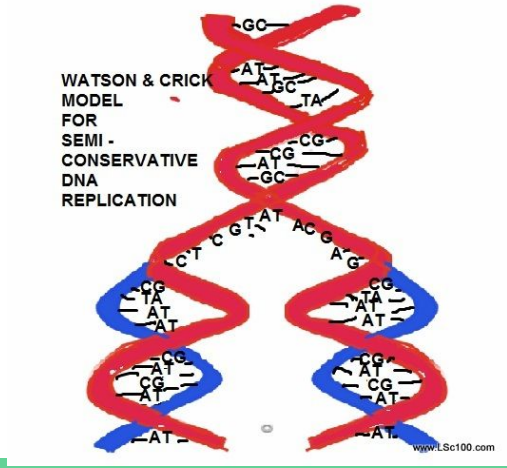
12.2: DNA Replication

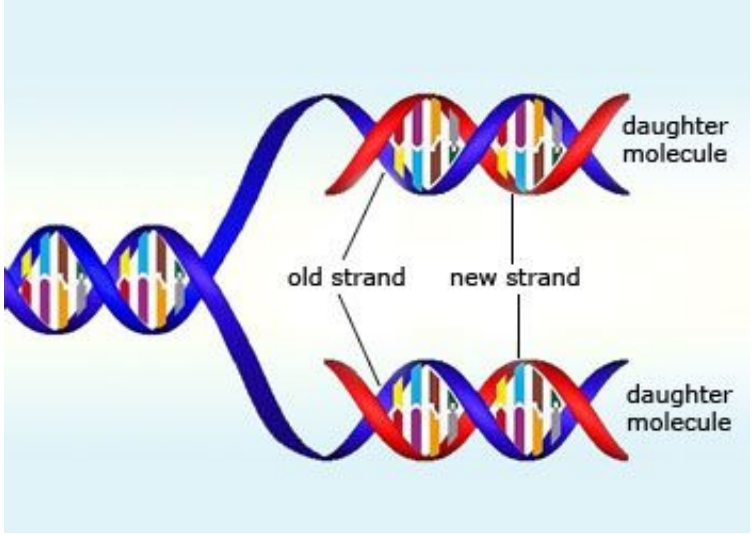
The structure of DNA, as envisioned by Watson & Crick, explained how DNA could be copied, or replicated.





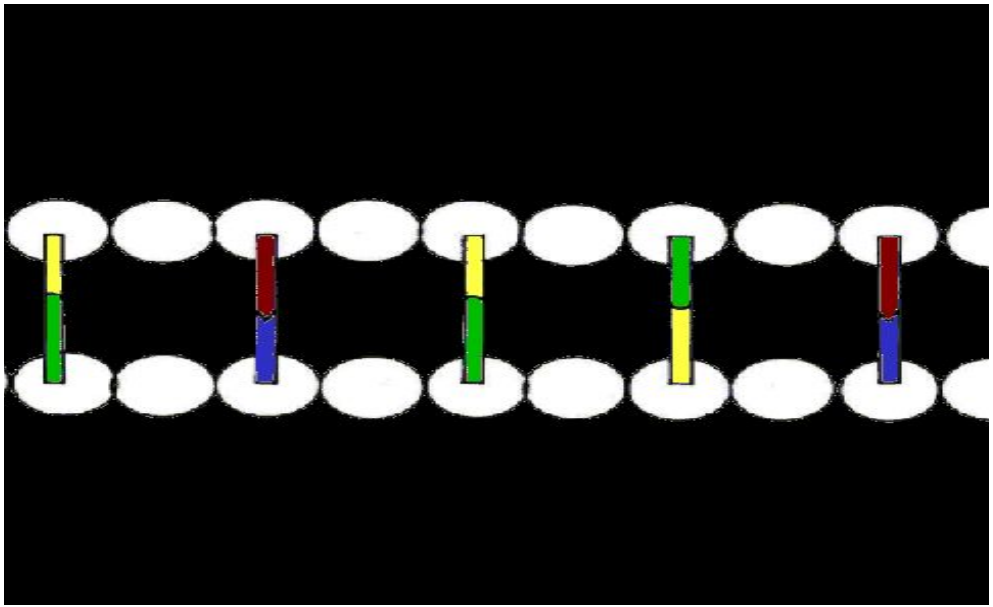
Each strand of the DNA double helix is complementary, the rules of base pairing would allow you to reconstruct either side should they become separated.





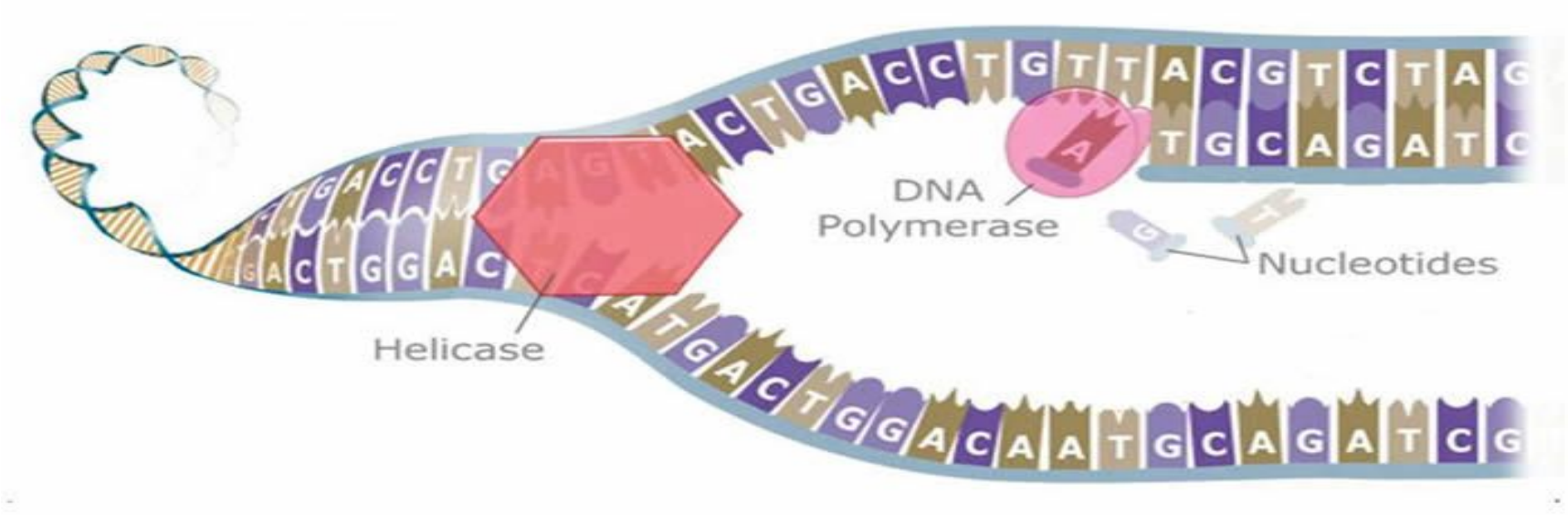
Prior to cell division, DNA replication must occur.

Replication: the process of DNA duplication



In prokaryotes, DNA replication begins at a single point in the chromosome, then proceeds in two directions until the entire chromosome is replicated.

The sites where separation and replication occur are called replication forks.



This process is carried out by a series of enzymes which “unzip” the molecule.

This enzyme is called DNA polymerase.