

DNA Replication & Recombination

Fill in the blank:

DNA serves as a _____ for replication

DNA replication begins at the _____, creating a _____

Bacterial DNA replication begins at the _____

What does bidirectional DNA replication mean? What is a replicon?

Describe all 3 modes of DNA replication. Which is the most accurate?

What 4 things MUST be present for DNA replication? What does each do?

Describe chain elongation.

Properties	I	II	III
Initiation			
5'-3' polymerization			
3'-5' exonuclease			
5'-3' exonuclease			

What DNA Polymerases are involved in DNA repair?

Describe the holoenzyme.

What are the 7 key issues that need to be solved for DNA replication to happen?

Describe the initial stages of DNA replication using the following terms: DNAa, DNA helicase, SSBP, and DNA gyrase.

What direction of DNA synthesis. What is the leading and the lagging strand?

What are Okazaki fragments and what “glues” them together?

What allows DNA to be able to proofread and correct any errors?

Compare and contrast bacteria and Eukarya DNA replication.

What is the prereplication complex in eukaryotes? What are its three DNA polymerases?