

BioFlix Study Sheet for DNA Replication

Refer to your book, BioFlix Animation, and BioFlix Tutorials if you need help.

1. Draw a DNA replication fork in the space below. Be sure to include and label the following structures: parental DNA, leading strand, lagging strand, short RNA segments, DNA polymerase, DNA ligase. Then describe each of the structures in the table below.

Structure	Description
Parental DNA	
Leading Strand	
Lagging Strand	
Short RNA Segments	
DNA Polymerase	
DNA Ligase	

2. How do the different DNA nucleotides (A, C, G, and T) pair during DNA replication?

AP Biology

BioFlix Quiz - DNA Replication

Write the answer to each question in the blank. Note that the order of the answer options does not match the online version of the quiz.

- ____ 1. Which of the following build(s) new strands of DNA?
- A. Parental DNA
 - B. DNA polymerases
 - C. The lagging strand
 - D. The leading strand
 - E. The origins of replication
- ____ 2. Which statement about DNA replication is CORRECT?
- A. The lagging strand is built continuously.
 - B. DNA ligase helps assemble the leading strand.
 - C. The lagging strand is one of the strands of parental DNA.
 - D. The leading strand is one of the strands of parental DNA.
 - E. The leading strand is built continuously, and the lagging strand is built in pieces.
- ____ 3. During DNA replication, which nucleotide will bind to an A nucleotide in the parental DNA?
- A. A
 - B. C
 - C. G
 - D. T
 - E. U
- ____ 4. The molecule that seals the gaps between the pieces of DNA in the lagging strand is
- A. RNA.
 - B. DNA ligase.
 - C. DNA polymerase.
 - D. the leading strand.
 - E. the replication fork.
- ____ 5. Which statement about DNA replication is FALSE?
- A. DNA ligase adds nucleotides to the lagging strand.
 - B. The two strands of parental DNA are separated during DNA replication.
 - C. DNA polymerase builds a new strand by adding DNA nucleotides one at a time.
 - D. The lagging strand is made of a series of pieces that must be joined together to make a continuous strand.
 - E. Because the two strands of parental DNA run in opposite directions, the new strands must be made in different ways.