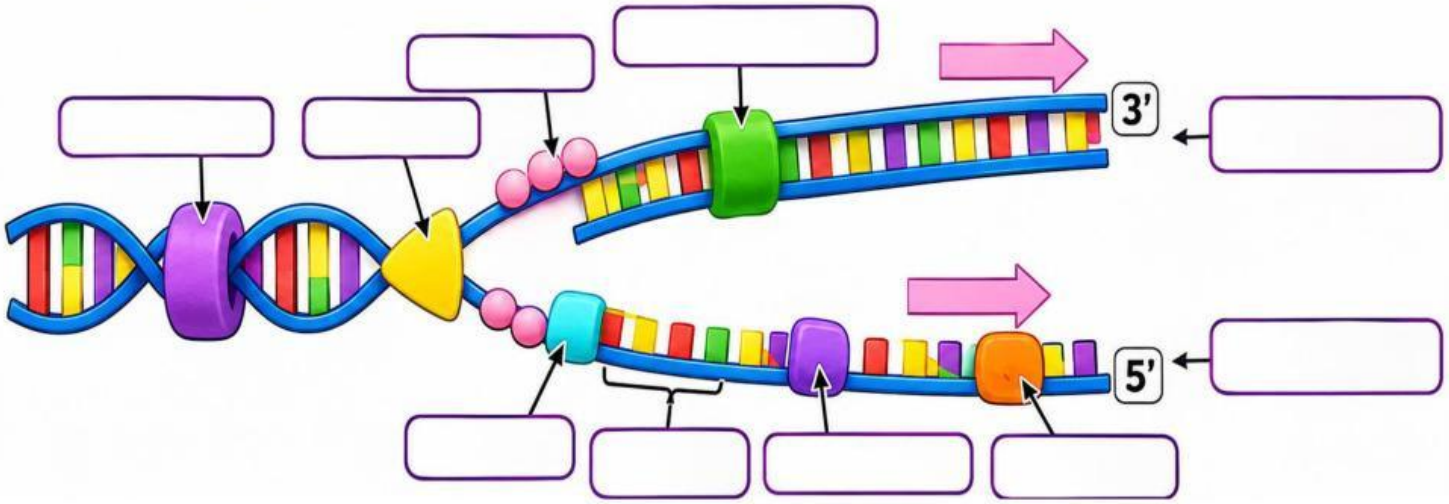
Activity 1. DNA Replication Fork Puzzle

DNA Replication Fork – Label the Diagram

Directions: Label the parts of the DNA replication fork. Use the word bank below.



Activity 2. Know Your Enzymes!

Objective: Identify the enzymes and proteins involved in DNA replication and understand their functions.

1. _____ Separates the two strands of DNA by breaking hydrogen bonds.
2. _____ Produces short RNA primers needed to start DNA synthesis.
3. _____ Adds complementary DNA nucleotides to the growing DNA strand.
4. _____ Removes RNA primers and replaces them with DNA nucleotides.
5. _____ Joins the Okazaki fragments to form a continuous DNA strand.
6. _____ Relieves the twisting and tension ahead of the replication fork.
7. _____ Keeps the separated DNA strands from joining together again.

Activity 3. Leading Strand vs. Lagging Strand

Objective: Differentiate the leading strand from the lagging strand.

Directions: Write LEADING if the statement describes the leading strand and LAGGING if it describes the lagging strand.

1. _____ Synthesized continuously.
2. _____ Synthesized in short sections called Okazaki fragments.
3. _____ Requires several RNA primers during replication.
4. _____ Synthesized continuously toward the moving replication fork.
5. _____ Requires DNA Ligase to connect the DNA fragments.
6. _____ Synthesized in the 5' to 3' direction.
7. _____ Synthesized discontinuously.
8. _____ Requires only one initial primer for a continuous stretch of synthesis at a replication fork.

LIVEWORKSHEETS