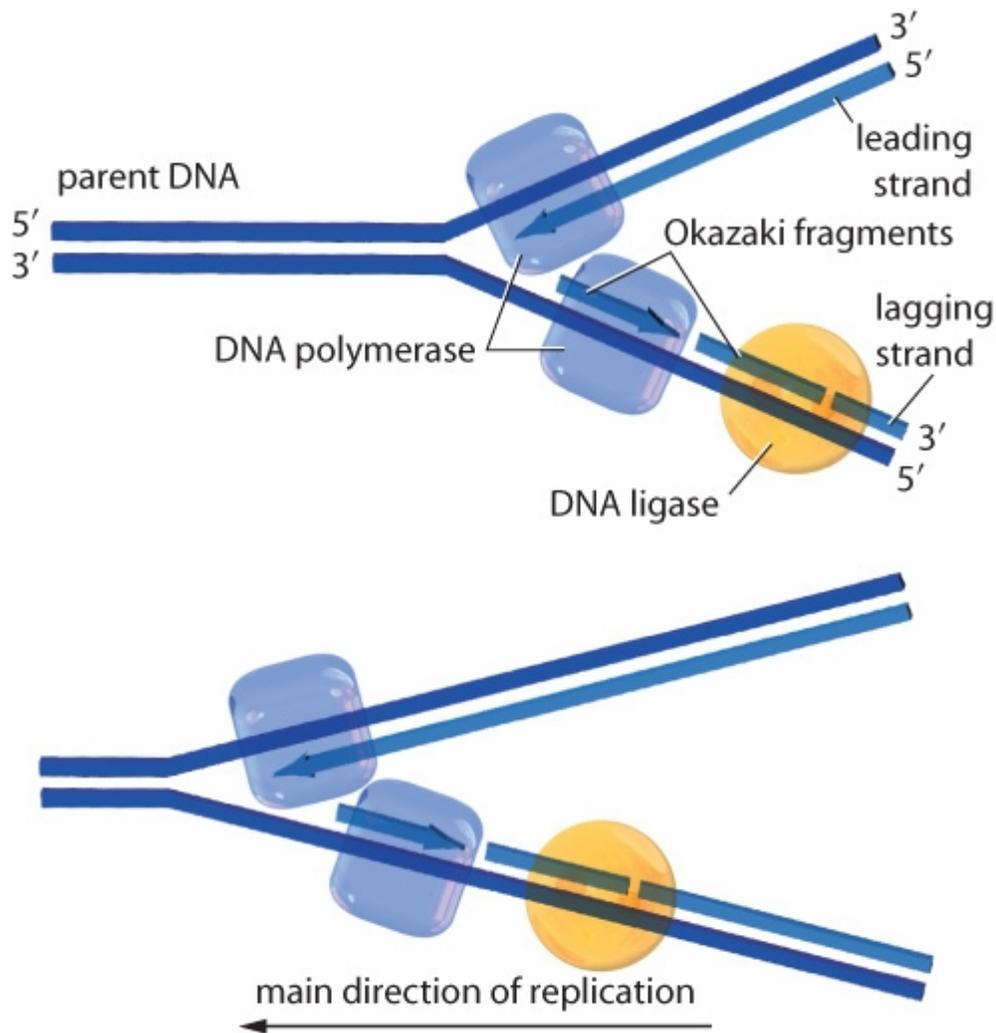
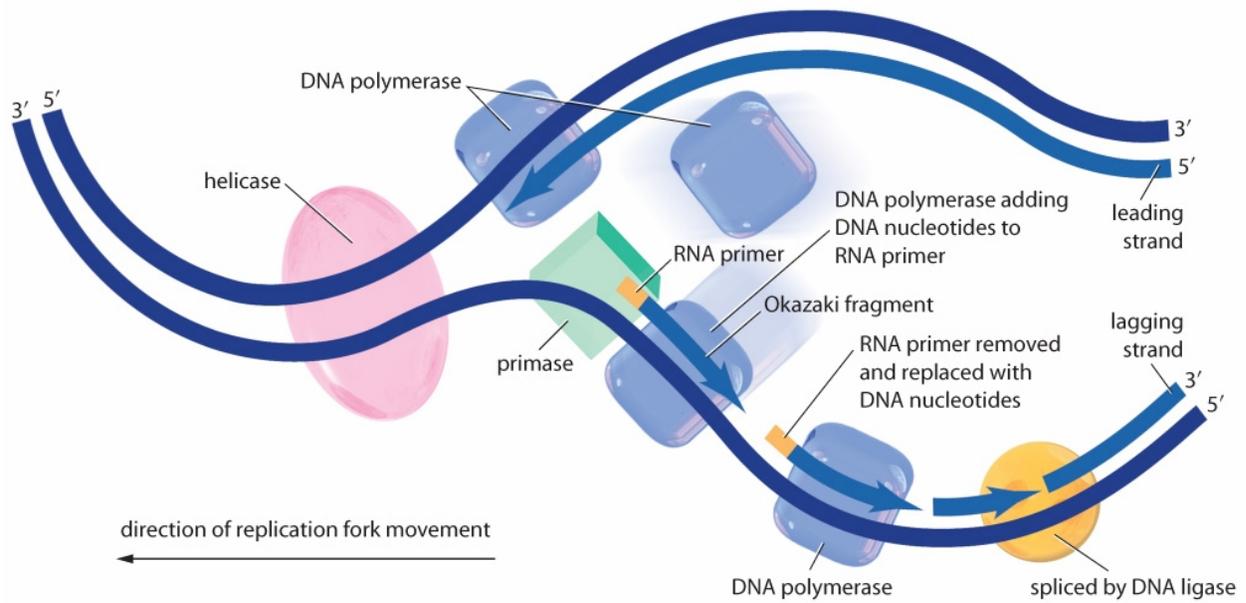


Replication takes place at several locations simultaneously. Each replication bubble represents two replication forks moving in opposite directions along the length of the chromosome. As replication proceeds along the strand, the bubbles grow until they meet. The parent strand of DNA is shown in grey. The new complementary strand is shown in black.



During DNA synthesis, the overall direction of elongation is the same along both strands, but elongation occurs differently. On the leading strand, DNA synthesis takes place along the DNA molecule in the same direction as the movement of the replication fork. On the lagging strand, DNA synthesis proceeds in the opposite direction to the movement of the replication fork. As well, the lagging strand is synthesized in short fragments.

DNA Replication



This simplified illustration of the replication machine shows how a loop in the lagging strand allows a single polymerase complex to replicate both DNA strands simultaneously.