**DNA Replication Components Activity**

What does each component do in replication?

Initiator protein (dnaA):

DNA gyrase:

DNA helicase:

Single-stranded binding protein:

DNA primase:

DNA polymerase III:

DNA polymerase I:

DNA ligase:

Sliding clamp protein:

DNA template strand:

dNTPs:

RNA primer:
General questions over Chapter 12:

1. Which component of replication requires all four ribonucleotide triphosphates?

2. What does exonuclease activity mean?

3. Do DNA polymerase III and DNA polymerase I both have 3' → 5' exonuclease activity?

4. Do DNA polymerase III and DNA polymerase I both have 5' → 3' exonuclease activity?

5. What are Okazaki fragments?

6. What is the licensing factor?

7. What is telomerase?

8. What would happen if an organism’s telomerase was mutated so that it became non-functional?

9. What are the two cell cycle checkpoints in replication in eukaryotes?