

SI #9 LIFE 1010-01

1) Draw a nucleotide and label all the components

2) What are the primary functions of nucleotides?

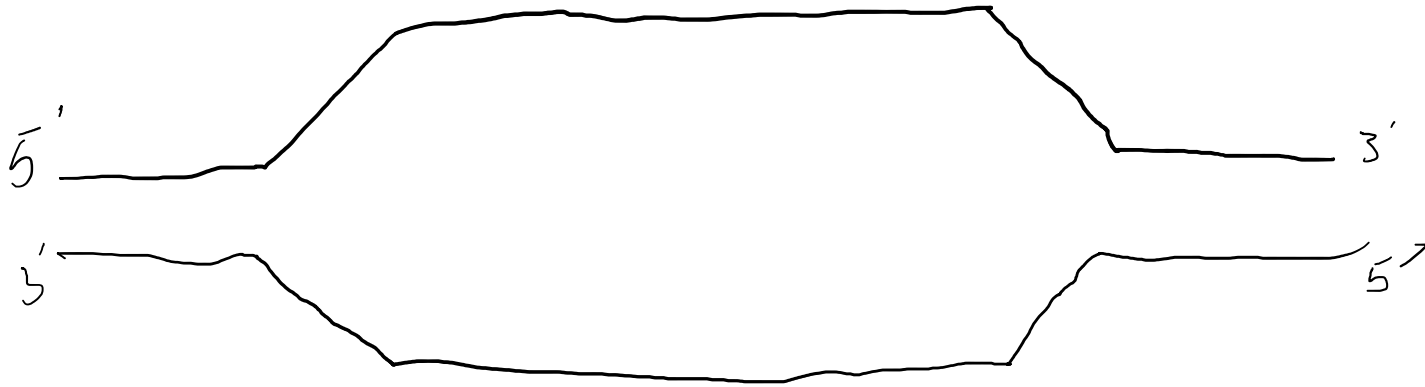
3) Write the complementary strand to the DNA strand below. Be sure to label the directionality. What type of bond is holding these two strands together?

5'-AGTCGGGCTA-3'

4) Complete the table below regarding replication enzymes.

Enzyme	Function
Ligase	
	Extends leading and lagging strands
	Synthesizes RNA primers
DNA Pol I	
Topoisomerase	
	Unwinds DNA into sperate strands for replication

- 5) Use the enzymes in the table from Q4 to fill in the diagram of DNA synthesis. Include lagging and leading strand as well as Okazaki fragments.



- 6) What is one difference between DNA replication in Prokaryotic Cells and DNA replication in Eukaryotic Cells?

### **Review Section**

Topics covered in Exam 2 are as follows:

- Cell Biology
- Energy and Metabolism
- Redox Reactions
- Cellular Respiration
- Photosynthesis

**Based on these topics, what would you like to go over?**