

Practice Problems:

Use the following piece of DNA to answer the following questions:

Coding: 5' T C G A A T G C C C T C A G A G T C A T A A C C C A C A C C 3'

Template:

mRNA:

1. This is the **coding** (non-template) strand of DNA. What is the Template strand of DNA? What is the mRNA? The protein coded by the mRNA?

2. If the base marked T is changes to a C, what will be the resulting change in the protein?

3. What is the amino acid associated with tRNA's with the following anticodons?

3' CCC 5'

3' UCA 5'

5' CGU 3'

5' UCA 3'

4. Make a drawing illustrating the basic principles of DNA replication. Be sure to include the following: helicase, topoisomerase, DNA polymerase, leading strand, lagging strand, Okazaki fragment, ligase.

