Name: _____ Date: _____

Replication – Transcription – Translation

For each of the following sequences, fill in either the DNA, the mRNA codons, the tRNA anticodon, or the amino acid sequences that have been left blank.

1. DNA C T T A G G C A C T A A C G T A G G
   DNA _____
   mRNA _____
   tRNA _____
   AA _____

2. DNA _____
   DNA G C A A G T _____ A C C T A _____
   mRNA _____ U G C
   tRNA _____ U C A G _____
   AA _____

3. DNA A C T G G _____
   DNA _____ A T A G C _____
   mRNA _____ U A U C G _____
   tRNA _____ G U U
   AA _____

4. DNA _____ T G C _____
   DNA _____ A C G
   mRNA U A U C G A _____
   tRNA _____ A C C _____
   AA _____ Gly _____

5. DNA _____ G T _____
   DNA _____ T _____
   mRNA _____ A G _____ C A _____
   tRNA A U G _____ C A _____
   AA _____ Glu _____ Trp

Name: _____ Date: _____

Explain the following processes. Create an example if needed.

- **Replication** –

- **Transcription** –

- **Translation** –

1. What, specifically, is the *purpose* of DNA?

2. Does DNA ever leave the nucleus? Why or why not?

3. Where does replication occur within the cell?

4. Where does transcription occur within the cell?

5. Where does translation occur within the cell?

6. Is mRNA created during transcription or translation?

7. Are amino acids created during transcription or translation?

8. Does mRNA have codons or anti-codons?