

Name \_\_\_\_\_

Date \_\_\_\_\_

### Transcription and Translation Worksheet

1. List the bases found in DNA: \_\_\_\_\_  
\_\_\_\_\_

2. List the complementary base pairing rules for DNA (what pairs with what):

\_\_\_\_\_ - \_\_\_\_\_  
\_\_\_\_\_ - \_\_\_\_\_  
\_\_\_\_\_ - \_\_\_\_\_  
\_\_\_\_\_ - \_\_\_\_\_

3. What base is found on RNA but not on DNA? \_\_\_\_\_

4. How many bases are in a codon? \_\_\_\_\_ In an anticodon? \_\_\_\_\_

5. How many amino acids are attached to a single transfer RNA? \_\_\_\_\_

6. Transcription occurs in the \_\_\_\_\_; translation occurs in the \_\_\_\_\_.

7. The process of making RNA from DNA is called \_\_\_\_\_ and it occurs in the \_\_\_\_\_.

8. The process of assembling a protein from RNA is called \_\_\_\_\_ and it occurs in the \_\_\_\_\_.

9. Which organelle is involved in translation? \_\_\_\_\_

10. What is the product of transcription? \_\_\_\_\_

11. Consider the following DNA strand: Write the sequence of bases for the product of transcription here. Next, translate the RNA into amino acids to create a polypeptide.

TAC CGT TCT GCT AAA TAT ACC ACT

12. What is the third codon in the mRNA you produced ?

13. What is the function of the following in translation?

Messenger RNA

Ribosomal RNA

Transfer RNA

14. Compare and contrast codon and anticodon.