Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Translating DNA**

Start by filling in the data chart, first by transcribing DNA to mRNA and then translating it into amino acids. Remember, in RNA Thymine is replaced by Uracil. Use the mRNA triplets to find the amino acid number from the translation chart. Use the trait chart to find the actual characteristic that would form from the DNA strand you started with. After you have all 8 traits identified, draw your organism. Compare it to others in the class and answer the questions on the board.

Gene 1:

|  |  |
| --- | --- |
| DNA | ACT GGG CCC TAC |
| mRNA |  |
| Amino Acids |  |
| Traits |  |

Gene 2:

|  |  |
| --- | --- |
| DNA | AGC CGC TAC |
| mRNA |  |
| Amino Acids |  |
| Traits |  |

Gene 3:

|  |  |
| --- | --- |
| DNA | TTT AAC |
| mRNA |  |
| Amino Acids |  |
| Traits |  |

Gene 4:

|  |  |
| --- | --- |
| DNA | GGA CGC AAA CCC |
| mRNA |  |
| Amino Acids |  |
| Traits |  |

Gene 5:

|  |  |
| --- | --- |
| DNA | ATC ATC CTA |
| mRNA |  |
| Amino Acids |  |
| Traits |  |

Gene 6:

|  |  |
| --- | --- |
| DNA | GGA CGC CGA |
| mRNA |  |
| Amino Acids |  |
| Traits |  |

Gene 7:

|  |  |
| --- | --- |
| DNA | TTT AGG AAA TTT |
| mRNA |  |
| Amino Acids |  |
| Traits |  |

Gene 7:

|  |  |
| --- | --- |
| DNA | ACC GGT TAT TAT |
| mRNA |  |
| Amino Acids |  |
| Traits |  |

**Questions:**

1. What is the specific site of transcription in the cell? What is the specific site of translation in the cell?
2. Do all of the organisms in the class look identical? Why or why not?

**Translation Chart Traits Chart**





