Name: Student Number/Homeroom:

Practicing the Genetic Code

LO: Transcribe and translate a gene into a protein.

SLE: Meet NGSS.

In a previous worksheet, you practiced transcribing DNA to RNA. Now it's time to go all the way from DNA to protein!

1. Where in the cell does transcription occur?

2. Where in the cell does translation occur?

3. Starting with the piece of DNA below, write the RNA sequence and the amino acid sequence that result from this DNA sequence.

DNA sequence: T A C C G G C C C G G G A G G G A G…

RNA sequence:

Amino acid sequence:

4. If this gene contains additional codons beyond those shown here, can you tell what the very last amino acid in the protein will be?

5. If a typical protein contains about 500 amino acids, how many bases long would you expect the corresponding gene to be?

OPTIONAL. What is an intron? How would introns affect your answer to #5?