

**Translation: Using mRNA to Make Proteins!**

**Transcription recap:**

- DNA \_\_\_\_\_
- mRNA \_\_\_\_\_

**Translation PROCESS:**

- mRNA \_\_\_\_\_
- A new contender enters: \_\_\_\_\_ works inside the ribosome to \_\_\_\_\_  
\_\_\_\_\_
- tRNA \_\_\_\_\_
  - Each group of THREE nucleotides is called a \_\_\_\_\_.
  - Each codon \_\_\_\_\_.
  - The tRNA tells the \_\_\_\_\_.

**Translation PURPOSE:**

As tRNA reads new codons, the ribosome uses more amino acids.... \_\_\_\_\_  
\_\_\_\_\_

**Amino Acids & Proteins**

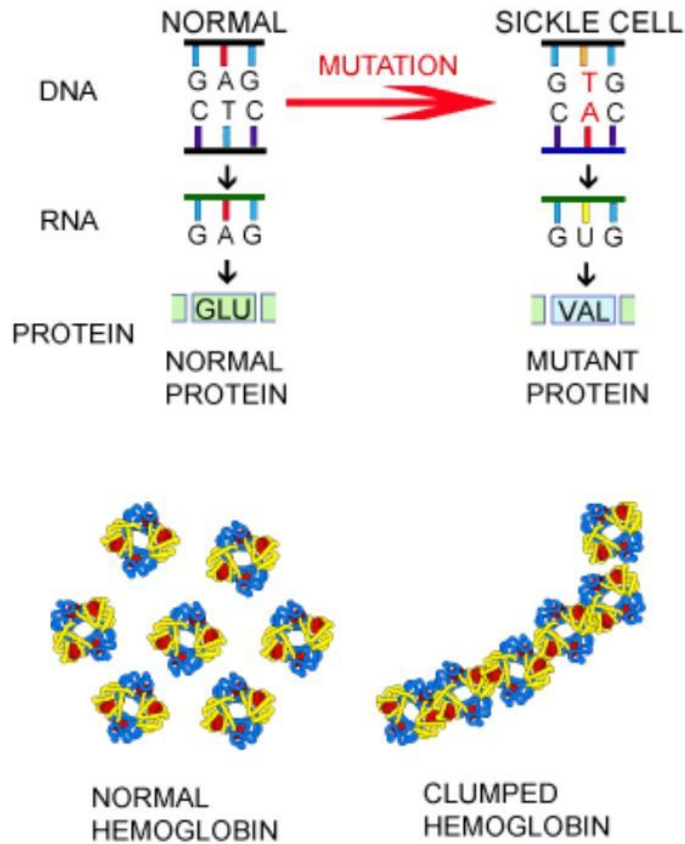
- There are \_\_\_\_\_.
- These 20 AA's can be \_\_\_\_\_.
- The many different proteins are used to \_\_\_\_\_.
- Proteins can \_\_\_\_\_
  - One special type of protein, an \_\_\_\_\_  
\_\_\_\_\_
- Without the correct proteins \_\_\_\_\_.

**Example protein & function:**

1. Hemoglobin: \_\_\_\_\_

When hemoglobin is “misfolded” \_\_\_\_\_

**Example: The hemoglobin protein folded normally VS. folded abnormally:**



The above picture shows the creation of hemoglobin, starting the DNA transcription. What differences in the journey to become a protein do you notice between the “NORMAL” hemoglobin and the “SICKLE CELL” hemoglobin?

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