

Names _____

Today, this room is a cell and the table is the nucleus:

1. Pick up a DNA sequence from the front desk. Remain at the front desk and copy the nucleotide sequence below.
2. While still at the front desk, transcribe the DNA sequence into an mRNA sequence. Write it below.
3. Around the room you will find tRNA molecules, some of which correspond to your mRNA sequence. Use these to translate the mRNA (sequences of nucleotides) to amino acids (words) in the space below.

Oh, dear! Your DNA sequence has been mutated after being caught in the blast of a gamma bomb... This resulted in the mutation of your gene. Return to the front desk and obtain your mutated sequence.

1. Remain at the front desk and write the sequence of your mutated gene below.
2. While still at the front desk, transcribe the DNA sequence into an mRNA sequence. Write it below.
3. Again, use the tRNA molecules to translate your mutated mRNA into amino acids, and write this below.

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Final Questions:

1. Provide a physiological explanation for why I made you stay at the front desk to transcribe the DNA into mRNA?
2. What do the desks where you 'translated' your mRNA into amino acids represent?
3. What molecule does your final sentence represent?
4. What type of mutation did your gene experience?