

**Virtual Lab: DNA and Genes
Worksheet**

1. Please make sure you have read through all of the information in the “Questions” and “Mutation Guide”. If you come upon terms that are unfamiliar to you, please refer to your textbook for further explanation or search the word here:

<http://encarta.msn.com/encnet/features/dictionary/dictionaryhome.aspx>
2. When you are ready, please close out the “Mutation Guide” and click the “Mutate” button that appears on the new page to begin the activity.
3. You will see the following:
 - an “Original sequence” of mRNA that has been translated properly into its corresponding amino acid sequence
 - a “Mutated sequence” that is blank
 - a “Mutation Rules” block of information
4. Your task is to read the information in the “Mutation Rules” area and then apply the information to completing the “Mutated sequence” of mRNA and protein. To do this, you must:
 - read the “Mutation Rule”
 - look at the “Original sequence” of mRNA given
 - determine the “Mutated sequence” of mRNA bases after applying the information presented in the “Mutation Rule”
 - determine the “Mutated sequence” of protein (amino acids) translated from the mRNA sequence you just created using the “Genetic Code Chart”