Genetic Disease Webquest – DNA Researcher

Name: _____
Group Members: _____
Date: _____

1) Write a half page biography describing what training you need to become a DNA researcher. What kind of activities do you do on a day-to-day basis?

2) Research the gene that causes the disease:
   What is the size of the gene? _____
   Where is it located in the human genome?_____
   _____

3) Learn more about the structure of DNA and how DNA codes for proteins.
   What are the names of the two processes needed to code DNA into protein?

   How many nucleotides are in a codon?

4) This disease is caused by a mutation in the DNA that causes a change in the amino acid sequence of the protein. Using the genetic code, translate portions of the normal and disease DNA sequence into amino acids.

Normal: A A T A T C A T C T T T G G T G T T T

Disease: A A T A T C A T T G G T G T T T C C

5) In the example above, the third codon is different in the normal and disease DNA sequence, but the amino acid remains the same. What is the benefit of having more than one codon for an amino acid?