Name:_____Date:_____Period:_____

Introduction to Protein Synthesis Webquest

Objective: T*he purpose of this assignment is to give you a better understand of how the message found on a molecule of DNA is used to build a protein.*

Link 1 – DNA and RNA Comparison **http://www.diffen.com/difference/DNA_vs_RNA**

1. Use the information in the table to complete the following comparison table:

	DNA	RNA
A. Structure: How many strands are in each nucleic acid molecule?		
B. Structure: What sugar is found in each nucleic acid molecule?		
C. Base-Pairing: What are the base pairing rules in each nucleic acid molecule?		
D. Location: Where in the cell can each nucleic acid molecule found?		
E. Stability: How easy is it for an enzyme to attach each nucleic acid molecule?		
F. Unique Features: Describe how UV light affects each nucleic acid.		

2. Scroll down until you see the section titled "**Function**." Describe the functions of the 3 types of RNA. Don't be basic! Remember, half an answer only gets half the credit. ☺

A. Messenger RNA (mRNA): _____

_____

_____

B. Transfer RNA (tRNA): _____

_____

_____

C. Ribosomal RNA (rRNA): _____

_____

_____

Link 2- General Information about Proteins https://learn.genetics.utah.edu/content/basics/proteins/

3. Proteins make up _____% of the dry weight of a human body.

4. What single protein holds our hair, skin, nails and bones together? _____

5. a. Proteins are made of building blocks called _____ acids.

   b. How many amino acids are used to build our proteins? _____

6. List the 6 high protein foods described on the website: _____

_____

7. What happens to a protein when we eat it? How are the amino acids reused? _____

_____

_____

Link 3- More Information about Proteins
https://www.wisc-online.com/learn/natural-science/life-science/ap13304/biomolecules---the-proteins
Read and click through the slides and answer these questions as you go.

8. Fill in the blanks: Proteins are built from ____ common building blocks called _____.

9. What identifies the various amino acids? _____

10. What determines the **primary structure** of a protein? _____

11. What kind of bond connects the amino acids together? _____

12. What kind of bonding results in the **secondary structure** of a protein? _____

13. Give 2 examples of **secondary structures** in a protein: _____ and _____

14. What determines the function of a protein? _____

15. When a protein is destroyed it's called "denaturing" the protein. List 4 things that can cause the destruction of a protein:

_____

16. Why are animal proteins considered "complete proteins?" _____

_____

17. Why are plant proteins considered "incomplete proteins?" _____

_____