Simulating Protein Synthesis

Student Name:_____

Directions: Using the computer, go to the following web site:

http://www.pbs.org/wgbh/aso/tryit/dna/shockwave.html

Use this worksheet as a guide to complete the simulation of protein synthesis, while answering the questions on the worksheet. Do not click on any "buttons" during the simulation until the directions on the worksheet tell you to.

1. Click on the "protein synthesis" button.
2. The first thing that happens when making proteins is _____
   a. Click on the "unzip" button.
   b. What actually unzips the DNA? _____
3. The first process of protein synthesis is called _____.
   a. Observe the 4 RNA bases on the left side of the picture. What are the 4 RNA bases? _____
   b. How do the RNA bases/nucleotides differ from DNA bases/nucleotides?
      _____
   c. What does "T" in DNA bond with in RNA? _____
   d. What does "G" in DNA bond with in RNA? _____
   e. What does "A" in DNA bond with in RNA? _____
   f. Match the appropriate RNA bases with their complimentary DNA bases on the picture. Do this by clicking and dragging an RNA base to its complimentary DNA base.
4. You've just completed making a strand of RNA. Is RNA single or double stranded? _____ How does this differ from DNA?
   _____