**Transcription and Translation *Don’t write on this paper!***

**1**. Go to **www.classzone.com** **2**. Select the correct Textbook in the **ClassZone Book Finder (High School Science, MD, Biology 2008)** **3**. Click on the **Animated Biology** option. **4**. Click on the **UNIT 3: Genetics** option. **5.** Click on the ***Chapter 8: Build a Protein*** option. **6.** Read the instructions and answer the following as you complete the activity.

***\*Make sure to us complete sentences in your responses.***

1. What is a gene?

2. What are the materials available for the process of transcription?

3. What is the 1st item you have to place onto the DNA polymer?

4. What direction does the mRNA molecule get pieced together?

5. Write down the DNA sequence that is being transcribed? (From right to left)

6. Underneath the previous DNA sequence, write the complementary RNA strand.

7. How do you know that the strand being made is RNA?

8. Make a small sketch of the DNA molecule and the new RNA molecule. Label both parts.

9. Can the mRNA stay in the nucleus? Why or why not?

10. Write down the DNA single strand code.

11. What need to bind to the mRNA strand for translation to begin?

12. What does tRNA do in the translation process? What does it recognize? And what does it build?

13. What would be the complementary tRNA code?

14. What is the final product of translation?

**Human Chromosomes**

Click on the Chapter 7: Human Chromosomes option

1 What is a karyotype?

2. Name three characteristics that are used to match chromosomes.