



Name: _____ Date: _____

Transcription and Translation

- Go to <http://www.dnai.org/a/index.html> > **Copying the Code** > **pieces of the puzzle** > **The Central Dogma**

Use the tutorial to answer the following questions.

1. RNA is found mostly in the _____ of the cell.

2. What makes the bases used by RNA and DNA different?

3. How are RNA and DNA different when comparing their structure in terms of strands?

- Now go to **Copying the Code** > **putting it together** > **transcription**

- Watch the video twice – once before and once after reading the transcript.
- Make a drawing of the process of transcription you just watched inside the portion of the cell where it occurs, and be sure to include labels.
- Add color to help identify the relationship between structures and labels.
- Explain your drawing to a partner.

- Next go to **Copying the Code** > **putting it together** > **Interactive**
Practice being the RNA polymerase.

- Now go to **Reading the Code** > **putting it together** > **translation**
(a) Watch the video once or twice.

- Now go to **Reading the Code** > **putting it together** > **Interactive**
(a) Be the ribosome and make part of a protein.

- One more version of translation to see! Go to <http://www.pbs.org/wgbh/aso/tryit/dna/> > **DNA Workshop Activity** >

Protein Synthesis

- (a) Work through the workshop.
- (b) Using what you have learned about translation from the last three activities, make a drawing of the process of translation, including labels. Explain your drawing to a partner.
- (c) Words to be sure to use in your drawing:
 - mRNA
 - codon
 - tRNA
 - polypeptide chain
 - anticodon
 - amino acid
 - ribosome