

Lost and Found in Transcription
 A Digital Story
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Narration	Animation
Hello, and welcome to the wonderful world of Science! Today we will learn about the process of transcription. In this story, there are several characters:	The title slide will be displayed.
RNA Polymerase, an enzyme who loves to cause trouble,	The pipe-cleaner hoop will be displayed
and our nucleobases, we have Cytosine, Guanine, Thymine, Adenine, and Uracil, and they all enjoy living in pairs.	I will pan across the different colors of pipe-cleaners as I name each one.
Cytosine and Guanine always link together.	I will show the Cytosine and Guanine pipe cleaner colors linking together.
In the DNA helix, Adenine links with Thymine. However, when RNAP separates them, Thymine is replaced by Uracil.	I will show the Thymine and Adenine pipe cleaners being linked together, then the Uracil color replacing Thymine.
As our story begins, Cytosine, Guanine, Thymine, and Adenine are all paired up and happily dancing along in the nucleus. These couples don't realize it, but they possess the instructions to build a valuable protein.	I will show the strand of whole DNA
Elsewhere in the nucleus, RNAP receives a message that the cell needs the instructions these couples possess.	I will show an exclamation point next to the RNAP loop
RNAP approaches the helix...and tears the couples apart!	I will show RNAP attaching to the DNA strand and the strand beginning to separate.
To obtain the instructions these nucleobases possess, RNAP quickly finds matches for half the helix, pairing Cytosines to Guanines, Adenines to Thymines, Guanines to Cytosines, and Uracil to Adenines.	I will show matching nucleobases lining up with one side of the DNA.
This creates a strand of messenger RNA, which will carry the instructions out of the nucleus.	I will attach the nucleobase matches to a single pipe cleaner.
After a few seconds, RNAP finishes copying the instructions, detaches the strand of mRNA, and moves on.	I will show the mRNA being removed, and RNAP unhooking from the DNA.

The DNA nucleobases are reunited, and happily resume dancing along in the nucleus.

I will show the re-attached segment of DNA.