

DNA Transcription

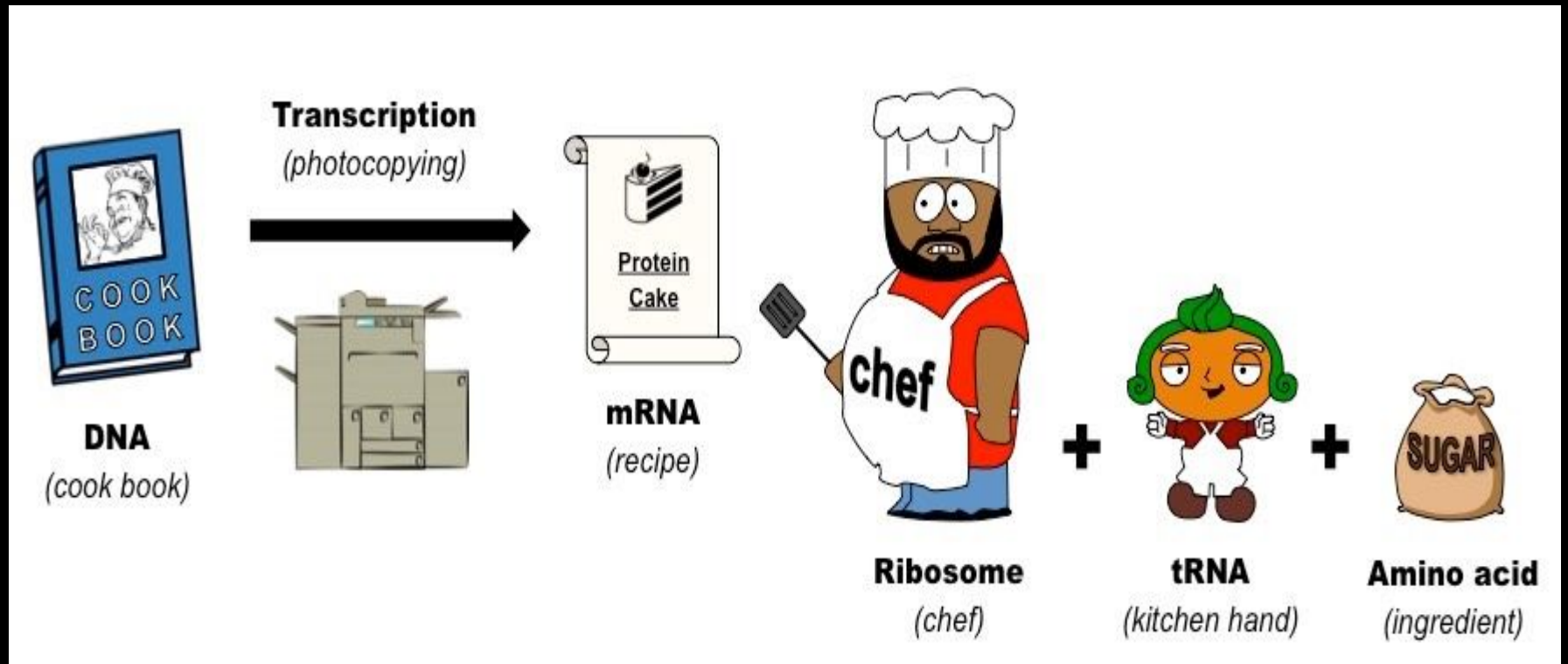


Learning Objectives

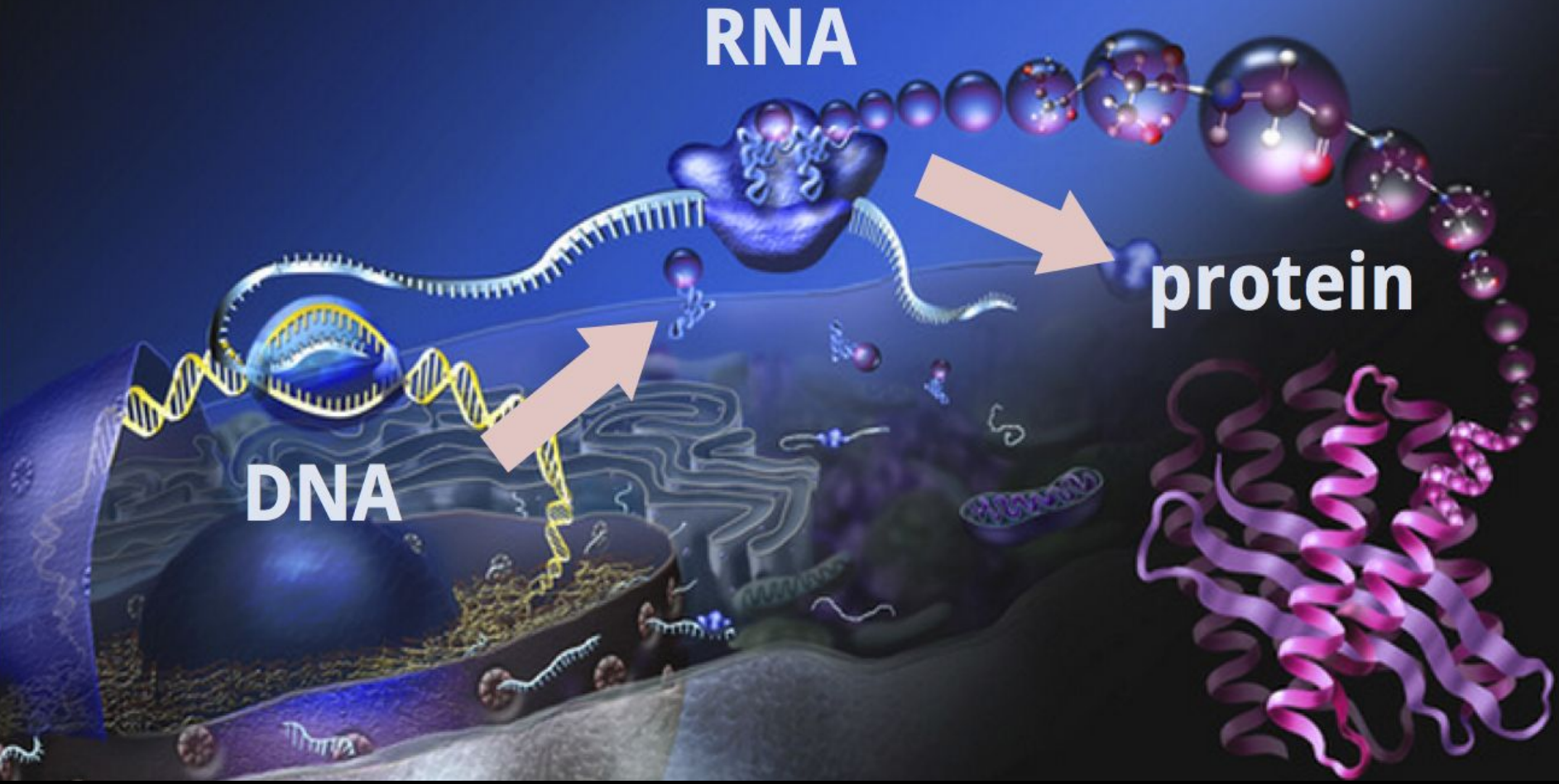
- Explain how DNA is transcribed into RNA
- Compare and contrast DNA replication and DNA transcription

Central Dogma

DNA $\xrightarrow{\text{(Nucleus) Transcription}}$ RNA $\xrightarrow{\text{(Cytoplasm) Translation}}$ Protein

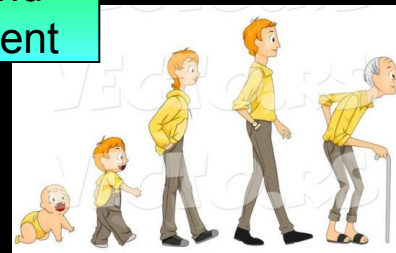
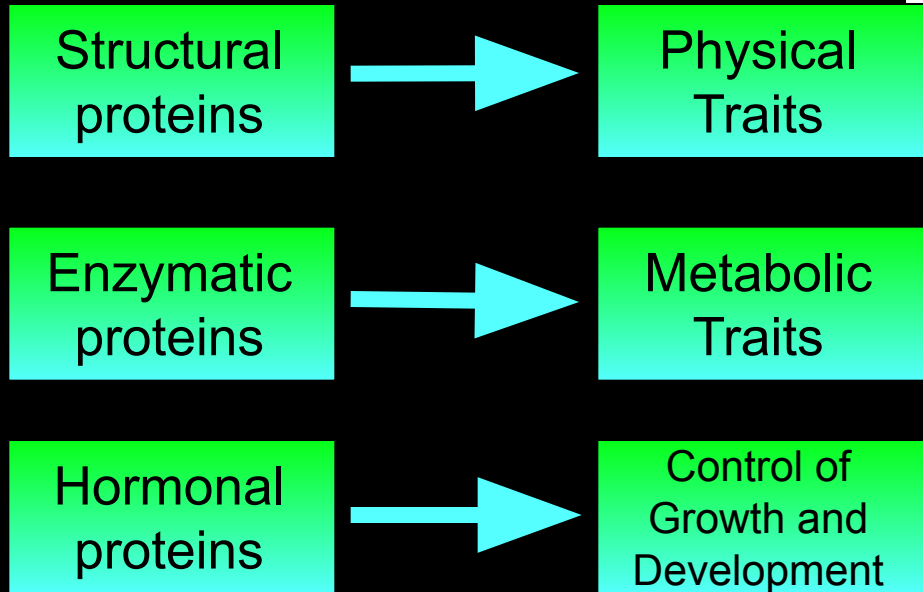
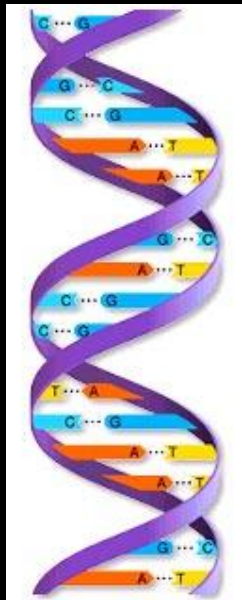


Central Dogma



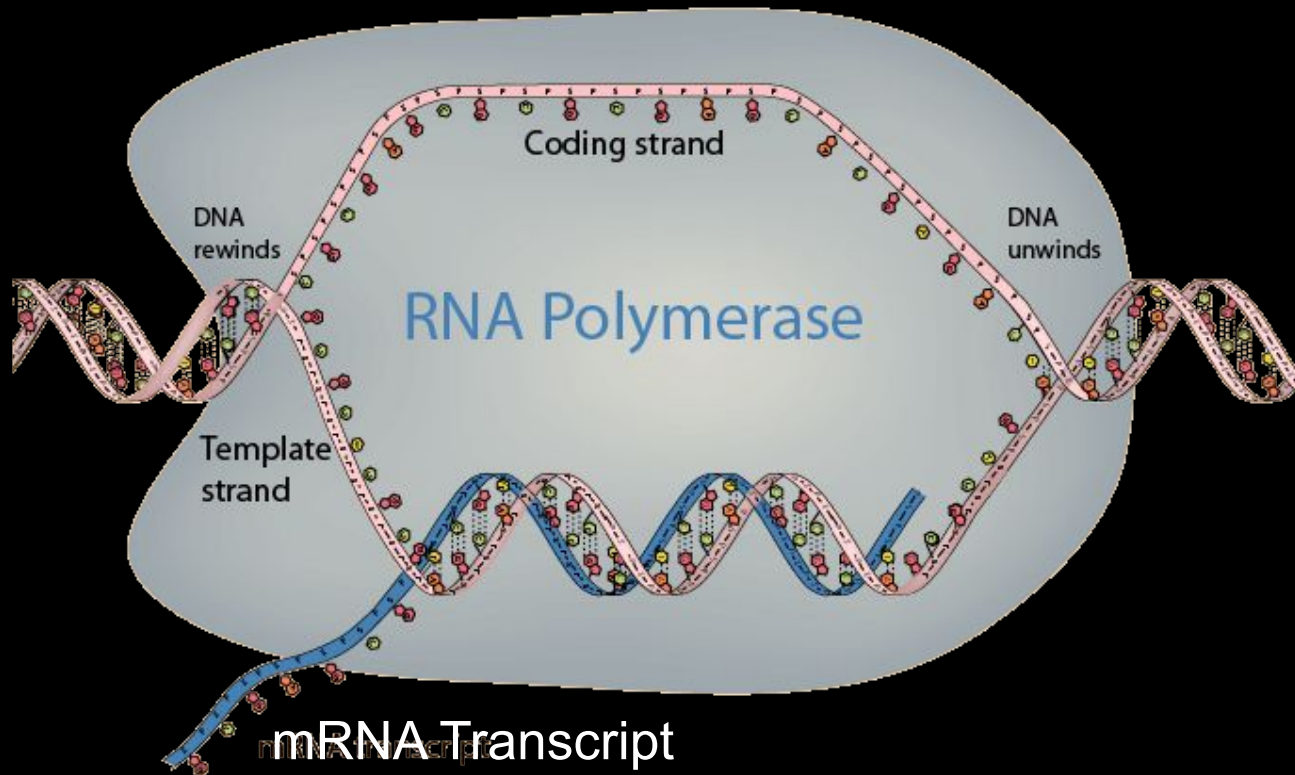
Proteins Make Traits

(Don't Write, Just Listen)



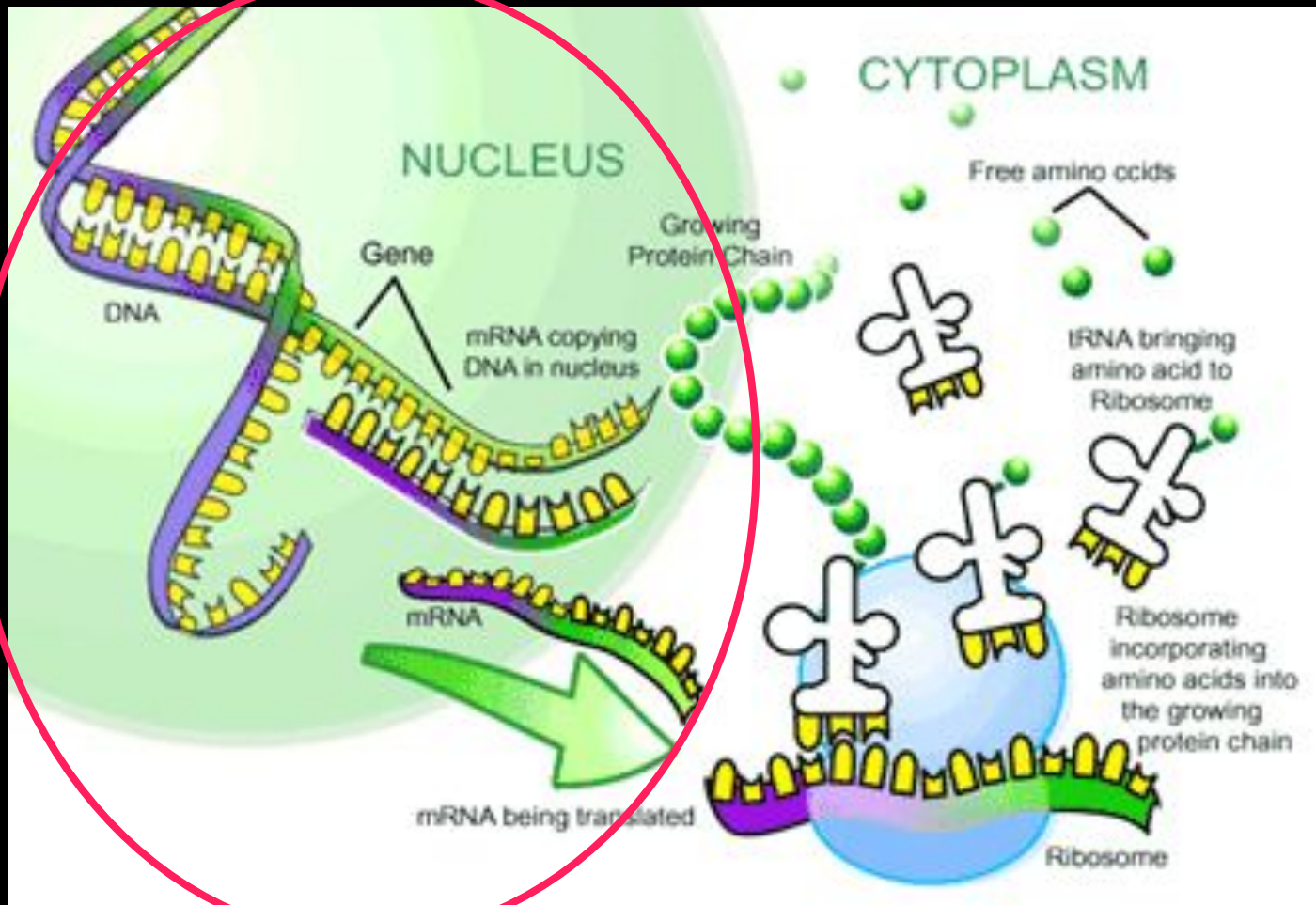
One gene is a segment of DNA

Purpose of DNA Transcription



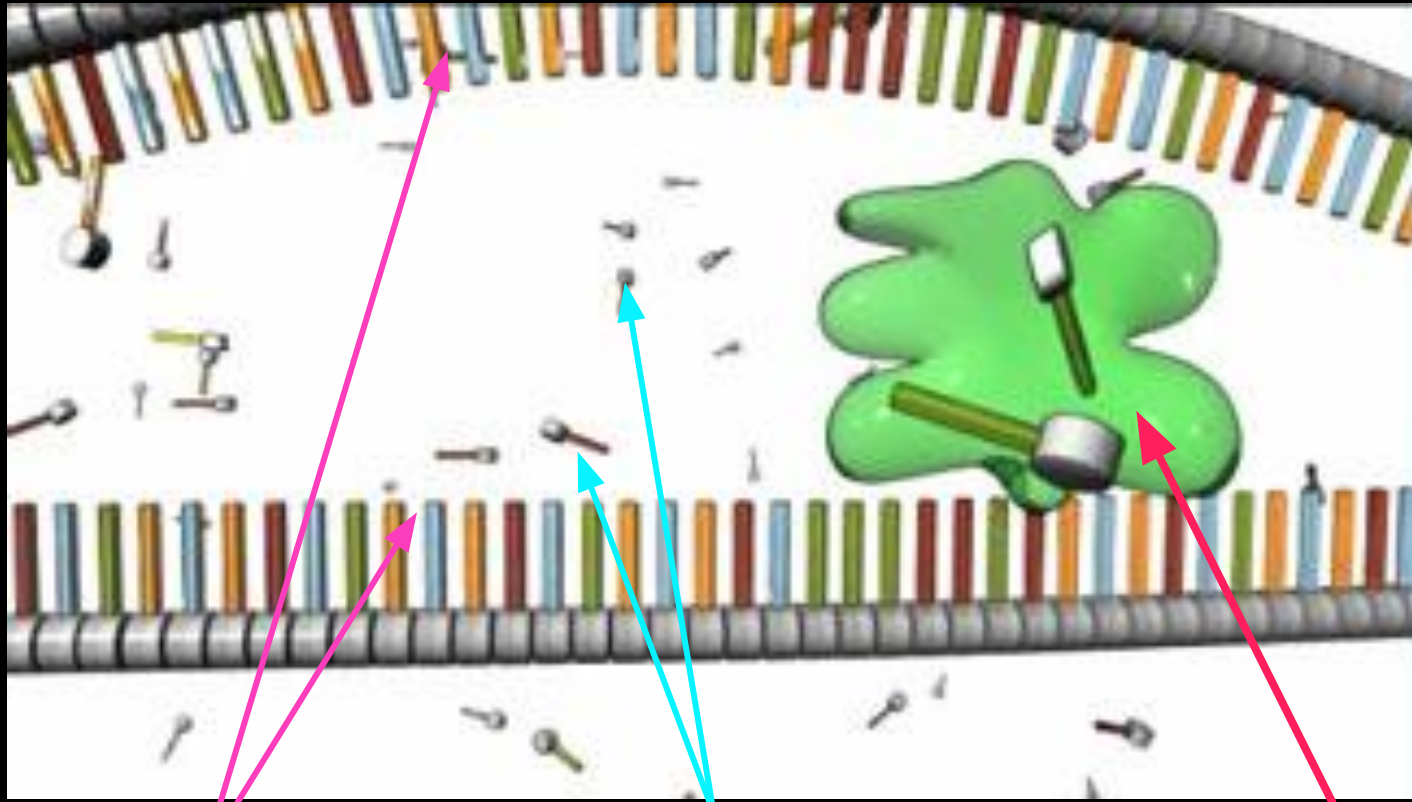
To make messenger RNA (mRNA) from a DNA template

Where Does Transcription Occur?



DNA transcription occurs in the **nucleus**

Parts of the Transcription Machinery



DNA Template

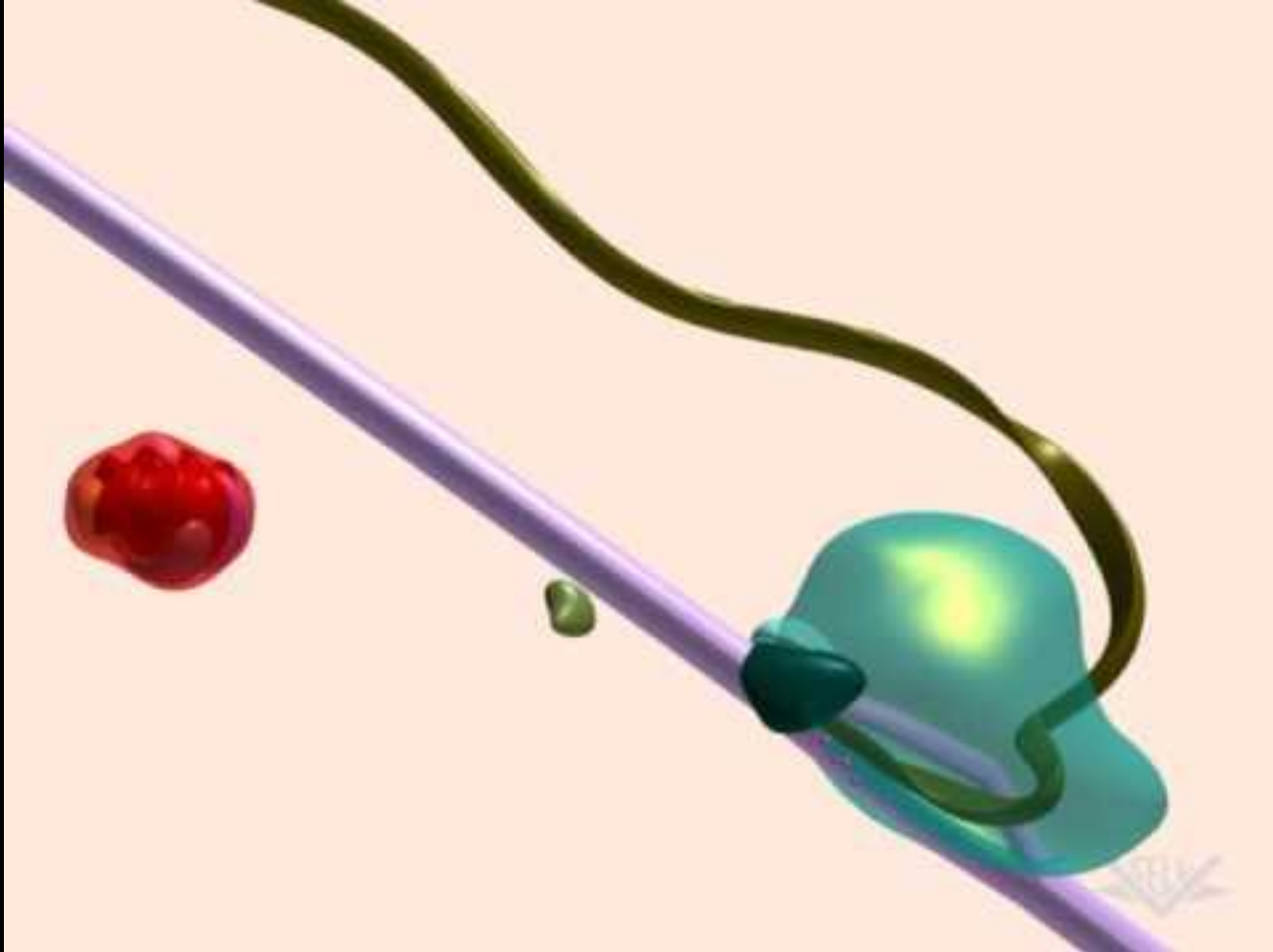
Free
Nucleotides

RNA
Polymerase

Difference between DNA Replication and DNA Transcription

DNA replication	DNA transcription
<ul style="list-style-type: none">• DNA replication copies the whole DNA strand• Creates two identical copies• Uses thymine (T)	<ul style="list-style-type: none">• DNA transcription copies small sections (genes)• Creates one single strand (mRNA)• Uses uracil (U)

YouTube Video



Stop Here

