

Transcription

First watch this animation of transcription:

<http://passel.unl.edu/pages/animation.php?a=Transcription.swf>

Then answer the questions below:

1. Where does Protein synthesis (making proteins) take place?
2. What do chromosomes contain?
3. How is genetic information encoded?
4. There are 2 steps to protein synthesis. What is the name of the first one, and what happens in this step?
5. What is a promoter?
6. What is a coding region?
7. What is a termination sequence?
8. What does RNA polymerase do?
9. What does the promoter of a gene act like? HOW does it act like it?
10. What does RNA polymerase do once it reaches the coding sequence?
11. As RNA polymerase reads each nucleotide on the DNA strand, what does it bring and bond together?
12. What happens when the RNA polymerase reaches the termination sequence?

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Answer Key

Watch this video: <http://passel.unl.edu/pages/animation.php?a=Transcription.swf>

Then answer the questions below:

1. Where does Protein synthesis (making proteins) take place?
Begins in nucleus of cell—finishes in Cytoplasm on ribosomes
2. What do chromosomes contain?
The information to make proteins
3. How is genetic information encoded?
In the sequence of nitrogenous bases
4. There are 2 steps to protein synthesis. What is the name of the first one, and what happens in this step?
Transcription- a mRNA copy of the gene is made
5. What is a promoter?
Section on the gene that turns the gene on and off
6. What is a coding region?
Region of gene which contains the information for making the protein
7. What is a termination sequence?
Section on the gene that Signals the end of the gene
8. What does RNA polymerase do?
Reads the gene and puts together the mRNA strand
9. What does the promoter of a gene act like?
Acts like a light switch
10. What does RNA polymerase do once it reaches the coding sequence?
It reads a single strand and begins to build the mRNA strand
11. What happens when the RNA polymerase reaches the termination sequence?
The sequence causes the mRNA to fold back on itself. Both RNA polymerase and mRNA fall off the DNA strand
12. RNA polymerase falls off the gene at the termination site.