

Click on the link above to take you to the interactive model for learning about how genes are expressed, at a molecular level. Answer the questions below as you go through the model.

Resource links: [RNA](#) [Translation](#) [Transcription](#)

1. Transcription is _____

 2. Transcription takes place in the _____
 3. The product of transcription is _____ (click continue)
 4. An enzyme separates a small segment of DNA and does what? _____

 5. What process is making RNA (called transcription) like? _____
 6. What is a difference between DNA and RNA in the bases that make up the molecule? _____

_____ (click continue)
 7. What is the name of the enzyme that separates DNA and is responsible for forming the molecule of RNA?

 8. What happens when the mRNA molecule is finished being made? _____
_____ (click continue)
 9. When the process of transcription has finished, what happens to the mRNA molecule that was made in the nucleus? _____ (click continue)
 10. Where does translation occur in the cell? _____ And on what organelle does the process happen? _____
 11. What is the role of mRNA in translation? _____
 12. What is each three RNA nucleotide triplet called? _____
 13. What word do you see within this term that helps you understand what it's used for? _____
 14. The molecule that pairs in a complementary way to the three mRNA nucleotide triplet is called _____ and has its own three ribonucleotide base triplet called a _____. (click continue)
 15. What are the names of the codons that *begin* (_____) and *end* (_____) the process of tRNA reading the mRNA molecule. (click continue to simulate the translation in protein synthesis)
 16. When you paired tRNA's anticodons to mRNA's codons, what did you see attached to the tRNA molecule that remained long after the tRNA goes away? _____
 17. What is it that forms a chain with every tRNA addition? _____
- End of interactive lesson.

18. After your first run through protein synthesis, what's easy about it? _____

19. Same question, but what's tough about it to you? _____

Side lesson (know your terms)

3 types of RNA in cells:

(a) mRNA: m = _____ RNA = _____

Function: _____

(b) rRNA: r = _____ 2 subunits: _____ & _____

Function: _____

(c) tRNA: t = _____

Function: _____

