Student Name

Title of the Experiment

Course Name

INTRODUCTION / OBJECTIVE / SCIENTIFIC QUESTION

- What are DNA, RNA, and proteins?
- What is the purpose of transcription and translation?
- What is the goal of this virtual lab?

HYPOTHESIS

- What do you think will happen if the DNA sequence is changed?
- How do you predict the protein will be affected?

MATERIALS

- Learn.Genetics online simulator
- Internet browser
- Notebook

PROCEDURE

Describe, step-by-step, how you used the simulation:

- Which buttons you clicked
- How you ran transcription and translation
- How you tested changes in the DNA

DATA / RESULTS

Provide:

- A table or list comparing the DNA sequence, the RNA sequence, and the resulting amino acid chain.
- Highlight what changed when you modified the DNA.
- Label each result clearly. (No paragraph explanation here, you can provide data/images)

ANALYSIS

Explain:

- How your results support or reject your hypothesis.
- What you learned about the connection between base pairs and protein shape.
- Any patterns you noticed.

REFLECTION QUESTIONS

Answer in complete sentences:

- What did you find most interesting or surprising in this lab?
- Why do you think a single base change can have such a big effect?
- How does this lab relate to the study of organic molecules and living things?

CONCLUSION

Summarize:

- What was learned
- Whether your hypothesis was correct
- What this tells you about how cells use genetic information

REFERENCES / CITATIONS

If you used any outside source (including Learn.Genetics), list the full URL here:

https://learn.genetics.utah.edu/content/basics/transcribe/

Submission Notes:

- Follow the lab report rubric for grading expectations.
- Use scientific vocabulary and complete sentences.
- You must complete all sections. Incomplete reports will be penalized.