Virtual Frog Dissection

SNC2D | Student laboratory assignment | 1 of 4

Prepare for your investigation

Name: _____ Date: _____ Class: _____

Research question

How does the arrangement and structure of organs support survival in a frog?

Learning goal: use the virtual model to gather evidence, explain virtual frog dissection and communicate a supported conclusion.

Materials: WorksheetGalaxy virtual laboratory, this assignment, calculator or spreadsheet if needed. Virtual observations only; do not recreate hazardous procedures or perform physical fitness tests without teacher approval.

1. Define two relevant scientific terms from the Background Information tab. (K/U)

2. Write a prediction or hypothesis with a scientific reason. (K/U, T/I)

3. Identify the variable or feature compared, the measured outcome and constants or consistent observation criteria. (T/I)

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Perform the virtual laboratory

Open the corresponding virtual lab and read Background Information. Follow the investigation instructions below. Record authentic simulated results; do not invent data.

• In the Experiment tab, select External anatomy . Identify at least five structures and record observations.

• Switch to Internal anatomy . Select at least eight organs and record their functions.

• Use the identification challenge to test your knowledge. Complete at least eight prompts.

• Visit Data & Graphs and compare your identification results by organ system.

• Complete the Lab Report using specific observations and appropriate anatomical terminology.

Record each completed observation using the simulator’s record control when available. Use Data & Graphs to review results. Export CSV if available; attach additional rows or screenshots when needed.

Record the exact settings and any changes to the method.

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Observations & results

Enter the actual results. Keep trial IDs consistent between continued tables. Attach the full exported data or extra sheets when the procedure requires more rows. Include units as displayed.

Data table 1

Trial / item	View	Structure	System	Student observation

Qualitative observations / sample calculation (show units where applicable)

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Analysis, conclusion & assessment

4. Present a labelled graph of a measured relationship, or an annotated diagram / comparison chart for qualitative investigations. Attach it separately. Explain the pattern using recorded evidence. (C, T/I)

5. Identify three digestive organs and trace the path of food through the digestive tract. (K/U, A)

6. Explain how the frog heart and lungs support transport of oxygen and nutrients. (K/U, A)

7. Describe the role of the kidneys and urinary bladder. (K/U, A)

8. Compare two frog structures or organ systems with those of a human. (K/U, A)

Conclusion and evaluation: answer the research question, revisit the prediction using evidence, identify a model limitation and propose an improvement. (T/I, A)

Submit this assignment plus your completed Lab Report (printed or saved as PDF from the lab) and any supporting data/figures.

K/U: accurate concepts /10	T/I: method, data, reasoning /12	C: clear tables, units, report /8	A: explanation, conclusion, transfer /10

Total: /40