



How to write a formal lab report – Frog Dissection

DUE: _____



I. TITLE: Pick a descriptive title that is related to your investigation/research. Include the scientific name of the organism that you are dissecting. (Common name is **Northern Leopard Frog**, scientific name is **Rana pipien**). **Include the purpose and objective of the lab after the title.**

Purpose: To observe characteristics that identifies the frog as an amphibian

Objectives:

- Examine the frog and relate the structures to their functions
- Determine how the frog's characteristics enable it to live.

II. INTRODUCTION:

Background information should include the following:

- Definition of "amphibian"
- The period in time when they first appeared.
- Describe the 3 groups of amphibians and include examples of members of each group.
- Habitat of frogs
- Life cycle of frogs
- Ecology: Describe their importance to their environment and to humans.

III. MATERIAL & PROCEDURE (numerical):

a. List materials.

b. Clearly state step by step how you run your experiment. Avoid using "I" or "we" or copying and pasting from my handout. Summarize it! Make sure that your experiment is **clearly** described so that someone else can replicate it.

IV. DATA & OBSERVATIONS:

Attach the sketch to this part of the lab and the handout with the questions that you answered while you dissected.

V. CONCLUSION:

a. **Analysis of Data:** - Answer in **full sentences** pg. 848 Chapter 33

1. Look at the cladogram on pg. 850, what adaptations do frogs, toads, salamanders and caecilians have in common?
2. How many species of frogs and toads exist on Earth today?
3. **Body Temperature:** How are amphibians and mammals different in the way they control their body temperature?
4. What is the advantage and disadvantage of being an ectotherm?
5. What is the advantage and disadvantage of being an endotherm?
6. **Digestive system:** Compare and contrast the digestive system of a salamander (amphibian) and a cow (mammal). (how are they similar/different?)
7. **Respiration:** How is the respiration system in amphibian larvae different from adult amphibians?
8. **Circulation:** In chordates, why is the heart divided into chambers? How is the amphibian's heart different from a reptile's heart?
9. **Excretion:** How is the excretory system in aquatic amphibians different from land amphibians?
10. **Response:** How is the cerebrum in amphibians different from the ones in primates?
11. **Movement:** Describe the skeletal and muscular system of amphibians.
12. **Reproduction:** What kind of fertilization do amphibians have? What happens after fertilization?

b. **Validity & Error Analysis**

- Comments on the accuracy of the identification of the internal and external anatomy. In other words, how much confidence do you have that you were able to identify the organs inside your specimen?
- Discuss possible errors that could have occurred in the collection of the data (experimental errors)

c. **Discuss Improvements:**

- How can the experiment be improved if you were to do it again? Be specific.