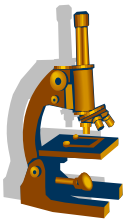

FORMAL BIOLOGY LAB EPORTS

In writing laboratory reports, follow the outline below, making sure to write reports in a concise, yet complete and clear manner.

Important Notes:

- Be sure to use the third person, past tense, passive voice, and proper grammar.
  e.g. - *On January 5, three radish seeds were planted in each of four individually marked paper cups. The seeds were covered with about one-quarter inch of potting soil.*

- Don't use acronyms until you have first named the substance or technique and cited its acronym.
  e.g. - *Potassium acid phthalate (KHP)*

- Professors may use alternate names for the following section headings listed below; simply substitute with the professor's preferred heading.

THE REPORT

Title: Identify the title of the experiment as given at the top of the cover page of the laboratory procedure packet for that experiment.

Introduction: Describe why the study was undertaken. Briefly summarize (usually in one or two paragraphs) relevant background information leading to a specific statement about the problem being investigated.

Materials & Methods: Thoroughly describe the procedure for the experiment so the report serves as a set of future instructions for any repetitions. List all materials used.

e.g. - **Methods:**

- *On January 5, three radish seeds were planted in each of four individually marked paper cups. The seeds were covered with about one-quarter inch of potting soil.*
- *To avoid prejudicing the results by distributing food according to size of caterpillar, the three different diets were distributed to the caterpillars in a random fashion as described by Shannabruch (1992).*

e.g. - **Materials:**

species of caterpillar used
size and age of caterpillars
diets used
amount of food provided per caterpillar
time of year
time of day
air temperature in room . . .

Results: List data, major findings, and computed results in a simple, concise, yet very clear form (usually presented in tables and graphs: see examples below).

*******DO NOT INTERPRET THE DATA HERE: SIMPLY PRESNT FINDINGS*******

- *Calculations* - Submit only one set of detailed mathematical manipulations of each type. There is no need to show every single calculation -- all other values appear in data tables.

- *Data Tables* - List calculated values in their appropriate format as below.

- *Table 1. Summary of Raw Data*

Diet	*Initial Caterpillar Wt. (g)*	*Final Caterpillar Wt. (g)*	*Caterpillar Wt. Change(g)*	*Wt. of Food Lost (g) over 3 h*	*Feeding Rate (g food lost/h caterpillar)*
A	8.05	9.55	+1.55	3.65	15.2×10^{-2}
A	4.80	5.80	+1.00	1.74	07.2×10^{-2}
A	5.50	7.00	+1.50	3.33	13.9×10^{-2}
A	5.50	4.70	~~0.80~~	~~0.00~~	0
A	5.90	6.95	+1.05	1.35	5.6×10^{-2}
Average	5.95	6.80	+1.28	2.52	8.4×10^{-2}
B	4.40	5.11	+0.71	2.19	9.1×10^{-2}
B	5.20	5.60	+0.40	1.25	5.2×10^{-2}
↓	↓	↓	↓	↓	↓
Control 1	x	x	x	0.22	x
2	x	x	x	0.10	x
3	x	x	x	0.16	x

- *Table 2. Average rates of food consumption over a 24 h period for caterpillars given three separate diets*.

Diet	No. Caterpillars	(g food eaten/caterpillars/h)
A	4*	8.4×10^{-2}
B	5	3.8×10^{-2}
C	5	7.9×10^{-2}

* One individual died during the study, without eating any food.

- *Plotting* - Plots should:
  1. be adjusted to fill the largest portion of space available with reasonable scaling
  2. have clearly labeled axes (what was plotted and what units were used)
  3. have cleared located points (labeled both x & Y values)
  4. be smoothly drawn (Use ruler or graphical analysis)

Discussion: Typically the longest part of the report, answering the following questions

- how did your results relate to goals of the study stated in the introduction section
- did your results relate to any expected results based on lectures, textbooks, or other readings
- what, if any, new hypothesis should be formulated and how can it be tested
- answer any questions posed by professor

Literature Cited: Be sure to include proper and full citations for ALL references used.