HONORS BIOLOGY LABORATORY FORMAT

Laboratory write-ups should be typed, or neatly written on lined, non-spiral bound paper. Clearly label each of the five headings, exactly as shown in the format guide.

I. Title
   - Create a title page for the write up, include lab title, name, date, period, illustration

II. Abstract
   - A summary of the laboratory investigation including a short discussion on the results
   - Written after you have completed the experiment
   - Cannot exceed 100 word, please provide word count

III. Introduction
   - Purpose: Explain what you expect to gain from conducting this experiment.
   - Define the variables in your experiment:
     - **Dependent Variable** (DV)-Y-axis: the variable for which you collect resulting data. The variable that you trying to see what will happen if you do something to it.
     - **Independent Variable** (IV)-X-axis: The variable you manipulate. The variable you do to the dependent variable to see if it will change.
   - **Hypothesis:** Looks at what you expect the relationship to be between the independent variable and the dependent variable “and why” you expect this relationship to exist. Your teacher will inform you if this write-up requires a hypothesis or not. Your hypothesis must be an *If/then* statement.

III. Methods and Materials
   - **Materials:** Numbered vertical list of materials used in experiment.
   - **Control Variable (CV):** Something you have control over and keep the same on purpose
   - **Procedure:** Numerical steps in your own words. Include the number of trials for the experiment. Must be able to recreate the experiment by following your procedure.
   - Drawing/diagram/photo of set up, must be labeled
IV. Results

- A blank data table with columns and rows labeled must be completed “prior” to conducting the experiment.
- This blank data table is then to be used to collect data during the course of the experiment. This becomes the “Raw Data” and must be turned in with the formal lab write-up.
- Data collected must be manipulated into charts and/or graphs:
  - All data tables, charts, and graphs must have a title, and the axis’s labeled with correct units.
  - A brief explanation of what is illustrated in the tables, charts, and graphs must be written below each diagram.

V. Discussion

- Answer any analysis questions in this section, be sure to number your answers.
- Explicitly state the relationship you data indicated between the independent and dependent variable by looking at the quantitative and qualitative data you collected.
- If the lab required a hypothesis, discuss if it was supported by the results or not. If a hypothesis was not required, discuss the findings and what can be learned from the results.
- Analyze any errors that occurred in the experiment and discuss how they could be reduced.
- What are the questions for further investigation? What new questions arise from the results of the investigation? How would you spring board from here to another investigation?