

## 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.

### IV. 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

## V. 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

## VI. 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?