

## Checklist for IB Inquiry Lab

### Title Page:

- Descriptive Lab Title (independent and dependent variables in the title)
- Your Name, date of the report
- IB student number

### General Considerations:

- Times / Times New Roman font, size 12, double spaced, 0.75" - 1" margins. Single sided.
- Control your formatting: all lists, tables on same page
- Number your pages (title page is not numbered; it is page 0.
- Write well, using scientific terms. Edit your work several times before handing it in.
- Subject - verb agreement: "data" are plural

### Introduction:

- Just enough background info to explain why your independent variable is significant
- Research question
- Hypothesis
- Variable being tested (independent)
- Variable being measured (dependent)
- Controlled variables (and, briefly, how you will control them)

### Materials and Method:

- Materials list with specifics (vol, mass, accuracy of measuring devices...)
- Procedure is a step by step, detailed set of instructions. Format like an outline or bulleted list.
- Repeat your experimental groups several times to give you a range of data for each point. More is always better.

### Data:

- Descriptive titles on all tables, graphs
- Raw data table includes units and uncertainties.
- Statistical analysis of the significance of your data (i.e. T-test or Chi<sup>2</sup> statistical analysis)
- Processed data table; include formulae used
- Graph with: independent variable on the X, dependent on the Y; (if a line graph) line of best fit; labeled axes
- Put data sets to be compared on the same axes. Label the different data sets.
- Show the range of raw data points using box and whisker or error bars

### Analysis:

- State a conclusion, reflecting on your hypothesis, including data that justify your conclusion. Your hypothesis is either refuted or supported; anything else and you did it wrong.
- Evaluate error: How reliable is your data? (refer to statistical analysis/refer to uncertainties in your measurement. Evaluate weaknesses/limitations in procedure or measurement data.
- Note: Mistakes in lab procedure are NOT error; mistakes represent poor lab technique. If you made mistakes, fix the data (by redoing the trial(s)?) before reporting the data.
- Suggest improvements to your procedure or lab design
- In light of what you have learned, suggest areas of further investigation