Physics Practical Report Checklist

General

- ☐ Include a header and footer with your name and the date.
- ☐ Start sections with clear headings.
- ☐ Use formal, impersonal language (except in Manipulation and Collaboration).

Hypothesis

- ☐ A statement of what you expect to happen, written as if it will be true.
- ☐ Include a specific mathematical relationship.

Manipulation and Collaboration

- ☐ Things which made it difficult to take accurate or precise measurements.
- ☐ Any initiative you showed (extra things you did that weren't in the procedure).
- ☐ Care (preventing damage to equipment) and safety (preventing injury).
- ☐ How you cooperated (worked with others and/or as a group).

Results: Table

- ☐ Variables in columns, with independent on left and dependent on right.
- ☐ Units in brackets, in column headings only.
- ☐ Consistent decimal places for measurements and significant figures for calculations.

Results: Graph

- ☐ Fill the whole page.
- ☐ Title (descriptive of this experiment).
- ☐ Axis labels (including units).
- ☐ Independent variable on horizontal (x) and dependent on vertical (y).
- ☐ Sensible major and minor axis scales (neat, consistent values).
- ☐ Extend line of best fit to touch an axis. It does not have to go through (0,0).

Calculations: Hypothesis

- ☐ Include derivation and/or research for the hypothesis.
- ☐ If the calculations are typed instead of hand-written, use properly formatted equations.
- ☐ Discussion of the variables and things to be held constant (see equation for ideas).

Calculations: Slope

- ☐ Choose points at the start and end of the line of best fit (not data points).
- ☐ Show working on the graph (dashed lines).
- ☐ Include units for the slope (y units per x units).
- ☐ If possible, use the hypothesis equation to calculate an expected slope.
- ☐ If expected slope was calculated, also calculate percentage error.

Discussion

- ☐ Discuss both precision and accuracy, including evidence for each.
- ☐ Clearly distinguish between precision and accuracy.
- ☐ Possible source(s) of random error.
- ☐ Possible source(s) of systematic error.
- ☐ Predict effects of each error source and compare with experimental results.
- ☐ Suggest improvements to the procedure.
- ☐ Be realistic and specific in your improvements.

Conclusion

- ☐ Restate the hypothesis and whether it is supported or not by the results.
- ☐ Describe evidence/pattern in the results.
- ☐ Include important points from Discussion.
- ☐ Someone could read the aim and then skip here and get a good idea of what happened.

References (if relevant)

- ☐ Follow the reference formatting guidelines (author year, title, publishing info).