IB internal assessment report checklist

Design

Introduction	Have you given a brief introduction of the theory related to the task, and where appropriate, an equation (sometimes this is appropriate to discuss the various methods that could be used)	
Research question	Does your research question mention the independent variable (include the range) and the dependent variable (include how it is measured) ?	
Independent variable (must be in a table)	Have you stated what variable you are going to change and what your range is?	
	Have you stated how you are going to change it?	
Dependent variable (must be in a table)	Have you stated what you are going to measure?	
	Have you stated how you are going to measure it?	
Constant variables (must be in a table)	Have you stated all the variables that need to be kept constant from one test to the next in order ensure a fair test?	
	Have you stated how you are going to control your variables?	
	If it is not possible to keep a variable constant, then it must be monitored in some way.	
Equipment	Have you listed all the equipment that you will require?	
	Remember to include size, degree of accuracy (uncertainty) and number of significant figures.	
Method	Have you included a diagram with labels?	
	Is your method a step by step account of what you did? (Does it include what equipment, size, concentration, accuracy etc?)	
	Does your method include the independent variable and how it is going to be changed?	
	Does your method include the dependent variable and how it is going to be measured?	
	Does your method include all the constant variables and how they are going to be kept constant (or monitored)?	
	Does your method indicate how you are going to ensure that you will collect sufficient relevant data? E.g. are you repeating your experiment a number of times, is your range large enough etc?	
	Does your method describe how the data is going to be analysed such as formulae for calculations or graphs?	
	Is your data sufficient to be able to plot a graph? At least five data points are required for a trend line.	

	Have you described how you are going to ensure that your results are reliable and whether you will use a mean value for calculations?	
Risk assessment	Have you included any precautions you should take with the equipment/chemicals you are using?	

Data Collection and Processing (DCP)

Results	Are your results presented in a table?	
	Does your table have the independent variable recorded in the first column with a unit and an uncertainty?	
	Do the columns have a heading, a unit and an uncertainty?	
	Does your table have the independent variable recorded in the second third and fourth columns?	
	Do your average results column have a heading, a unit and an uncertainty?	
	Does your table have a **heading** that mentions the independent and dependent variable?	
	Is your table computer generated?	
	Did you include any observations (qualitative observations)?	
Interpretation of data	Did you draw a graph?	
	Did you put the independent variable on the x axis and the dependent variable on the y axis?	
	Did you label your axes (label plus unit)?	
	Does your graph have a **heading** that mentions the independent and dependent variable?	
	Have you drawn a line of best fit or a curved line to connect your points?	
and/or	Did you carry out a sample calculation that can be clearly followed?	
	Did you use the correct number of significant figures?	
	Did you calculate the total estimated random error through error propagation?	
	Can you make a general statement about your results (trend, absolute value etc)?	
	Did you remove any unusual results?	

	Did you include any processed data into your data table?	
	Did you carry out a % error calculation (your final result divided by the expected result times 100)?	

Note: When using a data logger it is essential that you take down all the raw data from the data logger (or computer) and place the raw data in a table that is designed by you. It is fine to place all data on a spreadsheet to generate a table and then a graph. However, you must indicate that you selected a scale, type of graph (e.g. a line of best fit), what to graph, graph title etc.

A computer calculated gradient is acceptable.

Conclusion and Evaluation (CE)

Conclusion	What have you found out? Have you made a statement?	
	Have you supported your findings with data from the table or graph?	
	How does the % error compare with the total estimated random error?	
	Have you made a judgement between **random error** and **systematic error**? (Include **both** terms)	
	Have you included a scientific explanation of your results?	
Evaluation	Make a comment about the magnitude of your **random** error and whether or not it was significant or not.	
	Identify the main source(s) of **random** error and suggest how they could be minimised.	
	Make a comment about the magnitude of your **systematic** error.	
	Identify the main source(s) of **systematic** error and what effect they may have on your final outcome.	
	Did your determine whether there were any weaknesses/ limitations with your method e.g. equipment used was not appropriate for the task, not sensitive enough etc?	
	Did you record any problems with your investigation e.g. using equipment and how you solved them?	
	Did you record any other variable (not identified in the beginning) that had an affect on your results?	
	Did you state whether your repeated results were similar (reliable results) or was there some data that was quite different (unreliable results)?	
	Did you make any assumptions that may have influenced the final outcome of your investigation?	
Improvements	What suggestions have you made to improve the weaknesses and limitations identified above to reduce random and systematic error?	
	What modifications have you made to improve the method?	
	How would you improve the method?	
	How would you ensure better control of the variables?	

	Are there any alternative methods that could have been used?	

General

The report should be written in the passive voice ideally.

Make sure that chemicals are named correctly and try not to use vague nouns like ‘the substance’.

Include your name, date the practical work was completed and name of partner(s).

Number all pages and include a bibliography if necessary.