

IGCSE Assessment for learning: Physics skills checklist

Name:	Investigation
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Exploration

	1 mark	2 marks	3 marks
a	Aim of investigation or research question is unclear.	There is a research question but dependent and independent variable have not been clearly defined.	A research question that has the dependent and independent variable clearly defined.
b	Only one control variable has been identified.	Most important control variables have been identified.	All important control variables have been identified.
c	Little detail in method in terms of amounts/sizes or how control variables will be measured.	The method includes some amounts/sizes and some of the control variables are kept constant.	The method is a numbered list of detailed steps, with amounts/sizes that keep all control variables constant.
d	No clear instructions in method on how, when and how often the dependent variable will be measured or is only measured once.	Clear instructions but the independent variable is changed less than 4 times.	The independent variable is changed at least 4 times.

Analysis

a	Some data is collected, not all relevant, and is not recorded in a table. There is inconsistency in number of decimals in data.	Some relevant raw data is missing and/or table does not have any of the following: title, column headings with units, uncertainties. There is inconsistency in number of decimals in data.	All data collected is relevant and is recorded in an appropriate results table with title, column headings and units, uncertainties. There is consistency in number of decimal places in data.
b	Two or more of the following are missing on the graph: title, suitable scales, labels or units and some points are not plotted correctly.	One of the following is missing on the graph: title, suitable scales, labels or units or some points are not plotted correctly.	Graph has title, suitable scales, labels and units and all points are plotted correctly.
c	Graph line connects the data points or does not deal with anomalies.	Incorrect line of best fit is drawn but deals with anomalies.	Correct line of best fit.

Evaluation

a	No clear conclusion (unclear statement or no reference to data) or is not consistent with data collected or is very obvious.	Clear but obvious qualitative statement consistent with data.	A clear conclusion consistent with data and supported by the data.
b	Identifies some irrelevant experimental error(s).	Identifies at least one relevant experimental error, weakness or limitation.	Identifies at least two relevant experimental errors, weaknesses or limitations.
c	Suggests unrealistic improvement(s).	Suggests at least one appropriate improvement linked to the experimental errors.	Suggests at least two appropriate improvements linked to the experimental errors.

Exploration	mark	Reason / Comment
a	/3	
b	/3	
c	/3	
d	/3	
Total	/12	

Analysis	mark	Reason / Comment
a	/3	
b	/3	
c	/3	
Total	/9	

Conclusion and Evaluation	mark	Reason / Comment
a	/3	
b	/3	
c	/3	
Total	/9	

Total /30	
%	
Grade	