Rehydration investigation report marking scheme

A Ability to represent information in multiple ways

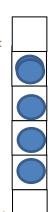B Ability to design and conduct an observational experiment

C Ability to design and conduct a fair test experiment

D Ability to communicate scientific ideas

E Ability to collect and analyse experimental data

F Ability to explore alternative solutions and explanations

G Ability to evaluate models, equations, solutions, and claims

Heading	Present =1 mark	Missing = 0 marks

	2 marks	1 mark	0 marks
Introduction	Demonstrates a good knowledge of the subject matter and the research conducted by others. Clearly states the reason why the investigation is conducted.	Demonstrates a moderate knowledge of the subject matter and the research conducted by others. Unclear as to the reason why the investigation is conducted.	Missing
Aim	Clearly outlined the aim of the experiment	The aim of the experiment is not clear as it relates to the investigation procedure.	Missing
Hypothesis	Clearly states the prediction of the experiment using an "If, then" statement to reflect the dependent and independent variables. Also includes reasoning for the hypothesis.	It is not clear what the dependent and independent variables are and how they relate to the predicted outcome.	Missing
Apparatus	Clearly identified all material used in this experiment	Identified some of the material used in this experiment	Missing
Procedure	Outlined in detail the manner in which the experiment was conducted.	Some details of the experimental procedure are missing or not in the right order.	Missing

Results	Data collected is shown on properly labelled and ruled tables.	Data is missing and the table is not properly labelled	Missing
	Data from the table is clearly and accurately expressed in properly labelled graphs with a legend, if needed. Graphs have a: -heading -clearly labelled axis -and properly drawn lines of best-fit.	Data is expressed in graphs, however, labelling is not complete or the lines of best-fit are not properly drawn or data from the table may not have been accurately graphed.	Missing
Discussion	Clearly and accurately identifies trends in the data and offers a logical explanation to explain the observations.	Identifies some trends in the data and/or fails to explain adequately the trends in the data.	Missing
	Uses the data to reason, accurately, if the hypothesis is supported or refuted.	The data is not used, or inaccurately used, to reason if the hypothesis is supported or refuted.	Missing
	If the hypothesis is refuted the hypothesis is modified in line with the data and briefly outlines an experiment that will test the revised hypothesis. If the hypothesis is supported a further question is put forward with a brief outline of an experiment that will test it.	If the hypothesis is refuted an attempt to modify the hypothesis is made, not necessarily in line with the data. The experiment outlined is either absent or unclear as to how it will test the modified hypothesis. If the hypothesis is supported a further question is put forward but it is unclear how the experiment will answer the question.	Missing
	Accurately identifies sources of error and suggests ways to minimise them.	Identifies some sources of error but does not suggest ways to minimise them.	Missing
Conclusion	Conclusion clearly and concisely answers the aim.	Conclusion does not clearly answer the aim.	Missing

Consider the following when writing your report

- Make arguments based on your data and separate the observations from interpretation.
- Provide sufficient detail to enable others to repeat the same experiment.
- Summarise your findings and observations.
- Do not present raw data. Change the raw data into meaningful statistics - percentages, averages, graphs, comparisons.
- Describe the outcome of the trial.
- Do not use the phrase 'made a mistake' or say that the experiment failed, instead, explain the outcome in terms of observable facts.
- Do not make excuses.
- Explain alternative hypotheses (if applicable).
- Explain issues that you did not consider in your initial design or hypothesis.
- Evaluate whether the test was valid, i.e. if the test was repeated would the same conclusions be reached?