Assessment Rubric: Grade 8 Lab Report - Calcium Carbonate and Hydrochloric Acid Rate 25/26				
	Insufficient	**Satisfactory**	**Good**	**Excellent**
1. Introduction and Hypothesis - Research Question	The research question is stated but may not be relevant.	The research question is stated and relevant.	The research question is fully focused and detailed, including independent variables and dependent variables.	
- Background Information	No relevant information is given.	A description of the reaction is stated. The reactants and products of the reaction are stated. Collisions are mentioned but not in a relevant sense.	A full word equation for the reaction is given. Descriptions of the reactants and products are given. Collision theory is described, but not necessarily in the context of this investigation.	Students provide a full symbol equation for the reaction (this does not have to be balanced) All chemicals present in the reaction are described, including the states that they are in and how that will allow the reaction to be measured. Students explain the nature of collision theory with reference to the molecules of the reaction being investigated.
- Hypothesis	No hypothesis, or an unreasonable one, is given for the experiment.	A somewhat reasonable hypothesis for the experiment is given without **scientific** reasoning.	The hypothesis predicts a clear and measurable relationship between the IV + DV. Correct scientific reasoning is applied to justify the hypothesis and demonstrates insightful thinking.	

2. Methodology - Variables	Some variables are stated, but there is no justification for the range of IV.	Variables are stated, but there is no justification of the selected range of IV. Some reasonable control variables are outlined, with minimal justification for how/why they need to be controlled.	Variables are stated and there is some justification of the selected range of the IV. Some reasonable control variables are described, briefly justifying how/why they need to be controlled.	The independent variable is stated and it is clear how this is manipulated. A good justification of the range of the IV is given. The dependent variable is stated and it is clearly explained how this is measured. Sufficient and reasonable control variables are described, briefly justifying how/why they need to be controlled.
- Materials - Diagram	Materials and equipment are not listed, or largely incomplete. No diagram or setup is drawn, or with insufficient detail.	A complete list of materials and equipment is given Diagram or setup is drawn, but it may be missing some labels.	Materials and equipment are listed, clearly indicating sizes and amounts used. A clear diagram or setup is drawn with correct labels using scientific words.	
- Method	The method is briefly described but does not state how all variables are manipulated and measured.	The method is described such that the experiment can be reproduced. How to manipulate all variables is partly missing.	The method is clearly described such that the experiment can be **exactly** reproduced, including how to manipulate all variables. This includes how exactly controlled variables were controlled.	
3. Data and Analysis - Data table	No raw data, or insufficient raw data is shown in a table.	Raw data is provided in a table, but there is no evidence of multiple trials or consistent readings.	Complete and full data is shown in a correct raw data table. This includes all three Independent Variable values, consistent mass readings and all trials.	

- Data Processing	The data is not or insufficiently processed.	Average masses are calculated for any repeated trials. Rate of reaction not calculated. No sample calculations are shown.	Average masses and overall change in mass has been calculated. Average rate of reaction is calculated, but there are inconsistencies or errors. Sample calculations are provided, but some portions are missing.	Average masses and overall change in mass is calculated correctly. Average rate of reaction is correctly calculated. A sample calculation is provided that explains each step in the processing of the raw data.
- Graph	A graph is not provided	A graph is provided but it is incorrect. No explanation is given for the choice of graph is given	A correct graph is selected, but it is formatted incorrectly. A brief explanation for the graph is given.	A correct graph is provided that is fully labelled and shows **ONLY** the processed data. A correct explanation is given for the choice of graph, referring to the type of data used for the graph.
4. Conclusion and Evaluation - Conclusion	There is no conclusion or it is incorrect.	In the conclusion the research question is answered, but there is no strong link to the obtained data.	In the conclusion the research question is answered correctly, but the link to the obtained data and the graph drawn is not fully clear.	A clear and correct conclusion is drawn that correctly and strongly refers to the graph and data collected.
- Relation to hypothesis and scientific context.	The conclusion does not relate to hypothesis and/or does not explain what was learnt from experiment.	The conclusion relates to hypothesis and explains a little of what was learnt from the experiment.	The conclusion relates to the hypothesis and explains most of what was learnt from the experiment with an attempt at using scientific terminology.	The conclusion is clear, relates to hypothesis and fully explains what was learnt from the experiment using correct scientific reasoning

- Evaluation of methodology	The report explains none of the strengths and weaknesses of the experiment.	The report explains a few of the strengths and weaknesses of the experiment.	The report explains the strengths and weaknesses of the experiment, and provides some suggestions for how to improve the experiment	Strengths and weaknesses of the experiment are explained and realistic suggestions for improvement are fully described.
5. Organization and Communication - Organisation - Writing - Use of terminology symbols, units.	Some parts of the lab report are missing, which does not allow the reader to easily understand the investigation. Some correct terminology, symbols and units are used.	The lab report contains all of the necessary elements as listed in the template. The general organization and use of terminology, symbols and units of the paragraphs is sufficient but could use improvement - readers may get confused at times.	The lab report contains all of the necessary elements as listed in the template The writing is clear and concise; the general organization of the paragraphs allow for an easy understanding of the investigation. Correct scientific terminology, symbols and units are used throughout the lab report. Example equations and calculations are explained. A clear and concise bibliography has been added.	