

Rubric/G 8/Science Fair/Thursday/ 12th March/2026/ Theme : Energy and Sustainability

Max marks 100

SECTION 1: POSTER - Group work X/52

	Insufficient-1	Satisfactory-2	Good-3	Excellent-4
1. Research Question	The research question is shown, but it is not focused	A somewhat focused research question is stated, but either the topic or the relationship between variables is not made clear.	A focused research question is stated, and a clear topic identified. The relationship between the variables is mostly clear.	A fully focused research question is provided that clearly identifies the topic and the relationship between the independent and dependent variables of the investigation.
2. Background Science	Background information is given but it is not relevant to the research question.	Some relevant background information is given. The introduction is somewhat reasonable and some purpose for the investigation is given.	Sufficient, clear and relevant background information is given. The introduction is a reasonable and useful purpose of the investigation	Sufficient, clear and relevant background information is given. The introduction describes a reasonable and useful purpose of the experiment.
3. Hypothesis	No hypothesis is given or is stated without further explanation.	A basic hypothesis is given, and an attempt was made to justify it.	The hypothesis predicts a clear and measurable relationship between the independent and dependent variables. Scientific reasoning is used for justification, but this contains errors, gaps or misconceptions.	The hypothesis predicts a clear and measurable relationship between the independent and dependent variables. Correct scientific reasoning is applied to justify the hypothesis.

4. Materials and Methodology	No materials and methods are shown, or they're largely missing.	A summarized materials and equipment list is shown. A summarised methodology is shown, but does not include a diagram of the setup used	A concise, summarized materials and equipment list is shown. A clear diagram, photo or drawing of the setup is shown but this lacks in labels or annotation. A summarized method is given which includes most key points.	A concise, summarized materials and equipment list is shown. A clear diagram, photo or drawing of the setup is shown with correct labels using scientific words. A summarized method is given which includes all key points, in such a way that it allows the presenter to easily explain how the investigation was conducted.
5. Health and Safety considerations	The students have not considered the health and safety aspects of their investigation	Some basic health and safety considerations are stated. No attempt is made to show how these risks will be managed.	Most health and safety considerations are stated with some idea of how risks can be managed.	Full health and safety consideration is shown; it is clear WHAT needs to be considered, HOW the risk can be minimized or avoided, and WHAT should be done in case of an accident or spill.
	Insufficient	Satisfactory	Good	Excellent
6. Link to Sustainability	No ecological and/or environmental considerations are given.	Ecological and environmental considerations are shown, but they are limited to a few simple statements.	Ecological and environmental considerations are described, with some ideas outlined how these minimize the impact on the environment.	Full ecological and environmental considerations are discussed. Students clearly indicate how they minimize the impact on the environment of their experiment. Students correctly outline how to deal with waste generated by their experiments.

7. Raw Data and Calculations	<p>Raw data is presented in a table, but in such a way that understanding is difficult.</p> <p>Calculations were used in the investigation, but they are not shown on the poster.</p>	<p>Most raw data is presented in a table, but some elements may be missing (units, headings etc).</p> <p>If calculations have been used, the results are shown but no sample calculation is given.</p>	<p>Complete and full raw data is shown in a correct, yet concise raw data table.</p> <p>If calculations are used in the investigation, then a clear sample calculation is shown.</p>	<p>Complete and full raw data is shown in a correct, yet concise raw data table.</p> <p>If calculations are used in the investigation, then a clear and logical sample calculation is shown.</p>
8. Data processing and presentation	<p>Data processing and a graph are shown but contain large errors or are largely unclear.</p>	<p>Data processing and graphs are present but contain minor mistakes or do not include correct labels or axes.</p>	<p>Processed data is shown but could be presented more concisely.</p> <p>A correct graph is drawn that allows for analysis of the data and enables the research question to be answered completely. This includes the correct choice of scatter plot (including trend line) or bar</p>	<p>Processed data is shown. As much as possible, this data has been collated together with the raw data, in the same table.</p> <p>A correct graph is drawn that allows for analysis of the data and enables the research question to be answered completely. This includes a correct choice of scatter plot (with trendline) or bar graph (with error bars).</p>
9. Data interpretation	<p>A description of the trends in the data is stated, but this contains inaccuracies.</p>	<p>There is some attempt made to describe any of the trends shown in the data, but this does not cover all key points.</p>	<p>A summarized interpretation of the data (graph) is written. This allows the presenter to detail most of the key points from the graph.</p>	<p>A summarized interpretation of the data (graph) is written, in such a way that it easily allows the presenter to highlight all key points that can be deduced from the graph.</p>
10. Discussion of results	<p>The results of the investigation are not discussed in a way that allows for any key points to be determined from the data.</p>	<p>The results of the investigation are briefly discussed in such a way as to allow some key points to be interpreted, but these are not all encompassing.</p>	<p>A summarized discussion of the results is written that allows the presenter to demonstrate most of the key points that can be interpreted from the investigation</p>	<p>A summarized discussion of the results is written, in such a way that it easily allows the presenter to discuss and interpret all key points that can be inferred from the investigation.</p>

11. Conclusion	The conclusion relates somewhat to the hypothesis	The conclusion relates to the hypothesis but does not explain what was learnt from the research.	The conclusion relates to the hypothesis and explains partially what was learnt from the research.	The conclusion is clear, concise, relates to hypothesis and explains what was learnt from the experiment.
	Insufficient	Satisfactory	Good	Excellent
12. Visualization and Communication	<p>Students have not included relevant visuals in their poster.</p> <p>The setup of the poster is confused and does not all for all of the key points of the investigation to be understood.</p>	<p>Students have included some relevant visuals which somewhat increase the appeal of the poster but do not necessarily aid understanding.</p> <p>The setup of the poster contains all of the key points of the investigation, but not in a way that is easily understandable.</p>	<p>Students have included some relevant visuals, which increase the appeal of the poster, however these do not necessarily improve understanding of the work presented.</p> <p>The setup of the poster allows for the majority of the key points to be easily understood.</p>	<p>Students have included various relevant visuals, which successfully increase the appeal of the poster, and aid in the understanding of the investigation and presentation.</p> <p>The setup of the poster makes that the key points such as goal, proceedings, and outcomes of the investigation are easily understood.</p>
13. Sources and Bibliography	No, or very few sources are stated	Most sources are shown on the poster, including hyperlinks.	<p>All relevant sources are stated at the end of the report, with correct hyperlinks.</p> <p>In addition, the student has attempted to use in-line research citations to make referencing more clear.</p>	<p>All relevant sources are stated at the end of the report, in a properly numbered list, with working hyperlinks to online sources.</p> <p>The student has correctly used the numbered sources for in-line citations to make referencing more clear. This includes sources for pictures and graphs, a.o</p>
13 x 4 = 52				

SECTION 2: PRESENTATION - Individual Mark X/30**3 x 10 = 30**

	Insufficient-2	Satisfactory-5	Good-7	Excellent-10
1. Clarity of presentation	<p>The presentation given is unclear.</p> <p>The student consistently speaks at a tempo that inhibits understanding of the work.</p> <p>There is consistent hesitation when answering questions.</p> <p>The notes or poster is consistently used as a crutch for the student to refer back to.</p>	<p>The oral presentation of the work is relatively clear.</p> <p>There are some changes to the tempo of the student's speech and hesitation when answering questions.</p> <p>The student uses their notes/poster as a minor reference point.</p>	<p>The oral presentation of the student's work is mostly clear.</p> <p>There are minor fluctuations in the tempo of the student's speech and minimal hesitation when answering questions.</p> <p>The student refers to their notes/poster sparingly while presenting.</p>	<p>The student gives a clear oral (spoken) presentation of their work.</p> <p>The tempo of their speech is good and consistent.</p> <p>There is no hesitation in their answers to questions.</p> <p>The student does not overly rely on their notes/poster as a reference point for their presentation.</p>
2. Understanding of the topic and underlying science	<p>Students can state the science used as it is shown in their work, there is no knowledge shown of any wider understanding.</p>	<p>Students are able to clearly describe the science used in their investigation but cannot give any further insight into this.</p>	<p>Students can provide some additional information to that which is provided on their poster.</p> <p>This is mainly relevant to the work that has been carried out.</p>	<p>Students are able to elaborate upon the scientific concepts displayed in their work and add additional context to the work and research that has been carried out while remaining relevant.</p>
3. Knowledge of the work performed and presented	<p>Students are only able to describe the results of their investigation by using the notes/poster as reference.</p>	<p>Students can describe the results shown in their work but cannot explain the trends shown.</p> <p>The poster/notes are used to remind students of this at regular points.</p>	<p>Students are able to describe and explain the results of their experiment with minimal reference to the data as it is shown.</p>	<p>Students are able to discuss the results of the investigation freely without referring back to the poster or notes, showing that they were an active participant in the investigation process.</p>

SECTION 3: Evaluation - Individual Mark X/18**2 x 9 = 18**

	Insufficient-2	Satisfactory-5	Good-7	Excellent -9
1. Reflection on the scientific process	<p>Students have identified the topic of their investigation and the results but have not linked this to accepted scientific context.</p> <p>The student has stated very few strengths or weaknesses of the experiment .</p> <p>No further continuations are mentioned.</p>	<p>Students are able to state what their project was and give an overview of their results with an attempt at describing the scientific context of the investigation (but this is not wholly correct)</p> <p>The student has identified some strengths and weaknesses of the investigation.</p> <p>A continuation to the investigations is suggested.</p>	<p>Students are able to clearly describe the nature of their project with regard to the experimental process, their results and mostly correct scientific context of their work.</p> <p>Most strengths and weaknesses of the student's work are clearly described</p> <p>Some suggestions for improvements and continuation of the student's work are identified and described.</p>	<p>Students are able to clearly and concisely explain the nature of their project with regard to the experimental process, their results and the correct scientific context of their work.</p> <p>Strengths and weaknesses of the student's work are clearly identified and explained.</p> <p>Suggestions for improvements and continuation of the student's work are clearly identified and discussed fully.</p>
2. Reflection on cooperation (Relationships and Responsibility)/ Core values	<p>The student is able to identify the work they contributed to the project.</p> <p>The student criticizes the contributions of their partner.</p>	<p>The student states the work that they contributed to the project but is only able to state the superficial areas of improvement.</p> <p>The student identifies areas of improvement in their partner's work.</p>	<p>The student is able to describe their own role within the group and identifies some areas that could have improved upon.</p> <p>The student acknowledges the contributions of their teammates and gives some feedback as to how the overall group dynamic and workload could be improved, but this is not constructive.</p>	<p>The student is able to give a clear explanation as to their own role within the group and reflects well on how THEY worked and what they could have improved upon.</p> <p>The student acknowledges the contributions of their teammates and gives constructive feedback as to how the overall group dynamic and workload could be improved.</p>