

Science & Engineering Fair Project Rubric 2018

Student→ The following sheet was used by the judges as they reviewed your project. They were asked to either check off boxes in the rubric, **OR** give thorough comments at the bottom.

Some judging teams used the numbers to score/rank the projects.

Please use this as a way to better understand the results of your placement in your category.

Engineering Applications - Sr
Project Number: **S0825** *Judging Group:* -
Student Name(s): Riley Furlong
 Benjamin Karni
 Shrayes Raman

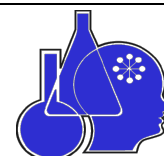
Project Title: Portable Automatic Tourniquet System

School: Santa Monica High School
Site Coordinator: Breanna Snyder

Topic	4	3	2	1
Introduction (I)/ Experimental Question (EQ) & Hypothesis (H) <i>(H may not be present in all projects)</i>	<input type="checkbox"/> It has an original, detailed EQ that clearly outlines the experiment. <input type="checkbox"/> H (where appropriate) is clearly stated and based on research. <input type="checkbox"/> The purpose of the investigation, answers a specific question.	<input type="checkbox"/> It has an EQ that outlines the experiment. <input type="checkbox"/> H (where appropriate) is clearly stated.	<input type="checkbox"/> The EQ is the same as published by another source; lacks originality. <input type="checkbox"/> H is based on assumptions, lacks a review of research.	<input type="checkbox"/> The EQ does not overview the experiment. <input type="checkbox"/> H is not related to the EQ; student lacks understanding of experiment and expected results.
Background Research/ Exploration	<input type="checkbox"/> Research has been done on the scientific process that is being manipulated in the experiment. <input type="checkbox"/> Evidence of a bibliography is present, written in proper format.	<input type="checkbox"/> Research has been done on the topic of the experiment. <input type="checkbox"/> Evidence of a bibliography is present.	<input type="checkbox"/> Minimal research has been done. <input type="checkbox"/> Student lacks understanding of the experimental topics. <input type="checkbox"/> Bibliography may be present.	<input type="checkbox"/> Lacks evidence of research related to the topic of the experiment. <input type="checkbox"/> No bibliography is present.
Procedure/ Materials & Methods	<input type="checkbox"/> Detailed ORIGINAL procedure written to allow an outsider to understand all steps that were taken in the experiment. (This includes explanation of the variable, data collected, number of trials, disposal methods, if necessary, and all tools that were used.)	<input type="checkbox"/> The procedure is written to allow an outsider to understand steps that were taken in the experiment. (This includes explanation of the variable, data collected, and all tools that were used.)	<input type="checkbox"/> The procedure is the same as published by another source; lacks originality.	<input type="checkbox"/> The procedure is very brief and does not allow another reader to fully understand what was done during the experiment.
Data/ Results <i>*Some projects do not use graphs with data.</i>	<input type="checkbox"/> Appropriate qualitative and/or quantitative data has been collected. <input type="checkbox"/> Data is clear and understandable. <input type="checkbox"/> Sample size and number of trials are appropriate for the subject. <input type="checkbox"/> Graphs/data/and tables are appropriately used. <input type="checkbox"/> Data is appropriately labeled. <input type="checkbox"/> Grade appropriate data presentation.	<input type="checkbox"/> Both qualitative and quantitative data has been collected. <input type="checkbox"/> Multiple trials have been conducted. <input type="checkbox"/> Graphs are present of trials and averages. <input type="checkbox"/> These graphs include key parts of a graph and a caption.	<input type="checkbox"/> Only one kind of data has been collected. <input type="checkbox"/> Limited trials have been conducted. <input type="checkbox"/> Student has a graph of their data.	<input type="checkbox"/> Minimal data has been collected. <input type="checkbox"/> Only one trial has been completed. <input type="checkbox"/> Graphs are misleading, they do not have equivalent spans, lacking key information.
Conclusions/ Student Understanding	<input type="checkbox"/> Analysis is thorough and grade appropriate. <input type="checkbox"/> Student has drawn conclusions based on their experiments and research. <input type="checkbox"/> Student is able to discuss the results and cite the data that has been collected. <input type="checkbox"/> The student is able to discuss if/when the research and data match or not. <input type="checkbox"/> Student has further questions and research ideas. <input type="checkbox"/> Depth of understanding is present.	<input type="checkbox"/> Student has drawn conclusions based on the experiments. <input type="checkbox"/> They are able to discuss the results and cite the data that has been collected. <input type="checkbox"/> Student has further questions and research ideas.	<input type="checkbox"/> Student has drawn conclusions based on the experiments. <input type="checkbox"/> Student is able to discuss the results and cite the data that has been collected.	<input type="checkbox"/> Student has difficulty discussing the experiment and results. <input type="checkbox"/> Student does not make connections between results and research.

You did a great job with the following items.

- You did a wonderful job presenting yourself and your information.
- Your board flows nicely and is easy to read.
- Your logbook/original data was present.
- Additional materials were present in front of the board and helped with your discussion and our understanding.
- As a team, there is/was evidence that all members contributed equally to the project. {Team projects only.}



Additional comments from the judges.

Judge Initials: _____