

## BAY AREA SCIENCE AND ENGINEERING FAIR MERIT JUDGING FORM 2022

**NOTE: Merit judges will receive assigned student projects electronically and submit their project scores through a secure link. Every effort will be made to have each project evaluated by 4 experienced merit judges.**

### Evaluation Criteria Score

Criterion 1 – Scientific thought ( <i>PDF files as outlined</i> )	/50
Criterion 2 – Abstract	/10
Criterion 3 – Display ( <i>Power Point or Backboard or slide show</i> )	/10
Criterion 4 – Video ( <i>replacing the traditional interview</i> )	/20
Criterion 5 – Journal/Diary	/10
TOTAL Score	/ 100

## CRITERIA 1 – SCIENTIFIC THOUGHT

**Refer to rubric below to determine the level of the project by matching the description with the project.**

<p>Select whether the project is either an experiment, study, or innovation.</p> <p>- <b>Experiment</b> Investigation undertaken to test one or more hypotheses.</p> <p>- <b>Study</b> A collection and analysis of data showing evidence of a correlation, or pattern of scientific interest.</p> <p>- <b>Innovation</b> The development and evaluation of models or innovative devices, using approaches from the field of technology or engineering.</p> <p><b><u>Judges will consider the Full Project Report as well as the overall impression after viewing all files submitted.</u></b></p> <p>Information included in the formal report :</p> <ul style="list-style-type: none"> <li>○ Introduction/Background and purpose</li> <li>○ Hypothesis/question</li> <li>○ Materials and methods</li> <li>○ Data and results</li> <li>○ Conclusions/Analysis</li> <li>○ Acknowledgments</li> <li>○ References</li> </ul> <p><b><u>Full Project Report – Maximum 25 pages</u></b> (judges will note reports that exceed this page limit when submitting your final marks)</p> <p><b>NOTE Optional</b> - additional background information, surveys and other supporting documents can be included as separate APPENDICES.</p>	<p><b>Level 1</b> (acceptable)</p> <p><b>Level 2</b> (fair)</p> <p><b>Level 3</b> (good)</p> <p><b>Level 4</b> (excellent)</p> <p style="text-align: right;"><b>RATING: /50</b></p>
--	---

<b>SCIENTIFIC THOUGHT (maximum 50)</b>				
<b>Definition</b>	<b>Level 1 (acceptable)</b>	<b>Level 2 (fair)</b>	<b>Level 3 (good)</b>	<b>Level 4 (excellent)</b>
<p><b>Experiment</b></p> <p>Investigation undertaken to test one or more hypotheses.</p>	Duplication and reporting of an experiment to test a previously confirmed hypothesis.	Extension of a known experiment through modification of its procedure, data collection, analysis or application.	A new approach to the design, modification or application of an existing experiment with control of some variables.	A new experimental approach to a research problem in which most of the significant variables are controlled.
<p><b>Study</b></p> <p>A collection and analysis of data showing evidence of a correlation, or pattern of scientific interest.</p>	Study and presentation of printed material related to the basic issue.	Study of material collected through compilation of, or expansion of, existing data. The study attempts to address a specific issue.	Study based on new observations and research of a previously studied topic. Appropriate analysis of data and correlations made.	A new approach to the study of a problem which correlates information from a number of sources. The report also offers new insights or solutions to the problem.
<p><b>Innovation</b></p> <p>The development and evaluation of models or innovative devices, using approaches from the field of technology or engineering.</p>	Building models or other devices that duplicate existing technology; minimal reporting	Make improvement to an existing technology or use an existing technology for new applications.	Design and build an innovative adaptation of an existing technology for a new application.	Build a novel technology or integrate technologies to form an innovative system that has commercial or human benefit.
<p><b>Score out of a possible 50 marks.</b></p>	20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35	25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40	30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

**CRITERIA 2 – ABSTRACT**

<ul style="list-style-type: none"> <li>• Does the abstract contain all aspects of the project?</li> <li>• Is the information concise, complete, and accurate?</li> <li>• Is the abstract well written? (grammar, syntax and spelling)</li> </ul> <p><b><u>Maximum 2 pages.</u></b></p>	<p><b>RATING: /10</b></p>
--	---------------------------

**CRITERIA 3 – DISPLAY – Backboard or Power point or Slide show presentation**

<ul style="list-style-type: none"> <li>• Is the content clearly and logically presented?</li> <li>• Does it capture attention?</li> <li>• Does it have impact?</li> <li>• Is there good balance and use of contrasts?</li> <li>• Does it contain visuals as well as text?</li> <li>• Is workmanship neat and carefully done – no spelling or grammatical errors?</li> <li>• Are colours strong and suitable?</li> <li>• Does it summarize all the important facts?</li> <li>• Is the layout complete, logical and self-explanatory?</li> </ul>	<p><b>RATING: /10</b></p>
--	---------------------------

**CRITERIA 4 – VIDEO**

<ul style="list-style-type: none"> <li>• Is the project well explained/ summarized?</li> <li>• Does the student(s) speak about things not included in the abstract and report?</li> <li>• Is the student(s) speaking clearly and slowly so they can be easily understood?</li> </ul> <p><b><u>Maximum 8 minutes</u></b></p>	<p><b>RATING: /20</b></p>
---	---------------------------

**CRITERIA 5 – JOURNAL/ PROJECT DIARY**

<p>Does the journal/ diary or logbook show evidence of:</p> <ul style="list-style-type: none"> <li>• Initial brainstorming on possible problems/questions to explore</li> <li>• Planning</li> <li>• How and when the work was done and data collected</li> <li>• Any obstacles and problems encountered</li> </ul> <p><b>Optional</b> – student(s) may include sample data taken and photos of experiments in progress</p>	<p><b>RATING: /10</b></p>
--	---------------------------

**Overall Impressions:** Please add any comments or impressions that you have about the project,

which you found particularly compelling.

**Areas for Improvement:** Explain how the participants could have scored higher. Your comments may be used to provide feedback to the judging committee and to participants who ask for tips to improve a project.

