Bay Area Science & Engineering Fair Merit Judging Form 2024

Judge's Name:	Project ID:	*Total Score* / 100

Criterion 1 – Scientific Thought *45 Points Available* First, select whether the project is either an experiment, study, or innovation. Refer to rubric below to determine the level of the project by matching the description with the project.	*Score* / 45

Experiment Investigation undertaken to test one or more hypotheses.	**Innovation** The development and evaluation of models or innovative devices using approaches from fields of technology or engineering.	**Study** A collection and analysis of data showing evidence of a correlation, or pattern of scientific interest.	**Score** (*Circle One*)
Below Level 1 – Low			
Does not adequately meet the Level 1 criteria.	Does not adequately meet the Level 1 criteria.	Does not adequately meet the Level 1 criteria.	15 16 17 18 19 20
Level 1 – Acceptable			
Duplication and reporting of an experiment to test a previously confirmed hypothesis.	Building models or other devices that duplicate existing technology; minimal reporting	Study and presentation of printed material related to the basic issue	21 22 23 24 25 26
Level 2 – Fair			
Extension of a known experiment through modification of its procedure, data collection, analysis or application.	Make improvement to an existing technology or use an existing technology for new applications.	Study of material collected through compilation of, or expansion of, existing data. The study attempts to address a specific issue.	27 28 29 30 31 32
Level 3 – Good			
A new/modified approach to the design, or application of an existing experiment with control of some variables.	Design and built an innovative adaptation of an existing technology for a new application.	Study based on new observations and research of a previously studied topic. Appropriate analysis of data and correlations made.	33 34 35 36 37 38
Level 4 – Excellent			
A new experimental approach to a research problem in which most of the significant variables are controlled.	Built a novel technology or integrate technologies to form an innovative system that has commercial or human benefit.	A new approach which correlates information from a number of sources. The report also offers new insights or solutions to the problem.	39 40 41 42 43 44 45

Criterion 2 – Student Engagement *5 Points Available* This criterion assesses the extent to which the student(s) engages with the project and makes it their own. Personal engagement may be recognized by how students address their personal interests, show evidence of independent motivation, thinking, creativity or initiative in the designing, implementation and presentation of the investigation.	*Score* / 5

• Is it evident that the student(s) have gained a deeper understanding of the topic? • Does the student(s) show passion for their topic?	*Circle the number of points awarded.*	0 1 2 3 4 5

Criterion 3 – Scientific Communication *50 Points Available* This criterion assesses whether the investigation is presented in a way that supports effective communication of the focus, process, and outcomes. It is based on four elements: formal project report (includes abstract), project display, evidence of organized record keeping (logbook/notebook/diary/ journal), and the judging interview. See below for indicators of levels for all subcategories in Criterion 3.	*Score* **50**
Below Level 1 – Low	
Does not adequately meet the Level 1 criteria.	
Level 1 – Acceptable	
Most or all the elements are simple or incomplete. There is little evidence of attention to effective communication. Most pieces require clarification or further explanation, or most of the material is redundant. Cited sources are insufficient or of poor quality. In a pair project, one member dominates the interview.	
Level 2 – Fair	
Some of the elements are simple or incomplete, but there is evidence of student attention to communication. A number of pieces may require clarification or explanation or there may be considerable redundant material. Sources are almost entirely web-based. In a pair project, one member may have made a stronger contribution in the interview.	
Level 3 – Good	
All elements are complete and demonstrate attention to detail. All parts are well thought out and executed. Some further explanation may be required or there may be some redundant material. A few sources beyond web-based articles were used. In a pair project, both members contributed to the interview.	
Level 4 – Excellent	
All elements are complete and excellently presented. The display is informative and clearly written. Visual elements, including graphs are appropriate and clearly designed. The references extend beyond web-based articles. Records are organized and thorough. The oral presentation is logical and engaging. In a pair project, both members contribute to the interview.	

Criterion 3A – Oral Communication (Interview)	*Circle the number of points awarded.*	
In your conversation with the student(s): (20 Points Available) • Is the project well explained/ summarized? • Can they clearly articulate the scientific process and use appropriate scientific language? • Can they speak about things not included in the abstract and report? • Do they identify a practical application for their work? • Can they answer questions about their project coherently and show a strong understanding of their work? • Can they suggest and explain how to improve, extend and/or change their investigation?	*Below Level 1 – Low:*	8 9 10
	Level 1 – Acceptable:	11 12 13
	Level 2 – Fair:	12 13 14
	Level 3 – Good:	15 16 17
	Level 4 – Excellent:	18 19 20

Criterion 3B – Written Communication (Formal Report, Display, Journal/Diary)	*Circle the number of points awarded.*	
<u>Formal Report</u> (15 Points Available) Does the information included in the formal report contain: • Introduction/background and purpose; hypothesis/research question; materials and methods; data and results; conclusions/analysis; acknowledgements; references? Does the abstract: • Summarize the project in a complete, concise, and accurate manner?	*Below Level 1 – Low:*	5 6 7
	Level 1 – Acceptable:	7 8 9
	Level 2 – Fair:	9 10 11
	Level 3 – Good:	11 12 13
	Level 4 – Excellent:	13 14 15
<u>Display</u> (10 Points Available) • Is the content clearly and logically presented? • Does it summarize all the important facts? • Is the layout complete, logical and self-explanatory? • Does it capture attention and have impact? Is there good balance and use of contrasts? • Does it contain visuals as well as text? Are graphs and tables properly formatted? • Is workmanship neat and carefully done: no spelling or grammatical errors?	*Below Level 1 – Low:*	3 4
	Level 1 – Acceptable:	5 6
	Level 2 – Fair:	6 7
	Level 3 – Good:	7 8
	Level 4 – Excellent:	9 10
<u>Journal/Diary</u> (5 Points Available) Does the journal/ diary or notebook show evidence of: • Initial brainstorming on possible problems/questions to explore? • Experimental planning and a record of how/when the work was done? • A record of data collected? • Any obstacles and problems encountered?	*Below Level 1 – Low:*	1
	Level 1 – Acceptable:	2
	Level 2 – Fair:	3
	Level 3 – Good:	4
	Level 4 – Excellent:	5

BASEF	**Bay Area Science & Engineering Fair Merit Judging Form 2024**	Judge's Name:	Project ID:

Judges' Comments

Use this section to jot down notes about the project. Please consider the following:

Overall Impressions– *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.*

Remember– *All judges' marks must be kept confidential. However, BASEF may choose to share your comments with the student(s) to celebrate their work or help them identify areas of improvement.*