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|---|---|---|---|---|
| BASEF | **Bay Area Science & Engineering Fair Merit Judging Form**<br>**Judge:** | **Project ID:** | **Division:**<br>**Student(s):** | **Total Score** / 100 |
| **Scoresheet #** | | | **Project:** | |

**Criterion 1 – Scientific Thought** *45 Points Available*

First, select whether the project is either an experiment, study, or innovation (*see* Judges' Reference Sheet).
Use the rubric below to determine the appropriate level rating of the project, then select a score within that level.

*Score* / 45

| **Experiment** | **Innovation** | **Study** | *Circle the number of points awarded.* |
|---|---|---|---|
| *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. | Build/integrate a novel technology 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 (self-directed) motivation, thinking, creativity or initiative in the design, 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. Evidence is collected based on four elements: the judging interview, the project report, the project display, and the student's journal/diary. Determine the appropriate level rating (*see* Judges' Reference Sheet) of each sub-criterion, then select a score within that level.

*Score* ____ / **50**

**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 Communications** *Circle the number of points awarded.*

Formal Report *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 |

Display *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 appropriately 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 |

Journal/Diary *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 |

**Judges' Comments** *Use this space to jot down notes about the project. Please use a separate page if needed.*

**Bay Area Science & Engineering Fair Merit Judging Form 2025**

# Judges' Reference Sheet

**Add together the "scores" from the Criteria 1–3 headings and transfer this sum into the "Total Score" square at the top of the page.**

**Criterion 1 – Scientific Thought** *45 Points Available*

First, select whether the project is either an experiment, study, or innovation (*see* Judges' Reference Sheet).
Use the rubric below to determine the appropriate level rating of the project, then select a score within that level.
**Write the circled "number of points awarded" in the square marked "Score" in the Criterion 1 heading.**

| **Experiment** | **Innovation** | **Study** |
|---|---|---|
| Investigation undertaken to test one or more hypotheses. | The development and evaluation of models or innovative devices using approaches from fields of technology or engineering. | A collection and analysis of data showing evidence of a correlation, or pattern of scientific interest. |

**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 (self-directed) motivation, thinking, creativity or initiative in the design, implementation and presentation of the investigation.
**Write the circled "number of points awarded" in the square marked "Score" in the Criterion 2 heading.**

This section is designed to capture judges' subjective impressions of students and their projects that are not already assessed in the other two criteria.

**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. Evidence is collected based on four elements: the judging interview, the project report, the project display, and the student's journal/diary. Determine the appropriate level rating (*see* Judges' Reference Sheet) of each sub-criterion, then select a score within that level.
**Add together the "number of points awarded" in each sub-criterion in this section, then write this sum in the square marked "Score" in the Criterion 3 heading.**

| |
|---|
| *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. Figures/tables are missing or do not appropriately present results. 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. Some tables/figures are used to present results, but they do not add much clarity. 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 figures and tables appropriately present results. Some further explanation may be required or there may be some redundant material. A few (scholarly) 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 are appropriate and clearly designed. Figures and tables are used to succinctly and appropriately present results. The references extend beyond web-based articles to scholarly sources. Records are organized and thorough. The oral presentation is logical and engaging. In a pair project, both members contribute to the interview. |

**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 (see reverse for more information).* |

***Judges' Comments, Continued…***

**Submitting anonymous feedback to student regarding their projects:**

We ask that you share two to three of your comments about each of the projects you judged. Please acknowledge what was done well and provide constructive suggestions for improvement or future work. The students will receive your comments following the Awards Ceremony. Your comments and suggestions will be invaluable to those students moving on to the Canada Wide Fair and ISEF.

When you input each project's grades into the BASEF computer at the end of the day, a form will be available you to provide your feedback: one form per project. We will also provide a form where you can relay general feedback to BASEF regarding any aspect of judging or the Fair.

**Sample comments from previous years:**

*Areas for Improvement:*

- Define or focus the purpose of your project more clearly.
- Try to find methods that are more quantitative so you can use statistical analysis.
- As a scientific project, it would be helpful to carry out some comparison between your method and existing methods.
- Larger font size on your display would make the text easier to read.
- The flow of information on your display board was confusing.
- Slow down in your oral presentation.
- In the future, a bigger sample size would improve your analysis.
- What does the scientific literature say?

*Strengths:*

- You were well spoken and knowledgeable about the content of the project.
- Well organized and clearly presented.
- The use of multiple trials showed excellent application of the scientific method.
- Your presentation was concise and reflected an application of the results.
- The idea was creative and innovative.
- You demonstrated a clear and thorough and good understanding of the topic.
- You have a solid grasp and understanding of your experiment.