Preliminary Judging Rubric

Adopted February 2024



Judging Criteria – 2024 Preliminary

• Introduction and Background 10%

- Provides an intro that begins with general information leading up to the area of their project.
- Student understands how their research is relevant in their area of study or the world.

• **Problem Statement / Goals / Hypothesis** 15%

- Student clearly explained the goals or purpose of the research.
- Explains how the goal addresses a problem or gap in understanding.

• Methods / Materials 15%

- Explains method of scientific work.
- A clear plan was shown and variables were identified.
- If controls were necessary, appropriate controls were selected.
- Sample size was appropriate.
- If appropriate, prototype solutions were developed.
- If using a survey, the questions adequately addressed the problem.

• **Results / Analysis / Discussion** 15%

- Student clearly and adequately explained the results of their work and understands the relationship of the results with respect to the goals.
- Sufficient data was presented to support the conclusion. If applicable, statistical analysis was used properly.
- Student was able to explain method of analysis, including statistical analysis.
- Student interpreted the data in a way that is consistent with the original hypothesis / problem statement.
- If applicable: Solution provides improvement or alternative to existing product or designs.
- If applicable: Solution was tested for performance.



Judging Criteria – 2024 Preliminary

• **Conclusion / Application / Future Research** 15%

- Sound conclusions were made based on the data / schematics presented.
- Project was carried out to completion within the scope of the original intent.
- The student provided possible applications of their work.
- Demonstrated a clear direction for further study in the area of research.

• Novelty / Creativity 15%

- A creative project demonstrates imagination and inventiveness.
- Such projects often offer different perspectives that open up new possibilities or new alternatives.
- The project demonstrates considerable creativity in one or more of the following criteria: research question, design and methods, or execution (prototype development, data collection, analysis or interpretation).

• **Quality of Materials** 15%

- The display slides demonstrate an organized scientific approach.
- Slides clearly showed the data that was presented in identifiable tables and or figures.
- Slides clearly presented the specific goals or specific purpose of research study.
- Text was clearly visible with readable formatting.
- Information was organized in a way that enhanced the presentation of the student's research.



Finalist Judging Rubric

Adopted February 2024



Judging Criteria – 2024 Finalist

• Introduction and Background 10%

- Provides an intro that begins with general information leading up to the area of their project.
- Student understands how their research is relevant in their area of study or the world.

• **Problem Statement / Goals / Hypothesis** 10%

- Student clearly explained the goals or purpose of the research.
- Explains how the goal addresses a problem or gap in understanding.

• Methods / Materials 10%

- Explains method of scientific work.
- A clear plan was shown and variables were identified.
- If controls were necessary, appropriate controls were selected.
- Sample size was appropriate.
- If appropriate, prototype solutions were developed.
- If using a survey, the questions adequately addressed the problem.

• **Results / Analysis / Discussion** 15%

- Student clearly and adequately explained the results of their work and understands the relationship of the results with respect to the goals.
- Sufficient data was presented to support the conclusion. If applicable, statistical analysis was used properly.
- Student was able to explain method of analysis, including statistical analysis.
- Student interpreted the data in a way that is consistent with the original hypothesis / problem statement.
- If applicable: Solution provides improvement or alternative to existing product or designs.
- If applicable: Solution was tested for performance.



Judging Criteria – 2024 Finalist

• **Conclusion / Application / Future Research** 10%

- Sound conclusions were made based on the data / schematics presented.
- Project was carried out to completion within the scope of the original intent.
- The student provided possible applications of their work.
- Demonstrated a clear direction for further study in the area of research.

• Novelty / Creativity 10%

- A creative project demonstrates imagination and inventiveness.
- Such projects often offer different perspectives that open up new possibilities or new alternatives.
- The project demonstrates considerable creativity in one or more of the following criteria: research question, design and methods, or execution (prototype development, data collection, analysis or interpretation)

• **Quality of Presentation** 10%

- Student presented the material in a clear and organized manner.
- Student demonstrate enthusiasm in the presentation of their research.

• Student Understanding 15%

- Student demonstrated understanding of the project.
- Student clearly explains all aspects of the project.

• **Display Organization** 10%

- The display demonstrates an organized scientific approach.
- Display clearly showed the data that was presented in identifiable tables and or figures.
- Display clearly presented the specific goals or specific purpose of research study.
- Text was clearly visible with readable formatting.
- Information was organized in a way that enhanced the presentation of the student's research.



Elementary Judging Rubric

Adopted February 2024



Judging Criteria – 2024 Elementary

• **Problem Statement / Goals / Hypothesis** 15%

- Student clearly explained the goals or purpose of the research.
- Explains how the goal addresses a problem or gap in understanding.
- Methods / Materials 15%
 - Explains method of scientific work.
 - A clear plan was shown and variables were identified.
 - If controls were necessary, appropriate controls were selected.
 - Sample size was appropriate.
 - If appropriate, prototype solutions were developed.
 - If using a survey, the questions adequately addressed the problem.

• **Results / Analysis / Discussion** 15%

- Student clearly and adequately explained the results of their work and understands the relationship of the results with respect to the goals.
- Sufficient data was presented to support the conclusion. If applicable, statistical analysis was used properly.
- Student was able to explain method of analysis, including statistical analysis.
- Student interpreted the data in a way that is consistent with the original hypothesis / problem statement.
- If applicable: Solution provides improvement or alternative to existing product or designs.
- If applicable: Solution was tested for performance.



Judging Criteria – 2024 Elementary

• **Conclusion / Application** 15%

- Sound conclusions were made based on the data / schematics presented.
- Project was carried out to completion within the scope of the original intent.

• Novelty / Creativity 10%

- A creative project demonstrates imagination and inventiveness.
- Such projects often offer different perspectives that open up new possibilities or new alternatives.
- The project demonstrates considerable creativity in one or more of the following criteria: research question, design and methods, or execution (prototype development, data collection, analysis or interpretation)

• Quality of Presentation and Display 15%

- Student presented the material in a clear and organized manner.
- Student demonstrate enthusiasm in the presentation of their research.
- The display demonstrates an organized scientific approach.
- Display clearly showed the data that was presented in identifiable tables and or figures.
- Text was clearly visible with readable formatting.

• Student Understanding 15%

- Student demonstrated understanding of the project.
- Student clearly explains all aspects of the project.

