**Judge Scoring Rubric**

|  |  |  |
| --- | --- | --- |
| **Criteria for Technology Projects** | **Score** | **Criteria for Math Projects** |
| **Research Question*** Application of a Tech concept/s to a real world situation
* Definition of concepts that are needed in the application of this technology project
 |  | **Research Question*** Application of a math concept/s to a real world situation
* Definition of concepts and formulas that are needed in the application of this situation
 |
| **10 POINTS** |
| **Design and Methodology*** Understanding of the appropriateness of the computer application chosen based on the real-world problem that needs solving
* Clearly understand the processes involved in completing the chosen task
 |  | **Design and Methodology*** Understanding of appropriate concepts to use in your chosen real word situation
* Clear understanding of when during the application you are to use different concepts
 |
| **15 POINTS** |
| **Execution: Technological Proficiency*** Demonstrates proficiency in performing a complex computer task
* Program/Site/etc… works as intended
 |  | **Execution: Computational Accuracy*** Project demonstrates one or more math concepts
* Math work has been done correctly
* Correct units are applied to your chosen situation
 |
| **20 POINTS** |
| **Creativity*** Project demonstrates significant creativity in one or more of the above criteria
 |  | **Creativity*** Project demonstrates significant creativity in one or more of the above criteria
 |
| **20 POINTS** |
| **Poster Display*** Logical organization of materials
* Clarity of graphics and legends
* Supporting documents displayed
 |  | **Poster Display*** Logical organization of materials
* Clarity of graphics and legends
* Supporting documents displayed
 |
| **10 POINTS** |
| **Interview*** Clear, concise, thoughtful responses to questions
* Understanding of basic math relevant to project
* Understanding interpretation and limitations of results and conclusions
* Degree of Independence in conducting project
* Recognition of potential impact in science, society, and/or economics
* Quality of ideas for further research
* **For team projects, contributions to and understanding of project by all members**
 |  | **Interview*** Clear, concise, thoughtful responses to questions
* Understanding of basic math relevant to project
* Understanding interpretation and limitations of results and conclusions
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* **For team projects, contributions to and understanding of project by all members**
 |
| **25 POINTS** |
|  |  |  |
| **100 TOTAL POINTS POSSIBLE** |

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|  |  |  |
| --- | --- | --- |
| **Criteria for Science Projects** | **Score** | **Criteria for Engineering Projects** |
| **Research Question*** Clear and focused purpose
* Identifies contributions to the field of study
* Testable using scientific methods
 |  | **Research Question*** Description of a practical need or problem to be solved
* Definition of criteria for proposed solution
* Explanation of constraints
 |
| **10 POINTS** |
| **Design and Methodology*** Well-designed plan and data collection methods
* Variables and controls defined, appropriate and complete
 |  | **Design and Methodology*** Exploration of alternatives to answer need or problem
* Identification of a solution
* Development of a prototype/model
 |
| **15 POINTS** |
| **Execution: Data Collection, Analysis, and Interpretation*** Systematic data collection and analysis
* Reproducibility of Results
* Appropriate application of mathematical and statistical methods
* Sufficient data collected to support interpretation and conclusions
 |  | **Execution: Computational Accuracy*** Prototype demonstrates intended design
* Prototype has been tested in multiple conditions/trials
* Prototype demonstrates engineering skill and completeness
 |
| **20 POINTS** |
| **Creativity*** Project demonstrates significant creativity in one or more of the above criteria
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| **100 TOTAL POINTS POSSIBLE** |