

# Science & Engineering Fair Rubric

Scale 1-10 (10 = best)

20% - 1 - Question - Hypothesis / Problem Statement

**Science:** Question and hypothesis are clearly stated, appropriate for grade level, and original. Background research is excellent and appropriate for grade level. Information sources are reputable and credible. Grade level-appropriate bibliography is included.

**Engineering:** Problem statement is clear and original. Goals are clear and criteria are defined and measurable.

20% - 2 - Design & Procedures / Design & Materials

**Science:** Design is logical for supporting or refuting the hypothesis. Variables have clearly been considered and controlled. There is only one variable tested. Procedures were carried out with exemplary consistency and accuracy.

**Engineering:** Design is excellent and clearly described. Plans are provided and labeled. Materials were used appropriately.

20% - 3 - Data and Documentation/ Testing and Redesign

**Science:** Data collected is well matched to the purpose of supporting or refuting the hypothesis. Data is obviously sufficient in quantity and quality to support or refute the hypothesis. There is clear, complete and accurate documentation with all necessary information recorded consistently.

**Engineering:** Measures of performance were made with accuracy. Functionality fully tested. Complete and accurate records of testing and redesign were kept. Improvements needed were identified and made. Final design meets criteria for functionality.

20% - 4 - Discussion & Conclusions/ Evaluation

**Science:** Whether the hypothesis was supported or refuted is clearly and logically stated. Data was accurately interpreted. Conclusions are substantiated by data. Errors or problems are acknowledged and suggestions for improvement or further research are made.

**Engineering:** Utility, functionality and performance are addressed. Design flaws or problems are acknowledged and suggestions are made for further redesign.

20% - 5 - Interview/Display

**Science and Engineering:** Student is able to explain what they learned and clearly relate the process of experimentation or design. Student can interpret the data and explain how it supports the conclusion(s) and/or redesigns undertaken. Student can interpret the visual display of data. Student addresses the problems encountered, the mistakes that may have been made, and is able to make suggestions for further experiments or for additional redesign. The display is neat, organized well, and is visually polished within reasonable expectations for the student's grade level. (Do not give full points if it is evident that the display is not substantially the work of the student, with minimal adult assistance.)