### Criteria for Judging Engineering Projects

#### Creative Ability
- Questions asked
- Approach to solving problem
- Analysis of data
- Interpretation of data
- Use of equipment
- Construction or design of new equipment

**Total Points Awarded for Creative Ability (Maximum 30 Points)**

#### Engineering Goals
- Project has clear objective
- Objective is relevant to potential users needs
- Solution is workable, acceptable to potential user, and economically feasible
- Solution could be utilized successfully in design or construction of an end product
- Solution is a significant improvement over previous alternatives
- Solution has been test for performance under the conditions of use

**Total Points Awarded for Engineering Goals (Maximum 30 Points)**

#### Thoroughness
- Purpose carried out to completion within the scope of the original intent
- Problem was covered completely
- Conclusions based on a single experiment or replication
- How complete project notes are
- Student is aware of other approaches or theories
- Amount of time student spent on project
- Student is familiar with scientific literature in the studied field

**Total Points Awarded for Thoroughness (Maximum 15 Points)**

#### Skill
- Student has required laboratory, observational and design skills to obtain supporting data
- Location of project creation. Assistance received from parents, teachers, scientists, or engineers
- Student largely complete project alone or work under adult supervision
- Source of project equipment: Was it built independently? Was it obtained on loan? Was it part of the laboratory?

**Total Points Awarded for Skill (Maximum 15 Points)**

#### Clarity
- Student clearly discusses his/her project and explains the purpose, procedure, and conclusions
- Written material reflects the student’s understanding of the research
- Important phases of the project are presented in an orderly manner
- Clear presentation of data
- Clear presentation of results
- How well project display explains the project
- Presentation was done in a forthright manner, without tricks or gadgets
- Student performed all of the work, or student received help from someone else

**Total Points Awarded for Clarity (Maximum 10 Points)**

**Total Overall Score (Maximum 100 Points)**