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)