

Judging Criteria for Science Projects

- I. **Research Question (10 pts)**
 - a. clear and focused purpose
 - b. identifies contribution to field of study
 - c. testable using scientific methods
- II. **Design and Methodology (15 pts)**
 - a. well designed plan and data collection methods
 - b. variables and controls defined, appropriate and complete
- III. **Execution: Data Collection, Analysis and Interpretation(20 pts)**
 - a. systematic data collection and analysis
 - b. reproducibility of results
 - c. appropriate application of mathematical and statistical methods
 - d. sufficient data collected to support interpretation and conclusions
- IV. **Creativity (20 pts)**
 - a. project demonstrates significant creativity in one or more of the above criteria
- V. **Presentation (35 pts)**
 - Poster (10 pts)
 - a. logical organization of material
 - b. clarity of graphics and legends
 - c. supporting documentation displayed
 - Interview (25 pts)
 - a. clear, concise, thoughtful responses to questions
 - b. understanding of basic science to project
 - c. understanding interpretation and limitations of results and conclusions
 - d. degree of independence in conducting project
 - e. recognition of potential impact in science, society and/or economics
 - f. quality of ideas for further research
 - g. for team projects, contributions to and understanding of project by all members

Judging Criteria for Engineering Projects

- I. **Research Problem (10 pts)**
 - a. description of a practical need or problem to be solved
 - b. definition of criteria for proposed solution
 - c. explanation of constraints
- II. **Design and Methodology (15 pts)**
 - a. exploration of alternatives to answer need or problem
 - b. identification of a solution
 - c. development of a prototype/model
- III. **Execution: Construction and Testing(20 pts)**
 - a. prototype demonstrates intended design
 - b. prototype has been tested in multiple conditions/trials
 - c. prototype demonstrates engineering skill and completeness
- IV. **Creativity (20 pts)**
 - a. project demonstrates significant creativity in one or more of the above criteria
- V. **Presentation (35 pts)**
 - Poster (10 pts)
 - a. logical organization of material
 - b. clarity of graphics and legends
 - c. supporting documentation displayed
 - Interview (25 pts)
 - a. clear, concise, thoughtful responses to questions
 - b. understanding of basic science relevant to project
 - c. understanding interpretation and limitations of results and conclusions
 - d. degree of independence in conducting project
 - e. recognition of potential impact in science, society and/or economics
 - f. quality of ideas for further research
 - g. for team projects, contributions to and understanding of project by all members