

Judging Criteria for Experimental Projects

I. Purpose/Hypothesis (10 pts)

- ☐ clear and focused purpose with a creative approach used to answer the question
- ☐ contributes to field of study and is testable using scientific methods

II. Design and Methodology (15 pts)

- ☐ procedure is clear, including specific directions and metric units
- ☐ well-designed plan and data collection methods with complete material list
- ☐ variables and controls are defined, appropriate and complete

III. Execution: Data Collection, Analysis and Interpretation (30 pts)

- ☐ systematic data collection and analysis done quantitatively, precisely and related directly to the hypothesis
- ☐ results are reproducible
- ☐ appropriate application of mathematical and statistical methods
- ☐ sufficient data collected to support interpretation and conclusions (evidence of at least three trials and an overall average of those trials)
- ☐ data displayed graphically and correctly labeled
- ☐ clear statement that shows support of the hypothesis

IV. Creativity (10 pts)

- ☐ project demonstrates significant creativity in one or more of the above criteria
- ☐ project demonstrates imagination and inventiveness that offer different perspectives to new possibilities or new alternatives

V. Presentation (35 pts)

a. Poster (10 pts)

- ☐ logical organization of material with supporting documentation displayed
- ☐ clarity of graphics and legends

b. Interview (25 pts)

- ☐ clear, concise, thoughtful responses to questions
- ☐ understanding of basic science 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 and quality of ideas for further research