

Research Question (10 Points)

To what extent is quality and depth evident? Is there a clear and focused purpose? Has the student handled data properly, avoiding firm conclusions without having adequate proof? Does the investigation show a verification of laws or theories that help to clarify an understanding of scientific facts or principles? Does research show the background of the problem, its orderly analysis, its experimental approach, the collection, analysis of data, and the formation of logical conclusion?

Design & Methodology (15 Points)

What was the source of the idea or problem? Does the investigation show originality of concept or approach, or is it a copy of known experiments? Are the variables and controls defined, appropriate and complete? This does not mean that the entire project must be original, but ingenious approach or adaptation of materials should be noted. Collections can be considered as creative only when used to support an investigation or solution of a problem.

Engineering Goals: Does the project have a clear objective? Is it relevant to a potential user's needs? Is the solution workable? Economically feasible? Does the solution represent a significant improvement over previous alternatives? Has it been tested for performance under the conditions of use?

Execution (20 Points)

Consider how completely the problem has been covered in the project, along with the age and level of experience of the student. Does the project carry out purposes to completion within the scope of the original aims? Is there systematic data collection and analysis? Are the results reproducible? Is there appropriate application of mathematical and statistical methods? Was sufficient data collected to support interpretation and conclusions?

Creativity (20 Points)

Will a person with an average knowledge of science be able to comprehend the purpose, goals, or general conclusions of the project? How clear does the project display explain itself? Are guide marks, labels, and descriptions clearly presented and correctly spelled? Are all important phases of the investigation presented in a brief and orderly fashion?

Poster/Exhibit (10Points)

How attractive is the exhibit as compared to others in the same field? The exhibit should be dynamic and graphic in the presentation of the problem. The layout and results should be attractive and presented in a forthright manner. The use of "gadgets or cute things" which do not explain the project should not influence the judging.

Interview (25 Points)

Items to Consider during the interview: Student comprehension; Student poise and presentation; Explanation and Definition of terms. Present clear, concise, thoughtful responsive answers to questions. Understand the basic science relevant to project. Understand interpretation and limitations of results and conclusions. Consider the degree of independence in conducting research. Recognize the potential impact in science, society and/or economics. Consider the quality of ideas for future research.