



**\*\*PLEASE ALLOT EQUAL JUDGING TIME TO EACH STUDENT\*\***

**I. Creative Ability (30%)**

1. Does the project show creative ability and originality in the questions asked?
2. Creative research should support an investigation and help answer a question in an original way.
3. A creative contribution promotes an efficient and reliable method for solving a problem. When evaluating projects, it is important to distinguish between gadgeteering and ingenuity.

**II. Scientific Thought (30%)**

*If an engineering project, the more appropriate questions are those found in IIb. Engineering Goals*

1. Is the problem stated clearly and unambiguously?
2. Was the problem sufficiently limited to allow plausible approach?
3. Was there a procedural plan for obtaining a solution?
4. Are the variables clearly recognized and defined?
5. If controls were necessary, did the student recognize their need and were they correctly used?
6. Are there adequate data to support the conclusions?
7. Does the finalist or team recognize the data's limitations?
8. Does the finalist or team understand the project's ties to related research?
9. Does the finalist or team have an idea of what further research is warranted?
10. Did the finalist/team cite scientific literature, or only popular literature?

**II b. Engineering Goals (30%)**

1. Does the project have a clear objective?
2. Is the objective relevant to the potential user's needs?
3. Is the solution workable? Acceptable to the potential user? Economically feasible?
4. Could the solution be utilized successfully in design or construction of an end project?
5. Is the solution a significant improvement over previous alternatives?
6. Has the solution been tested for performance under the conditions of use?

**III. Thoroughness (15%)**

1. Was the purpose carried out to completion within the scope of the original intent?
2. How completely was the problem covered?
3. Are the conclusions based on a single experiment or replication?
4. How complete are the project notes?
5. Is the finalist/team aware of other approaches or theories?
6. How much time did the finalist or team spend on the project?
7. Is the finalist or team familiar with scientific literature in the studied field?

**IV. Skill (15%)**

1. Does the finalist/team have the required lab, computation, and design skills to obtain data?
2. Where was the project performed? What kind of assistance did the student receive?
3. Where did the equipment come from? Was it built, loaned, or part of a laboratory?

**V. Clarity (10%)**

1. How does the student discuss the project and explain the purpose, procedure and conclusions?
2. Does the written material reflect the student's understanding of the research?
3. Are the important phases of the project presented in an orderly manner?
4. Is the data and results presented clearly? Does the project display explain the project?