SCIENCE PROJECTS – Use as a guideline to determine if a presentation meets the necessary requirements.

Science Projects are judged on the following five criteria.

SCIENTIFIC THOUGHT

a) Does the student exhibit sufficient background understanding of the principles and concepts involved in the topic?
b) Is there a significant basic thought in the project? Is it clearly stated?
c) Does it admit formulation of an age-appropriate meaningful question?
d) Is the scope of the problem sufficiently limited to permit a meaningful experiment?
e) Is there a single formal hypothesis?

EXPERIMENTAL METHODS

a) Is the project well designed for the problem at hand?
b) Is the experiment basically sound, with sufficient sample size and control of variables?
c) Did the experiment have both a control group and experimental group(s) that were clearly defined?
d) Was the experiment conducted in a safe and accepted manner?
e) Does the procedure follow a logical sequence?
f) Have any original or ingenious materials or methods been used?
g) Were results measurable/quantifiable and done in metric?

ANALYTICAL APPROACH

a) Is the body of data sufficient to draw valid conclusions?
b) Do the conclusions refer back to the original question or hypothesis?
c) Is the student grouping the data properly to enable comparisons between groups?
d) Is the data fully used to draw conclusions?
e) Is he evaluating the significance of his own data properly?
f) Has the student thought about how his experiment could be improved if it were to be repeated? Is he aware of sources of error?
g) Is the student able to make suggestions for further researches related to his topic or perhaps see a practical application of his findings to the real world?

PRESENTATION

The presentation should, preferably, be in the form of a free talk employing good oral communication skills. The time restrictions in the rules necessitate planning and rehearsal.

a) Does the talk cover all the essentials of the project – the basic premises, the hypothesis or problem, the experimental methods, the data, and the conclusions?
b) Is the talk well organized and flowing in a logical pattern?
c) Do the audiovisual aids enhance the audience's understanding?
d) Did the presenter speak clearly and refer to notecards rather than read from them?
e) Does the student demonstrate through the presentation and his responses during the questioning period a firm understanding of the basic scientific principles involved?

JUDGE'S OPINION

This criterion covers simply the judge's overall reaction to the nature of the project and its handling by the student.

a) Consider the age level and project correlation when necessary.
b) Also, your overall feeling of the problem and the quality of the student's work.

SCORING

- Judges score the student on their individual worksheets after each presentation.
- The student is rated numerically by his success in each of 5 independently-evaluated criteria. For each of the 5 criteria the lowest score is 1, the highest score is 5. Use integer scores only.
- Students are not in competition with each other for some single top award; rather they are evaluated on how well they succeed in fulfilling the 5 criteria. Therefore, there is no limit to the number of each award that may be awarded in a given Presentation Room.
- PJAS Awards are based on the average of all judges' scores

Average	Award
4.0 or higher	First Place Award
3.0 – 3.99	Second Place Award
Below 3.0	Third Place Award

SCORING RUBRIC

Exceeds Characteristics	5
Meets ALL of the Characteristics	4
Meets MOST of the Characteristics	3
Meets FEW of the Characteristics	2
Meets NONE of the Characteristics	1