Judge Training Workshop

Central NM Science & Engineering Research Challenge
Finding Judges

• Word of mouth
• Judge Info page of website
• Volunteer database
• E-mail
• Phone calls (last resort)
• Student feedback
• Work practice observation
• Quality of Fair
• Quality of judging experience
Benefits of Being a Judge

• Excellent Opportunity to Network.
• Develop Communication Skills.
• Develop Analytical and Evaluation skills.
  – Translates into leadership and management skill base
• Sharpen your Investigative Skills.
• Build Self Confidence.
• Share Knowledge with Today’s Youth.
• Have fun while helping others.
Why is Training Important?

• Up to 33% or more of the judges each year will be first time judges.
• Contestants will have more contact with Judges than anyone else in the Research Challenge.
• Judge interaction with the contestants is the image left behind after the event.
• Judging quality ensures the right winners are rewarded.
• Judging quality raises the quality of future competitions.
What Judges Need to Know

- Who will be my contacts at the event?
- Date, time and judging day schedule.
- What to expect at the event.
- What is expected of them as Judges.
- People skills in handling students.
- How to use judging materials.
- How to dress.
- What’s in it for me (WII-FM)?
What does the competition look like?
What does an interview look like?
What does a project look like?
The Roles of a Judge

- Evaluator
- Facilitator
- Counselor
- Motivator
- Role Model
Provide a Good Experience for the Competitors

• Be Genuine.
• Let the contestants show their stuff.
• Encourage conversation.
• Avoid value judgments.
• Give one opportunity for improvement.
• End meeting on a positive note.
Judge Behavior with Students

- Work to put students at ease. *(Sit Down)*
- If students are intimidated, they will not speak freely.
- Show you are interested.
- Listen actively.
- Give positive reinforcement to nourish self esteem. *(say what you like about project)*
- Ask students about their project, not just what they did or the steps they took.
Judge Behavior with Students

- Ask students enough questions to satisfy yourself that they understood the project.
- When you have reached the student’s knowledge limit, **STOP!** asking questions.
- Have 1 positive comment for every student.
- Remember when you were 12 years old!
- Let the student teach you something.
Suggested Wording

Personalize your language

- I liked....
- I enjoyed....
- I feel that......
- I see that.....

If asked...

- I suggest...
- A technique I have used.....
- The project would have more impact on me if....
Judging Tips and Tricks

• Get there early.
• Set timing goals for your exhibits. *(10-15 min per project)*
• Contestants’ understanding is as important as the project.
• Revise your scores as many times as you need.
• Don’t tally judging sheet in front of Contestants.
• If stuck on a project, see your Category Chair.
• Judging is finished after the 2nd Judge and Category Chair Meeting is completed (usually around 12:45pm). Be prepared to stay until 1:00pm especially if you are in a larger category.
How to Judge a Project

Before starting to judge, see your assigned projects to get a feel for what they are about, what they look like, and their location.

To judge a project do the following:

• Read through the display board in some logical order.

• Assess it's impact, and how well it tells the "story" of the project.

• Do you quickly understand what the project is trying to do, and what the results were?

• If equipment or devices are part of the display, do they serve an obvious purpose based on what you have seen so far?
How to Judge a Project

- Read through the abstract. Assess it.
- Read through the workbook *(journal and/or report)*. Assess it.
- Write down questions and compliments, for use in the Interview, and add to comments section of the judging form.
- Note your marks.
- Do not "team-judge." Ask your Category Chair or another experienced judge if you have any questions during judging.
How to Judge a Project

• Once all projects are interviewed & scored:
  – Write down the rank order of the projects you have judged, based on your day’s overall impressions.
  – Which one is best?
  – Which should be at the bottom of the list?
  – Now check the total score you have assigned to each project.
  – Is your ranking impression consistent with the marks you've assigned? Decide if you need to review anything.
# Sample Judging Rubric

**Judge’s Scoring Guidelines & Worksheet for SCIENTIFIC & ENGINEERING RESEARCH PROJECTS**

*Award the Best ... Encourage the Rest*

**Project Number:**

**Title/Keywords:**

Judge scoring is conducted using a 100-point scale, with points assigned to Research Question, Design/Methodology, Data Collection, Analysis-Interpretation, Creativity, and Presentation (poster & interview) for Scientific Projects OR Research Problem, Design/Methodology, Construction & Testing, Creativity, and Presentation (poster & interview) for Engineering Projects. Review the criteria carefully and use the one most appropriate (scientific project or engineering project) for each project you are judging. Team projects have a slightly different balance of points including points for teamwork. The following is a set of criteria that can assist you in interviewing and scoring your projects. A more thorough discussion of the criteria can be found in the Judging Guide.

## GUIDELINES

<table>
<thead>
<tr>
<th>I. RESEARCH QUESTION – SCIENTIFIC PROJECTS</th>
<th>NOTES</th>
<th>MAXIMUM POINTS AVAILABLE</th>
<th>POINTS GIVEN</th>
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</thead>
<tbody>
<tr>
<td>• Clear and focused purpose</td>
<td></td>
<td>10 Points MAX</td>
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</tr>
<tr>
<td>• Identifies contribution to field of study</td>
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<tr>
<td>• Testable using scientific methods</td>
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<tr>
<td>or RESEARCH PROBLEM – ENGINEERING PROJECTS</td>
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<tr>
<td>• Description of a practical need or problem to be solved</td>
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<tr>
<td>• Definition of criteria for proposed solution</td>
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<tr>
<td>• Explanation of problem constraints</td>
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<thead>
<tr>
<th>II. DESIGN &amp; METHODOLOGY – SCIENTIFIC PROJECTS</th>
<th>NOTES</th>
<th>MAXIMUM POINTS AVAILABLE</th>
<th>POINTS GIVEN</th>
</tr>
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<tbody>
<tr>
<td>• Well-designed plan and data collection methods</td>
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<td>15 Points MAX</td>
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<tr>
<td>• Variables and controls defined, appropriate, and complete</td>
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<tr>
<td>or DESIGN &amp; METHODOLOGY – ENGINEERING PROJECTS</td>
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<tr>
<td>• Exploration of alternatives to answer need or problem</td>
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<tr>
<td>• Identification of a solution</td>
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<tr>
<td>• Development of a prototype/prototype</td>
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<tr>
<th>III. DATA COLLECTION &amp; METHODOLOGY – SCIENTIFIC PROJECTS</th>
<th>NOTES</th>
<th>MAXIMUM POINTS AVAILABLE</th>
<th>POINTS GIVEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Systematic data collection &amp; analysis</td>
<td></td>
<td>20 Points MAX</td>
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<tr>
<td>• Reproducibility of results</td>
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<tr>
<td>• Appropriate application of mathematical and statistical methods</td>
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<tr>
<td>• Sufficient data collection to support conclusions</td>
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<tr>
<td>or CONSTRUCTION &amp; TESTING – ENGINEERING PROJECTS</td>
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<tr>
<td>• Prototype demonstrates intended design</td>
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<td>• Prototype has been tested in multiple conditions</td>
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<td>• Prototype demonstrates engineering skill &amp; completeness</td>
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<tr>
<th>IV. CREATIVITY</th>
<th>NOTES</th>
<th>MAXIMUM POINTS AVAILABLE</th>
<th>POINTS GIVEN</th>
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<tbody>
<tr>
<td>• Project demonstrates creativity in one or more of the above criteria</td>
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<td>20 Points MAX</td>
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<tr>
<th>V. PRESENTATION – DISPLAY BOARD/POSTER</th>
<th>NOTES</th>
<th>MAXIMUM POINTS AVAILABLE</th>
<th>POINTS GIVEN</th>
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<tbody>
<tr>
<td>• Logical organization of material</td>
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<td>10 Points MAX</td>
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<tr>
<td>• Clarity of purpose and agenda</td>
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<tr>
<td>• Supporting documentation displayed</td>
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<thead>
<tr>
<th>VI. PRESENTATION – INTERVIEW</th>
<th>NOTES</th>
<th>MAXIMUM POINTS AVAILABLE</th>
<th>POINTS GIVEN</th>
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</thead>
<tbody>
<tr>
<td>• Clear, concise, thoughtful responses to questions</td>
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<td>25 Points MAX</td>
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<tr>
<td>• Understanding of basic science relevant to project</td>
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<td>• Understanding of interpretation and limitations of results and conclusions</td>
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<td>• Degree of independence in conducting project</td>
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<tr>
<td>• Recognition of potential impact on science, society, and industry</td>
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<tr>
<td>• Quality of ideas for future research</td>
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<tr>
<td>• TEAM PROJECTS – Criteria and understanding of project by all team members</td>
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**TOTAL POINTS =**

Keep this sheet with you and use it to take notes. Actual scores and comments are recorded on other forms.

**PLEASE RETURN THIS FORM TO YOUR JUDGE CHAIR WHEN YOU HAVE COMPLETED THE JUDGING PROCESS AS IT IS SENSITIVE INFORMATION THAT IS SHREDDED AFTER THE COMPETITION.**

**ADDITIONAL NOTES...**
Sample Questions

• Why did you decide to study this topic?
• What are your controlled variables?
• How accurate are your readings?
• What future applications can you see from the results of this project?
• What one outstanding thing did you learn doing this project?
• How would you improve this project if you would do it again?
ENJOY this unique experience!

Remember the reason we do all this is for the students!