



**DR. NELSON YING
TRI REGION SCIENCE
AND ENGINEERING FAIR**

Judging 101

Thank you for choosing to be a Judge at our regional fair. What a great time you will have seeing and hearing about the amazing work of these students!

Logistics: Roughly one week before the fair you will receive an e-mail with your judge assignment. Look for the code "S" for Senior Level, "J" for Junior Level, "P" for Poster or "SP" for Special Awards. Those experienced judges chosen to be team captains will see "TC" following the judge level code. You will receive your team assignments at Check-In. Please print your Fair Day schedule from the website "Fair Day Schedule" that final week. An approximate schedule is online now.

Fair Day 2010 is Sunday, March 21st at the Gordon Student Center of [Onondaga Community College](#). Free parking is available on campus. We provide coffee during training, lunch for all judges during deliberations, and a snack will be brought to you in the Exhibit Hall during judging. As is traditional, donations for lunch help us defray costs, but *no one* is expected to pay for their meal.

Objectives of the Fair & the Judging Process

1. Encourage students' pursuit of science, engineering and medicine.
2. Showcase students' science and engineering research.
3. Excite students about returning to next year's science fair.

Judging Do's & Don'ts

Rule #1: Make science Fair an educational and motivating experience for every kid! The high point of the fair experience for most participants will be YOUR judging interviews. *Encourage all the participants.*

Rule #2: Remember that judges represent professional authority to students. So ... use an encouraging tone when asking questions, offering suggestions or giving constructive criticism. Do NOT criticize, treat lightly or display boredom toward projects that seem unimportant to you. THE PROJECT IS VERY IMPORTANT TO THE PARTICIPANT. Thank the participant for his or her hard work and accomplishment.

Rule #3: Be discreet when discussing winners or making critical comments outside the Judge Deliberation Area! Students, parents or teachers may overhear in the Exhibit Hall or lobbies. Discuss nothing unless you are in the secured Judges Area. ALL results are confidential until announced at the Awards Ceremony, and no details regarding deliberations are discussed before or after the Ceremony.

Dr. Nelson Ying Tri Region Science and Engineering Fair

Mary Eileen Wood, Director Ying TRSEF, Advisory Council Member ISEF

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604 Walberta Road
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Research Judging Procedure

Before judging, you can view all the projects on your list for their location and a sense of the range of projects. Time is available twice on Sunday morning – an optional period before judge training from 9:30-10:30, and a formal preview session from 11:00-11:30. Please DO NOT TALK to the students during this time.

Reminder to Junior Judges: Avoid comparing your students to those in other grade levels.

You will review the [Judging Rubric](#) in detail during your training sessions. Take time now to preview it now, so you prepare your questions for your trainer.

Interview students ONE JUDGE AT A TIME. Limit your time with each student to 10 minutes. (You have more students to judge and other judges need to meet that student.) Shake hands and identify yourself as a judge, allow the student to introduce him or herself, and then open judging with "tell me about your project." Allow the student to give their prepared oral description of the project (about 3-5 minutes). Encourage the student to get the entire story out before you begin to ask questions.

Then engage in a conversation during which you ask questions about such things as why they selected the topic, how long they worked on the project, what their plans are for future research as well as questions that encourage the student to clarify what she/he did. Don't hesitate to ask questions that help you determine the limits of their background knowledge or help you to understand how the student worked with parents or mentors. You may also ask questions to clarify how independent and self-motivated the student was throughout the project.

You should ask to see an abstract, written paper, research logbook and bibliography.

At the end of the interview, shake hands, congratulate the student on his/her work and say goodbye. You will find it helpful to take notes about your impressions, which you can use during judge deliberations. **However, never record ratings, discuss projects with judges, or complete the Judge Tally Card in front of any student or parent.**

Later, use the Judging Rubric to rate the students only in spaces where there are no students or parents. The space where you eat lunch will be set aside for Judge Deliberation. Security volunteers permit only Judges and Fair Officials to enter that area.

Special Awards and Poster Judging

Note: Our fair's Special Awards judges will also interview Poster Presenters.

You will receive guidelines for each special award at your training; mention when you register if you are coming to judge a specific special award. You will receive a sticker from each student you interview for your record sheets. Turn in the paperwork with your selection(s) at Awards Processing. For the Poster Judging, you will also receive a manila folder with record sheets, on which you will place the sticker of each student you interview. You will evaluate them on a five-item scale, 0-2 points per item for a maximum score of 10. The Fair volunteers will then total the scores for each student, and select Best of Grade Honors and the 30-40% who receive Poster Commendations. *The Poster Judging Rubric is available online.*

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Issues to be considered

Is the exhibit display important?

The exhibit offers a visual of the student's research and acts as a tool for both the student and the judge. More important is the student's understanding of his/her research and ability to communicate.

Why is the question-and-answer period the most important part of the interview?

Q&A will give you a sense of how independent the student was, how well s/he understood the project.

How much ownership should the students have for their work?

Ideally, the student should have generated the project idea; [Science Buddies](#) can walk them through this process under their own steam. The student should be the most active participant in all possible aspects of the project. The analysis and conclusions should be entirely their own.

What are the roles of mentors and parents?

Ideally, mentors and parents are only assistants. If the student must work with dangerous items, adult supervision or the adult sometimes doing the experiment is required. Also, in some lab settings, the mentor is required to run the experiment. In either circumstance, the student should be present for the experiment and any work thereafter should be the responsibility of the student. Parents and mentors should **never** do literature reviews, data manipulation, conclusions, or display work.

What is original research to these age groups?

Your experience may be with original research *at the graduate level*, which is either something that has never been done before or is a twist on an already established scientific or engineering principle. Original research is not required of a middle or high school project, though it can earn the student up to two bonus points. **However, you are looking for documentation that actual experimentation was conducted.** Merely demonstrating a scientific or engineering principle is not "research."

Why can't every student win an award?

The science fair is a competition for advancement to other competitions (e.g., ISEF, Discovery Education 3M Young Scientist Challenge) and a variety of special awards that commend exemplary work. Every student does receive a Certificate of Participation.

Junior Level and First Round Senior Level Judging Team Deliberations

Once all judges on a team complete their interviews of all the students on their lists, the team meets to discuss the projects under the guidance of the experienced team leader. Judging projects and selecting award winners are by their nature subjective. The [Judging Rubric](#) serves as a guideline for what award levels should look like. Remember to use your score sheets and notes as a guide as your judge team discusses the subjective merits of the students' work.

Let each member of the team give her/his reflections about each student. Remember that students are nervous and learn from each of you. The first judge to interview a student will get a very different presentation and impression from the last judge in your group to see him or her.

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Review the list of items for which each student must be scored. Student work must go beyond a report of the literature that the student has read or a plan for future work – those should be among the Poster Presentations only. The winning Research Projects must include an investigation or experiment in which the student analyzed or manipulated data to test a hypothesis or an engineering objective and come to a conclusion or summary. Students may have collected data directly or they may have used pre-existing data sets (such as medical, weather, historical or climate records). The students must then have manipulated, organized, graphed or mapped the data to show a previously unseen or untested relationship or pattern that relates to their hypothesis or engineering objective. While replication of existing experiments is an important part of scientific research and a valuable learning experience, projects that only demonstrate an established principle or procedure should be rated below more original inquiries.

At your training, take careful notes about the distribution of Honors, High Honors and Highest Honors. We expect roughly 30% Honors, 20% High Honors and 10% Highest Honors. But how that will work out at the team level will depend on the final numbers of students and judges who come to the TRSEF – a number one cannot predict. You will be given specific guidelines in your training.

Senior Level Second Round of Judging

In order to select our two ISEF Finalists, Senior Level judge team captains will interview the Senior Level Highest Honors winners. The second round will start as soon as the initial judging group decisions have been submitted. These judges circulate in small groups to interview the eligible students and then convene to select the top three winners. First and second place winners will represent our region at the Intel International Science and Engineering Fair in San José, California the following May. It is very important that we select two students whose projects meet ALL of the criteria of the Judging Rubric as well as meet all of the rules and paperwork requirements of the ISEF Scientific Review Committee. The third-place student will be the ISEF Alternate.

Awards

Feel free to ask for clarification of judging criteria or goals from a member of the judging committee. Do not submit a final awards score card for your group if:

1. you have selected no one for a Highest Honor medallion;
2. you have selected all students to receive a medal.

If your judging team arrives at either of these conditions, consult a member of the judge committee for assistance BEFORE submitting your final decision. We need to verify your conclusions.

In the Junior Level (5th-8th grade), approximately 10% of the participating students (generally Highest Honors winners) will be selected as nominees for the Discovery Education 3M Young Scientist awards.

***Caution - Recording errors on award forms hurt students.
Every student must be marked as an award winner, no award given, or absent.***

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Each judging team must complete the awards form and hand it in to Awards Processing by:

<i>Judge Team</i>	<i>Deadline for last possible submission</i>
* Special Awards	11:00 << Pull awards with no appropriate projects during preview
Poster	1:00
Junior	2:00
Senior First Round	2:00
Special Awards	2:00
Senior ISEF Round	3:00

Before submitting the awards form, take time to carefully review the entire list of students and confirm your decisions. With hundreds of students and hundreds of awards, recording errors can happen, leading to very unfortunate situations for students and fair volunteers. In your final review, poll the judge team by describing each of your students by name/number and by project description to confirm that you are giving awards to the students/projects that you intend to. Do not hesitate to consult with a fair official

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