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a guide for researchers judging a science fair



Canadian Institutes
of Health Research

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ON BEING AND JUDGING

You've agreed to judge a science fair.

Now what?

First of all, thank you. By your involvement, you are helping to foster young peoples' interest in science, encourage their continued involvement in it and providing them with a role model of a "real-life" scientist.

Second, we recognize that judging is not something that necessarily comes naturally. So the Canadian Institutes of Health Research has consulted with some of the top science fair judges in Canada – and even a student or two – to find out what, exactly, makes a great science fair judge.

Let's clarify – what exactly is a science fair?

At first glance, a science fair is a competition. Every year, more than 25,000 young scientists participate in nearly 100 regional science fairs throughout Canada. Many thousands more have competed at the local level to make it this far. At the regional science fairs, students showcase their research achievements and compete to represent their region at the Canada-Wide Science Fair.

So it's a competition, right?

Yes.

But science fairs are also an opportunity to encourage students who are interested in the health and life sciences, to give them a chance to explore an area that interests them outside the classroom setting. Ultimately, it is a key part of sparking an interest in science that lasts a lifetime.



From that perspective, every student who enters a science fair should come away feeling like a winner. That's where you come in.



"At the end of the day, every student should come away saying, 'WOW, that was a fantastic judging experience'."

PATRICK WHIPPEY,
Deputy National Judge-in-Chief,
Canada-Wide Science Fair

That's a big responsibility!



Yes it is. But, simply by volunteering to judge a science fair, you've acknowledged just how important it is. And it's not really that difficult. Each science fair will have its own specific system of marking to guide you. No matter where you are, however, or at what level, some things remain constant:

- Be at the student's level. It's not a PhD exam, it's an opportunity for middle- and high-school students to show what they've done and what they know about it.
- Remember that, as nervous as you may be, the students are much more nervous. Do your best to put them at ease by being friendly and accessible. Sit down, so you are physically at their level, not towering over them. Remember to smile and look them in the eyes.
- Be personal. Introduce yourself to the student, tell a little bit about yourself, and ask about the student's background, why they're there, why they chose the project they did.

- Ask questions that will probe the students' knowledge. Start at the lowest level and slowly go up to more complicated questions – but stop when it's obvious that you've reached the limits of their knowledge.
- Give the students the full time allotted for judging each project.
- Always find something positive to say about a project: “I was impressed that you knew...” or “I liked...” Give a suggestion for improvement if it seems appropriate.
- Keep your tone positive and upbeat. If you're smiling and interested, it gives the students confidence.
- Thank the students for sharing their projects with you.
- At the end of the judging, you may be asked to fill out a feedback form. This form will go to the students, so the same caveats hold true: be positive and encouraging, and avoid being too critical.

Above all, you want to communicate to the students you are judging a sense of the passion you feel for science.

You are judging the students – but they are also judging you.



**“The best compliment
a judge can get is that
you let them prove
themselves.”**

ROBERT LOISELLE,
Chief Judge,
Canada-Wide Science Fair, 2006



FROM THE STUDENT’S DESK

Students with wide experience of science fairs, from the local level to the international, offered their tips on what they like and what they don’t like from their judges.

Questions: Interrupting the student during his or her presentation has mixed reviews. On the one hand, it can distract the student from the presentation. On the other hand, questions can help the judge decide if the student understands his or her subject matter. Questions, however, need to be relevant. There’s nothing more frustrating than spending a large chunk of the limited judging time answering questions that are tangential to the project.

Feedback sheet: Be as specific as possible. General comments aren't as helpful, particularly as the student may want to reuse the project or develop it further.

Preparing: Take the time to review the student's abstract or report – in advance, if possible. First, it's a sign of respect for the work that has been done. Second, there's nothing worse, when time for judging is limited, to spend too much of that precious time going over what should have already been clear.

The act of judging: Two's company – more is a crowd. Multiple judges, or additional special award judges, who are not scheduled, can create a crowd around a student. This can be a panic-inducing situation for an already-nervous student.

What never to say: Never, never, say to a student or write on his or her feedback form that if only the student had done this,

or that, he or she could have been the best in the fair. Better to simply tell them they've done well than to hold out a tantalizing glimpse of what could have been.



“Judges are sources of inspiration and motivation. I’ve learned something new from them each time.”

DAVID WANG,
Student

But, ultimately, I have to evaluate the projects – help!

Your science fair organizers should have a marking rubric to help you in assessing each project that will provide categories for

marking and numerical values for different levels of effort and achievement.

You will generally be looking for things like scientific thought and creativity in the project as a whole. You will also need to assess the separate components of the project – the visual display, the oral presentation and the written report.

The hardest thing is to maintain a level of consistency in your judging, particularly if you are judging a lot of projects. It's only natural to be more enthusiastic at the beginning and to tire at the end – resist the urge!

What if it's a higher-level science fair?

The basic rules of judging stay the same, whether it's a local fair in your city, a regional fair, or the Canada-Wide Science Fair. The biggest difference is that, at the more “senior” levels, there will be more than one judge for each category. That

means you have to resist the temptation to give the students information as you are talking to them, such as answers to questions they weren't sure of or suggestions for improving or extending their projects – or the next judge is not going to get an accurate assessment of the students' knowledge in the area of their projects. You could put this type of information, however, on the feedback sheet.

In addition, at the Canada-Wide Science Fair, you may have an opportunity to view the projects the night before the event, without the students present. This allows you to become familiar with the projects, so that you can make better use of your interview time with the student the next day. This is particularly important as time limits on these interviews are usually strictly enforced.



I loved it! I want to do more

Never fear – there are many number of ways to involve yourself in science fairs. Volunteer to be on the organizing committee, to conduct registration, to set up and tear down, to fundraise. There's no shortage of these kinds of "logistics" jobs – usually, only a shortage of volunteers to carry them out!

You can also become more involved with the students. Volunteer to be a mentor. This can range from inviting students into your lab, to advising them on an ongoing basis, to nothing more than a simple chat or exchange of e-mails. It's up to you how deeply you want to become involved. How about letting students know about visiting researchers lecturing on subjects related to their areas of interest? You might even invite a talented student to work in your lab over summer vacation?



What do I get out of judging?

Judging is an incredibly rewarding experience. As one experienced judge says, the enthusiasm they see in students' eyes is extremely satisfying – particularly since it's something they don't often see in their university students!



**"I've been judging for
27 years. Each spring,
I go and meet these kids
and it recharges my
batteries."**

ROBERT LOISELLE,
Chief Judge,
Canada-Wide Science Fair, 2006

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Robert Loisel, Chief Judge, Canada-Wide Science Fair

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