

Dear Student:

You are receiving this letter because you have expressed interest in the 2004 Intel International Science and Engineering Fair (ISEF).

The following provides information and a step-by-step guide to becoming a candidate to the 2004 Intel International Science and Engineering Fair (ISEF) in Portland, Oregon May 9 - 15, 2004

What is the Intel ISEF?

The Intel ISEF is the world's largest pre-college science competition. Now in its 55th year, the Intel ISEF is the world's only science project competition for students in the ninth through twelfth grades. The Intel ISEF brings together students, teachers, corporate executives, and government officials from around the world. Students compete for over \$3 million in scholarships, tuition grants, scientific equipment, and scientific trips.

Who participates?

Each year between 3 and 5 million students complete science research projects, and roughly 1,200 of those students earn the right to compete at the Intel ISEF. Throughout the United States and around the world, 500 Intel ISEF-affiliated Science Fairs send individual finalists to compete on the international level. Students compete for scholarships in 15 categories: Behavioral and Social Sciences, Biochemistry, Botany, Chemistry, Computer Science, Earth & Space Sciences, Engineering, Environmental Science, Gerontology, Mathematics, Medicine & Health, Microbiology, Physics, Team Projects, and Zoology.

Who are the judges?

Approximately 1,200 science, engineering, and industry professionals serve as judges for the Intel ISEF. All judges have a PhD or equivalent degree and eight years of relevant experience.

What are the rewards?

More than 600 individual and team awards will be presented at the 55th Intel ISEF. Each entry is judged at least four times (usually many more times) with category awards given in first, second, third and fourth place. Awards are \$3,000, \$1,500, \$1,000 and \$500 respectively in each of the 15 categories. Additional awards worth over \$1.5 million include tuition scholarships, summer internships, scientific field trips, and laboratory equipment provided by Intel, Science Service, and nearly 70 other corporate, professional, and government sponsors. The top winners of the Intel ISEF receive all-expense-paid trips to attend the Nobel Prize Ceremony in Stockholm, Sweden and a \$50,000 portable scholarship!

As you can see, ISEF is a big deal and becoming a candidate to the International is a great honor, but it may not be easy. If you are undaunted, read on and we will describe the roadmap for getting from the Pittsburgh Regional Scientific and Engineering Fair (PRSEF), to Portland, Oregon and the Intel ISEF. The subsequent progression may be unlike anything that you have done to date. Your initial preparation for the PRSEF, will be augmented to include the following:

Application

Being chosen as a candidate to the International is not automatic. Just because you win at the category level does not mean that you have a “ticket” to spend a week in Portland Oregon this coming spring. The judging for the International is completely separate from the PRSEF judging – different judges and different criteria. The ISEF judges do not confer with the PRSEF judges nor are they swayed by who wins the category competition. To be considered for the International, you must submit an application along with three (3) copies of your research paper. The application is available from your teacher or online at:
http://www.scitechfestival.org/mainsf_form.asp.

Research paper

The simplest way to explain the paper is to refer you to the scientific journals in your specialty. We want you to construct this paper as if you were submitting it to a journal for publication. Follow the journal’s rules for citations, footnotes, graphics, et cetera. The paper is to be limited to no more than 20 double-spaced pages, not including the cover page. If you can say everything in less than twenty pages, do it! Do not pad your paper with extraneous information. Sheer volume means nothing, high quality does! The reason for doing the paper is to help you focus your thoughts. Remember, a very large number of the students you will be competing against at ISEF have already published and/or hold patents! The paper will help to place you on a level playing field.

Note: the judges who will be reading the papers are or have served as editors and reviewers for numerous scholarly books and journals. They WILL check your references. Avoid Internet citations unless they are from online, refereed journals.

Initial interview

The ISEF judge for your particular category will review all the papers in the category. Based on the review of the papers and your project boards, the judge will select the top one or two. These students will be given a preliminary interview amidst the category judging. You may not know that the person talking to you is an ISEF judge. Following that interview, the judge will select usually one from the category to move on to the final competition. However, the judge has the prerogative to send more than one or none. Theoretically, there will be eight of you (one from each category). Now the fun begins!

Final interview

You and your project board will be sequestered with the other ISEF finalists. We will provide lunch (as if you can eat). After lunch each finalists will present themselves and their research to the panel of eight senior-level scientists and engineers. You will have 15 minutes to present your work and field questions from the group. Generally speaking, the questioning will explore your depth of knowledge and ability to think on your feet. The questioning can be extensive. After your “15 minutes of fame,” you will be returned to the holding area with the rest of the finalists and another contender will go before the judges. You are required to stay in this area until all finalists have been interview. At that time you may be released OR the judges may request a few more minutes with some of you. This may be due to further questions or clarification. Do not read anything into the recall or the lack thereof!

When the judges are satisfied with the interviews, you will be released and you can go home. The students that are selected to be candidates to ISEF will be announced at the awards ceremony the following day.

ISEF preparation

If you are an ISEF candidate, the judges and other specialists will offer to critique your work with the International in mind. Many of us have attended Internationals as judges and will offer suggestions and comments on such varied topics as presentation, board composition, grammar, strong points and yes, even weak points. Candidly, we will pick your project apart. Please understand that this is for your benefit. Do not become defensive! It is better we, as your advocates, do this than the judges in Portland!

You will have at least two weeks to incorporate relevant suggestions into your presentation. Your project board will then be shipped to the ISEF venue.

Final note

We have tried to enumerate some of the hazards, pitfalls as well as your obligations in connection with ISEF. Although this process appears daunting, the rewards far outweigh the hassles and stress to which you may be subjected. You will be an ISEF candidate – a member of a VERY select fraternity of young scientist and engineers (Incidentally, your candidacy is something that you should list on you college resume!). This is a great honor and we wish you success in your upcoming trials.

T. D. Jacobsen PhD
Chair, ISEF Judges