

NORTH JERSEY REGIONAL SCIENCE FAIR

A nonprofit, volunteer organization

Science Fair Co-Director: Ken Lyons Rm. E250 (973)-360-8663 [FAX: 360-8187; kbl@research.att.com]
AT&T Labs, 180 Park Ave, Florham Park, NJ 07932

Science Fair Co-Director: Karen Kranz [kskranz@hotmail.com]

Registration Contact: Ulrike Schroeter [ulrschr@hotmail.com]

Judging: Lenore Neigeborn (732)-932-7731

Site prep: Dan Stevans (973)-972-6704

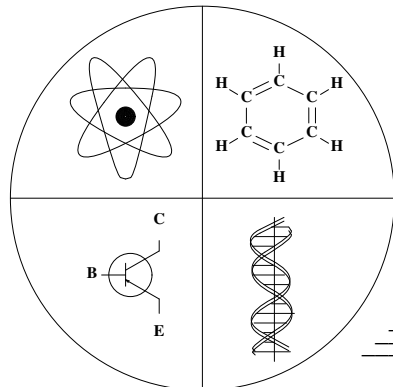
Awards: Karen Kranz kskranz@hotmail.com

Publicity: Samantha Quick samandjake2000@yahoo.com

Fund Raising: Ken Lyons (973)-360-8663

Safety Review: Matthew Toth (908)-277-5998

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NJRSF Home Page: NJRSF.org

Dear Sponsor:

October 4, 2004

The TWENTY-SECOND Annual North Jersey Regional Science Fair will be held March 4-5, 2005 at Rutgers University. You and your students have the opportunity to win expense-paid trips to the Intel International Science and Engineering Fair in May 2005. We hope to see you there.

I would like to point out a few details for your attention.

- A sponsor can be a parent, teacher, or science professional capable of reviewing the student's science project and ensuring that the project adheres to all ISEF rules and regulations.
- Each school receives one rule book from us. Please read it carefully. Additional copies are available from Science Service (see our website).
- ISEF requires advance certification of certain types of projects. Check the details on the reverse. If your students do not adhere to these rules, they will not be considered for the ISEF trips. If your project falls under these rules, all of the ISEF forms must be submitted to our Scientific Review Committee by **December 1 and before the student begins work.**
- **All students** must fill out the Research Plan, ISEF forms 1A and 1B. You must sign 1B, along with the student and his/her parent. You must fill out and sign the ISEF Safety Checklist (Form 1).
- **All paperwork should be complete before the students begin experimentation.**
- Your students should enter via the website: <http://njrsf.org>.
 - **The entry deadline is January 28, 2005.**
 - After entering, the students will receive a reply letter, which must be signed and returned with the ISEF forms.
 - **All of your paper forms must be received by February 25.**
 - Abstracts should be submitted on the website by **February 25.**
 - You will receive a list of your student entrants in late February.

One copy of the ISEF rules and student handbook has been sent to our main contact at your school. Both documents are also available on the web. See our website for links.

We are looking forward to another productive season of student research. If you have any questions, please feel free to contact me as indicated in the letterhead.

Sincerely,

Ken Lyons, Fair Director

There are a number of different areas of research which require special certification. The reasons stem from (i) the need to protect the subjects of research and (ii) the need to protect the researcher (the student) against unanticipated hazards.

As enumerated in the ISEF rules, the areas requiring certification fall into two classifications. The first group comprises those areas for which there are special forms provided in the rule book:

- Vertebrate animal research
- Human subject research
- Controlled substances
- Pathogenic agents (includes infectious bacteria and viruses)
- Recombinant DNA
- Human or animal tissues

The next group of areas, primarily comprising safety issues for the student, should receive special attention, but do not require advance approval by our SRC. Remember, though, that you must review the students' forms 1A and 1B and fill out the ISEF Safety Checklist before the students begin their work. The form 1B should be signed and dated by the you, the student, and his/her parent or guardian. You should also fill out the ISEF Form 3, and make sure that the student has adequate supervision from you or from another qualified adult before they proceed with any potentially hazardous work. This form will be required for such projects at the fair, and must be dated prior to the beginning of the experimental work. We will be happy to review any plans you find questionable or outside your expertise.

- Explosive or toxic chemicals, carcinogens, mutagens
- Hazardous equipment (high temperature, voltage greater than 220V)
- Radioactive samples
- Ionizing radiation (x-ray or nuclear, UV in the 100-400nm range)

Although this looks like a concise list, there is considerable misunderstanding as to its application in practice. One of our student winners in 1996 was very nearly disqualified from ISEF because of utilization of a chemical (ethidium bromide) banned from student use by the ISEF SRC. In 1997, a similar student (not one of ours) *was* in fact disqualified. As other examples, the ISEF rules exclude "established tissue cultures" and "meat and meat by-products" from the requirement for the Tissue Form. This can lead to some misunderstandings, so **if there is any doubt, you should contact us rather than waiting for the fair!** The following is a list of example projects which DO REQUIRE certification under these rules.

1. Plants grown in the presence of heavy metals, such as Pb, Cd, Hg, etc. These ions are toxic, and the researcher must not only protect himself or herself, but must also plan effective procedures for disposal of the contaminated soil after the experiments.
2. Non-vertebrate animals (e.g. brine shrimp) raised in polluted environment, involving, for example, petroleum products, or heavy metals. Same consideration as to disposal applies here as well.
3. Any experiment in which unknown organisms are cultured, even if they come from the most common of origins (like your mouth or the kitchen table).
4. Taste tests of purchased or common products. If the project involves ingestion or skin contact as part of an experiment, certification is a necessity (and an informed consent form will be required).
5. Questionnaires. There are often psychological issues raised by questionnaire projects which must be adequately dealt with. A project which just asks people questions IS using human subjects, and falls under the requirements of that category.
6. Informed consent forms are ALWAYS required where children are concerned.

A good rule of thumb is: "if in doubt, send it in." If there is no problem, we will get back to you rapidly with that decision. If there are problems, there is probably a good reason. If you wish to discuss issues related to certification, please contact Matthew Toth, by email at peter1@eclipse.net. Please do not send forms electronically.

A note for teachers who might read the rules and get worried: Your school IS NOT REQUIRED to form an IRB (Institutional Review Board) to oversee student research involving human subjects. You may if you wish, but our SRC is constituted to act as an IRB, and will perform both roles for any entrants who require it.

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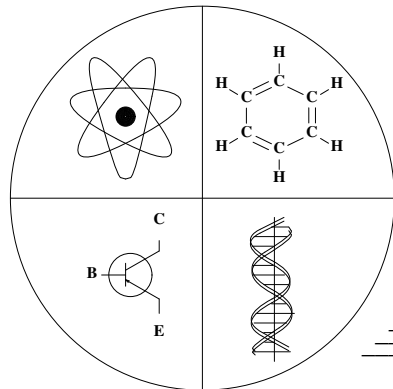
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October 4, 2004

ENCLOSED ARE YOUR NJRSF MATERIALS FOR 2005.

The ISEF rules have once again undergone further revision for 2005. I urge everybody to read this book carefully. Some things have been changed and/or clarified from previous versions, so please don't use the old rule books as a reference.

In this package you should find the following items:

- A letter for distribution to all teachers interested in the fair.
- A letter for distribution to interested students
- A copy of the ISEF rule book (revised for 2005 -- read it!)
- 1 copy of the NJRSF brochure (feel free to make copies)

We have decided to depend on our website rather than assume the expense of distributing posters and using paper entry forms. Please encourage any interested students to visit the website: <http://NJRSF.org>. This year we expect all students who enter to do so via the website.

I hope you will make these materials available to all teachers in your school who may have an interest (don't forget the math department!). If your students cannot enter via the website, contact us for a paper entry form.

Please refer to our website NJRSF.org first if you have questions. And make use of it for electronic entry and abstract submission. If you have further questions, please give me a call.

I wish your students the best of luck for 2005. See you in March!

Sincerely,

Ken Lyons, Fair Director

P.S.

We are sometimes asked whether students are "permitted" to enter their project in multiple competitions. Not only do we permit it, but we encourage it! We want your students to get as much recognition as possible for the fine work they have done.

Other Science Competitions

There are a few other science competitions available to your students. Since these provide added incentive for students to do science projects, we strongly encourage that you participate in them as well.

I have gathered below a list of the information we have on available competitions for students in the North Jersey Area. Some of this information might be out of date, but we provide it as a sampling of what should be available if you look.

Middlesex County Science Fair

Dr. Allan Sherman; 732-906-6853 (Middlesex County College)

ACTSO Competition (Minority students only)

Sponsor: NAACP

Held at Rutgers (May); Information available from local NAACP organization

NJ Jr. Academy of Science Competition

contact number: (M,F 8:30-11:30) (732) 463-0511

contact: Dr. Gadegbeku, Dir. Jr. Academy, (908) 757-4624

Jr. Science Symposium (previously held at Monmouth and Fairleigh Dickinson)

usually held at Rutgers in March.

contact: Marilyn Ballentine

Kore Building, 96 Frelinghuysen Rd.; Piscataway, NJ 08855-1390

732-445-3443 (FAX: 445-0547)

School registration due around Nov. 1. Abstracts due around Dec. 1.

Final research papers due late Jan. Contact above for details.

Duracell NSTA Scholarship Competition

NSTA, 1742 Connecticut Ave., NW, Washington, DC 20009

JETS Teams (Jr. Engineering Soc.)

NJIT, Newark 07102

973-596-3222

Intel Science Talent Search

Science Service; 1719 N Street, NW; Washington, DC 20036 202-785-2255