Rules for Indiana

Elementary and

Middle School Science Research

2011-2012\*



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\*Updated with 2013 rules regarding microorganisms

Acknowledgments

Much of this document is taken liberally from the Intel International Science and Engineering Fair document “International Rules for Precollege Science Research: Guidelines for Science and Engineering Fairs 2011-2012.” Available online at [http://www.societyforscience.org/isef/document/index.asp](http://www.societyforscience.org/isef/document/index.asp%20)

The Purpose of this document is to develop a common set of rules and guidelines for projects in grades K-8 conducted at schools and homes across the state of Indiana for competition in a Regional Science Fair. All Regional Science Fairs are required to follow the Intel ISEF rules for students in grades 9-12. However, these rules and their associated forms have proven to be a hindrance to many students in the lower grades.

The rules and guidelines in this document are intended to secure the safety of students, parents and teachers while conducting a science fair project. It is our hope that each teacher will adopt these guidelines for projects at their school and district level science fairs. Regional Fairs are not required to use or accept this version of rules and guidelines. For region specific rules and guidelines, please contact your regional fair director. A comprehensive list may be found at [www.sefi.org/registration.html](file:///G:\Master%20Yoda%20Copy\Science%20Fair\www.sefi.org\registration.html)

**All Projects**

Scientific Fraud and misconduct are not accepted at any level of science research. The work you submit for science fair must be your own work. Taking some other students project and submitting it as your work will lead to disqualification from competition.

**Approval and Documentation**

**1. Before you begin, you must submit to your teacher a project proposal (page …) and receive approval for the project you wish to do.**

**2. Certain projects are prohibited for students in grades K-8. If you desire an exception to this rule you will have to work with the Regional Fair Director in your Region to get permission to proceed.** [**www.sefi.org/registration.html**](http://www.sefi.org/registration.html)

3. Display guidelines for Intel ISEF must be followed by all participants.

4. Every student should have the following items as part of their science fair project display.

**Logbook:** The logbook contains a dated account of everything that concerns the project. Every student is required to keep detailed notes, original observations and data from the experiment in the logbook.

**Research Paper: (grades 6-8)** This part of the project is typically 4-10 pages long. It must be typed or written in ink. It is based upon the information that was kept in the logbook and it also includes the review of literature (background science) that was conducted before the experiment began.

**Exhibit Board:** The purpose of the display is to show what the student has done. It includes elements from the research paper and these parts should be displayed in the order presented in this handout. The exhibit should be visually appealing. Photographs that are dated and labeled are useful to relay the progress of the experiment, and/or the outcome of the experiment.

**Abstract:** a one-page summary (not more than 250 words) that states the purpose, hypothesis, procedures and conclusion of the project.

**Approval Form:** This form is included in this document.

5. CIRSEF permits team projects. No team may have more than three (3) members. Each Team members’ name must be on the Approval Form.

6. Teachers and Parents are responsible for ensuring that these rules are followed and the student project is safely designed and supervised at all times.

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**PROHIBITED / RESTRICTED RESEARCH**

The research topics below are either not permitted or have conditions for students in grades K-8. This is not a comprehensive list. Teachers who have concerns about projects should contact the Regional Fair Director for guidance.

**PERMITTED RESEARCH WITH CONDITIONS**

Bacterial Studies: Eighth grade students may experiment with microorganisms if they comply with all applicable ISEF (i.e. high school) rules. Younger students may work only with microorganisms that belong on a pantry shelf, i.e. baker’s or brewer’s yeast. This does exclude all projects involving letting food rot or grow mold, or any other project that cultures an organism. Environmental measuring

**Human Subjects** may be used only if all experimentation is conducted under adult supervision and student researchers have notified parents of the conditions of the experiment and provided the opportunity for their child to opt out of participation.

**PROHIBITED – NO EXCEPTIONS**

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| **Animal Behavior Studies** Research projects of this type should be reviewed by a Veterinarian to ensure the safety of the student and animal. |
| **PROHIBITED – NO EXCEPTIONS** |
| **Radioactive substances** or equipment that emits any form of ionizing radiation |
| **Hazardous Chemicals** or reagents, DEA Controlled substances, tobacco, alcohol, prescription drugs, firearms or explosives. |
| **Biological Agents Experiments at Home** projects that use or study microorganisms including bacteria, viruses, prions, fungi and parasites.  Some research may be possible if conducted in the school under the supervision of a properly trained teacher. (see above) |
| Vertebrate Animal Research involving pain, withholding of food or water.  All Vertebrate animal research should be reviewed by a Doctor of Veterinary Medicine. These experiments require approval of the SRC **BEFORE** experimentation. Refer to the ISEF rules for further guidance. Those studies that involve observation only, with no interaction or change of the animal’s environment, are definitely allowed and |
| Class IV Lasers (All use of Lasers must be under direct supervision of a qualified adult) |