

Registration must be received with originals of all required forms attached on or before February 20, 2004. Please do NOT fax forms. FORMS MUST BE LEGIBLE. Forms can be downloaded from PRSEF website.

1. TITLE OF PROJECT _____
(titles of more than 30 characters must be abbreviated)

2. CATEGORIES (refer to next two pages for descriptions, CHECK ONLY ONE)

Junior Division (Grade 6)

Physical Science Life Science Consumer Science

Intermediate Division (Grades 7 & 8)

Behavioral & Social Science Biology Chemistry
 Computer Science/Math Consumer Science Earth/Space/Environment
 Engineering/Robotics Medicine & Health/Microbiology Physics

Senior Division (Grades 9 - 12)

Behavioral & Social Science Biology Chemistry
 Computer Science/Math Earth/Space/Environment Engineering/Robotics
 Medicine & Health/Microbiology Physics

I am submitting a Preliminary ISEF application

3. STUDENT'S NAME _____ Male Female Grade _____

Address _____

City _____ State _____ Zip _____

Parent/Guardian Name _____ Phone () _____

Student's birth date _____ Student's email address _____

Social Security Number _____

(to collect cash award, you must include your social security number)

How many years have you participated in PRSEF (this science fair), including 2004? _____

4. SPONSORING TEACHER

(Note: if you are submitting more than one student registration for your school, complete this section ONCE per school.)

Sponsoring Teacher Name* _____ Email Address _____

School Name _____ District _____

Teacher's School Phone _____ # of years of participation, including 2004? _____

**A teacher from the student's school must act as a sponsor. In addition, students may have an adult mentor/sponsor.*

5. CERTIFICATION

We certify that this student's project/exhibit is entirely the work of the student only with no help other than advice from the sponsor, parents or others. We agree that all judges' decisions are final and non-negotiable. We agree to abide by the rules of the 2004 PRSEF, and understand this project can be disqualified for any violations. We understand research plans/abstracts may be published. We agree to have the Science Fair Office release the student's mailing address to colleges that partner with the Science fair.

Student's signature: _____ Parent's signature: _____

Teacher's signature: _____

NOTE: Original Student's Registration form MUST be submitted with ORIGINALS of ALL REQUIRED FORMS, including ABSTRACT FORM – please keep copies of all forms.

6. MAIL TO: PRSEF, Carnegie Science Center, One Allegheny Avenue, Pittsburgh, PA 15212-5850.

Contact the Science Fair office 412/237-1534

WEBSITE: www.pittsburghsciencefair.org



Checklist for Adult Sponsor / Safety Assessment Form (1)

This completed form is required for ALL projects and must be completed prior to experimentation

Student's Name _____

- 1) The student and a parent / guardian have signed the **Approval Form (1B)**.
- 2) I have reviewed the **Research Plan (1A)**, **Research Plan Attachment** and signed **Approval Form (1B)**.
- 3) This project involves the following area(s) and requires **SRC/IRB approval** before experimentation begins:

<input type="checkbox"/> Human Subjects	<input type="checkbox"/> Controlled Substances
<input type="checkbox"/> Non-Human Vertebrate Animals	<input type="checkbox"/> Recombinant DNA
<input type="checkbox"/> Pathogenic Agents*	<input type="checkbox"/> Human or Non-Human Vertebrate Animal Tissue

* All bacteria, fungi, etc. isolated from the environment should be considered potentially pathogenic.

- 4) This project does not involve any of the research areas listed in #3.
- 5) This project involves human subjects. The student will obtain approval from an **Institutional Review Board (IRB)** before experimentation is started. (See pp. 14-16.)
- 6) This project involves non-human vertebrate animals, pathogenic agents, controlled substances, recombinant DNA, or human and animal tissue. The student will obtain approval from a **Scientific Review Committee (SRC)** before experimentation is started. (See pp. 17-25.)
- 7) This project involves the hazardous substances or devices checked below. A Designated Supervisor will provide proper supervision to the student. Prior approval by the adult sponsor and certification by a designated supervisor is required. (See p. 28.)
 - Chemicals** (*i.e.*, hazardous, flammable, explosive or highly toxic; carcinogens; mutagens and all pesticides). I have reviewed with the student the Material Safety Data Sheet (MSDS) Listing for each chemical that will be used. I have also reviewed the proper safety standards for each chemical including toxicity data, proper handling techniques, and disposal methods. For *Safety in Academic Chemistry Laboratories*, visit the American Chemical Society's website at <http://pubs.acs.org>.
 - Equipment** (*i.e.*, welders; lasers; voltage greater than 220 volts). I have reviewed with the student the proper operational procedures and safety precautions for the equipment to be used by the student. For information about laser standards and research, visit the OSHA website at www.osha.gov.
 - Firearms**. I have reviewed with the student the proper safety standards for firearms use.
 - Radioactive Substances**. I have reviewed the proper safety standards for each radioactive substance the student will use.
 - Radiation** (*i.e.*, x-ray or nuclear; unshielded ionizing radiation of 100-400 nm wavelength). I have reviewed with the student the proper safety methods concerning the type of radiation the student will use.

Adult Sponsor's Printed Name

Signature

Date of Review
(Must be prior to experimentation.)

Research Plan (1A)

This completed form is required for ALL projects.

Type or print all information requested.

Answer all questions and complete Research Plan Attachment

- 1) Student's Name _____ Grade _____
- 2) Title of Project _____

- 3) Adult Sponsor _____
- 4) Is this a continuation from a previous year? Yes No
If Yes: a) Attach the previous year's **abstract & completed 1A & research plan** and
b) Explain how this project is new and different from previous years on **Continuation Form (7)**
- 5) **This year's** laboratory experiment/data collection will begin: (must be stated (mm/dd/yy))
Projected Start Date: _____ Projected End Date: _____
ACTUAL Start Date: _____ ACTUAL End Date: _____
- 6) Where will you conduct your lab work? (check all that apply) Research Institution School Field Home
- 7) Name, address & phone of school and work site(s):
School: _____ Work site: _____ Work site: _____

- 8) **All projects require completed forms: Checklist for Adult Sponsor/Safety Assessment Form (1), Research Plan (1A), Research Plan Attachment and Approval Form (1B) and may require Registered Research Institutional/Industrial Setting Form (1C).**

Check **ALL** items that apply to your research.

The following areas require review and approval by SRC or IRB prior to experimentation :

- Humans** (requires prior IRB approval; complete Forms: Checklist, 1A, 1B, 4 [1C, 2, 3, if required])
 Non-Human Vertebrate Animals (requires prior SRC approval, complete Forms: Checklist, 1A, 1B, 2, 5 [1C, 3, if required])
 Recombinant DNA (requires prior SRC approval, complete Forms: Checklist, 1A, 1B [2, 3, 1C, as required])
 Pathogens (requires prior SRC approval; complete Forms: Checklist, 1A, 1B, 2 [1C, 3, if required])
 Controlled Substances (requires prior SRC approval; complete Forms: Checklist, 1A, 1B, 2 [1C, 3, if required])
 Human/Animal Tissue (requires prior SRC approval; complete Forms: Checklist, 1A, 1B, 6 [1C, 2, if required])

This area requires approval by a Designated Supervisor prior to experimentation:

- Hazardous Substances or Devices** (complete Forms: Checklist, 1A, 1B, 3 [1C, if required])

- 9) **Complete Research Plan Attachment (See page 31) and attach to this form.**

- 10) **An abstract is required for all projects after experimentation (see page 27).**

Research Plan Attachment

REQUIRED for ALL Projects

A complete research plan must accompany Research Plan Form (1A)

Additional pages may be attached

Student Name(s): _____

Provide a typed research plan and attach to Research Plan Form (1A).

The research plan is to include the following:

A. Question being addressed

B. Hypothesis/Problem/Engineering Goals

C. Description in detail of method or procedures (including chemical concentrations and drug dosages)

For human research, include survey or questionnaires if used, and critically evaluate the risk. See instructions for human research on p. 14 of the Rules. **For nonhuman vertebrate animal research, you must briefly discuss POTENTIAL ALTERNATIVES and present a detailed justification of use of nonhuman vertebrate animals.** See instructions on p. 19 of the International Rules.

D. Bibliography

List at least three major references (*e.g.*, science journal articles, books, internet sites) from your library research. If you plan to use non-human vertebrate animals, give an additional animal care reference.

Approval Form (1B)

This completed form is required for ALL projects.

1) REQUIRED FOR ALL PROJECTS.

- a) **Student Acknowledgment:** I understand the risks and possible dangers to me of the proposed **Research Plan (1A)**. I will adhere to all International Rules when conducting this research.

Student's Printed Name

Signature

Date Acknowledged

(Must be prior to experimentation.)

- b) **Parent/Guardian Approval:** I have read and understand the risks and possible dangers involved in the **Research Plan (1A)** and **Attachment**. I consent to my child participating in this research.

Parent/Guardian's Printed Name

Signature

Date of Approval

(Must be prior to experimentation.)

- c) **Adult Sponsor Approval:** I have read the **Research Plan (1A)** and **Attachment** prior to experimentation and reviewed the **Checklist for Adult Sponsor** with the student. I agree to sponsor the student named above and assume reasonable responsibility for compliance with all International ISEF Rules as they pertain to the **Research Plan (1A)**.

Adult Sponsor's Printed Name

Signature

Date of Approval

(Must be prior to experimentation.)

2) REQUIRED FOR PROJECTS REQUIRING SRC/IRB APPROVAL. SIGN 2a OR 2b AS APPROPRIATE.

- a) **Required for projects that need prior SRC/IRB approval BEFORE experimentation** (i.e., see Item #8 on Form 1A.)

The SRC/IRB has carefully studied this project's **Research Plan (1A) and Attachment** and all the required forms are included. My signature indicates approval of the **Research Plan (1A)** before the student begins experimentation.

SRC/IRB Chair's Printed Name

Signature

Date of Approval

(Must be prior to experimentation.)

OR

- b) **Required for research conducted at all Registered Research Institutions with no prior fair SRC approval.**

This project was conducted at a registered research institution (**not home or high school**) and was not previewed and approved by the fair SRC before experimentation, but it does comply with the International Rules. **Attach (1C) and required institutional approvals (e.g. IACUC, IRB)**

SRC/IRB Chair's Printed Name

Signature

Date of Approval

NOTE: If a stamp is used, it must be initialed by the chairperson.

3) FINAL ISEF AFFILIATED FAIR SRC APPROVAL. (REQUIRED FOR ALL PROJECTS)

SRC Approval After Experimentation and Shortly Before Competition at Regional/State/National Fair

I certify that this project adheres to the approved **Research Plan (1A)** and **Attachment** and complies with all International Rules.

Regional SRC Chair's Printed Name

Signature

Date of Approval

State/National SRC Chair's Printed Name

Signature

Date of Approval

(where applicable)

Qualified Scientist Form (2)

Required for research involving animals, controlled substances and pathogens; may be required for rDNA, tissues, and humans. Must be signed prior to the start of student experimentation.

Student's Name _____

Title of Project _____

To be completed by the Qualified Scientist (qualifications must be in student's area of research):

Scientist's Name _____

Advanced Degree _____ Degree Specialty (must be stated) _____

If degree does not clarify, please explain qualifications in student's area of research:

Position: _____ Institution: _____

Address: _____ Phone: _____

- 1) Will nonhuman vertebrate animals be used? yes no
- a) If yes, were alternatives (see page 17) explored? yes no
- b) Could this project cause pain or distress to the vertebrate animal(s)? yes no
- c) Does this project duplicate previously published research? yes no

If yes to any of the above (a, b, c) please explain and justify: _____

- 2) Will human subjects be used? yes no
- 3) Will controlled substances be used?. yes no
(includes DEA classed substances, prescription drugs, alcohol and tobacco)
- If yes,** a) Will they be used according to existing local, state and federal regulations?. yes no
- b) Please list the name(s) of the controlled substance(s): _____

4) Will recombinant DNA be used? yes no

5) Will pathogenic or potentially pathogenic agents be used? yes no

If yes, name(s) _____

If yes, will accepted procedures be used? yes no

6) Will human blood, blood products or body fluids be used?. yes no

7) Will hazardous substances be used?. yes no

8) Will you directly supervise the student(s)?. yes no

If yes, please explain what safety precautions will be taken in this study: _____

I certify that I have reviewed and approved the **Research Plan (1A)** and **Attachment** prior to the start of the experimentation. If the student or Designated Supervisor is not trained in the necessary procedures, I will ensure her/his training. I will provide advice and supervision during the research. I have a working knowledge of the techniques to be used by the student in the **Research Plan (1A)** and **Attachment**. If an addictive substance is used in this research, I certify that I possess a DEA license required for procuring and dispensing an addictive substance. I understand that a Designated Supervisor is required when the student is not conducting experimentation under my direct supervision.

Qualified Scientist's Printed Name _____

Signature _____

Date of Approval
(Must be prior to experimentation.) _____

Non-Human Vertebrate Animal Form (5)
Required for all research involving nonhuman vertebrate animals.
(SRC approval required before experimentation.)

ATTENTION: *This form is not necessary if student uses only tissue from non-human vertebrates in the project.*

Student's Name _____

Title of Project _____

To be completed by Student Researcher:

1. Genus, species, common name of animal(s) used. **(Use separate animal form for each species used.)**

2. Where will animals be obtained? (See p. 17); Pet store animals, except fish and those used for behavioral studies, are inappropriate for research.

3. How many animals will be used? _____ Average weight _____
4. Cage size _____ Number of animals per cage _____
5. Type of food _____
6. How often fed and given water? _____
7. Type of bedding used (Do not use cedar chips, newspaper, or paper towels.) _____
8. Where will animals be housed? _____
9. Name the veterinarian who will provide veterinary medical and nursing care in case of illness or emergency **(required)**.
D.V.M. _____ Name of Facility _____ Phone _____
10. Will animals be euthanized? Yes No
If yes, why and by what method? _____ By whom? _____
If no, what will happen to the animals after experimentation? _____

To be completed by Animal Care Supervisor:

Name _____

Position _____

Institution _____

Address _____

Office Phone _____

I certify that I have discussed this research with the student prior to its start and will supervise and will accept primary responsibility for the quality of care and handling of the live vertebrate animals used by the above named student. I further certify that I am knowledgeable in the proper care and handling of laboratory animals, and meet prevailing animal care supervisory requirements. When an animal must be euthanized, I certify that I will perform the procedure, using recommended agents.

Animal Care Supervisor's Printed Name _____ Signature _____ Date of Approval _____
(Must be prior to experimentation.)

Title _____ Phone _____

Institution and Address _____

This completed form is REQUIRED for ALL projects and MUST be completed following experimentation and submitted on or before February 20, 2004.

NOTE: An electronic copy must be submitted to abstracts@csc.clpgh.org. Include the abstract in the body of the e-mail, NOT as an attachment. Please include Student's Name, Teacher's Name and School in the e-mail.

Project Number: _____ (will be completed by PRSEF)

Project Title: _____

Category: _____

ABSTRACT: (maximum of 100 words – must use this form)

Instructions for completing the Abstract form

After finishing research and experimentation, you are required to write a 100 word (maximum), one page abstract. The completed abstract form MUST be submitted on or before FEBRUARY 20, 2004.

Please note that PRSEF sponsor judges have requested student abstracts for their review prior to the fair competition day. YOUR PROJECT NUMBER WILL BE ASSIGNED TO YOUR ABSTRACT BY PRSEF. DO NOT SHOW YOUR NAME OR NAME OF SCHOOL ANYWHERE ON THE ABSTRACT FORM.

The abstract should include:

- a) purpose of the experiment
- b) procedures used,
- c) data, and
- d) conclusions

It may also include any possible research applications.

An abstract should not include:

- a) acknowledgements, or
- b) work or procedures done by the mentor.

