

Research Plan Instructions

A complete research plan is required and must accompany Checklist for Student (1A)

Provide a typed research plan and attach to Student Checklist (1A). Please include your name on each page.

The research plan for ALL projects is to include the following:

A. Question or Problem being addressed

B. Goals/Expected Outcomes/Hypotheses

C. Description in detail of method or procedures (The following are important and key items that should be included when formulating ANY AND ALL research plans.)

- **Procedures:** Detail all procedures and experimental design to be used for data collection
- **Risk and Safety:** Identify any potential risks and safety precautions to be taken.
- **Data Analysis:** Describe the procedures you will use to analyze the data/results that answer research questions or hypotheses

D. **Bibliography:** List at least five (5) major references (e.g. science journal articles, books, internet sites) from your literature review. If you plan to use vertebrate animals, one of these references must be an animal care reference.

- Choose one style and use it consistently to reference the literature used in the research plan
- Guidelines can be found in the Student Handbook

Items 1–4 below are subject-specific guidelines for additional items to be included in your research plan as applicable:

1. **Human participants research:**

- **Participants.** Describe who will participate in your study (age range, gender, racial/ethnic composition). Identify any vulnerable populations (minors, pregnant women, prisoners, mentally disabled or economically disadvantaged).
- **Recruitment.** Where will you find your participants? How will they be invited to participate?
- **Methods.** What will participants be asked to do? Will you use any surveys, questionnaires or tests? What is the frequency and length of time involved for each subject?
- **Risk Assessment**
 - **Risks.** What are the risks or potential discomforts (physical, psychological, time involved, social, legal, etc.) to participants? How will you minimize the risks?
 - **Benefits.** List any benefits to society or each participant.
- **Protection of Privacy.** Will any identifiable information (e.g., names, telephone numbers, birth dates, email addresses) be collected? Will data be confidential or anonymous? If anonymous, describe how the data will be collected anonymously. If not anonymous, what procedures are in place for safeguarding confidentiality? Where will the data be stored? Who will have access to the data? What will you do with the data at the end of the study?
- **Informed Consent Process.** Describe how you will inform participants about the purpose of the study, what they will be asked to do, that their participation is voluntary and they have the right to stop at any time.

2. **Vertebrate animal research:**

- Briefly discuss potential **ALTERNATIVES** to vertebrate animal use and present a detailed justification for use of vertebrate animals
- Explain potential impact or contribution this research may have
- Detail all procedures to be used
 - Include methods used to minimize potential discomfort, distress, pain and injury to the animals during the course of experimentation
 - Detailed chemical concentrations and drug dosages
- Detail animal numbers, species, strain, sex, age, source, etc.
 - Include justification of the numbers planned for the research
- Describe housing and oversight of daily care
- Discuss disposition of the animals at the termination of the study

3. **Potentially Hazardous Biological Agents:**

- Describe Biosafety Level Assessment process and resultant BSL determination
- Give source of agent, source of specific cell line, etc.
- Detail safety precautions
- Discuss methods of disposal

4. **Hazardous Chemicals, Activities & Devices:**

- Describe Risk Assessment process and results
- Detail chemical concentrations and drug dosages
- Describe safety precautions and procedures to minimize risk
- Discuss methods of disposal

Checklist for Adult Sponsor (1)

This completed form is required for ALL projects.

To be completed by the Adult Sponsor in collaboration with the student researcher(s):

Student's Name(s): _____

Project Title: _____

- 1) I have reviewed the Intel ISEF Rules and Guidelines.
- 2) I have reviewed the student's completed Student Checklist (1A) and Research Plan.
- 3) I have worked with the student and we have discussed the possible risks involved in the project.
- 4) The project involves one or more of the following and requires prior approval by an SRC, IRB, IACUC or IBC:

<input type="checkbox"/> Humans	Potentially Hazardous Biological Agents
<input type="checkbox"/> Vertebrate Animals	<input type="checkbox"/> Microorganisms <input type="checkbox"/> rDNA <input type="checkbox"/> Tissues
- 5) Items to be completed for **ALL PROJECTS**

<input type="checkbox"/> Adult Sponsor Checklist (1)	<input type="checkbox"/> Research Plan
<input type="checkbox"/> Student Checklist (1A)	<input type="checkbox"/> Approval Form (1B)
<input type="checkbox"/> Regulated Research Institutional/Industrial Setting Form (1C) (when applicable after completed experiment)	
<input type="checkbox"/> Continuation/Research Progression Form (7) (when applicable)	

6) **Additional forms required if the project includes the use of one or more of the following (check all that apply):**

- Humans** (Requires prior approval by an Institutional Review Board (IRB); see full text of the rules.)
 - Human Participants Form (4) or appropriate Institutional IRB documentation
 - Sample of Informed Consent Form (when applicable and/or required by the IRB)
 - Qualified Scientist Form (2) (when applicable and/or required by the IRB)
- Vertebrate Animals** (Requires prior approval, see full text of the rules.)
 - Vertebrate Animal Form (5A)—for projects conducted in a school/home/field research site (SRC prior approval required.)
 - Vertebrate Animal Form (5B)—for projects conducted at a Regulated Research Institution. (Institutional Animal Care and Use Committee (IACUC) approval required prior experimentation.)
 - Qualified Scientist Form (2) (Required for all vertebrate animal projects at a regulated research site or when applicable)
- Potentially Hazardous Biological Agents** (Requires prior approval by SRC, IACUC or Institutional Biosafety Committee (IBC), see full text of the rules.)
 - Potentially Hazardous Biological Agents Risk Assessment Form (6A)
 - Human and Vertebrate Animal Tissue Form (6B)—to be completed in addition to Form 6A when project involves the use of fresh or frozen tissue, primary cell cultures, blood, blood products and body fluids.
 - Qualified Scientist Form (2) (when applicable)

Note: Certain projects involving microorganisms are exempt from the PHBA review and form requirements. See the full text for details

- Hazardous Chemicals, Activities and Devices** (No prior approval required, see full text of the rules.)
 - Risk Assessment Form (3)
 - Qualified Scientist Form (2) (required for projects involving DEA-controlled substances or when applicable)

Adult Sponsor's Printed Name

Signature

Date of Review

Phone

Email

Student Checklist (1A)

This form is required for ALL projects.

1) a. Student/Team Leader: _____ Grade: _____
Email: _____ Phone: _____

b. Team Member: _____ c. Team Member: _____

2) Title of Project: _____

3) School: _____ School Phone: _____

School Address: _____

4) Adult Sponsor: _____ Phone/Email: _____

5) Is this a continuation/progression from a previous year? Yes No
If Yes:

a) Attach the previous year's Abstract and Research Plan

b) Explain how this project is new and different from previous years on Continuation/Research Progression Form (7)

6) This year's laboratory experiment/data collection: (must be stated (mm/dd/yy))

_____ Start Date: (mm/dd/yy)

_____ End Date: (mm/dd/yy)

7) Where will you conduct your experimentation? (check all that apply)

Research Institution School Field Home Other: _____

8) List name and address of all non-school work site(s):

Name: _____

Address: _____

Phone: _____

9) Complete a Research Plan following the Research Plan instructions and attach to this form.

10) An abstract is required for all projects after experimentation.

Approval Form (1B)

A completed form is required for each student, including all team members.

1) To Be Completed by Student and Parent

a) Student Acknowledgment:

- I understand the risks and possible dangers to me of the proposed research plan.
- I have read the Intel ISEF Rules and Guidelines and will adhere to all International Rules when conducting this research.
- I have read and will abide by the following Ethics statement

Scientific fraud and misconduct are not condoned at any level of research or competition. Such practices include plagiarism, forgery, use or presentation of other researcher's work as one's own, and fabrication of data. Fraudulent projects will fail to qualify for competition in affiliated fairs and the Intel ISEF.

Student's Printed Name	Signature	Date Acknowledged (mm/dd/yy) (Must be prior to experimentation.)
b) Parent/Guardian Approval: I have read and understand the risks and possible dangers involved in the Research Plan . I consent to my child participating in this research.		
Parent/Guardian's Printed Name	Signature	Date Acknowledged (mm/dd/yy) (Must be prior to experimentation.)

2) To be completed by the local or affiliated Fair SRC

(Required for projects requiring prior SRC/IRB APPROVAL. Sign 2a or 2b as appropriate.)

a) Required for projects that need prior SRC/IRB approval BEFORE experimentation (humans, vertebrates or potentially hazardous biological agents) The SRC/IRB has carefully studied this project's Research Plan and all the required forms are included. My signature indicates approval of the Research Plan before the student begins experimentation. <hr style="border: 0; border-top: 1px solid black;"/> <div style="display: flex; justify-content: space-between;"> Signature Date of Approval (mm/dd/yy) (Must be prior to experimentation.) </div>	OR	b) Required for research conducted at all Regulated Research Institutions with no prior fair SRC/IRB approval. This project was conducted at a regulated research institution (not home or high school, etc.), was reviewed and approved by the proper institutional board before experimentation and complies with the Intel ISEF Rules. Attach (1C) and required institutional approvals (e.g. IACUC, IRB). <hr style="border: 0; border-top: 1px solid black;"/> <div style="display: flex; justify-content: space-between;"> Signature Date of Approval (mm/dd/yy) </div>
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3) Final Intel ISEF Affiliated Fair SRC Approval (Required for ALL Projects)

SRC Approval After Experimentation and Before Competition at Regional/State/National Fair I certify that this project adheres to the approved Research Plan and complies with all Intel ISEF Rules.		
Regional SRC Chair's Printed Name	Signature	Date of Approval
State/National SRC Chair's Printed Name <i>(where applicable)</i>	Signature	Date of Approval