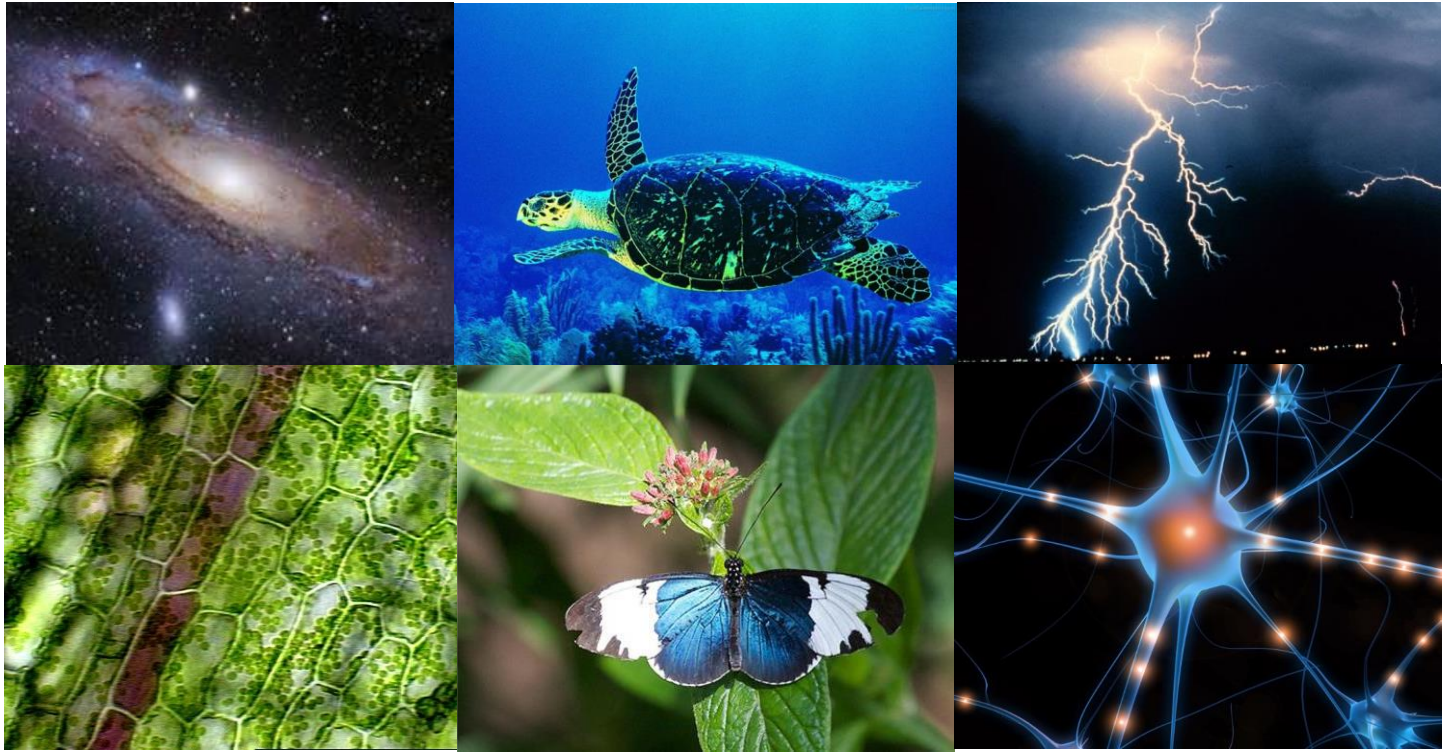
Florida State Science & Engineering Fair



Adult Roles and Responsibilities

- Adult Sponsor
- Designated Supervisor
- Qualified Scientist
- IRB
- SRC

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Adult Sponsor

- Oversees project
- Completes Form 1 – Checklist for Adult Sponsor
- Usually the science teacher

Designated Supervisor

- Supervises project when Qualified Scientist cannot directly supervise
- “Animal Care Supervisor” for animal projects
- Supervises projects using Hazardous Chemicals, Activities or Devices, completes and signs Form 3.

Qualified Scientist

- Required for some projects
- Doctorate/professional degree related to student research
- Completes Form 2 – QS Form and Form 3 if applicable.

Research sites

- Examples of non-regulated sites
  - Home
  - School
  - Farm
  - Ranch
  - Field
  - Hospitals and clinics may or/may not be RRI's
- Examples of regulated site
  - IACUC Review and Approval process
  - Universities
  - Government research agencies
  - Private research laboratories / hospitals

IRB

(Institutional Review Board)

- Individual schools can have their own IRB
- Reviews human subject studies
- Membership
  - educator
  - school administrator
  - someone knowledgeable about evaluating risk: MD, PA, RN, psychiatrist, psychologist, licensed social worker (knowledgeable in the area of the research being evaluated)

SRC
(Scientific Review Committee)

- Review all PHBA, Vertebrate and HCAD projects BEFORE experimentation
- Review all projects just prior to competition
- Membership
  - biomedical scientist (Ph.D., M.D., D.V.M., D.D.S., D.O.)
  - science teacher
  - other members

(These members cannot directly supervise project and be on SRC)

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Intel International Science & Engineering Fair 2019

Overview of Rule Changes

General
- Minor changes in wording (spelling, grammar, formatting)
- P. 4 - New section on digital paperwork and signatures
- All sections (human participant, vertebrate animals, PHBAs, hazardous substances) have been realigned to state general rules first and put exemptions at the end of the section.

Human Participants
- Removed expedited review. Any project that requires IRB approval requires full approval.
- Clarification of Regulated Research Institution IRB and School IRB
- New section on human participant involvement in student-designed invention, prototype, computer application and engineering/design projects

Vertebrate Animals:
- P. 10 Rule 6 – 15% is the maximum permissible weight loss for experimental animals compared to control group.

PHBAs:
- P. 14 B – Describes conditions under which various rDNA technologies may be conducted.

Hazardous Chemicals, Activities, or Devices:
- Clarifies sections on regulated drones and radiation

Engineering Projects Guide:
- P. 20 – New Section. Provides checklist for hazardous chemicals, substances, devices; human participants; vertebrate animals; PHBAs.

Forms:
- 1C – Now two pages
- 7 – Only current and previous project details are on the form. Additional forms may be used for all prior projects.

Florida SSEF

RSEF/SSEF/ISEF Reminders & Rule Changes

Teams at RSEF, SSEF & ISEF will compete in the category of their choice.

The use of *E.coli* K-12 in projects requires prior SRC approval. NOTE: This is stricter than INTEL ISEF Rules/Guidelines.

Behavioral vertebrate projects are prohibited which include operant conditioning with aversive stimuli.

NO BSL2 projects allowed in Junior Section.

Florida SSEF

RSEF/SSEF/ISEF Reminders & Rule Changes

Projects involving non-human vertebrates require SSEF Mortality Form.

No vertebrate animal deaths due to the experimental procedures are permitted in any group or subgroup. Such a project will fail to qualify for competition.

Any death which occurs must be investigated by an individual qualified to determine the cause of death, such as a veterinarian. The results of the investigation must be documented in writing.

Florida SSEF

RSEF/SSEF/ISEF Reminders & Rule Changes

All animals must be monitored for signs of distress. Because significant weight loss is one sign of stress, weight must be recorded at least weekly with 15% being the maximum permissible weight loss or growth retardation (compared to controls) of any experimental or control animal. . See Page 10, #6 ISEF Rules.

Florida SSEF

RSEF/SSEF/ISEF Reminders & Rule Changes

Studies involving the decomposition of vertebrate organisms (such as in forensic projects) require a Risk Assessment Form 3.

Human and other primate established cell lines and tissue cultures are to be treated as potentially hazardous biological agents. Plant and non-primate **established cell lines** and tissue culture collections do not need to be treated as potentially hazardous biological agents.

Florida SSEF

RSEF/SSEF/ISEF Reminders & Rule Changes

No batteries in drones at display.

No QR codes at display.

No expedited reviews for humans.

Written permission for collection on private property **and** “managed” public lands.

Florida SSEF

RSEF/SSEF/ISEF Reminders & Rule Changes

No brand names, student produced or commercial logos or acknowledgements may be displayed on a project at RSEF/SSEF/ISEF. This includes brand names in the project title and/or abstract.

A Project Summary is only required if the student makes a change in the procedures outlined in the student's original Research Plan.

Form 1C needed for locations outside home, field or school. New instructions/form on ISEF Form 1C.

Florida SSEF

Prohibited by SSEF

The use of wild-collected mushrooms is prohibited.

Use of carbapenem-resistant Enterobacteriaceae (CRE), methicillin-resistant Staphylococcus aureus (MRSA), vancomycin-resistant Enterococci (VRE) or Klebsiella pneumonia Carbapenemase (KPC) producing bacteria and other related resistant microbes is prohibited.

Sub-culturing from Microbial Fuel Cells is prohibited unless work is conducted at a Regulated Research Institution.

Florida SSEF

Prohibited by SSEF

No project involving emerging pathogens carried by arthropod (mosquitoes, flies, etc.) vectors or water samples collected from the environment containing cyanobacteria may be conducted by Junior Division participants.

Senior Division participants may conduct research on these subjects at Registered Research Institutions only when working with the RRI's collection.

Florida SSEF

SSEF Fair Concerns

Mentors must be aware of rules and rules must be implemented.

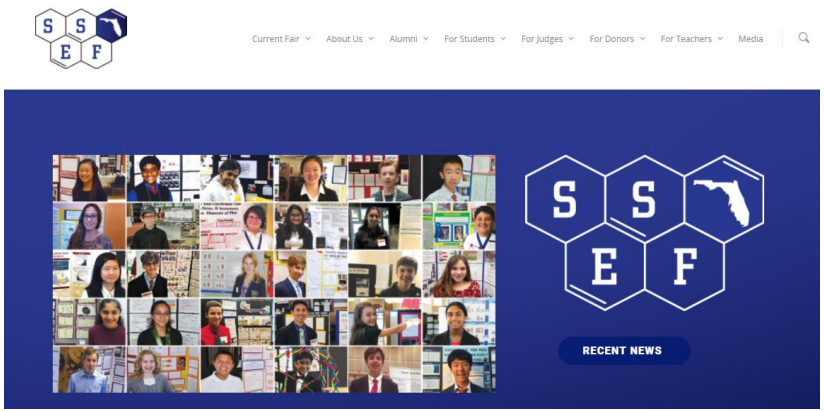
IRB can be set up by schools
Professionals must be in field of research.

Students, teachers and all involved must become aware of risks while conducting research.

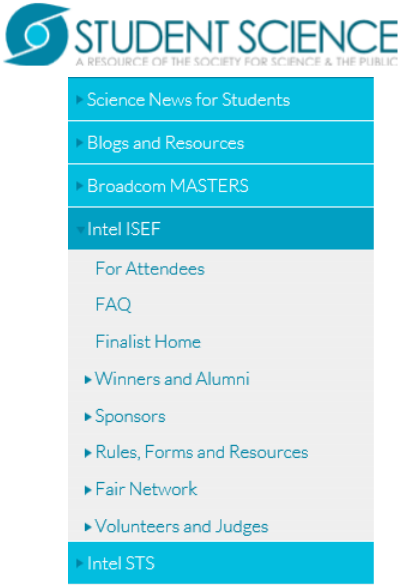
Florida SSEF

Research Teachers and Fair Directors must…

… become familiar with ISEF and SSEF Rules and Guidelines



https://sseflorida.com/



https://student.societyforscience.org/international-rules-pre-college-science-research

Florida SSEF

Research Teachers and Fair Directors please note that there is a SSEF Rules Supplement.

https://sseffflorida.com/wp-content/uploads/2018/07/2018.19-SSEF-Rules-Supplement.final_.pdf

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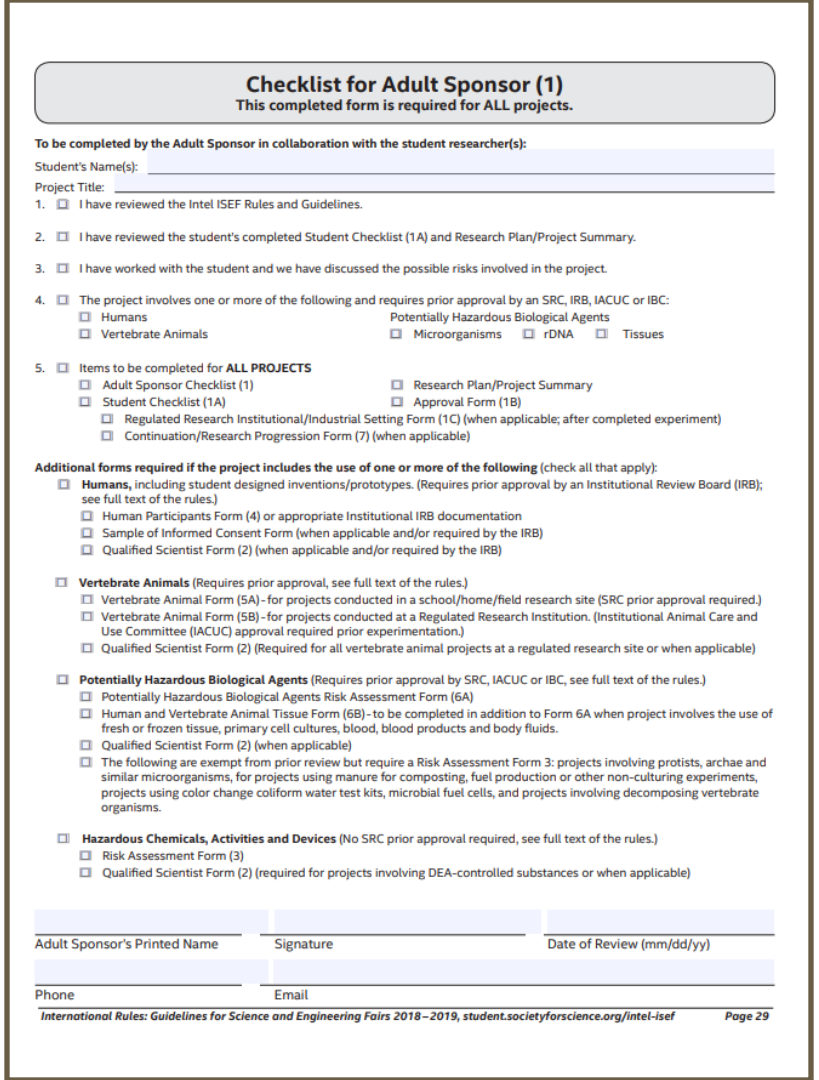
Form 1 is required of all projects.

Form 1 is a fillable and savable form

Make sure that areas pertaining to the project are indicated (checked).

Signatures and dates in blue ink to indicate "original", not copy.

Use current year's form!



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/Project Summary.
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:
   - ☐ Humans
   - ☐ Vertebrate Animals
   - Potentially Hazardous Biological Agents: ☐ Microorganisms ☐ rDNA ☐ Tissues
5. ☐ Items to be completed for **ALL PROJECTS**
   - ☐ Adult Sponsor Checklist (1)
   - ☐ Student Checklist (1A)
   - ☐ Research Plan/Project Summary
   - ☐ Approval Form (1B)
   - ☐ Regulated Research Institutional/Industrial Setting Form (1C) (when applicable; after completed experiment)
   - ☐ Continuation/Research Progression Form (7) (when applicable)

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

☐ **Humans,** including student designed inventions/prototypes. (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 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)
- ☐ The following are exempt from prior review but require a Risk Assessment Form 3: projects involving protists, archae and similar microorganisms, for projects using manure for composting, fuel production or other non-culturing experiments, projects using color change coliform water test kits, microbial fuel cells, and projects involving decomposing vertebrate organisms.

☐ **Hazardous Chemicals, Activities and Devices** (No SRC 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 (mm/dd/yy)

Phone | Email

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Form 1A is required of all projects.

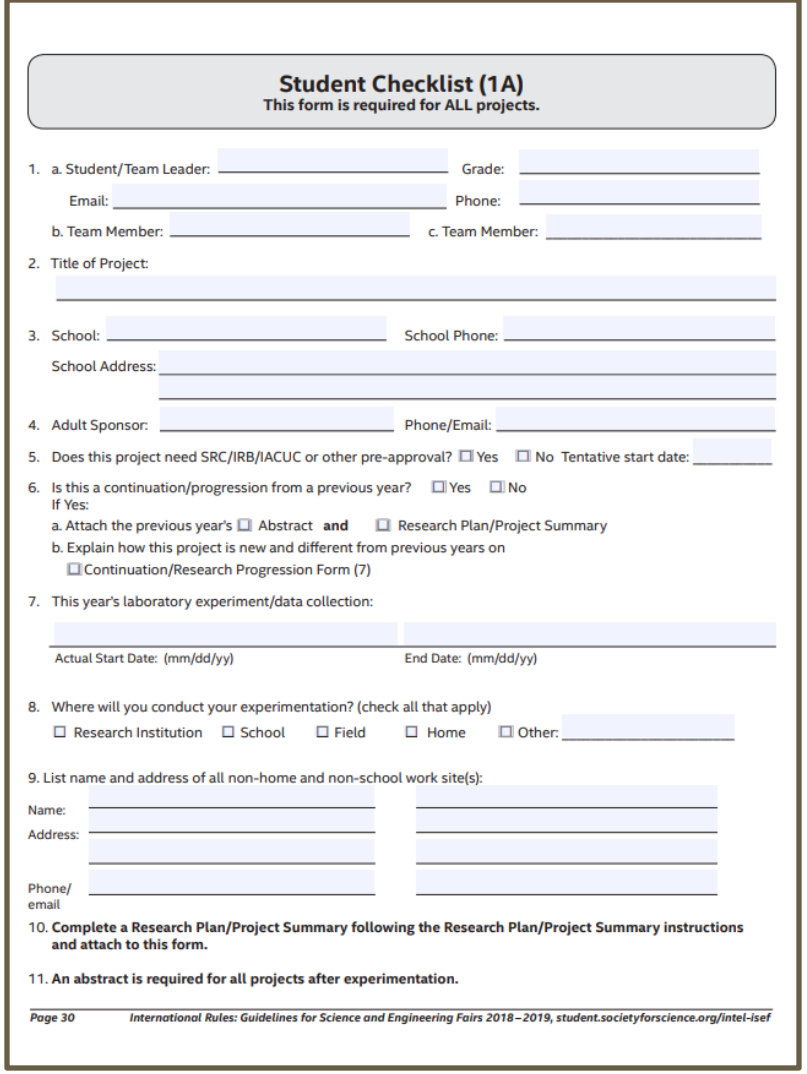
Form 1A is a fillable and savable form

Start dates are for the **experimentation** portion of the project.

Florida SSEF ★

Husbandry projects, experimentation date is established as the moment you take possession of the subject animal.

Vertebrate projects, Any action taken involving obtaining and setting up the experiment is included in experimental responsibilities for the vertebrate.



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. Does this project need SRC/IRB/IACUC or other pre-approval? ☐ Yes ☐ No Tentative start date: _____
6. Is this a continuation/progression from a previous year? ☐ Yes ☐ No
   If Yes:
   a. Attach the previous year's ☐ Abstract **and** ☐ Research Plan/Project Summary
   b. Explain how this project is new and different from previous years on
   ☐ Continuation/Research Progression Form (7)
7. This year's laboratory experiment/data collection:
   Actual Start Date: (mm/dd/yy) End Date: (mm/dd/yy)
8. Where will you conduct your experimentation? (check all that apply)
   ☐ Research Institution ☐ School ☐ Field ☐ Home ☐ Other: _____
9. List name and address of all non-home and non-school work site(s):
   Name: _____
   Address: _____
   Phone/email: _____
10. **Complete a Research Plan/Project Summary following the Research Plan/Project Summary instructions and attach to this form.**
11. **An abstract is required for all projects after experimentation.**

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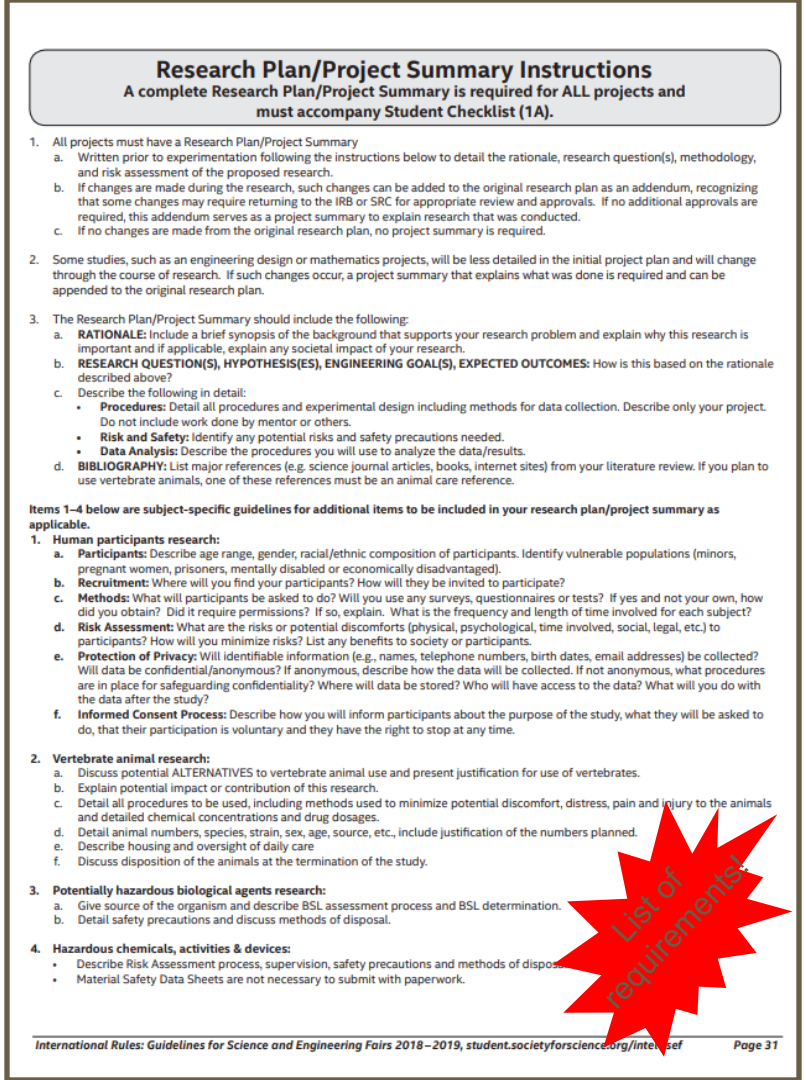
Research Plan is required of all projects.

Rationale: Brief synopsis of the background that supports your research problem and explain why this research is important scientifically.

Required items in research plan: Human subject, vertebrate, PHBA and HCAD projects require items listed at right in research plan.

Data Analysis: numbered steps. Please remember that "Data Analysis" is not a description of how data is to be displayed but an analysis of the data collected.

Bibliography: Please make sure to include required citations (depending on nature of research). Sources should be diverse.



Research Plan/Project Summary Instructions

A complete Research Plan/Project Summary is required for ALL projects and must accompany Student Checklist (1A).

1. All projects must have a Research Plan/Project Summary
   a. Written prior to experimentation following the instructions below to detail the rationale, research question(s), methodology, and risk assessment of the proposed research.
   b. If changes are made during the research, such changes can be added to the original research plan as an addendum, recognizing that some changes may require returning to the IRB or SRC for appropriate review and approvals. If no additional approvals are required, this addendum serves as a project summary to explain research that was conducted.
   c. If no changes are made from the original research plan, no project summary is required.

2. Some studies, such as an engineering design or mathematics projects, will be less detailed in the initial project plan and will change through the course of research. If such changes occur, a project summary that explains what was done is required and can be appended to the original research plan.

3. The Research Plan/Project Summary should include the following:
   a. **RATIONALE:** Include a brief synopsis of the background that supports your research problem and explain why this research is important and if applicable, explain any societal impact of your research.
   b. **RESEARCH QUESTION(S), HYPOTHESIS(ES), ENGINEERING GOAL(S), EXPECTED OUTCOMES:** How is this based on the rationale described above?
   c. Describe the following in detail:
      - **Procedures:** Detail all procedures and experimental design including methods for data collection. Describe only your project. Do not include work done by mentor or others.
      - **Risk and Safety:** Identify any potential risks and safety precautions needed.
      - **Data Analysis:** Describe the procedures you will use to analyze the data/results.
   d. **BIBLIOGRAPHY:** List 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.

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

1. **Human participants research:**
   a. **Participants:** Describe age range, gender, racial/ethnic composition of participants. Identify vulnerable populations (minors, pregnant women, prisoners, mentally disabled or economically disadvantaged).
   b. **Recruitment:** Where will you find your participants? How will they be invited to participate?
   c. **Methods:** What will participants be asked to do? Will you use any surveys, questionnaires or tests? If yes and not your own, how did you obtain? Did it require permissions? If so, explain. What is the frequency and length of time involved for each subject?
   d. **Risk Assessment:** What are the risks or potential discomforts (physical, psychological, time involved, social, legal, etc.) to participants? How will you minimize risks? List any benefits to society or participants.
   e. **Protection of Privacy:** Will identifiable information (e.g., names, telephone numbers, birth dates, email addresses) be collected? Will data be confidential/anonymous? If anonymous, describe how the data will be collected. If not anonymous, what procedures are in place for safeguarding confidentiality? Where will data be stored? Who will have access to the data? What will you do with the data after the study?
   f. **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:**
   a. Discuss potential ALTERNATIVES to vertebrate animal use and present justification for use of vertebrates.
   b. Explain potential impact or contribution of this research.
   c. Detail all procedures to be used, including methods used to minimize potential discomfort, distress, pain and injury to the animals and detailed chemical concentrations and drug dosages.
   d. Detail animal numbers, species, strain, sex, age, source, etc., include justification of the numbers planned.
   e. Describe housing and oversight of daily care
   f. Discuss disposition of the animals at the termination of the study.

3. **Potentially hazardous biological agents research:**
   a. Give source of the organism and describe BSL assessment process and BSL determination.
   b. Detail safety precautions and discuss methods of disposal.

4. **Hazardous chemicals, activities & devices:**
   - Describe Risk Assessment process, supervision, safety precautions and methods of disposal
   - Material Safety Data Sheets are not necessary to submit with paperwork.

List of requirements!

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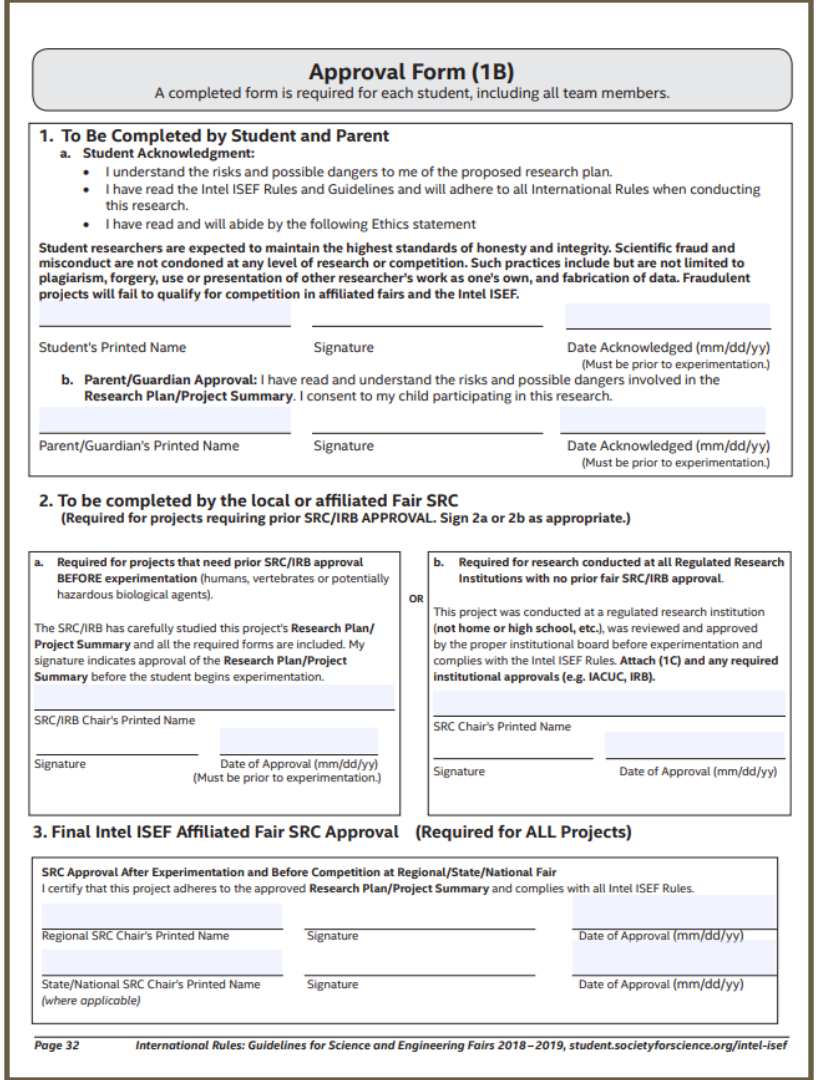
Form 1B is required of all projects.

Form 1B is a fillable and savable form

Signatures and dates in blue ink to indicate "original", not copy.

Some projects require SRC approval before 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

Student researchers are expected to maintain the highest standards of honesty and integrity. Scientific fraud and misconduct are not condoned at any level of research or competition. Such practices include but are not limited to 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/Project Summary**. 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/Project Summary** and all the required forms are included. My signature indicates approval of the **Research Plan/Project Summary** before the student begins experimentation.

SRC/IRB Chair's Printed Name

Signature | Date of Approval (mm/dd/yy) (Must be prior to experimentation.)

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 any required institutional approvals (e.g. IACUC, IRB).**

SRC Chair's Printed Name

Signature | Date of Approval (mm/dd/yy)

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/Project Summary** and complies with all Intel ISEF Rules.

Regional SRC Chair's Printed Name | Signature | Date of Approval (mm/dd/yy)

State/National SRC Chair's Printed Name *(where applicable)* | Signature | Date of Approval (mm/dd/yy)

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Form 1C is required of projects conducted at RRI or industrial setting.

Form 1C is a fillable and savable form

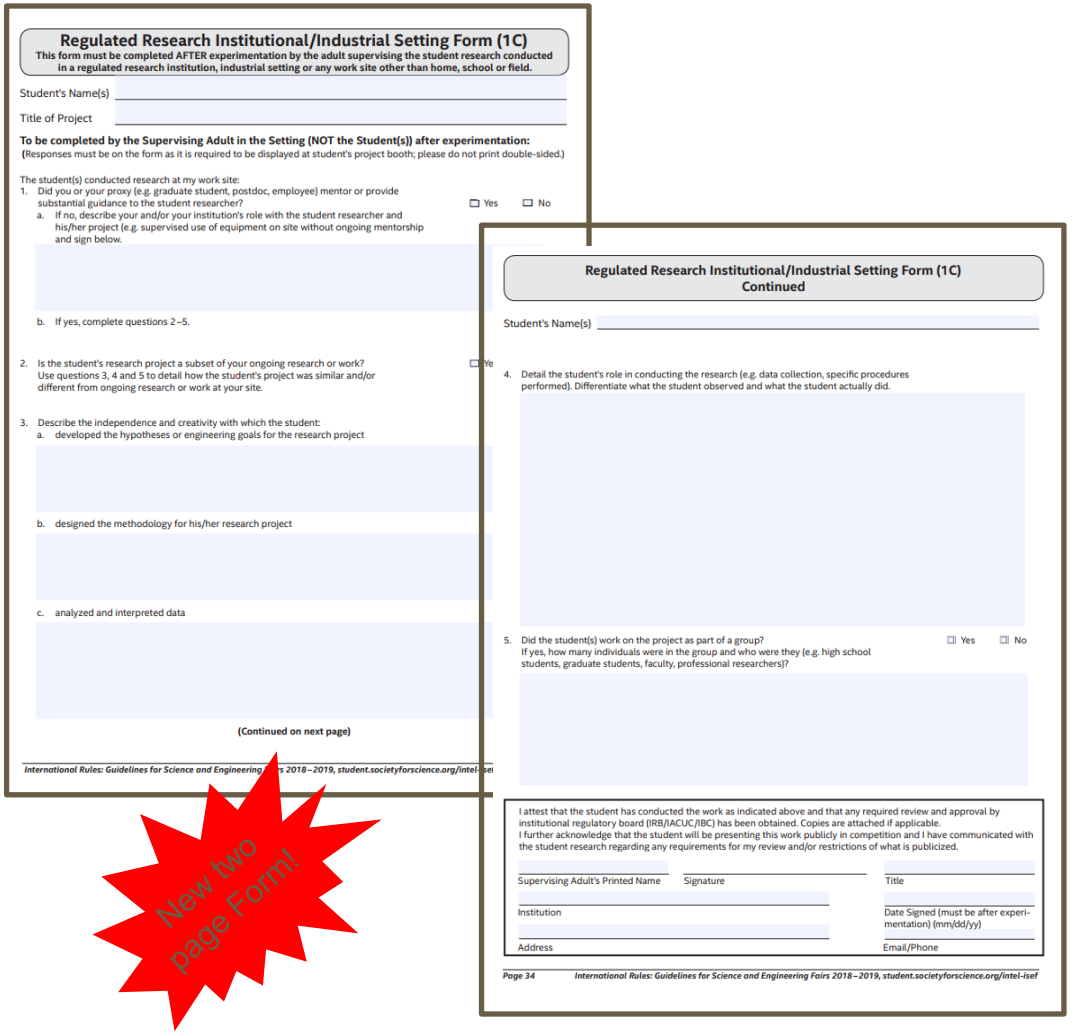
Please make sure that all questions are answered appropriately.

Determination of requirement is established by SRC and rules/guidelines.

Form 1C needed for locations outside home, field or school.

Signatures and dates in blue ink to indicate "original", not copy.

This form should be dated after the completion of experimentation.



Regulated Research Institutional/Industrial Setting Form (1C)
This form must be completed AFTER experimentation by the adult supervising the student research conducted in a regulated research institution, industrial setting or any work site other than home, school or field.

Student's Name(s)

Title of Project

To be completed by the Supervising Adult in the Setting (NOT the Student(s)) after experimentation:
(Responses must be on the form as it is required to be displayed at student's project booth; please do not print double-sided.)

The student(s) conducted research at my work site:

1. Did you or your proxy (e.g. graduate student, postdoc, employee) mentor or provide substantial guidance to the student researcher? ☐ Yes ☐ No
   a. If no, describe your and/or your institution's role with the student researcher and his/her project (e.g. supervised use of equipment on site without ongoing mentorship and sign below.
   b. If yes, complete questions 2–5.
2. Is the student's research project a subset of your ongoing research or work? Use questions 3, 4 and 5 to detail how the student's project was similar and/or different from ongoing research or work at your site.
3. Describe the independence and creativity with which the student:
   a. developed the hypotheses or engineering goals for the research project
   b. designed the methodology for his/her research project
   c. analyzed and interpreted data

(Continued on next page)

International Rules: Guidelines for Science and Engineering Fairs 2018–2019, student.societyforscience.org/intel-isef

New two page Form!

Regulated Research Institutional/Industrial Setting Form (1C)
Continued

Student's Name(s)

4. Detail the student's role in conducting the research (e.g. data collection, specific procedures performed). Differentiate what the student observed and what the student actually did.
5. Did the student(s) work on the project as part of a group? ☐ Yes ☐ No
   If yes, how many individuals were in the group and who were they (e.g. high school students, graduate students, faculty, professional researchers)?

I attest that the student has conducted the work as indicated above and that any required review and approval by institutional regulatory board (IRB/IACUC/IBC) has been obtained. Copies are attached if applicable.
I further acknowledge that the student will be presenting this work publicly in competition and I have communicated with the student research regarding any requirements for my review and/or restrictions of what is publicized.

Supervising Adult's Printed Name | Signature | Title

Institution | Date Signed (must be after experimentation) (mm/dd/yy)

Address | Email/Phone

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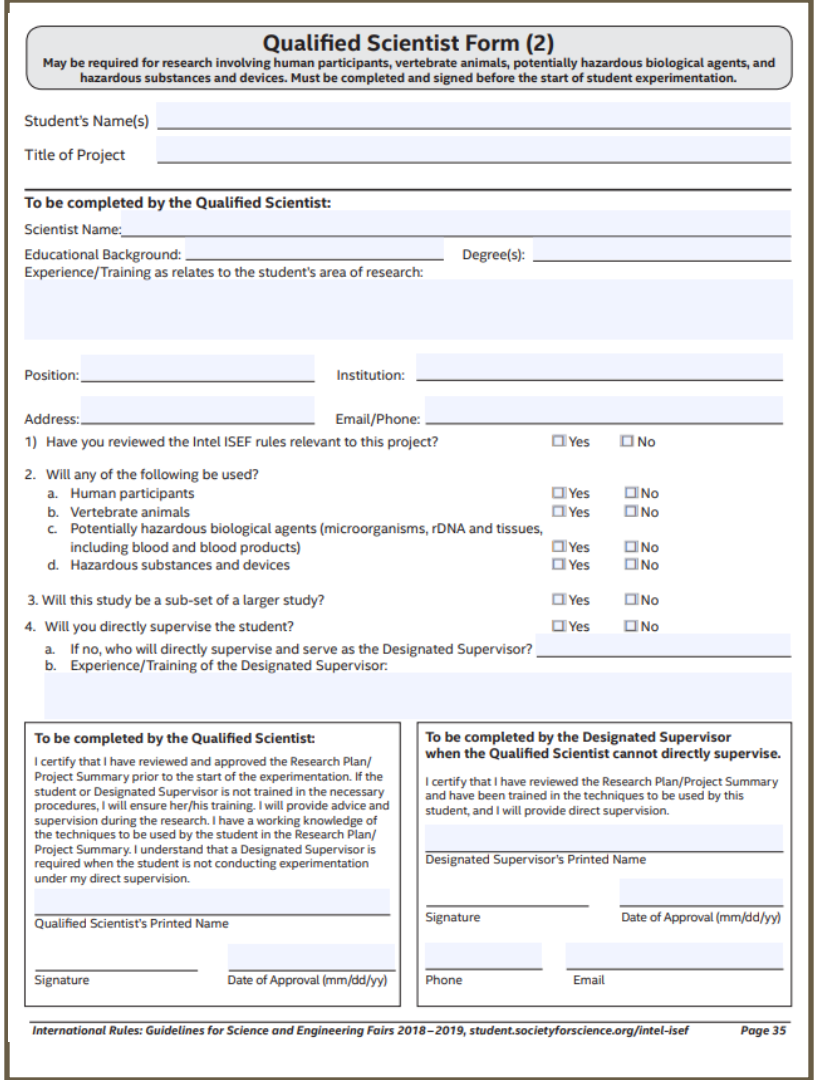
Form 2 may be required due to the nature of research.

Form 2 is a fillable and savable form.

Please make sure that all questions are answered appropriately.

Determination of requirement is established by SRC/IRB and rules/guidelines.

Signatures and dates in blue ink to indicate "original", not copy.



Qualified Scientist Form (2)

May be required for research involving human participants, vertebrate animals, potentially hazardous biological agents, and hazardous substances and devices. Must be completed and signed before the start of student experimentation.

Student's Name(s) _____

Title of Project _____

To be completed by the Qualified Scientist:

Scientist Name: _____

Educational Background: _____ Degree(s): _____

Experience/Training as relates to the student's area of research:

Position: _____ Institution: _____

Address: _____ Email/Phone: _____

1) Have you reviewed the Intel ISEF rules relevant to this project? ☐ Yes ☐ No

2. Will any of the following be used?
   a. Human participants ☐ Yes ☐ No
   b. Vertebrate animals ☐ Yes ☐ No
   c. Potentially hazardous biological agents (microorganisms, rDNA and tissues, including blood and blood products) ☐ Yes ☐ No
   d. Hazardous substances and devices ☐ Yes ☐ No

3. Will this study be a sub-set of a larger study? ☐ Yes ☐ No

4. Will you directly supervise the student? ☐ Yes ☐ No
   a. If no, who will directly supervise and serve as the Designated Supervisor? _____
   b. Experience/Training of the Designated Supervisor:

To be completed by the Qualified Scientist:

I certify that I have reviewed and approved the Research Plan/Project Summary 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/Project Summary. 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 (mm/dd/yy)

To be completed by the Designated Supervisor when the Qualified Scientist cannot directly supervise.

I certify that I have reviewed the Research Plan/Project Summary and have been trained in the techniques to be used by this student, and I will provide direct supervision.

Designated Supervisor's Printed Name

Signature Date of Approval (mm/dd/yy)

Phone Email

International Rules: Guidelines for Science and Engineering Fairs 2018–2019, student.societyforscience.org/intel-isef *Page 35*

STUDENT SCIENCE
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Form 3 is required of most projects including vertebrate animals.

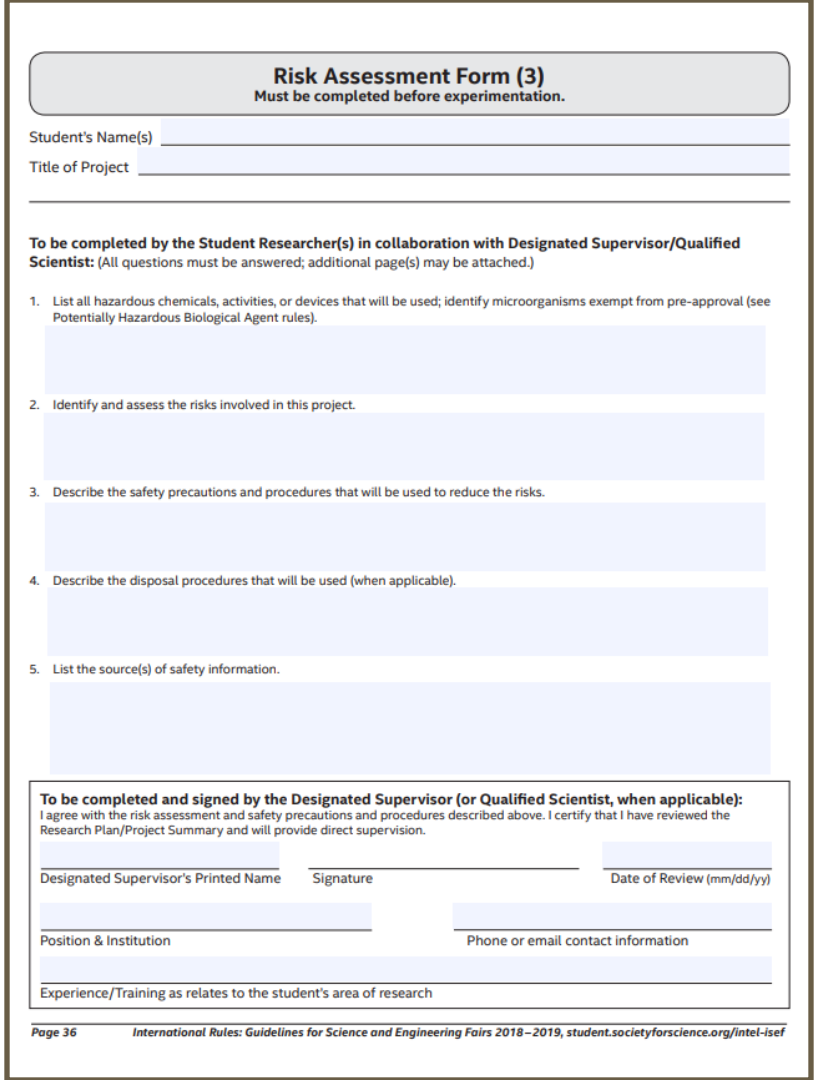
Form 3 is a fillable and savable form

Please make sure that all questions are answered appropriately.

Make sure to list appropriate sources off safety information.

Determination of requirement is established by SRC/IRB and rules/guidelines.

Signatures and dates in blue ink to indicate "original", not copy.



Risk Assessment Form (3)
Must be completed before experimentation.

Student's Name(s) _____

Title of Project _____

To be completed by the Student Researcher(s) in collaboration with Designated Supervisor/Qualified Scientist: (All questions must be answered; additional page(s) may be attached.)

1. List all hazardous chemicals, activities, or devices that will be used; identify microorganisms exempt from pre-approval (see Potentially Hazardous Biological Agent rules).
2. Identify and assess the risks involved in this project.
3. Describe the safety precautions and procedures that will be used to reduce the risks.
4. Describe the disposal procedures that will be used (when applicable).
5. List the source(s) of safety information.

To be completed and signed by the Designated Supervisor (or Qualified Scientist, when applicable):
I agree with the risk assessment and safety precautions and procedures described above. I certify that I have reviewed the Research Plan/Project Summary and will provide direct supervision.

Designated Supervisor's Printed Name | Signature | Date of Review (mm/dd/yy)

Position & Institution | Phone or email contact information

Experience/Training as relates to the student's area of research

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STUDENT SCIENCE
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Form 4 is required of all projects involving human subjects.

Form 4 is a fillable and savable form.

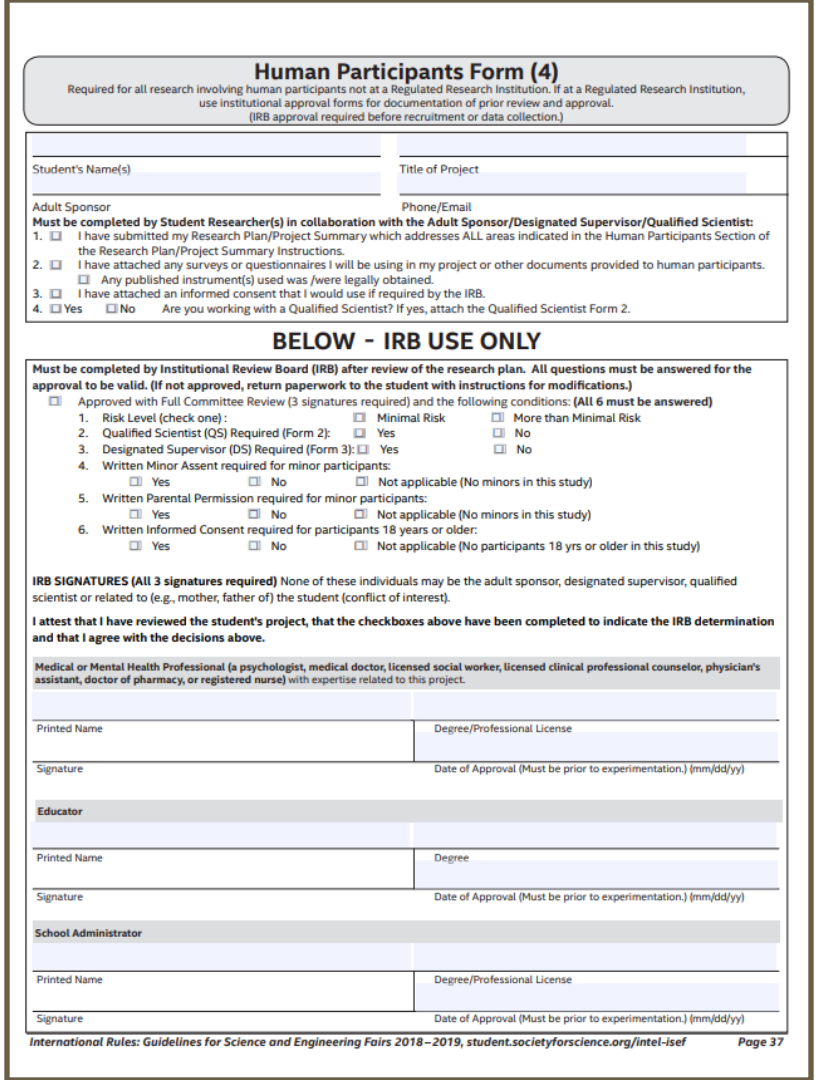
Level of risk is determined by the IRB.

Determination of requirement is established by SRC/IRB and rules/guidelines.

Florida SSEF

If a student uses humans in their research a reference to the protection of human subjects, MUST be cited in their bibliography.

Signatures and dates in blue ink to indicate "original", not copy.



Human Participants Form (4)

Required for all research involving human participants not at a Regulated Research Institution. If at a Regulated Research Institution, use institutional approval forms for documentation of prior review and approval.
(IRB approval required before recruitment or data collection.)

Student's Name(s) | Title of Project

Adult Sponsor | Phone/Email

Must be completed by Student Researcher(s) in collaboration with the Adult Sponsor/Designated Supervisor/Qualified Scientist:

1. ☐ I have submitted my Research Plan/Project Summary which addresses ALL areas indicated in the Human Participants Section of the Research Plan/Project Summary Instructions.
2. ☐ I have attached any surveys or questionnaires I will be using in my project or other documents provided to human participants.
   ☐ Any published instrument(s) used was /were legally obtained.
3. ☐ I have attached an informed consent that I would use if required by the IRB.
4. ☐ Yes ☐ No Are you working with a Qualified Scientist? If yes, attach the Qualified Scientist Form 2.

BELOW - IRB USE ONLY

Must be completed by Institutional Review Board (IRB) after review of the research plan. All questions must be answered for the approval to be valid. (If not approved, return paperwork to the student with instructions for modifications.)

☐ Approved with Full Committee Review (3 signatures required) and the following conditions: **(All 6 must be answered)**

1. Risk Level (check one) : ☐ Minimal Risk ☐ More than Minimal Risk
2. Qualified Scientist (QS) Required (Form 2): ☐ Yes ☐ No
3. Designated Supervisor (DS) Required (Form 3): ☐ Yes ☐ No
4. Written Minor Assent required for minor participants:
   ☐ Yes ☐ No ☐ Not applicable (No minors in this study)
5. Written Parental Permission required for minor participants:
   ☐ Yes ☐ No ☐ Not applicable (No minors in this study)
6. Written Informed Consent required for participants 18 years or older:
   ☐ Yes ☐ No ☐ Not applicable (No participants 18 yrs or older in this study)

IRB SIGNATURES (All 3 signatures required) None of these individuals may be the adult sponsor, designated supervisor, qualified scientist or related to (e.g., mother, father of) the student (conflict of interest).

I attest that I have reviewed the student's project, that the checkboxes above have been completed to indicate the IRB determination and that I agree with the decisions above.

Medical or Mental Health Professional (a psychologist, medical doctor, licensed social worker, licensed clinical professional counselor, physician's assistant, doctor of pharmacy, or registered nurse) with expertise related to this project.

Printed Name | Degree/Professional License

Signature | Date of Approval (Must be prior to experimentation.) (mm/dd/yy)

Educator

Printed Name | Degree

Signature | Date of Approval (Must be prior to experimentation.) (mm/dd/yy)

School Administrator

Printed Name | Degree/Professional License

Signature | Date of Approval (Must be prior to experimentation.) (mm/dd/yy)

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STUDENT SCIENCE
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Form 4 requires review by an Institutional Review Board (IRB).

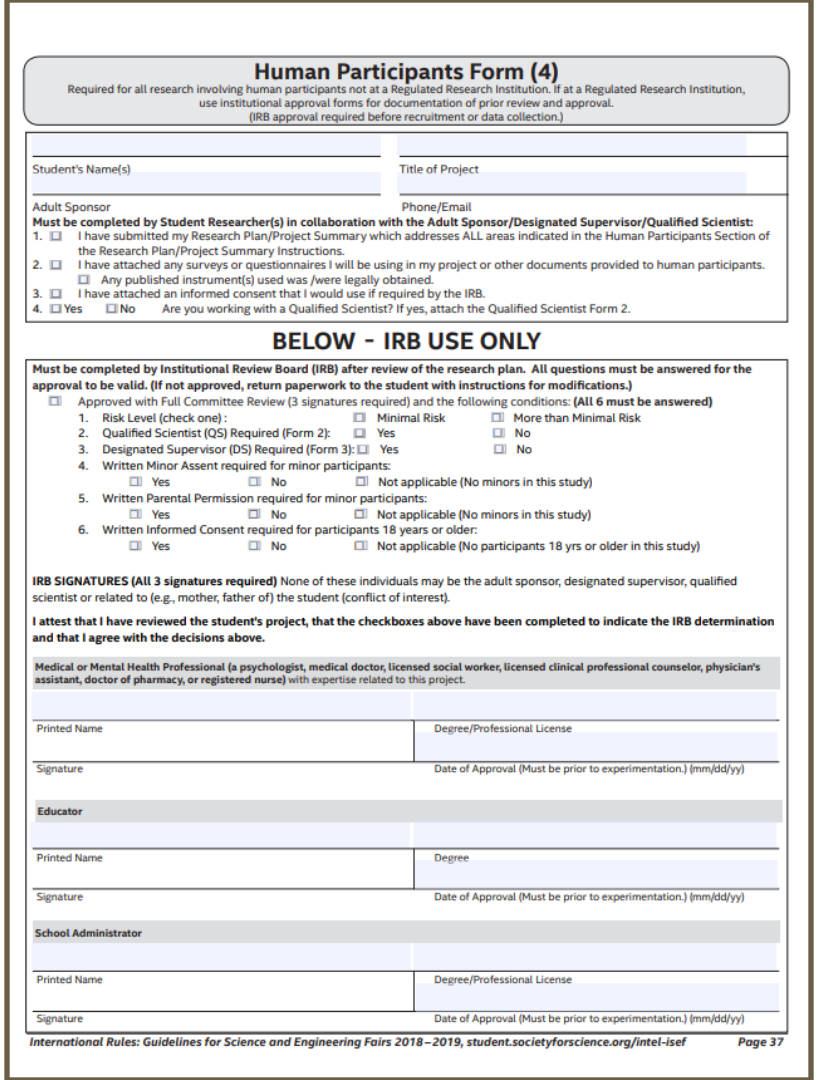
An IRB requires at least three members not associated with student's research in order to rule out a conflict of interest.

Note that "Specialist" must have credentials in area being reviewed.

Signatures and dates in blue ink to indicate "original", not copy.

Form 4 & Rule Change

An Expedited review is no longer valid.



Human Participants Form (4)

Required for all research involving human participants not at a Regulated Research Institution. If at a Regulated Research Institution, use institutional approval forms for documentation of prior review and approval. (IRB approval required before recruitment or data collection.)

Student's Name(s) | Title of Project

Adult Sponsor | Phone/Email

Must be completed by Student Researcher(s) in collaboration with the Adult Sponsor/Designated Supervisor/Qualified Scientist:

1. ☐ I have submitted my Research Plan/Project Summary which addresses ALL areas indicated in the Human Participants Section of the Research Plan/Project Summary Instructions.
2. ☐ I have attached any surveys or questionnaires I will be using in my project or other documents provided to human participants.
   ☐ Any published instrument(s) used was /were legally obtained.
3. ☐ I have attached an informed consent that I would use if required by the IRB.
4. ☐ Yes ☐ No Are you working with a Qualified Scientist? If yes, attach the Qualified Scientist Form 2.

BELOW - IRB USE ONLY

Must be completed by Institutional Review Board (IRB) after review of the research plan. All questions must be answered for the approval to be valid. (If not approved, return paperwork to the student with instructions for modifications.)

☐ Approved with Full Committee Review (3 signatures required) and the following conditions: **(All 6 must be answered)**

1. Risk Level (check one) : ☐ Minimal Risk ☐ More than Minimal Risk
2. Qualified Scientist (QS) Required (Form 2): ☐ Yes ☐ No
3. Designated Supervisor (DS) Required (Form 3): ☐ Yes ☐ No
4. Written Minor Assent required for minor participants: ☐ Yes ☐ No ☐ Not applicable (No minors in this study)
5. Written Parental Permission required for minor participants: ☐ Yes ☐ No ☐ Not applicable (No minors in this study)
6. Written Informed Consent required for participants 18 years or older: ☐ Yes ☐ No ☐ Not applicable (No participants 18 yrs or older in this study)

IRB SIGNATURES (All 3 signatures required) None of these individuals may be the adult sponsor, designated supervisor, qualified scientist or related to (e.g., mother, father of) the student (conflict of interest).

I attest that I have reviewed the student's project, that the checkboxes above have been completed to indicate the IRB determination and that I agree with the decisions above.

Medical or Mental Health Professional (a psychologist, medical doctor, licensed social worker, licensed clinical professional counselor, physician's assistant, doctor of pharmacy, or registered nurse) with expertise related to this project.

Printed Name | Degree/Professional License

Signature | Date of Approval (Must be prior to experimentation.) (mm/dd/yy)

Educator

Printed Name | Degree

Signature | Date of Approval (Must be prior to experimentation.) (mm/dd/yy)

School Administrator

Printed Name | Degree/Professional License

Signature | Date of Approval (Must be prior to experimentation.) (mm/dd/yy)

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STUDENT SCIENCE
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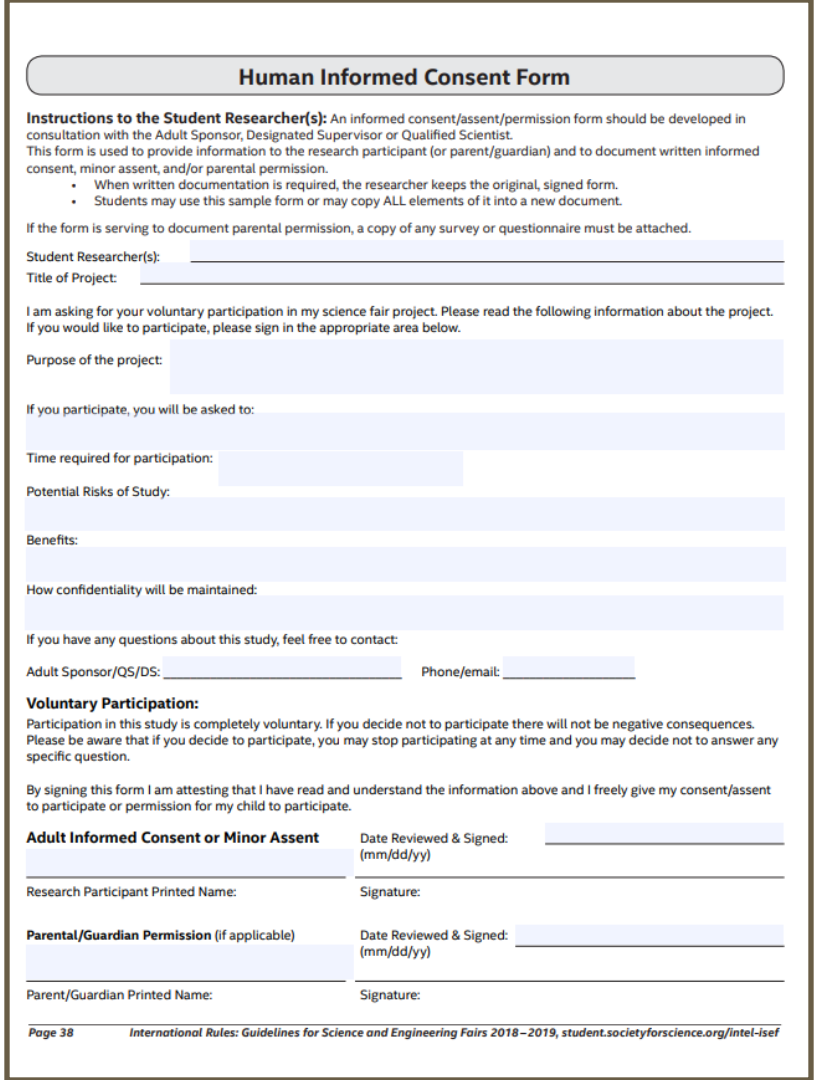
Informed Consent Form is the recommended consent form for SSEF when IRB from Form 4 indicates this as a required document.

Signatures and dates in blue ink to indicate "original", not copy.



Human Informed Consent Form

Instructions to the Student Researcher(s): An informed consent/assent/permission form should be developed in consultation with the Adult Sponsor, Designated Supervisor or Qualified Scientist.
This form is used to provide information to the research participant (or parent/guardian) and to document written informed consent, minor assent, and/or parental permission.

- When written documentation is required, the researcher keeps the original, signed form.
- Students may use this sample form or may copy ALL elements of it into a new document.

If the form is serving to document parental permission, a copy of any survey or questionnaire must be attached.

Student Researcher(s): _____

Title of Project: _____

I am asking for your voluntary participation in my science fair project. Please read the following information about the project. If you would like to participate, please sign in the appropriate area below.

Purpose of the project:

If you participate, you will be asked to:

Time required for participation:

Potential Risks of Study:

Benefits:

How confidentiality will be maintained:

If you have any questions about this study, feel free to contact:

Adult Sponsor/QS/DS: _____ Phone/email: _____

Voluntary Participation:
Participation in this study is completely voluntary. If you decide not to participate there will not be negative consequences. Please be aware that if you decide to participate, you may stop participating at any time and you may decide not to answer any specific question.

By signing this form I am attesting that I have read and understand the information above and I freely give my consent/assent to participate or permission for my child to participate.

Adult Informed Consent or Minor Assent Date Reviewed & Signed: (mm/dd/yy) _____

Research Participant Printed Name: _____ Signature: _____

Parental/Guardian Permission (if applicable) Date Reviewed & Signed: (mm/dd/yy) _____

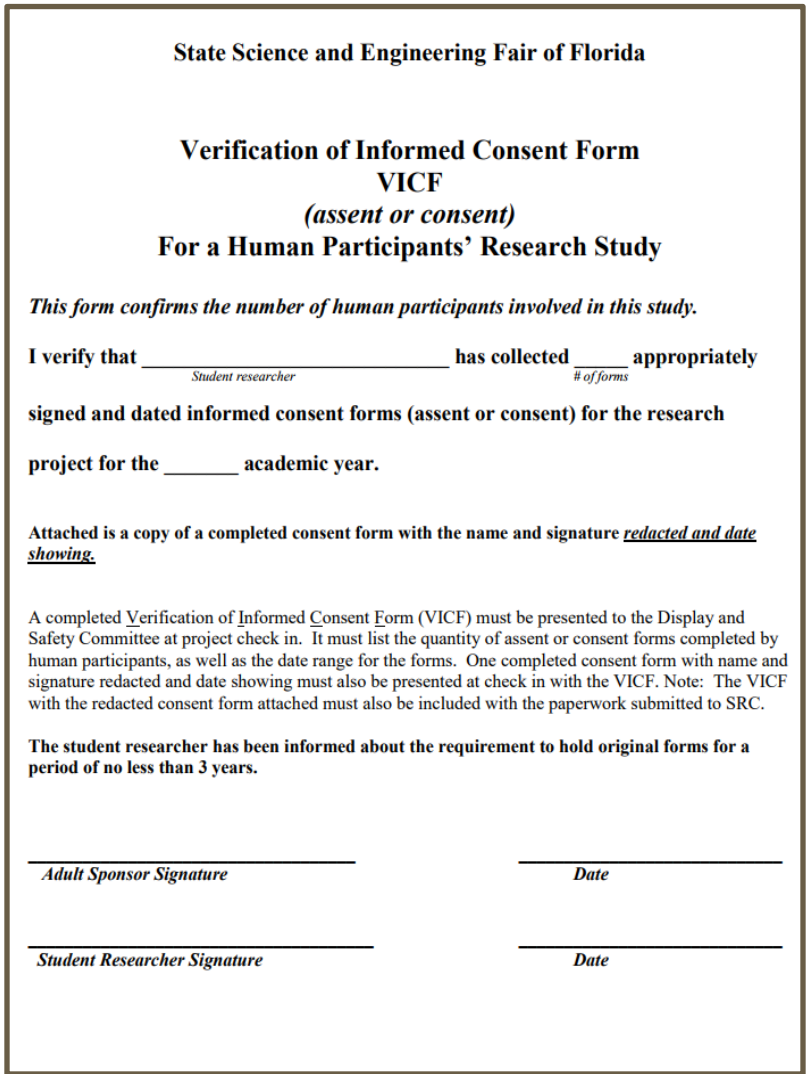
Parent/Guardian Printed Name: _____ Signature: _____

Florida SSEF

Human Subject Verification of Informed Consent Form: required form at setup prior to judging, along with one redacted copy (name and signature) of completed consent form, do not redact date and completed Form 4.

Form used to verify that consent/assent form was obtained from each human subject. **To be completed by adult sponsor and student researcher after experimentation.**

Signatures and dates in blue ink to indicate "original", not copy.



State Science and Engineering Fair of Florida

Verification of Informed Consent Form
VICF
(assent or consent)
For a Human Participants' Research Study

This form confirms the number of human participants involved in this study.

I verify that _____ **has collected** _____ **appropriately**
Student researcher *# of forms*

signed and dated informed consent forms (assent or consent) for the research

project for the _____ **academic year.**

Attached is a copy of a completed consent form with the name and signature *redacted and date showing.*

A completed Verification of Informed Consent Form (VICF) must be presented to the Display and Safety Committee at project check in. It must list the quantity of assent or consent forms completed by human participants, as well as the date range for the forms. One completed consent form with name and signature redacted and date showing must also be presented at check in with the VICF. Note: The VICF with the redacted consent form attached must also be included with the paperwork submitted to SRC.

The student researcher has been informed about the requirement to hold original forms for a period of no less than 3 years.

_____ _____
Adult Sponsor Signature ***Date***

_____ _____
Student Researcher Signature ***Date***

STUDENT SCIENCE
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Form 5A is required of projects involving vertebrates conducted at school/home/field site.

Form 5A is a fillable and savable form

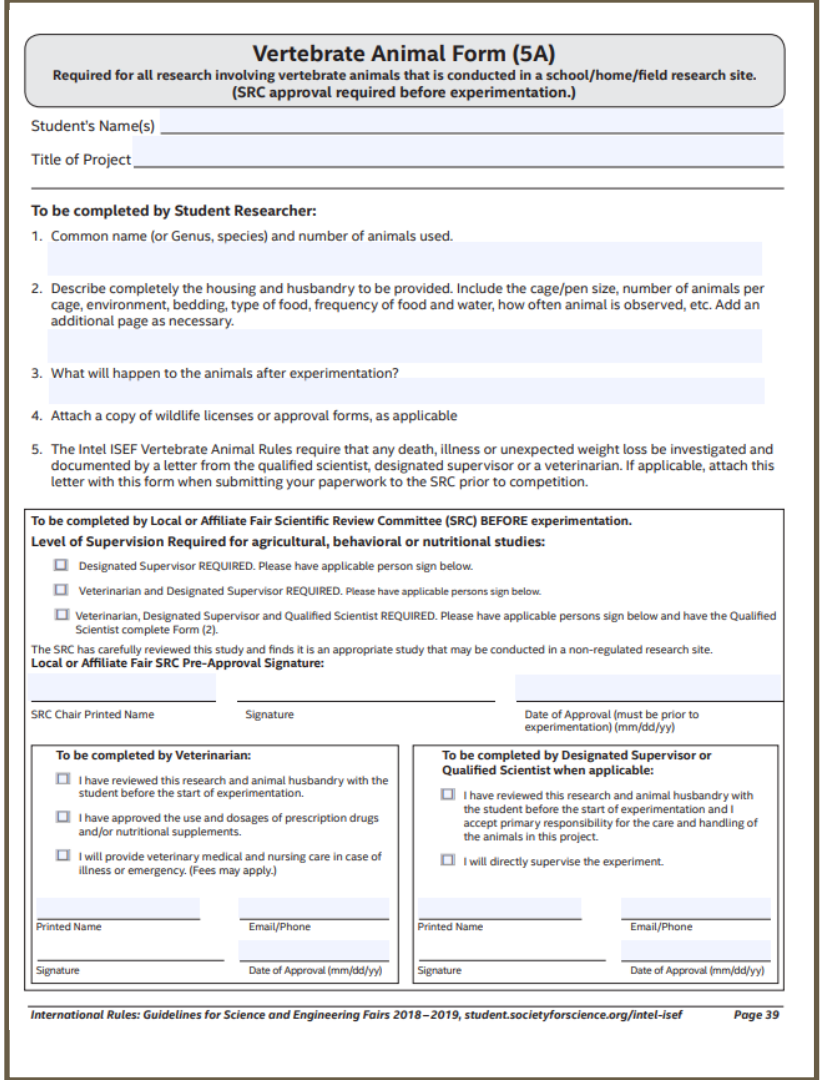
Determination of requirement is established by SRC and rules/guidelines.

Required of projects involving vertebrates at school or home.

Signatures and dates in blue ink to indicate "original", not copy.

Florida SSEF ★

If a student uses vertebrates in their research a reference to vertebrate subject care MUST be cited in their bibliography.



Vertebrate Animal Form (5A)

Required for all research involving vertebrate animals that is conducted in a school/home/field research site. (SRC approval required before experimentation.)

Student's Name(s) _____

Title of Project _____

To be completed by Student Researcher:

1. Common name (or Genus, species) and number of animals used.
2. Describe completely the housing and husbandry to be provided. Include the cage/pen size, number of animals per cage, environment, bedding, type of food, frequency of food and water, how often animal is observed, etc. Add an additional page as necessary.
3. What will happen to the animals after experimentation?
4. Attach a copy of wildlife licenses or approval forms, as applicable
5. The Intel ISEF Vertebrate Animal Rules require that any death, illness or unexpected weight loss be investigated and documented by a letter from the qualified scientist, designated supervisor or a veterinarian. If applicable, attach this letter with this form when submitting your paperwork to the SRC prior to competition.

To be completed by Local or Affiliate Fair Scientific Review Committee (SRC) BEFORE experimentation.

Level of Supervision Required for agricultural, behavioral or nutritional studies:

- ☐ Designated Supervisor REQUIRED. Please have applicable person sign below.
- ☐ Veterinarian and Designated Supervisor REQUIRED. Please have applicable persons sign below.
- ☐ Veterinarian, Designated Supervisor and Qualified Scientist REQUIRED. Please have applicable persons sign below and have the Qualified Scientist complete Form (2).

The SRC has carefully reviewed this study and finds it is an appropriate study that may be conducted in a non-regulated research site.

Local or Affiliate Fair SRC Pre-Approval Signature:

SRC Chair Printed Name | Signature | Date of Approval (must be prior to experimentation) (mm/dd/yy)

To be completed by Veterinarian:

- ☐ I have reviewed this research and animal husbandry with the student before the start of experimentation.
- ☐ I have approved the use and dosages of prescription drugs and/or nutritional supplements.
- ☐ I will provide veterinary medical and nursing care in case of illness or emergency. (Fees may apply.)

Printed Name | Email/Phone

Signature | Date of Approval (mm/dd/yy)

To be completed by Designated Supervisor or Qualified Scientist when applicable:

- ☐ I have reviewed this research and animal husbandry with the student before the start of experimentation and I accept primary responsibility for the care and handling of the animals in this project.
- ☐ I will directly supervise the experiment.

Printed Name | Email/Phone

Signature | Date of Approval (mm/dd/yy)

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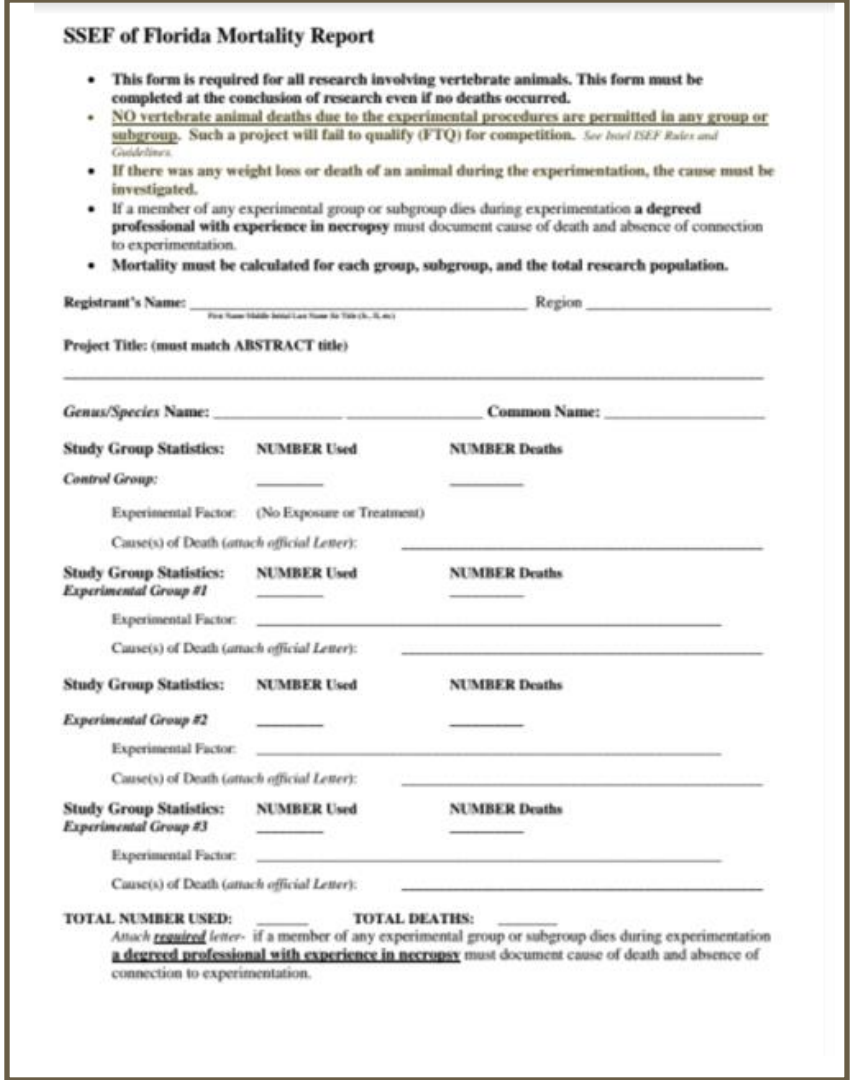
Florida SSEF

Mortality Report is required of all projects involving vertebrate animals, even if no deaths occurred.



SSEF of Florida Mortality Report

- **This form is required for all research involving vertebrate animals. This form must be completed at the conclusion of research even if no deaths occurred.**
- **NO vertebrate animal deaths due to the experimental procedures are permitted in any group or subgroup. Such a project will fail to qualify (FTQ) for competition.** *See Intel ISEF Rules and Guidelines.*
- **If there was any weight loss or death of an animal during the experimentation, the cause must be investigated.**
- If a member of any experimental group or subgroup dies during experimentation **a degreed professional with experience in necropsy** must document cause of death and absence of connection to experimentation.
- **Mortality must be calculated for each group, subgroup, and the total research population.**

Registrant's Name: _____ Region _____
First Name Middle Initial Last Name for Title (Jr., II, etc.)

Project Title: (must match ABSTRACT title)

_____

***Genus/Species* Name:** _____ _____ **Common Name:** _____

Study Group Statistics: **NUMBER Used** **NUMBER Deaths**

Control Group: _____ _____

Experimental Factor: (No Exposure or Treatment)

Cause(s) of Death (*attach official Letter*): _____

Study Group Statistics: **NUMBER Used** **NUMBER Deaths**
Experimental Group #1 _____ _____

Experimental Factor: _____

Cause(s) of Death (*attach official Letter*): _____

Study Group Statistics: **NUMBER Used** **NUMBER Deaths**

Experimental Group #2 _____ _____

Experimental Factor: _____

Cause(s) of Death (*attach official Letter*): _____

Study Group Statistics: **NUMBER Used** **NUMBER Deaths**
Experimental Group #3 _____ _____

Experimental Factor: _____

Cause(s) of Death (*attach official Letter*): _____

TOTAL NUMBER USED: _____ **TOTAL DEATHS:** _____

*Attach **required** letter-* if a member of any experimental group or subgroup dies during experimentation **a degreed professional with experience in necropsy** must document cause of death and absence of connection to experimentation.

STUDENT SCIENCE
A RESOURCE OF THE SOCIETY FOR SCIENCE & THE PUBLIC

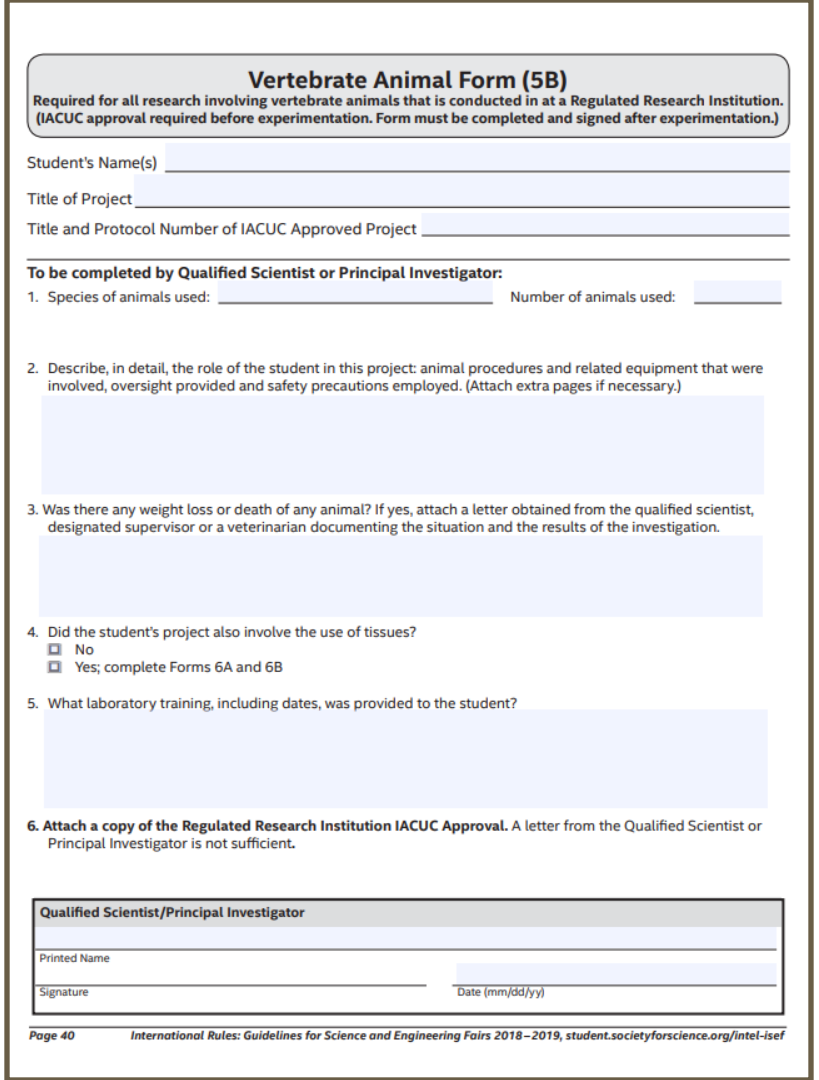
Form 5B is required of projects involving vertebrates conducted at Regulated Research Institution.

Form 5B is a fillable and savable form

Determination of requirement is established by SRC and rules/guidelines.

Required of projects involving vertebrates at registered research institutions.

Signatures and dates in blue ink to indicate "original", not copy.



Vertebrate Animal Form (5B)

Required for all research involving vertebrate animals that is conducted in at a Regulated Research Institution. (IACUC approval required before experimentation. Form must be completed and signed after experimentation.)

Student's Name(s) _____

Title of Project _____

Title and Protocol Number of IACUC Approved Project _____

To be completed by Qualified Scientist or Principal Investigator:

1. Species of animals used: _____ Number of animals used: _____

2. Describe, in detail, the role of the student in this project: animal procedures and related equipment that were involved, oversight provided and safety precautions employed. (Attach extra pages if necessary.)

3. Was there any weight loss or death of any animal? If yes, attach a letter obtained from the qualified scientist, designated supervisor or a veterinarian documenting the situation and the results of the investigation.

4. Did the student's project also involve the use of tissues?
   - ☐ No
   - ☐ Yes; complete Forms 6A and 6B

5. What laboratory training, including dates, was provided to the student?

6. **Attach a copy of the Regulated Research Institution IACUC Approval.** A letter from the Qualified Scientist or Principal Investigator is not sufficient.

Qualified Scientist/Principal Investigator

Printed Name

Signature Date (mm/dd/yy)

STUDENT SCIENCE
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Form 6A is required of some projects.

Form 6A is a fillable and savable form

Level of risk must be determined, BSL-1 or BSL-2.

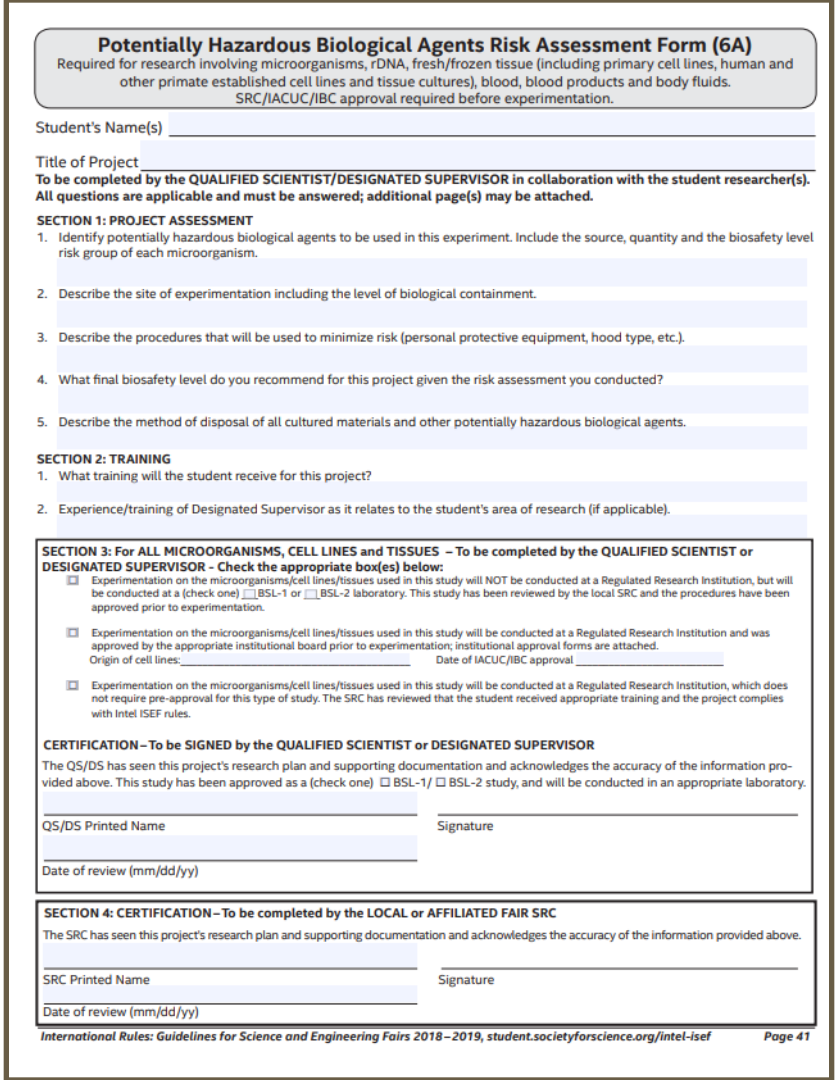
Determination of requirement is established by SRC. Determination of BSL could be due to organisms, procedures or both.

Signatures and dates in blue ink to indicate "original", not copy.

Florida SSEF

JUNIOR CATEGORY MAY NOT SUBMIT BSL-2 PROJECTS.

If a student uses PHBAs in their research a reference to the appropriate microbiological technique MUST be cited in their bibliography.



Potentially Hazardous Biological Agents Risk Assessment Form (6A)

Required for research involving microorganisms, rDNA, fresh/frozen tissue (including primary cell lines, human and other primate established cell lines and tissue cultures), blood, blood products and body fluids. SRC/IACUC/IBC approval required before experimentation.

Student's Name(s) _____

Title of Project _____

To be completed by the QUALIFIED SCIENTIST/DESIGNATED SUPERVISOR in collaboration with the student researcher(s). All questions are applicable and must be answered; additional page(s) may be attached.

SECTION 1: PROJECT ASSESSMENT

1. Identify potentially hazardous biological agents to be used in this experiment. Include the source, quantity and the biosafety level risk group of each microorganism.
2. Describe the site of experimentation including the level of biological containment.
3. Describe the procedures that will be used to minimize risk (personal protective equipment, hood type, etc.).
4. What final biosafety level do you recommend for this project given the risk assessment you conducted?
5. Describe the method of disposal of all cultured materials and other potentially hazardous biological agents.

SECTION 2: TRAINING

1. What training will the student receive for this project?
2. Experience/training of Designated Supervisor as it relates to the student's area of research (if applicable).

SECTION 3: For ALL MICROORGANISMS, CELL LINES and TISSUES – To be completed by the QUALIFIED SCIENTIST or DESIGNATED SUPERVISOR - Check the appropriate box(es) below:

☐ Experimentation on the microorganisms/cell lines/tissues used in this study will NOT be conducted at a Regulated Research Institution, but will be conducted at a (check one) ☐ BSL-1 or ☐ BSL-2 laboratory. This study has been reviewed by the local SRC and the procedures have been approved prior to experimentation.

☐ Experimentation on the microorganisms/cell lines/tissues used in this study will be conducted at a Regulated Research Institution and was approved by the appropriate institutional board prior to experimentation; institutional approval forms are attached.
Origin of cell lines:_____ Date of IACUC/IBC approval _____

☐ Experimentation on the microorganisms/cell lines/tissues used in this study will be conducted at a Regulated Research Institution, which does not require pre-approval for this type of study. The SRC has reviewed that the student received appropriate training and the project complies with Intel ISEF rules.

CERTIFICATION – To be SIGNED by the QUALIFIED SCIENTIST or DESIGNATED SUPERVISOR

The QS/DS has seen this project's research plan and supporting documentation and acknowledges the accuracy of the information provided above. This study has been approved as a (check one) ☐ BSL-1/ ☐ BSL-2 study, and will be conducted in an appropriate laboratory.

QS/DS Printed Name _____ Signature _____

Date of review (mm/dd/yy) _____

SECTION 4: CERTIFICATION – To be completed by the LOCAL or AFFILIATED FAIR SRC

The SRC has seen this project's research plan and supporting documentation and acknowledges the accuracy of the information provided above.

SRC Printed Name _____ Signature _____

Date of review (mm/dd/yy) _____

International Rules: Guidelines for Science and Engineering Fairs 2018–2019, student.societyforscience.org/intel-isef *Page 41*

STUDENT SCIENCE
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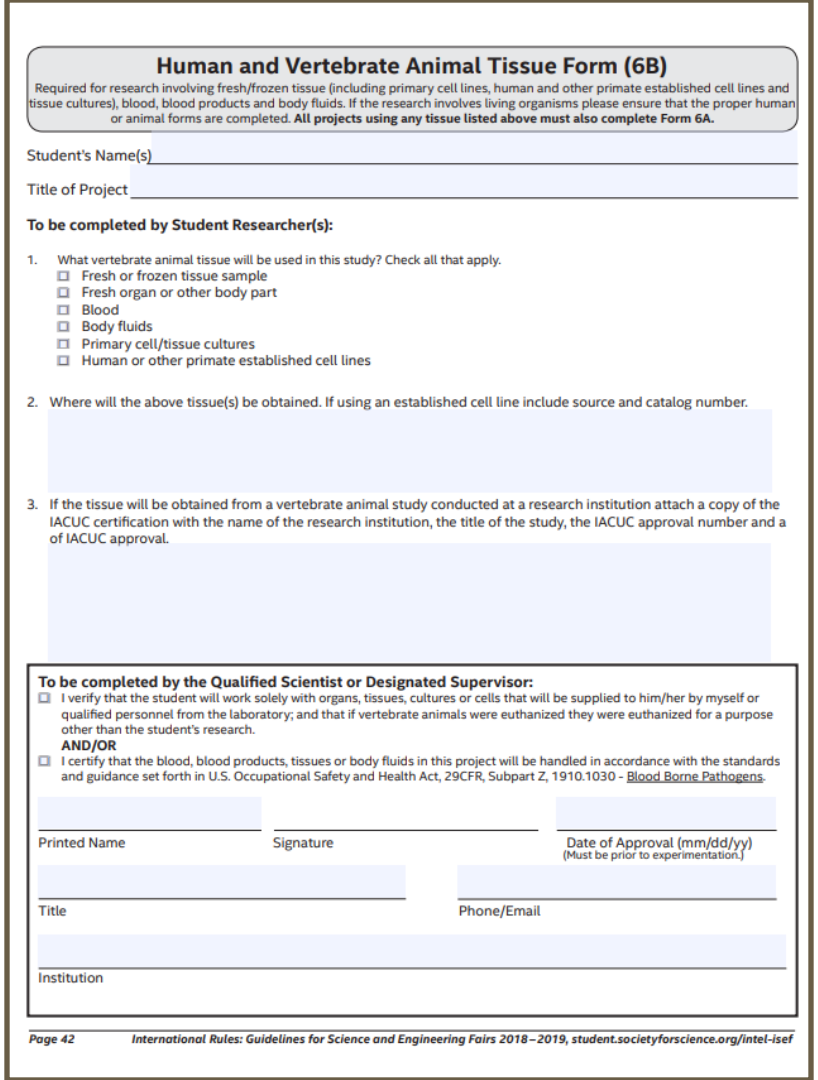
Form 6B is required of some projects.

Form 6B is a fillable and savable form.

Determination of requirement is established by SRC and rules/guidelines.

Required of projects involving human and vertebrate tissue.

Signatures and dates in blue ink to indicate "original", not copy.



Human and Vertebrate Animal Tissue Form (6B)

Required for research involving fresh/frozen tissue (including primary cell lines, human and other primate established cell lines and tissue cultures), blood, blood products and body fluids. If the research involves living organisms please ensure that the proper human or animal forms are completed. **All projects using any tissue listed above must also complete Form 6A.**

Student's Name(s)_____

Title of Project_____

To be completed by Student Researcher(s):

1. What vertebrate animal tissue will be used in this study? Check all that apply.
   - ☐ Fresh or frozen tissue sample
   - ☐ Fresh organ or other body part
   - ☐ Blood
   - ☐ Body fluids
   - ☐ Primary cell/tissue cultures
   - ☐ Human or other primate established cell lines
2. Where will the above tissue(s) be obtained. If using an established cell line include source and catalog number.
3. If the tissue will be obtained from a vertebrate animal study conducted at a research institution attach a copy of the IACUC certification with the name of the research institution, the title of the study, the IACUC approval number and a of IACUC approval.

To be completed by the Qualified Scientist or Designated Supervisor:

☐ I verify that the student will work solely with organs, tissues, cultures or cells that will be supplied to him/her by myself or qualified personnel from the laboratory; and that if vertebrate animals were euthanized they were euthanized for a purpose other than the student's research.

AND/OR

☐ I certify that the blood, blood products, tissues or body fluids in this project will be handled in accordance with the standards and guidance set forth in U.S. Occupational Safety and Health Act, 29CFR, Subpart Z, 1910.1030 - Blood Borne Pathogens.

Printed Name | Signature | Date of Approval (mm/dd/yy) (Must be prior to experimentation.)

Title | Phone/Email

Institution

STUDENT SCIENCE
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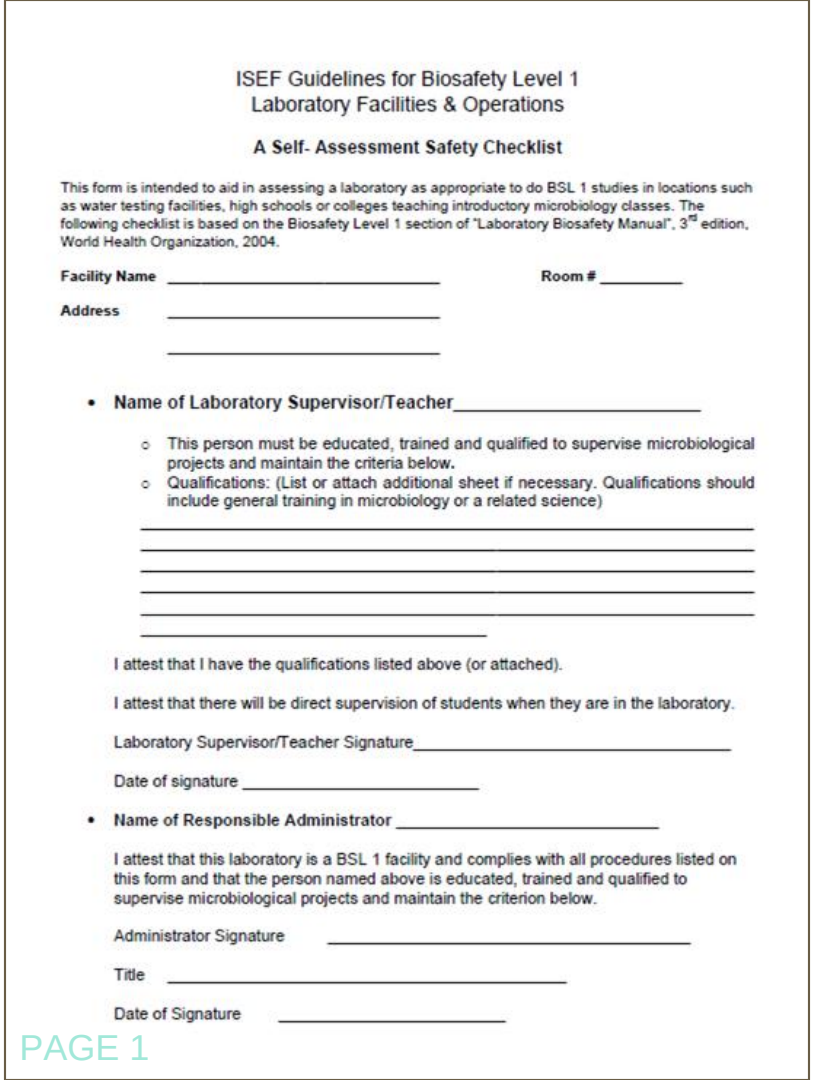
Guidelines for Biosafety Level 1 Laboratory Facilities & Operations.

Required of projects involving PHBA at a Biosafety Level of 1.

Determined by the completion of the risk assessment for PHBA, Form 6A.

Signatures and dates in blue ink to indicate "original", not copy.

Page ONE of 2.



ISEF Guidelines for Biosafety Level 1
Laboratory Facilities & Operations

A Self- Assessment Safety Checklist

This form is intended to aid in assessing a laboratory as appropriate to do BSL 1 studies in locations such as water testing facilities, high schools or colleges teaching introductory microbiology classes. The following checklist is based on the Biosafety Level 1 section of "Laboratory Biosafety Manual", 3rd edition, World Health Organization, 2004.

Facility Name _____ **Room #** _____

Address _____

_____

- **Name of Laboratory Supervisor/Teacher**_____
  - This person must be educated, trained and qualified to supervise microbiological projects and maintain the criteria below.
  - Qualifications: (List or attach additional sheet if necessary. Qualifications should include general training in microbiology or a related science)

_____
_____
_____
_____
_____
_____

I attest that I have the qualifications listed above (or attached).

I attest that there will be direct supervision of students when they are in the laboratory.

Laboratory Supervisor/Teacher Signature_____

Date of signature _____

- **Name of Responsible Administrator** _____

I attest that this laboratory is a BSL 1 facility and complies with all procedures listed on this form and that the person named above is educated, trained and qualified to supervise microbiological projects and maintain the criterion below.

Administrator Signature _____

Title _____

Date of Signature _____

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STUDENT SCIENCE
A RESOURCE OF THE SOCIETY FOR SCIENCE & THE PUBLIC

Guidelines for Biosafety Level 1 Laboratory Facilities & Operations.

Required of projects involving PHBA at a Biosafety Level of 1.

Determined by the completion of the risk assessment for PHBA, Form 6A.

Signatures and dates in blue ink to indicate "original", not copy.

Page TWO of 2.

Check the appropriate box for each statement.

If you check any of the following boxes with "NO", you must make appropriate modifications before you can classify the lab as a BSL 1 facility. The safety of students and faculty must be your primary concern.

Yes	No	A. Laboratory Practices
☐	☐	1. All personnel wash their hands after they handle viable materials and animals, after removing gloves, and before leaving the laboratory.
☐	☐	2. Eating, drinking, handling contact lenses, and applying cosmetics is forbidden in the laboratory.
☐	☐	3. Mouth pipetting is prohibited and only mechanical pipetting devices are used.
☐	☐	4. All procedures are performed to minimize the creation of splashes or aerosols.
☐	☐	5. Work surfaces are decontaminated with disinfectant when work is completed at the end of the day and after any spill of viable material.
☐	☐	6. All contaminated cultures, stocks, glassware, plastic ware and other biologically contaminated waste are autoclaved or decontaminated with a suitable disinfectant.
☐	☐	7. Culture fluids and other contaminated liquid wastes are autoclaved or decontaminated with a suitable disinfectant before disposal.
☐	☐	8. Materials to be decontaminated outside of the laboratory are placed in a durable, leak-proof container and closed for transport from the laboratory.
☐	☐	9. Insect and rodent control procedures are in effect.

Yes	No	B. Personal Protective Equipment
☐	☐	1. Protective laboratory coats/aprons are worn while in the laboratory and left in the laboratory after use. These coats are never taken from the laboratory without prior autoclaving or disinfection.
☐	☐	2. Suitable disposable gloves (e.g., latex, nitrile, vinyl) must be worn.
☐	☐	3. Goggles are available and used when required.

Yes	No	C. Laboratory Facilities
☐	☐	1. The laboratory has a sink for hand washing.
☐	☐	2. The laboratory is designed so that it can be easily cleaned and decontaminated. (Carpets and rugs are not appropriate)
☐	☐	3. Bench tops are impervious to water and resistant to moderate heat, acids, alkalis, organic solvents and chemicals used to decontaminate the work surface.
☐	☐	4. The laboratory furniture is sturdy with surrounding spaces accessible for cleaning.
☐	☐	5. If the laboratory has windows that are open, they are fitted with fly screens.
☐	☐	6. Sharps are discarded in a puncture-resistant sharps disposal container.
☐	☐	7. A fire extinguisher and first aid supplies are easily accessible within the laboratory
☐	☐	8. An eyewash facility is easily accessible within the laboratory.

STUDENT SCIENCE
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Guidelines for Biosafety Level 2 Laboratory Facilities & Operations.

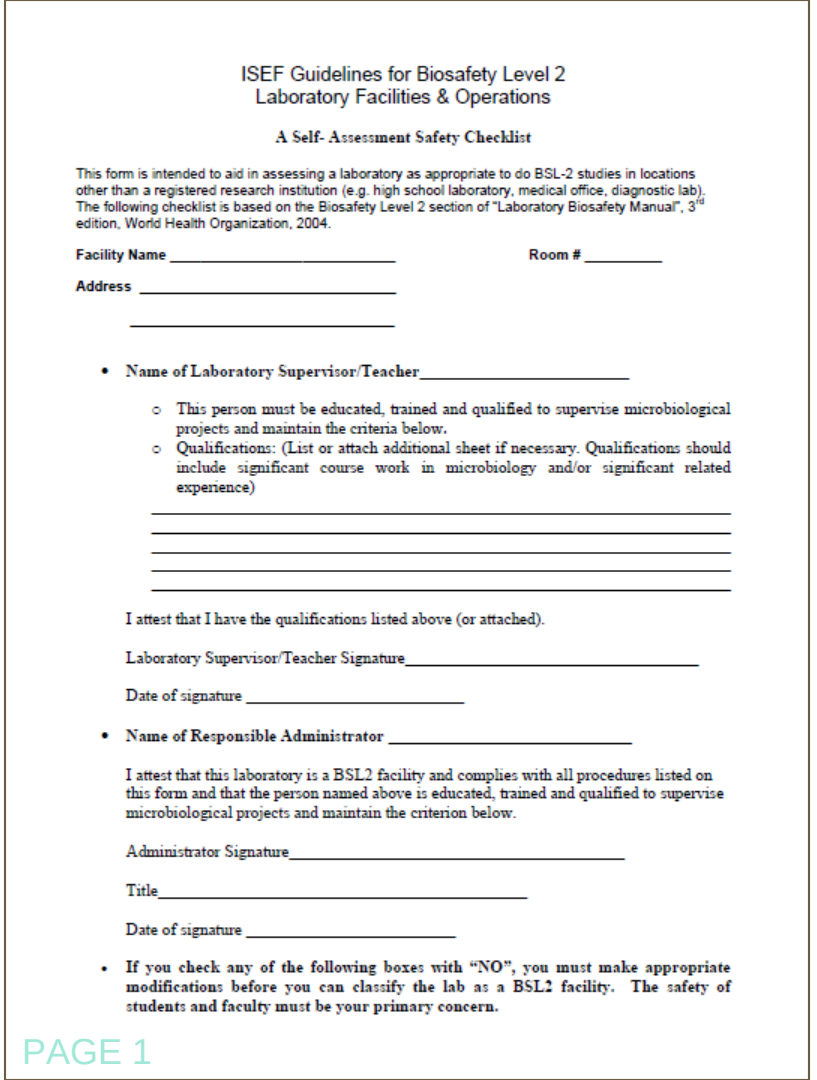
Required of projects involving PHBA at a Biosafety Level of 2.

Determined by the completion of the risk assessment for PHBA, Form 6A.

Signatures and dates in blue ink to indicate "original", not copy.

Page ONE of 3.

BSL 2 form not required for projects at Registered Research Institute.



ISEF Guidelines for Biosafety Level 2
Laboratory Facilities & Operations

A Self- Assessment Safety Checklist

This form is intended to aid in assessing a laboratory as appropriate to do BSL-2 studies in locations other than a registered research institution (e.g. high school laboratory, medical office, diagnostic lab). The following checklist is based on the Biosafety Level 2 section of "Laboratory Biosafety Manual", 3rd edition, World Health Organization, 2004.

Facility Name _____ **Room #** _____

Address _____

_____

- **Name of Laboratory Supervisor/Teacher**_____
  - This person must be educated, trained and qualified to supervise microbiological projects and maintain the criteria below.
  - Qualifications: (List or attach additional sheet if necessary. Qualifications should include significant course work in microbiology and/or significant related experience)

_____
_____
_____
_____
_____

I attest that I have the qualifications listed above (or attached).

Laboratory Supervisor/Teacher Signature_____

Date of signature _____

- **Name of Responsible Administrator** _____

I attest that this laboratory is a BSL2 facility and complies with all procedures listed on this form and that the person named above is educated, trained and qualified to supervise microbiological projects and maintain the criterion below.

Administrator Signature_____

Title_____

Date of signature _____

- **If you check any of the following boxes with "NO", you must make appropriate modifications before you can classify the lab as a BSL2 facility. The safety of students and faculty must be your primary concern.**

PAGE 1

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Guidelines for Biosafety Level 2 Laboratory Facilities & Operations.

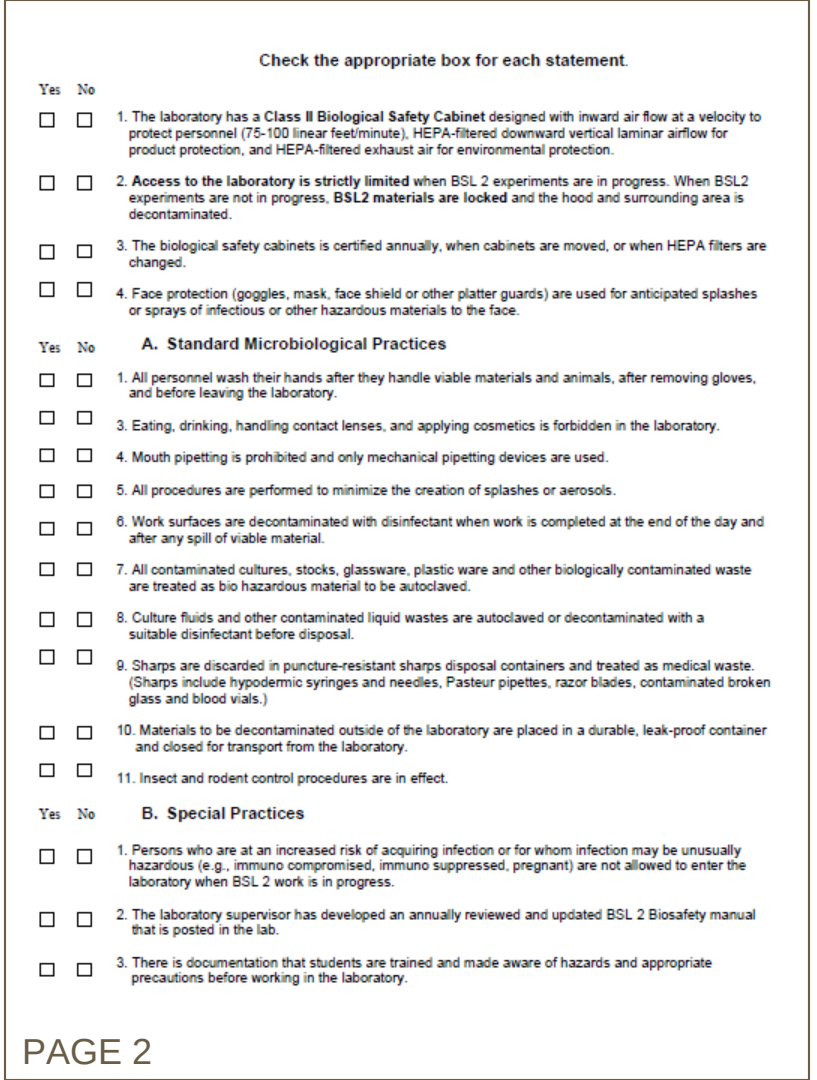
Required of projects involving PHBA at a Biosafety Level of 2.

Determined by the completion of the risk assessment for PHBA, Form 6A.

Signatures and dates in blue ink to indicate "original", not copy.

Page TWO of 3.

BSL 2 form not required for projects at Registered Research Institute.



Check the appropriate box for each statement.

Yes	No	
☐	☐	1. The laboratory has a **Class II Biological Safety Cabinet** designed with inward air flow at a velocity to protect personnel (75-100 linear feet/minute), HEPA-filtered downward vertical laminar airflow for product protection, and HEPA-filtered exhaust air for environmental protection.
☐	☐	2. **Access to the laboratory is strictly limited** when BSL 2 experiments are in progress. When BSL2 experiments are not in progress, **BSL2 materials are locked** and the hood and surrounding area is decontaminated.
☐	☐	3. The biological safety cabinets is certified annually, when cabinets are moved, or when HEPA filters are changed.
☐	☐	4. Face protection (goggles, mask, face shield or other platter guards) are used for anticipated splashes or sprays of infectious or other hazardous materials to the face.

Yes	No	A. Standard Microbiological Practices
☐	☐	1. All personnel wash their hands after they handle viable materials and animals, after removing gloves, and before leaving the laboratory.
☐	☐	3. Eating, drinking, handling contact lenses, and applying cosmetics is forbidden in the laboratory.
☐	☐	4. Mouth pipetting is prohibited and only mechanical pipetting devices are used.
☐	☐	5. All procedures are performed to minimize the creation of splashes or aerosols.
☐	☐	6. Work surfaces are decontaminated with disinfectant when work is completed at the end of the day and after any spill of viable material.
☐	☐	7. All contaminated cultures, stocks, glassware, plastic ware and other biologically contaminated waste are treated as bio hazardous material to be autoclaved.
☐	☐	8. Culture fluids and other contaminated liquid wastes are autoclaved or decontaminated with a suitable disinfectant before disposal.
☐	☐	9. Sharps are discarded in puncture-resistant sharps disposal containers and treated as medical waste. (Sharps include hypodermic syringes and needles, Pasteur pipettes, razor blades, contaminated broken glass and blood vials.)
☐	☐	10. Materials to be decontaminated outside of the laboratory are placed in a durable, leak-proof container and closed for transport from the laboratory.
☐	☐	11. Insect and rodent control procedures are in effect.

Yes	No	B. Special Practices
☐	☐	1. Persons who are at an increased risk of acquiring infection or for whom infection may be unusually hazardous (e.g., immuno compromised, immuno suppressed, pregnant) are not allowed to enter the laboratory when BSL 2 work is in progress.
☐	☐	2. The laboratory supervisor has developed an annually reviewed and updated BSL 2 Biosafety manual that is posted in the lab.
☐	☐	3. There is documentation that students are trained and made aware of hazards and appropriate precautions before working in the laboratory.

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Guidelines for Biosafety Level 2 Laboratory Facilities & Operations.

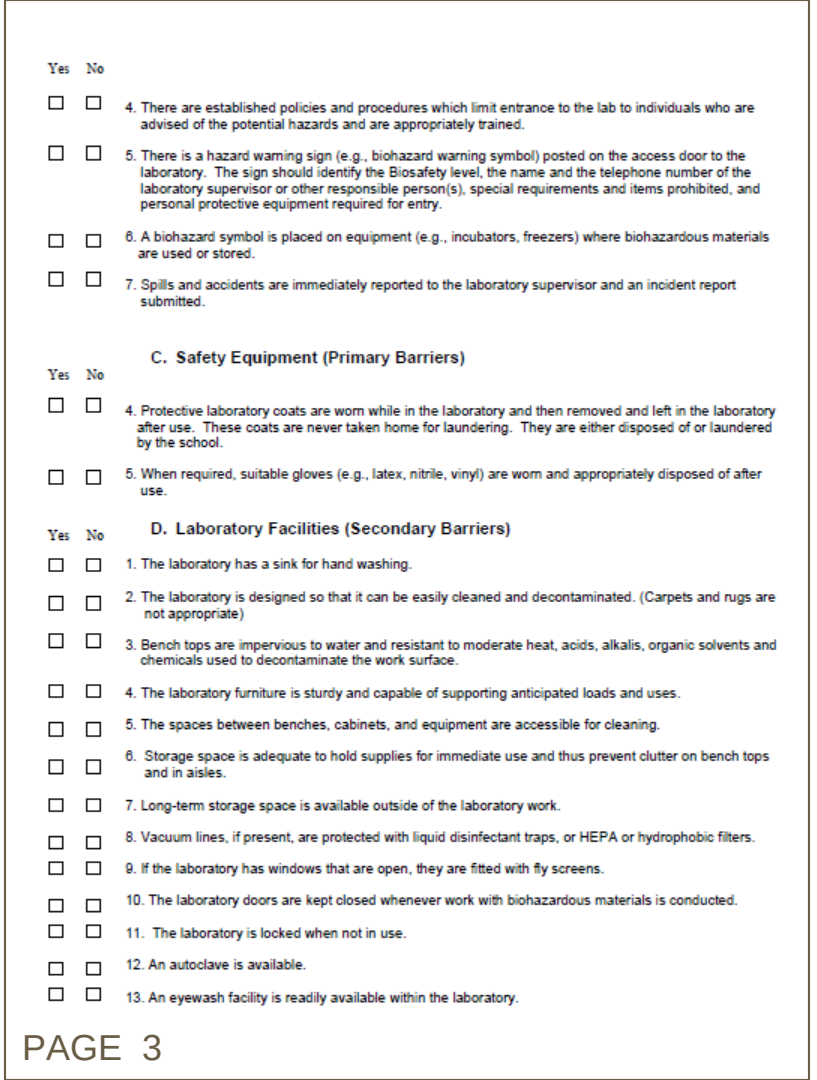
Required of projects involving PHBA at a Biosafety Level of 2.

Determined by the completion of the risk assessment for PHBA, Form 6A.

Signatures and dates in blue ink to indicate "original", not copy.

Page THREE of 3.

BSL 2 form not required for projects at Registered Research Institute.



Yes No

☐ ☐ 4. There are established policies and procedures which limit entrance to the lab to individuals who are advised of the potential hazards and are appropriately trained.

☐ ☐ 5. There is a hazard warning sign (e.g., biohazard warning symbol) posted on the access door to the laboratory. The sign should identify the Biosafety level, the name and the telephone number of the laboratory supervisor or other responsible person(s), special requirements and items prohibited, and personal protective equipment required for entry.

☐ ☐ 6. A biohazard symbol is placed on equipment (e.g., incubators, freezers) where biohazardous materials are used or stored.

☐ ☐ 7. Spills and accidents are immediately reported to the laboratory supervisor and an incident report submitted.

C. Safety Equipment (Primary Barriers)

Yes No

☐ ☐ 4. Protective laboratory coats are worn while in the laboratory and then removed and left in the laboratory after use. These coats are never taken home for laundering. They are either disposed of or laundered by the school.

☐ ☐ 5. When required, suitable gloves (e.g., latex, nitrile, vinyl) are worn and appropriately disposed of after use.

D. Laboratory Facilities (Secondary Barriers)

Yes No

☐ ☐ 1. The laboratory has a sink for hand washing.

☐ ☐ 2. The laboratory is designed so that it can be easily cleaned and decontaminated. (Carpets and rugs are not appropriate)

☐ ☐ 3. Bench tops are impervious to water and resistant to moderate heat, acids, alkalis, organic solvents and chemicals used to decontaminate the work surface.

☐ ☐ 4. The laboratory furniture is sturdy and capable of supporting anticipated loads and uses.

☐ ☐ 5. The spaces between benches, cabinets, and equipment are accessible for cleaning.

☐ ☐ 6. Storage space is adequate to hold supplies for immediate use and thus prevent clutter on bench tops and in aisles.

☐ ☐ 7. Long-term storage space is available outside of the laboratory work.

☐ ☐ 8. Vacuum lines, if present, are protected with liquid disinfectant traps, or HEPA or hydrophobic filters.

☐ ☐ 9. If the laboratory has windows that are open, they are fitted with fly screens.

☐ ☐ 10. The laboratory doors are kept closed whenever work with biohazardous materials is conducted.

☐ ☐ 11. The laboratory is locked when not in use.

☐ ☐ 12. An autoclave is available.

☐ ☐ 13. An eyewash facility is readily available within the laboratory.

PAGE 3

STUDENT SCIENCE
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Form 7 is required of some projects.

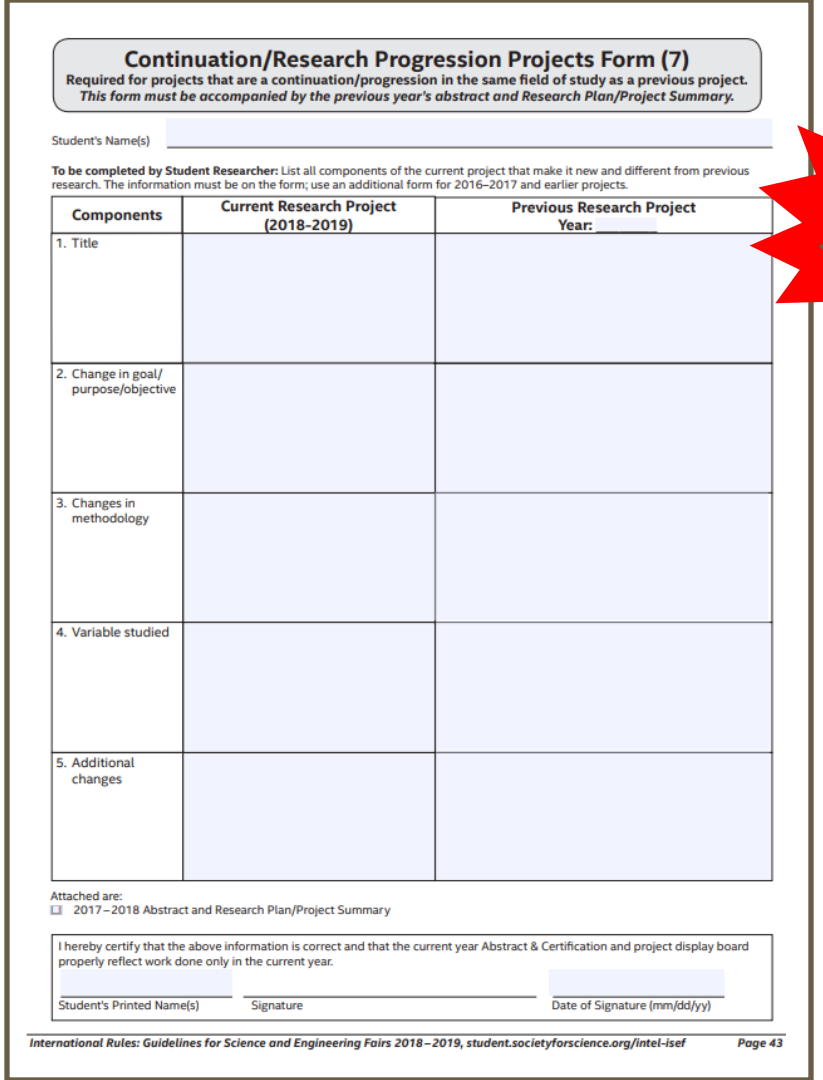
Form 7 is a fillable and savable form

Determination of requirement is established by SRC and rules/guidelines.

Required of projects which are a continuation of previous research.

Signatures and dates in blue ink to indicate "original", not copy.

This form can be dated after the completion of experimentation.



Continuation/Research Progression Projects Form (7)

Required for projects that are a continuation/progression in the same field of study as a previous project.
This form must be accompanied by the previous year's abstract and Research Plan/Project Summary.

Student's Name(s)

To be completed by Student Researcher: List all components of the current project that make it new and different from previous research. The information must be on the form; use an additional form for 2016–2017 and earlier projects.

Components	Current Research Project (2018-2019)	Previous Research Project Year:
1. Title		
2. Change in goal/ purpose/objective		
3. Changes in methodology		
4. Variable studied		
5. Additional changes		

Attached are:
☐ 2017–2018 Abstract and Research Plan/Project Summary

I hereby certify that the above information is correct and that the current year Abstract & Certification and project display board properly reflect work done only in the current year.

Student's Printed Name(s) | Signature | Date of Signature (mm/dd/yy)

International Rules: Guidelines for Science and Engineering Fairs 2018–2019, student.societyforscience.org/intel-isef *Page 43*

New Form!

Note … Form 7 only has room for current year and 1 (one) previous year… use additional forms for 2016-2017 or early project years. Multiple forms might be used.

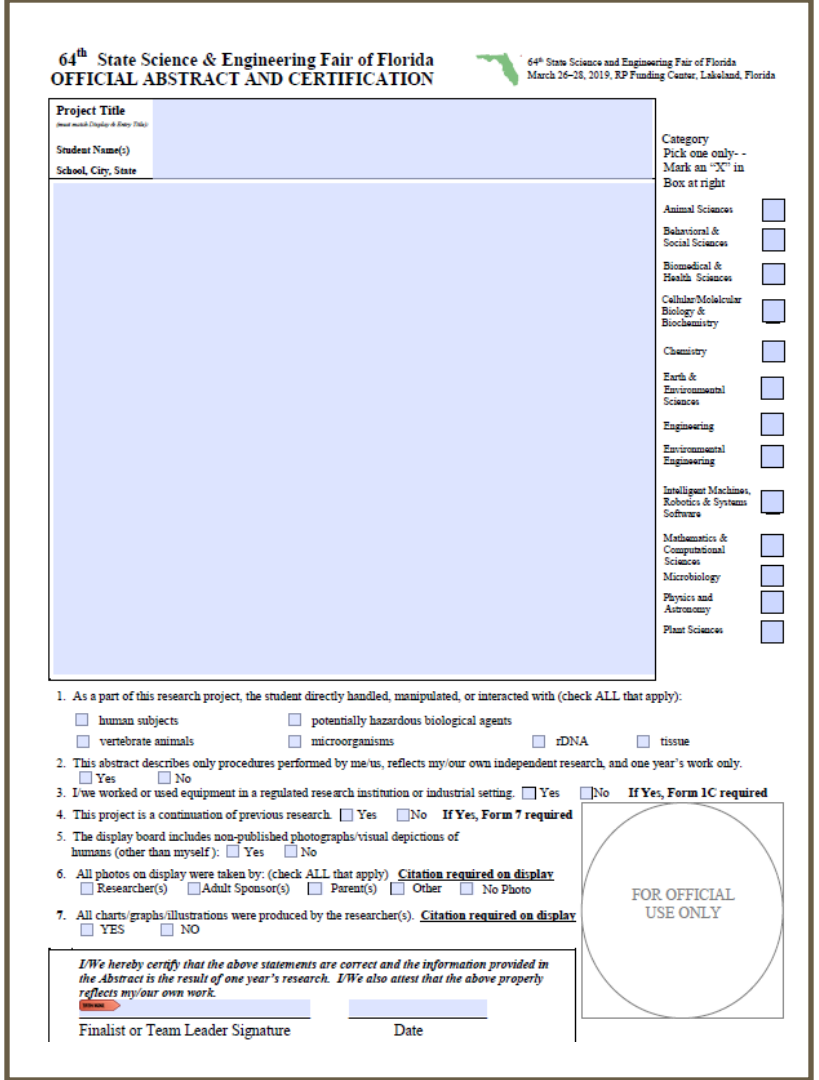
Florida SSEF

SSEF Fair Abstract is required of all projects.

SSEF Fair Abstract is a fillable and savable form.

Original will be reviewed and certified. This certified abstract is to be displayed vertically during check-in and judging.

Signatures and dates in blue ink to indicate "original", not copy.



64th State Science & Engineering Fair of Florida
OFFICIAL ABSTRACT AND CERTIFICATION

64th State Science and Engineering Fair of Florida
March 26-28, 2019, RP Funding Center, Lakeland, Florida

Project Title
(must match Display & Entry Title)

Student Name(s)

School, City, State

Category
Pick one only- -
Mark an "X" in
Box at right

- Animal Sciences
- Behavioral & Social Sciences
- Biomedical & Health Sciences
- Cellular/Molelcular Biology & Biochemistry
- Chemistry
- Earth & Environmental Sciences
- Engineering
- Environmental Engineering
- Intelligent Machines, Robotics & Systems Software
- Mathematics & Computational Sciences
- Microbiology
- Physics and Astronomy
- Plant Sciences

1. As a part of this research project, the student directly handled, manipulated, or interacted with (check ALL that apply):
   ☐ human subjects ☐ potentially hazardous biological agents
   ☐ vertebrate animals ☐ microorganisms ☐ rDNA ☐ tissue
2. This abstract describes only procedures performed by me/us, reflects my/our own independent research, and one year's work only. ☐ Yes ☐ No
3. I/we worked or used equipment in a regulated research institution or industrial setting. ☐ Yes ☐ No **If Yes, Form 1C required**
4. This project is a continuation of previous research. ☐ Yes ☐ No **If Yes, Form 7 required**
5. The display board includes non-published photographs/visual depictions of humans (other than myself): ☐ Yes ☐ No
6. All photos on display were taken by: (check ALL that apply) **Citation required on display**
   ☐ Researcher(s) ☐ Adult Sponsor(s) ☐ Parent(s) ☐ Other ☐ No Photo
7. All charts/graphs/illustrations were produced by the researcher(s). **Citation required on display**
   ☐ YES ☐ NO

FOR OFFICIAL USE ONLY

I/We hereby certify that the above statements are correct and the information provided in the Abstract is the result of one year's research. I/We also attest that the above properly reflects my/our own work.

Finalist or Team Leader Signature

Date

Florida SSEF Project Categories

SSEF Fair Categories

ANIM	100	Animal Sciences
BEHA	200	Behavioral and Social Sciences
BMED	300	Biomedical and Health Sciences
CMBI	400	Cellular/Molecular Biology &Biochemistry
CHEM	500	Chemistry
EAEV	600	Earth and Environmental Sciences
ENMS	700	Engineering (Engineering Mechanics, Material Science, Embedded Systems)
ENEV	800	Environmental Engineering
IMRS	900	Intelligent Machines, Robotics and Systems Software
MACO	1000	Mathematics and Computational Sciences
MICR	1100	Microbiology
PHYS	1200	Physics & Astronomy
PLNT	1300	Plant Sciences

THE DEATH OF COMMON SENSE

- When we are reviewing projects we often ask “Did any adult really read this before approving the procedure?”
- Please make sure the projects submitted adhere to the ISEF and SSEF rules.
- Please do not submit incomplete paperwork or a project that has not been **critically reviewed** by the research teacher before submission.
- We are more than happy to assist you with questions!