



Senior Division Form (9-12 Grade)



One form required per project, unless page is noted otherwise

All students completing a science fair project in grades 9-12 in the Alpine, Jordan, Nebo, Provo, or Wasatch District, or Charter/Private School within the listed district boundaries, must complete this form, complying with safety and experimentation rules.

Project Information:

School Name: _____ School District: _____

Teacher Name: _____

Project Type: Individual Team | Number of Team Members 2 3

Student 1: Grade 9 10
 11 12

Team Member 2: Grade 9 10
 11 12

Team Member 3: Grade 9 10
 11 12

First Name: _____

First Name: _____

First Name: _____

Last Name: _____

Last Name: _____

Last Name: _____

Project Category: Please select the category that best fits your project

- | | | |
|--|---|---|
| <input type="checkbox"/> Animal & Plant Sciences | <input type="checkbox"/> Chemistry | <input type="checkbox"/> Engineering: Electrical & Computer Science |
| <input type="checkbox"/> Behavioral & Social Science | <input type="checkbox"/> Earth & Environmental Science | <input type="checkbox"/> Engineering: Materials & Mechanical |
| <input type="checkbox"/> Biology & Biochemistry | <input type="checkbox"/> Energy: Chemical & Physical | <input type="checkbox"/> Physics, Astronomy, & Mathematics |
| <input type="checkbox"/> Biomedical, Medicine, & Health Sciences | <input type="checkbox"/> Engineering: Civil & Environmental | |

Display & Safety Rules:

Display boards can be no larger than 30" deep, 48" side to side, and 108" tall.

Do NOT bring items from your experiment to display -- take pictures and include them on your board or project notebook. A 1 minute video is also permitted with fair personnel preview and approval.

As an affiliated fair with the International Science & Engineering Fair the following are NOT permitted when creating or displaying your board:

- | | |
|--|--|
| 1. Living organisms, including plant material | 9. Sharp items - pipettes, glass, syringes, needles |
| 2. Taxidermy specimens or parts | 10. Highly flammable display materials (NO matches) |
| 3. Preserved animals - including embryos | 11. Empty tanks that previously contained combustible liquids or gases |
| 4. Food (empty containers may be secured to the display) | 12. Batteries with open top cells |
| 5. Human or animal parts or body fluids | 13. Photographs of people other than yourself or your family without their written permission (must have signatures) |
| 6. Soil, sand or waste samples | 14. Photographs or visual representations depicting vertebrate animals in surgical techniques, dissections, necropsies, other lab techniques, improper handling methods, improper housing conditions, etc. |
| 7. Laboratory/household chemicals - including water | |
| 8. Poisons, drugs, hazardous substances, or devices | |

I certify that my science project complies with all of the experimental rules of the Central Utah STEM Fair. I understand that if I have not complied with these rules that my project could fail to qualify for competition. I have also read and I understand the display and safety rules. If I display any of the objects listed above I am aware that they will be removed and returned at the conclusion of the fair.

If I am selected to participate at the Central Utah STEM Fair, I agree to set up my project on the appointed day prior to my competition and I will leave my project on display until the designated time for project tear down. I understand that I must be present for judging during the designated competition date and time to be eligible to receive an award.

I understand that the completion of this form, and submission to my school or district, does not guarantee advancement to the Central Utah STEM Fair. I understand that if selected as a district finalist I am required to register **online** for the Central Utah STEM Fair. I understand the district will provide the registration information to me, including the username and password, and that I **must register online** no later than February 27, 2020 or for a \$25 late fee February 28 - March 1. I understand that I will receive an email confirmation as verification that I have registered, if I do not I should email admin@cusef.byu.edu **BEFORE** March 2. I understand that no registrations for the Central Utah STEM Fair will be accepted after March 1.

Signature of Student 1 _____	Signature of Parent/Guardian _____	Date _____
Signature of Team Member 2 _____	Signature of Parent/Guardian _____	Date _____
Signature of Team Member 3 _____	Signature of Parent/Guardian _____	Date _____

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 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 Potentially Hazardous Biological Agents
 - Vertebrate Animals Microorganisms rDNA Tissues
5. Items to be completed for **ALL PROJECTS**
 - Adult Sponsor Checklist (1) Research Plan/Project Summary
 - Student Checklist (1A) 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)
- Other**
 - Risk Assessment Form (3)

Adult Sponsor's Printed Name

Signature

Date of Review (mm/dd/yy)

Phone

Email

Research Plan/Project Summary Instructions

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

- All projects must have a Research Plan/Project Summary**
 - Written prior to experimentation following the instructions below to detail the rationale, research question(s), methodology, and risk assessment of the proposed research.
 - 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.
 - If no changes are made from the original research plan, no project summary is required.
- 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.
- The Research Plan/Project Summary should include the following:**
 - 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.
 - RESEARCH QUESTION(S), HYPOTHESIS(ES), ENGINEERING GOAL(S), EXPECTED OUTCOMES:** How is this based on the rationale described above?
 - 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.
 - 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.

- Human participants research:**
 - Participants:** Describe age range, gender, racial/ethnic composition of participants. Identify 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? 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?
 - 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.
 - 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?
 - 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.
- Vertebrate animal research:**
 - Discuss potential ALTERNATIVES to vertebrate animal use and present justification for use of vertebrates.
 - Explain potential impact or contribution of this research.
 - 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.
 - Detail animal numbers, species, strain, sex, age, source, etc., include justification of the numbers planned.
 - Describe housing and oversight of daily care.
 - Discuss disposition of the animals at the end of the study.
- Potentially hazardous biological agents research:**
 - Give source of the organism and describe BSL assessment process and BSL determination.
 - Detail safety precautions and discuss methods of disposal.
- 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.

Attach your complete RESEARCH PLAN after this page.

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.**

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 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 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 ISEF Rules. **Attach (1C) and any required institutional approvals (e.g. IACUC, IRB).**

SRC Chair's Printed Name

Signature

Date of Signature (mm/dd/yy)
(May be after experimentation)

3. Final 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 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)

Attach any additional required forms here.

Additional forms can be found on the CUSF or ISEF website.

If you are unsure what additional forms you may need please review the previous form you completed: 'Checklist for Adult Sponsor'
OR complete the Rules Wizard on the ISEF website: <https://ruleswizard.societyforscience.org/>