

**Student Research Plan Template**

A Research Plan is required for each **project** and should be part of the file upload for Form 1A (Student Checklist),

as noted by Question 11 on that form.

The below template is only a guide. All Research Plans submitted for OSSEF should follow the detailed instructions specified for [Form 1A](https://sspcdn.blob.core.windows.net/files/Documents/SEP/ISEF/2025/Forms/1A-Student-Checklist.pdf), and projects must follow all ISEF rules.

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## PROJECT INFORMATION

**Student Name(s):**

**Student School:**

**Title of Project:**

**Category:**

**Team Project (yes or no):**

**Date you plan to start:**

**ALWAYS USE COMPLETE SENTENCES AND ANSWER THE FOLLOWING PROMPTS TO CONSTRUCT**

**YOUR RESEARCH PLAN.**

**Research Location:** *(Where do you plan to do your research check all that apply)*

☐Home

☐School

☐Regulated Research Institution/Industrial Setting (i.e. a University or government Lab etc.)

☐Place of Business, Commercial Property or Industrial Setting

☐Working Virtually with a Mentor

☐Field or Other Public Location (i.e. City Park, Lake, River, Shopping Mall etc.)

☐Other (Neighbor’s house, mentor’s house etc.)

**Location Address:** *(For each location above, list the name and give the street address if available, or if not give location description or GPS coordinates)*

**Rationale:** *(Why is this project important? Include a brief summary of the background that supports your research problem and explain why this research is important scientifically and if applicable, explain any societal impact of your research.)*

**Scientific Hypothesis or Engineering Goal:** (*State your HYPOTHESIS(ES), RESEARCH QUESTION(S), or ENGINEERING GOAL(S), as well as EXPECTED OUTCOMES. How are these hypotheses, questions, or goals related to your reasons for choosing this project?)*

**Materials:** *(List in detail the materials you will be using, including chemicals and amounts and concentrations. Include where you purchased any bacteria or other potentially hazardous biological agents. If you used E. coli k-12, make sure to list that as the material.)*

**Procedure:** *(Describe in detail all procedures and experimental design including methods for data collection, and when applicable, the source of data used.* ***Describe only your project. Do not include work done by your mentor or others.*** *If you will use published surveys, questionnaires or tests, describe how you obtained these, including required permission if applicable and include a link to the survey/questionnaire/test or upload as an additional file.)*

**Risk and Safety:** *(Identify any potential risks and safety precautions needed.)*

**Data Analysis:** *(Describe how you will analyze or compare your data to determine your results. (Will you use tables, graphs or formulas?)*

### Bibliography:

**Type in your Bibliography:** *(Must have at least 5 valid sources, APA format is recommended*. If your project uses vertebrate animals, one of your references must be an animal care reference*)*.

### Additional required sections, if applicable based on project type:

Choose the appropriate sections needed for your project. Then fill out those sections on the following pages. Delete the sections you do not need.

* [**Human Participant Studies**](#_3dy6vkm)
* [**Vertebrate Animal Studies**](#_4d34og8)
* [**Potentially Hazardous Biological Agents**](#_17dp8vu)
* [**Hazardous Materials/Activities/Devices**](#_lnxbz9)
* [**Continuation Projects**](#_1ksv4uv)

## HUMAN PARTICIPANT STUDIES (*complete if applicable, this includes studies where the researcher is a participant, delete if not needed*)

**Participant Details:** *(Describe who will participate in your study (age range, gender, racial/ethnic composition). Identify any vulnerable populations (minors, pregnant women, prisoners, mentally disabled or economically disadvantaged)*

**Recruitment:** *(Where will you find or get your participants?)*

**Consent:** *(You need to get permission from your participants and inform them of your study, will it be Verbal or Written?)*

**Activities:** *(What will participants be asked to do?)*

**Time:** *(How long will it take for each participant to participate?)*

**Surveys:** *(Will you be handing out any surveys, questionnaires or tests? If so, you will be asked to provide a sample copy of the survey or test in PDF Format)*

**Risks:** *(What are the risks or potential discomforts: physical, psychological, social, legal, etc.?)*

**Minimizing Risk:** *(How will you minimize or reduce any potential risk?)*

**Benefits:** *(How will this study be beneficial?)*

**Privacy:** *(Will you collect any personal data from your subjects (name, address, photos, etc.?)*

**Information Storage:** *(How will you store and protect the participant’s private information?)*

**Information Disposal:** *(What will you do with the participant’s personal data at the end of the study?)*

## VERTEBRATE ANIMAL STUDIES (*complete if applicable, delete section if not needed*)

**Alternatives:** *(Discuss possible alternatives to vertebrate animal use and justify why your project requires the use of vertebrate animals)*

**Impact:** (*Explain the potential impact or contribution of your vertebrate animal study to enhancing scientific knowledge or understanding)*

**Kind of Animal:** *(Give the common name(s) or genus and species of the animals you will be using)*

**Description:**  *(Describe demographics of the animals you will be using: sex, age, strain etc.)*

**Numbers:** *(Give the number of vertebrate animals that will be involved in your study and why you chose that number)*

**Source:** *(Where and how will you obtain the animals?)*

**Procedure:** *(Describe in detail the exact procedure you will be using on the vertebrate animals)*

**Dosages:** *(Give detailed chemical concentrations or drug or food dosages that you will be using, if applicable)*

**Discomfort:** *(Explain ways you will minimize pain, stress, and/or discomfort for the animals)*

**Housing and Care:** *(Describe how and where the animals will be kept. Include bedding, cage, type of food, frequency of food and water etc.)*

**Disposition After Experimentation:** *(What will happen to the animals when you are done with your study?)*

**Note: Licensing and other Documentation** *(if applicable)***:**

(You will be required to provide a copy of any licensing required by state, local or federal law i.e. fishing license etc. if applicable, in PDF Format)

(You will be required to provide a copy of the IACUC documentation in PDF Format if the study was performed in a regulated research institution. **The student researcher’s name must be on the IACUC or on a letter from the IACUC showing that the student was trained and authorized to work on the project**.)

## POTENTIALLY HAZARDOUS BIOLOGICAL AGENTS (*complete if applicable, delete section if not needed*)

***Projects in this section can NOT be done at HOME!***

**Biosafety Level:** *(What have you determined your* [*Biosafety Risk Level*](https://www.societyforscience.org/isef/international-rules/potentially-hazardous-biological-agents/#classification) *to be? BSL-1 or BSL-2)*

**Biosafety Determination:** *(How did you determine the biosafety level of this project?)*

**Identification:** *(Identify the potentially hazardous biological agents or microorganisms to be used. Include the source, catalog number, quantity etc. and biosafety level group for each microorganism)*

**Laboratory Environment and Training:** *(Describe the laboratory and setup and include the level of* [*biological containment*](https://www.societyforscience.org/isef/international-rules/potentially-hazardous-biological-agents/#containment) *“BSL-Level”. Describe the training process and supervision process for the student researcher(s).)*

**Minimizing Risk:** *(Describe the procedures that will be used to minimize risk or harm to humans, animals, and plants: protective equipment, gloves, hoods, etc.)*

**Disposal:** *(Describe the methods of disposal for all cultures and hazardous biological agents (i.e. autoclave, bleach, etc.)*

### Vertebrate Animal/Human - Bodily Fluids/Tissue (complete if applicable, delete if not needed)

**Identification:** *(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

☐ Primary Cell/Tissue Culture

☐ Human or Other Primate Established Cell Lines

**Source:**  *(Where will the tissue be obtained? (include source and catalog number, if using established cell lines)*

**Vertebrate Animal Tissue from Research Institution:** *(Complete if the tissue will be obtained from a vertebrate animal study conducted at a research institution)*

* **Title:** *(Type in the title of the study at the Research Institution)*
* **IACUC:** *(Type in the IACUC approval number)*
* **IACUC Date:** *(Type in the IACUC approval date)*
* **Note:** *(You will be required to upload a copy of the IACUC documentation in PDF Format that clearly shows the name of the research institution)*

**Human Tissue from Research Institution:** *(Complete if the tissue will be obtained from a human subjects study conducted at a research institution)*

* **Title:** *(Type in the title of the study at the Research Institution)*
* **IRB:** *(Type in the IRB approval number)*
* **IRB Date:** *(Type in the IACUC approval date)*
* **Note:** *(You will be required to upload a copy of the IRB documentation in PDF Format that clearly shows the name of the research institution)*

## HAZARDOUS MATERIALS/ACTIVITIES/DEVICES (*complete if applicable, delete section if not needed*)

**Risk:** *(Identify and assess the risks involved in this project for the researcher(s), humans, and the environment, e.g biosafety, , chemical toxicity, reactivity, or flammability, corrosiveness, radiation, or use of hazardous devices)*

**Supervision:** *(Who will train or supervise you when conducting these potentially hazardous activities and what will that training be?)*

**Details:** *(List all hazardous chemicals, activities, or devices be sure to include any chemical concentrations or dosages; also identify any microorganisms exempt from pre-approval that you will be using if applicable).*

**Safety:** *(What safety precautions and procedures you will use to reduce the risk to yourself and others and safely dispose of chemicals or materials?)*

**Environmental Impact:** *(What steps will you take* [*to protect the environment*](https://www.societyforscience.org/isef/international-rules/hazardous-chemicals-activities-or-devices/#allproj) *from potential hard due to these hazardous chemicals, activities, or devices)*

**Sources of Safety Information:** *(List all sources of safety information: product labels, teacher, MSDS, etc.)*

## CONTINUATION PROJECTS (*complete if applicable, delete section if not needed*)

**Previous Year:** *(Select the previous year’s research)*

**☐ 2023-2024 Season**

**☐ 2022-2023 Season**

**Previous Year’s Project Title:**

**Research Goal - Current Year:**

**Research Goal – Previous Year:**

**Method/Procedure Summary – Current Year:**

**Method/Procedure Summary – Previous Year:**

**Variables to be Tested – Current Year:**

**Variables Tested – Previous Year:**

**Additional Changes/Differences – Current Year:**

**Additional Changes/Differences – Previous Year:**

**Note:** *(You will be asked to provide a copy of previous year’s Research Plan & Abstract in PDF format)*