SRC (Scientific Review Committee) Checklist for Science Fair Project Preapproval

References

ISEF Checklist for SRC Review: https://www.societyforscience.org/isef/checklist-for-src-review/
Operational Guidelines for SRCs and IRBs:
https://sspcdn.blob.core.windows.net/files/Documents/SEP/ISEF/2025/Fair-Network/Operational-Guidelines.pdf
Rules for all projects:
https://www.societyforscience.org/isef/international-rules/rules-for-all-projects/
Full ISEF rules:
https://sspcdn.blob.core.windows.net/files/Documents/SEP/ISEF/2025/Rules/Book.pdf

Please consider the following as you approve a project BEFORE it begins. While not all projects require pre approval as per international science fair rules, Edison Fairs requires pre approval for all projects:

All Projects

Background information to consider while reviewing:

- ☐ Was the study done at a Regulated Research Institute/Industrial Setting (RRI)? Is the terminology or equipment very sophisticated? If so, recommend looking for a possible RRI site for the project. Needs Form 1C, which will be submitted at the conclusion of the project. See ISEF rules, page 7, for the definition of an RRI.
- ☐ Does this appear to be a continuation? Any mention of previous research? Does the project paperwork use terms like “previously,” “earlier research,” “improved,” “redesigned,” “year 3,” etc.? If this is the case, the project needs Form 7.
- ☐ Any discussion of a partner in a non-team study? This type of project uses “we” consistently (math projects and international studies frequently use “we” for all studies). If this is the case, the project needs Form 1C, which answers this question for studies done at a university. Form 1C is submitted at the conclusion of the science fair project.
- ☐ Any possibly hazardous chemicals, activities, or devices? This includes high voltage, hazardous equipment, radioactivity, firearms, explosives, prescription drugs, DEA-controlled substances, alcohol and tobacco. This type of project needs Form 3.
- ☐ The project’s timeline cannot be more than one year long or started before January of last year. A one-year project falls under Form 1A. Continuation projects also need Form 7.
- ☐ Only Forms 1C, 5B, and the abstract are done after the research. All other necessary forms must be submitted to the SRC for approval.
- ☐ Forms 1C and 5B are completed if a student chooses to work with an RRI. The forms will be completed by the RRI Qualified Scientist before the post-project certification process.
- ☐ All submitted forms must be completely filled out, with dates consistently-logged.

Form 1 - Checklist for Adult Sponsor/Safety Assessment Form - All projects

- ☐ Checked items match other paperwork submitted. For example, if a student checks "Humans," Form 1, Form 1A, Research Plan, Form 1C (where applicable), Form 7 (where applicable), Form 2, Form 4, and an Informed Consent Form are present.
- ☐ This page is signed when the project is reviewed which should be before the project starts.

Form 1A - Student Checklist and Research Plan - All projects

- ☐ Grade level of student is indicated. The student must have been in high school at the time of research.
- ☐ Contact information is present
- ☐ If this project is a continuation, it must include Form 7, previous abstracts, and last year's research plan. This information should match the checkmarks on Form 1.
- ☐ Check to be sure the start/end dates are only one year in length and did not start before January of the previous year.
- ☐ Look at the information regarding the Research Site. This will tell you if the student needs additional paperwork. For example, Form 1C for an RRI, Form 5A if animals are used at a school/field site/home, Form 5B if animals are used at a RRI. No culturing of microorganisms is allowed at home. Form 6A must be present to indicate use of a BSL-1 or BSL-2 lab, which is located in appropriate facilities.

  Research Plan Specifics

  - ☐ The following parts are present: rationale, research question(s)/hypothesis(es)/engineering goal(s)/expected outcome, list of materials, procedures, risk and safety, data analysis, bibliography
  - ☐ Rationale requirements: Included is a brief synopsis of the background that supports the research problem and explains why this research is important. If applicable, the student explained any societal impact of the research.
  - ☐ Research question(s)/hypothesis(es)/engineering goal(s)/expected outcome requirements: The included items here should be based on the described rationale.
  - ☐ List of materials should be detailed and specific. Chemical lists should include concentrations and quantities, apparatus, and organisms or subjects involved
  - ☐ Procedures should detail all procedures and experimental design including methods for data collection, and when applicable, the source of data used. The procedure should include safety precautions, aseptic techniques and disposal methods.

Describe only your project. Work done by a mentor or others is not included, unless that work is a single step. If that single step is done by a Qualified Scientist or Designated Supervisor, that should be clearly indicated in the procedure.

- ☐ Risk and Safety requirements: Any potential risks are identified and needed safety precautions are listed.
- ☐ Data Analysis requirements: Student has described the procedures they will use to analyze the data/results.
- ☐ Bibliography requirements: Student has listed major references (e.g. science journal articles, books, internet sites) from their literature review. ISEF (International Science and Engineering Fair) rules are listed as a reference. If the student plans to use vertebrate animals, one of these references must be an animal care reference.
- ☐ If the student makes a substantial addition, deletion, or clarification to the procedures described in the student's original research plan, an addendum is required which clearly explains the changes. Changes such as the addition of human participants, potentially hazardous biological agents, vertebrate animals, or hazardous chemicals, activities, and devices may require additional OR reapproval by the SRC/IRB.
- ☐ If a student uses procedures taken from a published study, data from open-access data repositories, laboratory standards, or equipment/kit manual, a complete citation (ie. not simply a URL) MUST be included with the research plan; or the procedure MUST be completely written into the research plan with appropriate citation.
- ☐ Sources for chemical safety information (ie: safety data sheet (SDS), safety manuals) are included in the bibliography. If there is a chemical in the materials/procedure, it must have an SDS listed in the bibliography. Do NOT include the printed SDS with the submitted research plan unless it is unavailable for reviewing online. If at all possible, please leave clickable links in the project documentation.
- ☐ If a student uses humans, non-human vertebrates, or PHBAs (potentially hazardous biological agents) in their research, a reference to the protection of human subjects, vertebrate subject care, or a reference to appropriate microbiological technique MUST be cited in their bibliography (see pages 23-25 ISEF Rules).
- ☐ *Addendum ONLY for projects involving human participants*: Look for information about subjects (any risk groups), recruitment, methods, risks & benefits, protection of privacy (HIPPA & FRPA), and informed consent (participant knows what they are

being asked to do, that they may withdraw at any time, there is no coercion, etc.). Participants must have informed consent forms on file before participating in the project. Is the level of risk appropriate? What risk assessment was done? Should the study have written Consent/Permission/Assent? Is the survey attached? Ethical concerns must always be considered by the student researcher and the local IRB. Not all areas of study are

appropriate for pre-collegiate research (See ISEF Rule Book pages 8-11). If a student's project includes media, scripts, surveys (including recruitment or pre-qualification questions), songs or lyrics, these must be reviewed by an IRB prior to any contact with potential participants or experimentation. Ratings of virtual reality, videos and/or video games must be provided in the research plan and on the Human Informed Consent Form or applicable substitute. The only allowable options for informed consent procedures involving digital surveys are those outlined in ISEF's Online Survey Consent Procedures found here: https://sspcdn.blob.core.windows.net/files/Documents/SEP/ISEF/Resources/Online-Survey-Consent-Procedures.pdf

- ☐ *Addendum ONLY for projects involving animals*: Pay particular attention to the detailed procedures and care of the animals in the research and if the student looked for alternatives to animal research. Look for any potential disqualifying items such as a study conducted at home, school or field that should have been done at an RRI, any expected animal deaths due to experimental procedures, any expected weight loss ≥15% in any group or subgroup, toxicity studies, studies designed to kill, studies which cause more than momentary pain or suffering, predator/prey, inappropriate water or food restriction, euthanasia by student, etc. Ensure that an allowable embryonic study didn't hatch and become a vertebrate study that is not permitted. For the purposes of ISEF rules regarding non-human vertebrates (ISEF Rules pages 12-14), "experimental procedures" include both adequate husbandry as well as experimental treatments. For all projects using non-human vertebrates the bibliography MUST include an animal care reference (such as those on ISEF Rules pages 23-25). Live organisms obtained from commercial sources or any captured invasive species may NOT be released into the environment. Appropriate disposal methods for organisms used MUST be listed in the Research Plan. Aquatic plants should be frozen for at least 24 hours or dried completely before being disposed of in the household garbage. Non-native plants should be sealed in plastic bags before

being disposed of in the household garbage. NEVER compost or dispose of non-native plants with landscaping waste. Non-native animals MUST NOT be released, even if they were caught in the wild. BEFORE starting a project involving non-native animals (example - Cuban tree frogs, lionfish), contact the Florida Fish and Wildlife Conservation Commission for appropriate disposal techniques (remember, student researchers cannot euthanize vertebrates). Organisms collected from the wild or purchased and subjected to experimental treatments may not be released into the environment after experimentation.

☐ *Addendum ONLY for projects involving PHBAs:* The source, quantity, and Biosafety Level (BSL) must be indicated for all microorganisms including established cell lines. Culturing of microorganisms may NOT be conducted at home. All BSL-1 studies must be conducted at a BSL-1 facility or higher. If a petri dish or culture container with unknown or BSL-2 microorganisms is opened, it becomes a BSL-2 study and may only be conducted at a BSL-2 facility, such as the lab on Floor 3 of Building 7 at Canterbury School. BSL-3 or -4 studies, culturing CRE (Carbapenem Resistant Enterobacteriacae), and studies designed to engineer bacteria with multiple antibiotic resistance are not permitted. Procedures to minimize risk must be clearly indicated. rDNA studies require close review to ensure proper oversight. Proper disposal methods must be listed (autoclaving, 10% bleach solution/sodium hypochlorite, biosafety pick up, etc.). A project involving research with any coronavirus particle is prohibited. The use of wild-collected mushrooms is prohibited. Use of the WHO-identified “Bacterial Priority Pathogens” of known drug resistant microbes is prohibited. Examples include but are not limited to: carbapenem-resistant Enterobacteriaceae (CRE),methicillin-resistant Staphylococcus aureus (MRSA), vancomycin-resistant Enterococcus (VRE), Klebsiella pneumoniae carbapenemase (KPC) producing bacteria, Candida auris and others. Contact with emerging pathogens carried by arthropod vectors (mosquitoes, flies, etc.) is prohibited. Students must conduct projects at a Regulated Research Institution if they involve virus particles (except bacteriophages, which require a minimum of a BSL-2 facility), cyanobacteria (unless a certified toxin-free strain from a reputable vendor), or red tide. For precollegiate research, if a student opens a culture after the student’s initial inoculation or subcultures from a student-inoculated culture, whether known or unknown microorganisms, the project will be treated as BSL-2, even if opened for the purposes of disposal. All PHBA projects MUST include detailed, step-by-step

procedures that clearly describe: personal protective equipment (PPE) items used to reduce risks to the researcher; aseptic technique (standard microbiological procedures that prevent cross contamination); sterilization of work surfaces and reusable equipment before and after use (Ex: 10% bleach or 70% ethanol); disposal of cultures and culture media in accordance with either ISEF rules or Regulated Research Institution's biohazard disposal procedure. All PHBA projects MUST include in the bibliography a reference for microbiological practices and aseptic techniques (such as those on ISEF Rules pages 23-25). All PHBA projects MUST include a BSL1 or BSL2 checklist, as appropriate, (www.sseffflorida.com) unless the work is conducted at a Regulated Research Institute (RRI).

- ☐ *Addendum ONLY for projects involving hazardous chemicals, activities or devices*: Look for detailed descriptions of risks and safety precautions and procedures used including methods of disposal. Hazardous chemicals are those with a National Fire Protection Association (NFPA) ranking of 2 or higher in any category AND/OR a Global Harmonized System (GHS) category designation of 1 or 2, as listed on the chemical's Safety Data Sheet (SDS). Whenever possible, the exact chemical's (brand and item) SDS should be referenced. If the exact chemical's SDS is not findable, researchers must find the closest available brand's published SDS. Many SDSs are available through Flinn Scientific, Sigma Aldrich, and other online repositories, such as this list of common biomedical research chemical SDS links shared by SSEF SRC member Pat Zalo. If NFPA ratings are not provided in a chemical's Safety Data Sheet (SDS), then careful consideration of the SDS hazard information, including any GHS hazard statements, should be used to determine whether the chemical and its use are required for the project. Chemicals regulated by the state of Florida or a federal agency must have documented permission and knowledge of legal requirements submitted with the project (ex. pesticides, fertilizer, petrochemical disposal, etc.). Students may only work with Schedule 1 or 2 drugs at a Regulated Research Institute under the supervision of a Qualified Scientist that provides copies of the DEA Research License and completed DEA Form 222 as attachments to ISEF Form 2. DEA Controlled Substances (https://www.dea.gov/drug-information/drug-scheduling). Projects involving the use of CBD oil, hemp oil, or related products must be done at a Registered Research Institution (RRI). Projects where the student engages in significantly hazardous activities requires careful consideration for approval, including student activity in

water-based or near-water venues, operation or passage in a water-craft; or where the student collects data involving any motorized vehicles. Projects involving the use of any projectile devices require careful consideration before approval and must be supervised by a qualified Direct Supervisor. Projects involving firearms or archery must be conducted on a range and supervised by certified range personnel. A copy of the certification should be provided as an attachment to Form 3. Range parameters MUST be described in the Research Plan. Projects involving laser light (in the visible range OR above/below) MUST include the following in the research plan: citation for eye-safety of the laser (for example: http://www.lasersafetyfacts.com/laserclasses.html); for any/all lasers used: manufacturer, model name/number, class, emission wavelength and wattage (mW); any amplification or focusing techniques used for ANY part of the project involving laser light; a detailed description of the environment in which the experiment will be performed that includes: eye safety, with explanation of rationale for the level of safety used; any shielding of laser equipment, including safety of power sources; the removal or covering of all reflective surfaces in the environment; the containment of laser emissions within a controlled area, such as covering all windows and doors. Additional rules regarding the use of drones (in addition to ISEF rules page 20): All unmanned remote operated aircraft, subsequently referred to as drones, must be registered with the FAA at https://faadronezone.faa.gov/#/ All drone flights require the presence of the Direct Supervisor. A description of the safe environment in which the drone is operated must be included in the Research Plan. Use of drones MUST adhere to Florida State Statute 934.50 as well as all local and ISEF rules on such craft. If drones are used in a research project, documentation of adherence to local and state requirements must be included in the Research Plan procedures and on Form 3. (http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&URL=0900-0999/0934/Sections/0934.50.html).

- ☐ *Addendum ONLY for projects involving field work:* When research is carried out on private property, prior written permission from the property owner must be secured and submitted with project paperwork. City, county, and/or state parks may require prior approval for students to collect samples. If so, all approvals must be secured and submitted with project paperwork. Approval to work at a Regulated Research Institution or Industrial Setting is implicitly provided by the inclusion of a Form 1C in

the project's paperwork and does not require additional written permission. Environmental water sample collections: Because of the seriousness of the effects of exposure to water containing cyanobacteria or Red Tide: Under NO circumstances may any student make collections or samplings during an active cyanobacteria or Red Tide bloom. Documentation must be provided that confirms samples were collected during non-bloom periods. For example, the Research Plan should include procedure steps to check the bloom report before collecting as well as a bibliographic link to the appropriate report (DEP/FWC). In addition, a screenshot may be attached to Form 3 confirming non-bloom status for the date of collection. If water is collected over multiple dates from the same location, only the earliest needs to be submitted with project paperwork (though best practice would be for all to be kept in the Research Log). Any project involving the collection of protected/regulated organisms, whether plants or animals, MUST include documentation from appropriate governmental agencies in their original paperwork. Collection of aquatic animals or plants MUST be made under the supervision of a holder of the state's Educator's Aquatic Collection Permit. Anything on the noxious weed or prohibited plant lists would require a permit from FDACS, unless the plant is growing on the researcher's own property and will not be transported from that property. When collecting organisms with potential toxicity, precautions must be documented in the Research Plan. The use of wild-collected mushrooms is prohibited. Projects involving archeological or paleontological excavations MUST be accompanied by appropriate documentation from the state organization or governmental agency responsible for oversight of such procedures. This documentation MUST be submitted with other required paperwork. It is illegal to dig for artifacts without the landowner's permission. On state-owned and controlled lands, including sovereignty-submerged lands, a permit from the Divisions of Historical Resources (DHR), Bureau of Archaeological Research is required to conduct archeological investigations. Digging for artifacts on state lands without a permit from DHR is a felony (Sections 267.061 and 267.12-13, Florida Statutes, and Chapter 1A-32, Florida Administrative Code.) Digging on federal land requires a permit and illegal digging is a felony offense.

Form 1B - Approval Form - All projects

- ☐ Signatures from student and parent should be before the start date shown on Form 1A.
- ☐ Section 2a must be signed by SRC or IRB before experimentation begins. The SRC committee will do this at the conclusion of the review, provided the project is approved.
- ☐ Section 3 will be signed at the conclusion of the experimental timeline, so please leave blank for now.

Form 2 - Qualified Scientist - Required at Canterbury School for all projects

- ☐ Look for answers that are consistent with the information on other forms. For example, if the scientist marks yes to 'used humans' but other human subject forms aren't present, send the project back for clarification.
- ☐ Any yes responses on #2 will require documentation on additional forms.
- ☐ This form documents the amount of oversight that the student had and the safety precautions needed. The QS and DS review the study before the experiment begins.
- ☐ All approval signatures must be before research begins, using the start date given on Form 1A.

Form 3 - Risk Assessment Form - Required at Canterbury School for all projects

- ☐ This form documents that both the student and supervisor have assessed the risks involved in the research and describes what safety precautions and procedures are needed including the disposal procedures.
- ☐ Start date for this form should be consistent with the date given on Form 1A.
- ☐ Risk assessment is given for every potentially hazardous chemical, bacteria, piece of equipment, organism, etc. that is listed in the Research Plan.
- ☐ If the project contains hazardous chemicals, activities or devices, the project meets the parameters put forth by ISEF: https://www.societyforscience.org/isef/international-rules/hazardous-chemicals-activities-or-devices/

Form 4 - Human Participants - ONLY for projects involving human subjects

- ☐ Make sure this form is complete, including decision checkmarks in the box and all 3 signatures.
- ☐ All approval dates are consistent with those on Form 1A.
- ☐ This form must also be reviewed by all members of the IRB. The IRB for this project should not include the adult sponsor, designated supervisor, qualified scientist or a relative (e.g. parent) of the student because of conflict of interest.
- ☐ Research Plan: Refer to the research plan for subject information, which includes any risk groups, recruitment, methods, risks and benefits, protection of privacy (HIPPA & FRPA), and informed consent (participant knows what they are being asked to do, that they may withdraw, no coercion, etc).
- ☐ Risk Level: Is the level of risk marked appropriate? Was a risk assessment done? Should the study have written Consent/Permission/Assent? Is the survey attached?

Human Informed Consent Form - ONLY for projects involving human subjects

- ☐ Does the form clearly explain what the participant is being asked to do?
- ☐ Does the form explain how long the study will take?
- ☐ Does the form explain the potential risks and steps that will be taken to mitigate risk?
- ☐ Does the form explain the benefits to the participant or to society?
- ☐ Does the form detail how confidentiality will be maintained?
- ☐ Does the form explicitly state that the study is completely voluntary and that the subject may withdraw at any time?
- ☐ Does the form use the correct language for informed consent? Adult participants sign giving their consent, minors give their assent, and parents of participants give permission.
- ☐ The project conforms to all guidelines of the ISEF Risk Assessment Guide: https://sspcdn.blob.core.windows.net/files/Documents/SEP/ISEF/Resources/Risk-Assessment-Guide.pdf
- ☐ The project meets the parameters set forth by the ISEF competition rules: https://www.societyforscience.org/isef/international-rules/human-participants/

Form 5A - ONLY for projects involving a vertebrate animal at a non-RRI site

- ☐ Since these animals are not in a research institution, which would provide a high level of oversight, verify that special attention will be paid to the housing and husbandry of the animal that will be provided by the student.
- ☐ The final disposition of the animals must also be appropriate. Any death, illness, or unexpected weight loss must have been investigated and documented by an attached letter from the Qualified Scientist, Designated Supervisor, or a veterinarian. If there were any deaths due to the experimental procedure, the project will Fail to Qualify.
- ☐ Capture & Release approvals must be attached when applicable.
- ☐ Research which causes more than momentary pain or suffering is prohibited.
- ☐ Appropriate use of anesthetics, analgesics and/or tranquilizers CANNOT be carried out in a non-RRI site. Tissue collection CANNOT be carried out in a non-RRI site.
- ☐ The project meets all parameters put forth by ISEF: https://www.societyforscience.org/isef/international-rules/vertebrate-animals/

Form 6A - Potentially Hazardous Biological Agents (PHBA) Risk Assessment Form - ONLY 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.

- ☐ Identification, Including Biosafety Level (BSL): The source, quantity, and BSL must be indicated. A plant or non-primate established cell line will not require this form but the student may fill out this form in order to document that it is from ATCC (American Type Culture Collection), etc. However, human and other primate established cell lines and tissue cultures require this form.
- ☐ Prohibited Studies: BSL-3 or -4 studies, culturing CRE (Carbapenem Resistant Enterobacteriacae), and studies which are designed to engineer bacteria with multiple antibiotic resistance are not permitted.
- ☐ Studies requiring an RRI site: human and vertebrate animal tissue. If the project involves the collection and use of these types of tissues, return the project for additional clearance steps.

- ☐ Site: Microorganisms may NOT be cultured at home. All BSL-1 studies must be conducted at a BSL-1 facility or higher. If a culturing plate with unknown microorganisms is opened, except for disinfection or disposal, it becomes a BSL-2 study and may only be conducted at a BSL-2 facility. Canterbury School has a BSL-2 lab on the third floor of Building 7.
- ☐ Risk Reduction: There should be explicit procedures intended to minimize risk. rDNA studies require close review to ensure proper oversight.
- ☐ Disposal: Proper disposal methods must be listed: autoclaving, 10% bleach solution, biosafety pick up, etc.
- ☐ The project meets all of the parameters put forth by ISEF: https://www.societyforscience.org/isef/international-rules/potentially-hazardous-biological-agents/

Form 7 - ONLY for projects that go beyond the one-year parameters

- ☐ This form is posted with the project so that the judges can tell at a glance exactly what was new and different about this year's study.
- ☐ All information must be on the form, not "see attached."
- ☐ Because research projects may only be 1 year's work, they will be judged on the current work only, not on previous work, and this form is used to document current versus previous research.
- ☐ Frequently, students don't wish to call their project a continuation, but it's good research to continue a line of investigation even when the focus is now totally different. If the study is in the same field, if anything they learned in a previous year helped with the current study, or if the current study refers to any earlier research, then it is a continuation and Form 7 and previous abstract and research plan are required.
- ☐ Repetition of a previous study that reflects no changes but simply retests or increases sample size is not permitted.
- ☐ A longitudinal study, in which time is a critical variable, is permitted but the original data from previous years cannot be presented only the comparison between years.