



2023-24

State Science & Engineering Fair of Florida
RULES SUPPLEMENT
to the International Science & Engineering Fair Rules
<https://ssefflorida.com/>

It is the responsibility of the affiliated Regional Science & Engineering Fair Directors, Scientific Review Committees and Institutional Review Boards, students, and teachers to develop a complete knowledge and understanding of both the [*ISEF Rules & Regulations*](#) & the *SSEF Rules Supplement*.

1. **SSEF has the right to make rules stricter than those stated by ISEF.**
2. **Review this SSEF Rules Supplement carefully so that you are aware of these additional requirements.**
3. The Regional Director MUST ensure that each person and committee involved in science research or intending to participate in an affiliated science fair receive copies of both *ISEF Rules & SSEF Rules Supplement* documents and follow ALL the rules outlined within them.
4. All of the RULES, REGULATIONS, and PROCEDURES of the *ISEF* are in effect at each affiliated regional science fair and at the *SSEF of Florida*.
5. Regional and local fairs may also adopt more restrictive rules.
6. Students must compete in the regional fair that serves the geographical region where they **attend school** (public, private, charter, homeschool). *If a team project includes members from more than one region, the team must request permission to compete in ONE regional fair. It is recommended that students request this permission BEFORE experimentation or data collection begins.*
7. Teachers/Adult Sponsors are to critically review all Research Plans **BEFORE** experimentation or data collection begins. If required by ISEF/SSEF rules, the Teacher/Adult Sponsor is also responsible for submitting the project to the appropriate SRC/IRB for additional review and approval **BEFORE** experimentation or data collection begins.

SSEF of Florida Scientific Review Committee

All Projects entering the SSEF of Florida will be reviewed and must be APPROVED by the SSEF of Florida Scientific Review Committee (SRC) before competition. In addition, all SSEF affiliated fair directors and selected representatives are required to participate in the final review process.

Only SSEF APPROVED projects are eligible for competition in the SSEF of Florida.

Members of the Scientific Review Committee (SRC) for the State Science and Engineering Fair of Florida are available to assist students, teachers, and Fair directors with rules questions.

For ISEF or SSEF of Florida rules questions, students, teachers, and fair directors may contact the SSEF of Florida Scientific Review Committee. Please reference the ISEF/SSEF rule(s) for which you need clarification.

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Eligibility for SSEF of Florida (In addition to ISEF rules p. 3)

1. Each RSEF of Florida affiliated fair may send to SSEF of Florida the number of projects allocated.
2. A student must be selected by the regional fair affiliated with the SSEF of Florida.
3. A research project may be part of a larger study performed by professional scientists, **but the project presented by the student must be only their OWN PORTION of the complete study.**
4. As a reminder, ISEF eligibility requires the following:
 - a. Team projects must have no more than three members. Team membership may not change once competition begins.
 - b. A student may only enter one project per year, representing no more than 12 months of work, beginning no earlier than the year preceding the SSEF of Florida.
 - c. A student may only compete in one regional fair.

Abstracts (In addition to ISEF rules p. 30)

1. All abstracts for the **2024 SSEF MUST** be on the **approved 69th SSEF Abstract Form** which is available at www.ssefflorida.com.
2. The official approved and stamped SSEF abstract received on-site at SSEF must be displayed vertically at the display. **No copies of the abstract may be distributed to judges or to the public.**

Research Plan (In addition to ISEF rules p. 33)

All projects must include a complete research plan. The research plan is a detailed step-by-step description of the student's involvement in procedures utilized during the research process, written prior to experimentation. It should be fully and clearly replicable by a reviewer. The research plan must not include data and conclusions.

1. The Research Plan must include:
 - a. a materials list to include chemicals (with concentrations and quantities for any hazardous chemicals), apparatus, and organisms or subjects involved;
 - b. procedures written as specific steps that include safety precautions, aseptic techniques and disposal methods (if applicable);
 - c. procedures in which the student researcher is directly involved and/or if someone else performs a step, it must be clearly identified in the research plan;
2. 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. Such changes may require additional **OR** reapproval as necessary, such as inclusion of human participants, potentially hazardous biological agents, vertebrate animals, or hazardous chemicals, activities, and devices.

Bibliography (In addition to ISEF rules p. 33)

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 **MUST** be included with the **research plan**; or the procedure **MUST** be completely written into the research plan.

1. 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).
2. List the sources for safety information (ie: safety data sheet (SDS), safety manuals). Do NOT include the printed SDS with the submitted research plan unless it is unavailable for reviewing online.

Human Participants Projects (In addition to ISEF rules pp. 8-11)

1. **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.
2. Projects with greater than minimal risk require a Qualified Scientist. See ISEF Rule Book page 5 and Risk Assessment Guide ([LINK](#))
3. Written parental consent is required for **ALL** projects involving minor human participants.
4. Student researchers with assent or consent forms must supply to the SSEF SRC the quantity of assent/consent forms using the **Verification of Informed Consent Form (VICF)** (www.ssefflorida.com) and a photocopy of the **earliest** signed **Human Informed Consent Form** (or other acceptable consent form) with names and signatures blacked out but **NOT** the dates blacked out.
5. If a student's project includes media, scripts, surveys, songs or lyrics, these must be reviewed by an IRB prior to experimentation and must be available for subsequent review at each level of participation. Rating of videos and/or video games must be provided in the research plan and on the **Human Informed Consent Form** or applicable substitute.
6. The only allowable options for informed consent procedures involving digital surveys are those outlined in ISEF's Online Survey Consent Procedures. ([LINK](#))

Non-Human Vertebrates (In addition to ISEF rules pp. 12-14)

1. If the project includes non-human vertebrates, the **Mortality Report Form** (www.ssefflorida.com) must be submitted along with all other required forms **even if no deaths occurred**.
2. For the purposes of ISEF rules regarding non-human vertebrates (pages 12-14), "experimental procedures" include both adequate husbandry as well as experimental treatments.
3. For all projects using non-human vertebrates the bibliography **MUST** include an animal care reference (such as those on ISEF Rules pages 23-25).
4. Animals obtained from commercial sources or any captured invasive species may **NOT** be released into the environment.

Potentially Hazardous Biological Agents (PHBA) (In addition to ISEF rules pp. 15-18)

1. The following PHBAs are PROHIBITED for use in projects that participate in the SSEF of Florida:
 - a. A project involving research with any Coronavirus particle is prohibited.
 - b. The use of wild-collected mushrooms is prohibited.
 - c. Use of carbapenem-resistant Enterobacteriaceae (CRE), methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant *Enterococcus* (VRE), *Klebsiella pneumoniae* Carbapenemase (KPC) producing bacteria, and *Candida auris* and other related resistant microbes is prohibited.
 - d. Contact with emerging pathogens carried by arthropod vectors (mosquitoes, flies, etc.) is prohibited.
2. **Junior Section** researchers may NOT conduct BSL-2 PHBA projects. Junior section researchers may NOT work with virus particles, cyanobacteria (unless a certified toxin-free strain from a reputable vendor), nor red tide.
3. **Senior Section** researchers may only conduct projects that involve virus particles, cyanobacteria (unless a certified toxin-free strain from a reputable vendor), or red tide if conducted at a Regulated Research Institute (except bacteriophages, which require a minimum of a BSL-2 facility). See also "Work in the Field" rule #3 in this document.
4. Student researchers may only conduct projects that involve sub-culturing from Microbial Fuel Cells if conducted at a Regulated Research Institute (RRI).
5. 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**.

6. SSEF does not recognize ISEF exemptions of PHBA organisms (see ISEF Rulebook page 17) **when cultured**. Prior SRC approval is required for PHBA organisms. Students must also complete a Form 3 and Form 6A.
7. All PHBA projects **MUST** include detailed, step-by-step procedures that **clearly describe**:
 - a. personal protective equipment (PPE) items used to reduce risks to the researcher;
 - b. aseptic technique (standard microbiological procedures that prevent cross contamination);
 - c. sterilization of work surfaces and reusable equipment before and after use (Ex: 10% bleach or 70% ethanol);
 - d. disposal of cultures and culture media in accordance with either ISEF rules or Regulated Research Institution's biohazard disposal procedure.
8. 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).
9. All PHBA projects **MUST** include a BSL1 or BSL2 checklist, as appropriate, (www.ssefflorida.com) unless the work is conducted at a Regulated Research Institute (RRI). See ISEF rules, page 7, for the definition of an RRI.

Additional Guidance

To retain a BSL-1 classification, a project must meet ALL of the following requirements:

- a. Culturing work must be performed in a BSL-1 rated facility, **never** in a home environment.
- b. Organisms being cultured are either known BSL-1 organisms from a reputable vendor or are unknown microorganisms sampled from a location (except locations with high probability of containing BSL-2+ organisms).
- c. If a stock culture, provided by either a reputable vendor or a Regulated Research Institute, needs to be re-plated or "reconstituted" before the student accesses it for their project, the Designated Supervisor may perform ONE subculture for this purpose.
- d. Once the student performs the initial inoculation, the student does NOT open the culture again for any reason. The Designated Supervisor may open the culture only to perform final disposal.
- e. An example of proper disposal by a designated supervisor includes submerging sealed plates in 10% bleach solution, removing the seals, and opening the plates to be soaked for at least 30 minutes.
- f. These rules are due to heightened chances of environmental contamination during inoculation by precollegiate researchers. The rules are stricter than standard microbiological practice in professional settings (where known BSL-1 organisms may be subcultured and still maintain BSL-1 containment).

Use of Hazardous Chemicals, Activities, or Devices (In addition to ISEF rules pp. 19-21)

1. All projects involving hazardous chemicals, activities, or devices **MUST** include a Form 3.
2. Hazardous chemicals are those with a National Fire Protection Association (NFPA) ranking of 2 or higher <https://www.flinnsci.com/sds/>. Adult Sponsors and other research mentors are also recommended to consult the Florida Department of Education's Safety in Science guide (last published 2015 at [LINK](#)).
3. Projects involving hazardous chemicals **MUST** include a Form 3 and be reviewed by the local SRC **PRIOR** to experimentation. 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 requires SRC prior approval.
4. **Chemicals regulated by the state of Florida or a federal agency** must have documented permission and knowledge of legal requirements submitted with project paperwork for SRC prior approval to experimentation (ex. pesticides, fertilizer, petrochemical disposal, etc.).
5. **Junior Section** researchers may NOT work with Schedule 1 or 2 drugs.
6. **Senior Section** researchers 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>).

7. Projects involving the use of CBD oil, Hemp oil, or related products are only permitted in the **Senior Section** and must be done at a Registered Research Institution (RRI).
8. Projects where the student engages in significantly hazardous activities requires SRC prior review and approval. Examples include 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.
9. Projects involving the use of **any projectile devices** require SRC prior approval and must be supervised by a qualified Designated Supervisor.
 - a. 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.
 - b. Range parameters **MUST** be described in the Research Plan.
10. Projects involving laser light (in the visible range OR above/below) require SRC prior approval and **MUST** include the following in the research plan:
 - a. citation for eye-safety of the laser (for example: <http://www.lasersafetyfacts.com/laserclasses.html>);
 - b. for any/all lasers used: manufacturer, model name/number, class, emission wavelength and wattage (mW);
 - c. any amplification or focusing techniques used for ANY part of the project involving laser light;
 - d. a detailed description of the environment in which the experiment will be performed that includes:
 - i. eye safety, with explanation of rationale for the level of safety used;
 - ii. any shielding of laser equipment, including safety of power sources;
 - iii. the removal or covering of all reflective surfaces in the environment;
 - iv. the containment of laser emissions within a controlled area, such as covering all windows and doors.
11. Projects involving drones require SRC prior approval. Additional rules regarding the use of drones (in addition to ISEF rules page 20):
 - a. All unmanned remote operated aircraft, subsequently referred to as drones, must be registered with the FAA at <https://faadronezone.faa.gov/#/>
 - b. All drone flights require the **presence** of the Designated Supervisor.
 - c. A description of the safe environment in which the drone is operated must be included in the Research Plan.
 - d. 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).

Work in the Field

1. 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.
2. **Environmental water sample collections:** Because of the seriousness of the effects of exposure to water containing cyanobacteria or red tide:
 - a. under NO circumstances may any student make collections or samplings during an active cyanobacteria or red tide bloom. Current blooms: <https://floridadep.gov/AlgalBloom>.
 - b. documentation must be provided that confirms samples were collected during nonbloom periods.

3. Any project involving the collection of protected/regulated organisms, whether plants or animals, **MUST** include documentation from appropriate governmental agencies in their original paperwork submission to the SRC.
 - a. Collection of aquatic animals or plants **MUST** be made under the supervision of a holder of the state's Educator's Aquatic Collection Permit. (<https://myfwc.com/license/saltwater/special-activity-licenses/>)
 - b. 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.
Invasive species: <https://floridainvasivespecies.org/plantlist.cfm>
Endangered and protected species: <https://www.fdacs.gov/Consumer-Resources/Protect-Our-Environment/Botany>
4. Appropriate disposal methods for organisms used **MUST** be listed in the Research Plan.
 - a. 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.
 - b. 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).
 - c. Organisms collected from the wild or purchased and subjected to experimental treatments **may not** be released into the environment after experimentation.
5. When collecting organisms with potential toxicity, precautions must be documented in the Research Plan.
6. 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 to the SRC.
 - a. It is illegal to dig for artifacts without the landowner's permission.
 - b. 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.*) <https://dos.myflorida.com/historical/archaeology/public-lands/research-permits/>
Permits for vertebrate fossil excavation: <https://www.floridamuseum.ufl.edu/vertpaleo/amateur-collector/fossil-permit/permit-application/>
 - c. Digging on **federal** land requires a permit and **illegal digging is a felony offense**. Contact the federal land manager for more information on obtaining permission to dig on federal lands.

Display and Safety (In addition to ISEF rules pp. 26-28)

1. There will be no electricity available at the SSEF of Florida.
2. No project materials may be distributed to judges.
3. All projects will sit on a table (no floor-standing displays will be allowed). **Projects may not exceed 72" in height from the table, 30" in depth, and 48" width.**
4. Projects **MUST** be capable of standing upright without toppling, even against normal indoor air currents (such as when someone walks by quickly, the air conditioner turning on, etc.).
5. Acknowledgements to recognize the contributions of a university, professional organization or mentor, or grant funding agency **MUST** be contained to one section of the poster/board, be in text-only format, and may not include a logo.