



## Thermo Fisher Scientific Junior Innovators Challenge Science Fair Paperwork Reference Guide 2023-2024

*This document is intended to provide guidance about the rules and documentation for science fair projects that aspire to compete at regional or state competition that may lead to a nomination and an opportunity to compete in the Thermo Fisher Scientific Junior Innovators Challenge (JIC). Some areas of research require pre-approval and knowing this up-front as students are generating their project idea will help in the successful planning, documentation, and implementation of the project.*

### Science Fair Paperwork

**The requirements and documentation procedures may vary depending on your fair, but knowing these general requirements is important:**

- Some projects require Pre-Approval by a Scientific Review Committee (SRC) and/or Institutional Review Board (IRB), before research begins, including projects that use:
  - **Human participants** of any kind (including use of surveys & testing of Inventions, Apps, prototypes)
    - Visit <https://www.societyforscience.org/isef/international-rules/human-participants/> for more information on rules regarding human participants. (Please see more about the IRB below, the committee that must approve all human participant studies.)
  - **Vertebrate Animals** (including pets)
    - Visit <https://www.societyforscience.org/isef/international-rules/vertebrate-animals/> for more information on vertebrate animals.
  - **Potentially Hazardous Biological Agents (PHBA's)**
    - Visit <https://www.societyforscience.org/isef/international-rules/potentially-hazardous-biological-agents/> for more information on PHBA's (PHBAs include potentially hazardous microorganisms (including bacteria, viruses, viroids, prions, rickettsia, fungi, and parasites), recombinant DNA (rDNA) technologies or human or animal fresh/frozen tissues, blood, or body fluids.)
    - **Culturing of microorganisms of any kind at home is strictly prohibited, including the use of commercially available kits**
  - **Hazardous Chemicals, Activities, or Devices**
    - Hazardous activities are those that involve a level of risk above & beyond that encountered in the students every-day life
    - Student should conduct a risk assessment (ISEF Form 3) in collaboration with their Adult Sponsor prior to experimentation in which they consider safety precautions, proper supervision and as applicable, proper disposal of any substances to not harm the environment.
    - The use of hazardous chemicals & devices and involvement in hazardous activities require direct supervision by a trained and/or experienced adult. This person may be a

Qualified Scientist, Designated Supervisor, Adult Sponsor, and/or parent.

- Visit [www.societyforscience.org/isef/international-rules](http://www.societyforscience.org/isef/international-rules) to view the full text of the International Rules & Guidelines. This is the formal documentation required at the high school level of competition and followed by many fairs for middle school competition.
- Contact [SRC@societyforscience.org](mailto:SRC@societyforscience.org) with approval/paperwork questions. A volunteer committee of scientists and educators takes turns responding to this email account on behalf of the Society to help students, teachers, parents, and other adults with any science fair rules questions they may have.
- Use the Rules wizard <https://ruleswizard.societyforscience.org/> to determine what forms & approvals are needed before starting a project. Students should retain copies of all forms submitted to their local fair.
- The Society accepts Regeneron ISEF forms and/or local science fair forms.

### **What is an Institutional Review Board, IRB?**

An Institutional Review Board (IRB), is a committee that must evaluate the potential physical and/or psychological risk of research involving humans. This IRB is intended to be formed at the school level. An IRB must consist of a minimum of three members including the following:

- An educator
- A school administrator (preferably principal or vice principal)
- A medical or mental health professional. This person must be knowledgeable about and capable of evaluating the physical and/or psychological risk involved in a given study.

Visit <https://www.societyforscience.org/isef/international-rules/roles-and-responsibilities-of-students-and-adults/#IRB> for more information on setting up an IRB.

### **Reasons Projects May Fail To Qualify for Competition**

- Culturing bacteria at home including commercially available kits.
- Culturing BSL 2 organisms (including unknown organisms collected from the environment) that are not handled in a BSL-2 laboratory setting.
- Working with human participants without IRB pre-approval before experimentation began. All signatures on paperwork must be before experiment start dates. Using surveys or testing prototypes/apps on anyone but the researcher count as human participant studies!
- Performing hazardous activities or using hazardous chemicals without proper supervision and safety precautions. A risk assessment form should be completed for all projects involving hazardous chemicals and activities.

**IF YOU HAVE ANY QUESTIONS, PLEASE email us at [jic@societyforscience.org](mailto:jic@societyforscience.org) or send rules questions to [src@societyforscience.org](mailto:src@societyforscience.org).**

**To learn more about the middle school national competition, visit the Society website, <http://www.societyforscience.org/jic>.**