

SCIENTIFIC INTEGRITY

Scientific integrity is central to the credibility, reliability, and progress of science. It is important that researchers of any age adhere to principles of honesty, transparency, and objectivity in how they conduct, document, and present their research. This becomes even more critical as it pertains to competing with a project to ensure that all are meeting the requirements and standards equally for a fair and just judging process.

Participating in a Society for Science competition carries moral and ethical responsibilities for every young person. Society for Science expects students to act with honor and integrity when conducting scientific research and while interacting within their peer community.

- Scientific fraud and misconduct are prohibited at all levels of research and competition.
- Student scientists must not fabricate data or images, plagiarize or present someone else's work as their own.
- Student scientists must differentiate their own work from the work of others and cite all sources.
- Student scientists must respect confidentiality and intellectual property.

While pre-collegiate scientific research is an educational process that includes the potential for errors and omissions, it is essential that students' intentions remain honest and free from deceit.

ETHICS STATEMENT

(This is at the beginning of the International Rules and is provided here for emphasis and to provide some additional context and explanation.)

Student researchers, as well as adults who have a role in their projects, are expected to maintain the highest ethical standards. These standards include, but are not limited to:

- **Integrity.** Honesty, objectivity, and avoidance of conflicts of interest are expected during every phase of the project. The project should reflect independent research done by the student(s) and presented in their own words with proper citation. The presentation of fraudulent data, the evidence of plagiarism or the inappropriate use of AI are prohibited and grounds for the project to fail to qualify.
- **Legality.** Compliance with all federal, state and local laws and regulations is essential. In addition, projects conducted outside the U.S. must also adhere to the laws of the country and jurisdiction in which the project was performed. All projects must be approved by a Scientific Review Committee (SRC), and when necessary must also be approved by an Institutional Review Board (IRB), Institutional Animal Care and Use Committee (IACUC), and/or Institutional Biosafety Committee (IBC). It is recommended that students reference their local, state or national laws and regulations.
- **Respect for Confidentiality and Intellectual Property.** Confidential communications, as well as patents, copyrights, and other forms of intellectual property must be honored. Unpublished data, methods, or results may not be used without permission, and credit must be given for all contributions to the research.
- **Stewardship of the Environment.** It is the responsibility of the researcher and the adults involved to protect the environment from harm. Introduction or disposal of native, genetically-altered, and/or invasive species (e.g. insects, plants, invertebrates, vertebrates), pathogens, toxic chemicals or foreign substances into the environment is prohibited. It is recommended that students reference their local, state or national regulations and quarantine lists.
- **Acknowledgment of Risks.** All projects involve some amount of risk. Everyone is expected to recognize the hazards, assess the risks, minimize the risks, and prepare for emergencies.
- **Animal Care.** Proper care and respect must be given to vertebrate animals. The use of non-animal research methods and alternatives to animal research are strongly encouraged and must be explored before conducting a vertebrate animal project. The guiding principles for the use of animals in research includes the following "Four R's:" Replace, Reduce, Refine, Respect.
- **Human Participant Protection.** The highest priority is the health and well-being of the student researcher(s) and human participants.
- **Potentially Hazardous Biological Agents (PHBAs).** It is the responsibility of the student and adults involved in the project to conduct and document a risk assessment, and to safely handle and dispose of organisms and materials.

Scientific fraud and misconduct are not condoned at any level of research or competition. This includes plagiarism, forgery, use or presentation of other researchers' work as one's own and fabrication of data. Fraudulent projects will fail to qualify for competition in affiliated fairs and ISEF. Society for Science reserves the right to revoke recognition of a project subsequently found to have been fraudulent.

INAPPROPRIATE USE OF AI

Rule 8. for All Projects states: Artificial Intelligence (AI) may be used as a project resource but must be cited and given proper acknowledgment. A student is expected to do independent work and all materials presented must be in the researcher's own words. A student may not use generative AI to write the research plan, abstract, poster or to create citations (it is known to hallucinate and falsify references).

Artificial Intelligence applications are progressing quickly and setting policies and practices for its appropriate use in education will inevitably evolve in the next several years. The table below is adapted from an AHA Ad Hoc Committee on AI in History Education.¹ This is a preliminary model and is a suggested policy established by the ISEF SRC and Society staff to help define what is and isn't appropriate AI usage in conducting a science fair project. Affiliated fairs may adopt their own, stricter, policies.

The key to this table and to our philosophy is that AI may be used to ideate and to generate initial brainstorming and research but that it must be cited properly and reviewed thoroughly for accuracy and veracity. It is the responsibility of the student researcher to document where and how AI is used and to never attribute the results from an AI prompt as their own words.

As remains true in using the internet, students must be guided and gain AI literacy to understand how to use AI effectively while understanding its limitations.

"For all its capacities, generative AI regularly hallucinates content, references, sources, and quotations. AI models are trained to identify and reproduce patterns, not to comprehend the world in

*all its complexity and contradictions. If a pattern leads to a false, biased, or imagined output, AI has no way to self-correct."*¹

Using AI responsibly requires a strict documentation process to allow a student (and the adults involved - adult sponsors, mentors, judges and fair officials) to be able to identify and trace where AI was used and how the student directed the prompts and then verified the information being provided.

For human participant projects, it is strongly advised that students not use AI as a chat bot or to provide unscripted responses to participants. Even with guardrails in place, the AI tool may provide harmful advice, diagnostic, or medical information to participants and be in violation of the rules.

This is most critical when it comes to a literature review and bibliography as it is a serious ethical violation to use an AI tool to generate your bibliography without ever having reviewed or consulted the articles and documents it identifies. "AI introduces new possibilities for fabricated sources; students must be trained to critically assess all outputs and to recognize that any information provided by a generative AI tool could be false unless properly verified."¹ Students are presenting scientific research as their own supported by their understanding from the existing literature. If the citations and references are fabricated it brings into question the validity and veracity of the student's research project.

It is strongly advised not to use AI tools for formatting references, however if it is used, all references must be verified manually by the student researcher.

Use of generative AI to support a research project

Task	Could this be acceptable use?	Under what conditions?
Ask generative AI to identify or summarize key points in an article before you read it. Use this as a starting point for your literature review.	Yes	Acceptable without explicit citation
Ask AI to summarize a book or article in your field. Reproduce that summary in your literature review without reading the book or article	No	Never acceptable, as there has been no engagement with the book or source itself
Use an AI chatbot as a writing tool to help generate and develop ideas	Yes	Acceptable, may require explicit citation depending on circumstances. Strongly encouraged to keep a log of your prompts as part of your research notebook.
Use generative AI to initially write the research plan, abstract, paper or poster.	No	Never acceptable. This must be the independent work of the student. Guidance or refinement after the initial document has been completed can be done with explicit citation and a log.

Task	Could this be acceptable use?	Under what conditions?
Use AI to write initial code for your project	Yes	Acceptable, only with explicit citation stating which portions of the code were AI generated and with a log of the prompts.
You write an abstract. Ask AI to sharpen the language but not modify, add to, or replace the main points	Yes	Acceptable use without explicit citation only if changes suggested by AI are limited to grammar and syntax
Ask generative AI to produce a flowchart, graphic, or image for a paper or presentation	Yes	Image should be clearly marked as AI-generated and with explicit citation as to how the image was created.
Write your research paper. Ask AI to add additional points to your research paper	No	Never acceptable.
Use AI to produce your conclusions, future steps, etc.	No	Never acceptable
Use AI to help identify appropriate statistical tests or software tools. (Interpretation of data must be done by the student researcher).	Yes	Acceptable, requires a log of your prompts as part of your research notebook
Ask generative AI to produce a starter bibliography	No	Never acceptable.
Use AI to collect data and write research plan. Use AI to provide citations that back up your claims	No	Never acceptable.
Ask generative AI to fix the structure or formatting of your bibliography	Yes	Acceptable without explicit citation. You must review and verify all citations as valid.

- Adapted from: [Guiding Principles for Artificial Intelligence in History Education](#) Approved by AHA Council, July 29, 2025

[Download the table as a stand-alone document.](#)

ACADEMIC INTEGRITY

It is of utmost importance that a student researcher works closely with the adults supporting their work to both provide appropriate acknowledgement of the support that they have received but to also gain all appropriate permissions and clearances to present their research in any circumstance in which the work is not solely their own. Working in a RRI laboratory, working with data that is not publicly available or working as a sub-set of any identifiable class or club project requires proper citations and crediting of others' work and may require formal Institutional review and approval from the RRI or RRI's appropriate review body before public presentation at a science fair. Seeking and receiving permissions should be done as you begin a project to make those involved aware of your intentions to produce an independent project, and compete at a future science fair. Student researchers need to obtain permission from their mentors before submitting their research to enter science fair. It is much better to have this discussion and agreement before the project has concluded and there are intellectual property or other proprietary concerns that the mentor has about publicly disclosing the research the student has done via science competition.

DISCLOSURE OF MENTORS & PAID SUPPORT

There is no rule that prohibits a student from working closely with a mentor – whether a family relative, friend or colleague or an individual sought for their expertise in the field of study. A student may participate in a paid or unpaid research program (with compensation to the mentor or not) and receive private lessons, tutoring or mentoring support.

What is important is full disclosure of the relationship, the nature of the mentorship and full acknowledgement of the support received in conducting the research. A student researcher must attest that they have done an independent project and what they are presenting is their own work. The documentation of their project – the research plan and the abstract – must present clearly what they have done and what support they received.

New in 2027, all students must now complete the Student Support Disclosure Form 2A. This form provides an opportunity to list all of the adults who supported the project as well as indicating any programs or paid mentorship that was provided and how artificial intelligence was used in the project.

Society for Science does not endorse any particular research programs; in fact, we do not believe a

student must participate in a research program to be successful as a scientist or in our programs. We do see the value in mentorship and learning research skills, and understand why some students may seek paid or unpaid options, but urge students and parents/guardians to be diligent in their selection of these types of programs.

For individuals seeking legitimate research programs, here are a few tips:

- A legitimate program will include the names and credentials of their staff and mentors on their website.
- A legitimate program shares transparent pricing on their website.
- Programs should not promise results. In addition, reciprocal payment based on student payment in competition is not permitted.
- Programs should not ask students for secrecy; this is inappropriate behavior when working with minors, and disclosure of additional support is required.

Society for Science is most concerned about safeguarding students and their parents against fraud and unfortunately there are many resources available that promise winning over supporting authentic student research. No research program should guarantee competition success. Any individual who is aware of fraudulent or suspicious research programs should email isef@societyforscience.org.

GRIEVANCES

Submitting a scientific integrity allegation is a serious action that should be done only with credible evidence and when you are willing to come forward as an identifiable source of that information. No adverse action or retaliation will be taken against a person who reports a violation or who participates in an investigation in good faith. Please note that the Society discourages anonymous allegations and may choose not to investigate them. Anonymous allegations — particularly those lacking context, evidence or full disclosure of relevant relationships — can hinder our ability to investigate thoroughly and fairly. False accusations can be a form of harassment, particularly when made publicly and can be actionable if knowingly charged without proper evidence. Individuals who come forward with concerns through our established reporting channels will not be retaliated against or punished in any way.