

2017 Siemens Competition Math: Science: Technology

2017 Human and Animal Protection Policy & FAQ's

For the purpose of the Siemens Competition, live vertebrates include humans, mammalian embryo or fetus, bird eggs within three days (72 hours) of hatching, and all other vertebrates at hatching or birth. Zebrafish are considered vertebrates upon hatching. (Source: [NIH Animal Program Director Guidelines for Zebra fish Larvae Incubators](#)) **If any of these types of vertebrates are used in the student's work, including obtaining tissue or cells from vertebrates even if the rest of the vertebrate was used for a different purpose, BOTH the student and mentor must fill out the following forms:**

Section V of the Mentor Form and the Human and Animal Protection Policy Certification, must be completed by the advisor, mentor, or supervising scientist. In addition, the student must complete the **Human and Animal Protection Policy Questions**.

Projects that involve in any way, including testing and questioning, the use of **live human subjects or other live vertebrates or the fluids, cells, tissues, or organs from vertebrates** are accepted only under the following conditions:

- The Research Project is conducted in a registered institution or laboratory in the United States where human or animal experimentation is authorized. The mentor(s) is required to provide the following information as part of the Mentor Form:
 - Name of the research institution.
 - Title of the study.
 - In the case of human subjects, Institutional Review Board (**IRB**) approval number and approval date. A high school IRB is **not permitted**. If an exemption was granted, this must be documented with the date of the exemption. **Copies of IRB approval or granting of exemption must be included with the application.**
 - In the case of other vertebrate animals, Institutional Animal Care and Use Committee (**IACUC**) approval number and approval date. **Copies of IACUC approval must be included with the application.**
- The vertebrate animals **CANNOT be euthanized** for the sole purpose of the student's research project. Fluids, cells, tissues, and organs may be used only if the animals were euthanized for another purpose. **This must be clearly documented by both the student AND the mentor. If the statements by the student and mentor are not consistent with each other, and thus, it is not clear whether these guidelines have been followed, then the project will be disqualified.**
- Projects using established commercially purchased human or animal cell lines **ONLY** do not require IACUC or IRB approval. However, the student must still complete the Human and Animal Protection Policy Questions and clearly state the cell line name. The student should include the ATCC catalogue number for the established cell lines, or if a catalogue number is not available, the student should give the original reference for the establishment of the cell line.

Research projects conducted outside of the United States must follow the same guidelines listed above when using **live human subjects or other live vertebrates or the fluids, cells, tissues, or organs from vertebrates** in accordance with the following:

- The research must be done in an institution that is affiliated with a U.S. registered institution or laboratory. The mentor must provide an IRB or IACUC approval number, and **copies of IACUC approval must be included with the application,**

or

- The country where the research is done must have, at a minimum, guidelines equivalent to the United States. **The mentor must provide evidence of this.** In place of an IRB or IACUC approval number, the mentor must provide a copy of the official certification used in that country and specifically for that research project. If the country or affiliate institution has a federal-wide assurance number, please provide. The documentation must be in English.

HAPP FAQ's

A: Can I submit a project in the behavioral or social sciences fields?

A: No. Any study of human behavior that does not focus on a **biological/biochemical mechanism is not allowed, and if submitted, will be disqualified.** For example, the study of how a person reacts to a stimulus is not allowed unless there are EEG or MRI data being collected to understand what parts of the brain play a role. You cannot collect surveys that focus on behavior unless you are studying it in the context of a disease or cognitive disorder. For example, taking surveys or studying reactions in those with Alzheimer's Disease versus control patients with a focus on the disease is appropriate.

Q: Does the Siemens Competition allow high school IRB/IACUC approvals or exemptions?

A: No. The Siemens Competition ONLY accepts **university** IRB/IACUC approvals and exemptions.

Q: Who is responsible for submitting the IRB/IACUC approval and/or exemptions to my project?

A: It is the mentor's responsibility to upload these documents as part of the Mentor Form.

Q: What happens if it's found my project needed an IRB/IACUC approval and/or exemption and my mentor failed to provide it?

A: Projects found without proper documentation will be disqualified.

Q: What happens if my statements about my work with human and/or animal subjects in my Project Form don't match what my mentor writes on the Mentor Form?

A: If statements by the student mentor statements are not consistent with each other regarding the use of human and/or animal subjects, the project will be disqualified.

Q: If I'm just surveying or polling human subjects as part of my project, NOT involving them in any experiments, do I still need IRB approval/exemption?

A: Yes, IRB approval or exemption is still required for surveying, polling, etc.

Q: If I'm just analyzing images from human subjects, do I still need IRB approval or exemption?

A: Yes, IRB approval or exemption is still required when working with images from human subjects.

Q: If I'm using myself or one of my team members as a human subject in my experiments, do I still need IRB approval or exemption?

A: Yes.

Q: If I'm using hospital waste for my project, do I still need IRB approval or exemption?

A: Yes. If you are obtaining hospital waste, you should either submit an IRB exemption or approval.

Q: If I'm analyzing images from animals but never actually touch or handle the animal, do I still need IACUC approval or exemption?

A: Yes, IACUC approval or exemption is still required when working with images from animal subjects. The IACUC approval should reflect the project which involved the animals from which you received the images.

Q: If I'm working with commercially purchased cell lines, do I need to provide IRB/IACUC approval?

A: No.

Q: I'm working in a lab and all the cell lines and primary cells I used for my project were received, cultured, and frozen long before I arrived at the lab. Do I still need to provide copies of IRB/IACUC approval?

A: Yes, you are still required to provide IRB/IACUC approvals to work with ANY cell lines, despite how long ago they were cultured. *Note: if these are commercially purchased cell lines or are commercially available, you do not need to provide IRB/IACUC approval.

Q: If I'm using public data, do I need to include IRB or IACUC approval?

A: No. However, if the data are not truly public, IRB/IACUC approval or exemption is needed. For example, if your institution or your collaborating institution has the data set and it is not open to the public, you must provide wither your exemption or either the original or your IRB approval.

Q: Can I submit my IRB/IACUC after I've submitted my project if I realize I've forgotten to include it?

A: No. As stated in the Guidelines, no changes can be made to a project once it has been submitted.