AZSEF
ARIZONA SCIENCE & ENGINEERING FAIR

ELEMENTARY AND JUNIOR DIVISIONS

SCIENTIFIC AND INSTITUTIONAL REVIEW

The Arizona Science and Engineering Fair (AzSEF) follows all Regeneron International Science and Engineering Fair (ISEF) rules and guidelines, as an affiliated fair through the Society for Science and the Public.

All projects involving Human Subjects, Vertebrate Animals, and/or Potentially Hazardous Biological Agents MUST obtain project approval by an Institutional Review Board (IRB) or Scientific Review Committee (SRC) prior to starting the project. Failure to obtain prior approval will result in disqualification at AzSEF. If your school does not have an IRB or SRC, contact azsefsrc@azscience.org for assistance.

In the lower grades (where projects may be less complicated) teachers, parents, or family friends will often say that it is "OK for a project to proceed," especially if the test subject is a family pet or if the human subjects are family or friends. However, this is incorrect. All projects competing at any level involving humans or vertebrates must receive prior approval from an IRB or SRC.

All such projects, no matter how innocent they may appear, must be reviewed by an SRC/IRB committee, prior to starting the project. We have created a special SRC form that is easy to complete and will be quickly reviewed. For those who are unsure if they need project approval by the SRC or IRB, contact azsefsrc@azscience.org. It is important that a school IRB or SRC comply with the **Regeneron ISEF Rules & Guidelines**, and also take into consideration **any and all** district policies regarding safety of the student, subjects, and property involved. Failure to comply with such guidelines will result in disqualification at AzSEF.

NEW GUIDELINES FOR 2026

- If your project involves human participants: All human participants under the age of 18 must sign an informed consent form AND have written approval from legal guardian to participate in your research project.
- Cephalopods (e.g., octopus, squid, cuttlefish, nautilus) are explicitly classified as vertebrate animals for the purposes of science-fair research.
- Students are prohibited from fishing with barbed hooks, live bait, or from performing electrofishing.
- All studies involving the use of prions or prion-like proteins are prohibited.

I. MOLD

Bread mold projects may be allowed at home ONLY if the study is stopped as soon as the mold is SEEN (i.e. as soon as mold starts to grow, the bread is thrown away).

II. BACTERIA

Research with unknown microorganisms (e.g. swabs from surfaces at school or home, shoes, mouths, etc.) can be treated as a **Bio Safety Level (BSL)-1**[1] study under the following conditions:

a. Organism is cultured in a plastic petri dish (or other standard non-breakable container) and **sealed**. Other acceptable containment includes two heavy-duty (2-ply) sealed bags.

b. Experiment involves only procedures in which the petri dish remains sealed throughout the experiment (e.g. counting presence of organisms or colonies).

c. The sealed petri dish is disposed of via autoclaving or disinfection under the supervision of the Designated Supervisor.

If a culture container with unknown microorganisms is opened for any purpose, (except for disinfection for disposal), it must be treated as a **BSL-2**[2] study and involve BSL-2 laboratory procedures.

Please review Regeneron **ISEF rules** for additional information and specifics regarding the type of bacteria that can be grown in a BSL-1 setting, etc.

Additionally, the following types of studies are exempt from prior SRC review and require no additional forms:

a. Studies involving baker's yeast and brewer's yeast, except in recombinant DNA studies.

b. Studies involving Lactobacillus, Bacillus thuringiensis, nitrogen-fixing, oil-eating bacteria, and algae-eating bacteria introduced into their natural environment. (Not exempt if cultured in a petri dish environment.)

c. Studies of mushrooms and slime molds.

d. Studies involving E. coli k-12 which are done at school and are not rDNA studies.

[1]**BSL-1** containment is normally found in water-testing laboratories, in high schools, and in colleges teaching introductory microbiology classes. Work is done on an open bench or in a fume hood. Standard microbiological practices are used when working in the laboratory. Decontamination can be achieved by treating with chemical disinfectants or by steam autoclaving. Lab coats and gloves are required. The laboratory work is supervised by an individual with general training in microbiology or a related science.

[2]**BSL-2** containment is designed to maximize safety when working with agents of moderate risk to humans and the environment. Access to the laboratory is restricted. Biological safety cabinets (Class 2, type A, BSC) must be available. An autoclave should be readily available for decontaminating waste materials. Lab coats and gloves are required; eye protection and face shields must also be worn as needed. The laboratory work must be supervised by a scientist who understands the risk associated with working with the agents involved.

FORM SUBMISSION

The following information will need to be submitted as part of your form:

a. **Written statement of the problem or question being addressed.** Explain why you are doing this study. This should include a justification statement and an explanation of why other alternatives are not used (especially if humans or animals are used).

b. **Detailed description of the methods, procedures and safety processions to be used.** This must include chemical concentrations, drug doses, number of experiments to be run, etc.

c. **Bibliography/References.** This should include at least three sources (i.e., peer review journal articles, books) from your library and Internet search. If you plan to use animals, an additional reference regarding animal care must be included. Websites used as references should have a brief justification for why they are being considered as a trusted source. Crowd-sourced and community managed sites (e.g. Wikipedia, etc.) may not contain accurate or up-to-date information.

d. **Signatures of parent(s)/guardian(s), teacher, and/or sponsors of the student(s) conducting research.** For teams with multiple team members, a signature is required from each student's parent/guardian.

FAQ

What specific items do SRC members consider in reviewing a project?

a. Evidence of library/literary search (Internet, journals, books, etc.)

b. Evidence of proper supervision

c. Use of accepted research techniques

d. Completed forms, signatures and dates

e. Evidence of search for alternatives to animal use

f. Humane treatment of animals

g. Compliance with rules and laws governing proper care and housing of animals

h. Appropriate/safe handling and use of rDNA, potentially pathogenic organisms, tissues and hazardous substances, devices and activities

i. Adequate documentation of the substantial expansion of continuing projects

How do I know if my project has been approved?

a. You will receive an email confirmation that your project submission has been received

b. Project submissions that require additional information will receive email feedback from the AzSEF SRC

c. If no additional information is needed you will receive email feedback that your project proposal is approved, and you are ready to begin experimentation

PLEASE ALLOW APPROXIMATELY 2 WEEKS FOR FEEDBACK

What if my project doesn't involve Human Subjects, Vertebrate Animals, and/or Potentially Hazardous Biological Agents?

a. If your project involves another potentially hazardous material, or you are not sure if something you are doing is hazardous, please submit your project form to **azsef_src@azscience.org** for SRC approval before research begins

b. If your project does not involve any of the areas of concern listed above, you may proceed with your project with proper scientist/teacher/adult approvals

What do I need to bring if I become an Arizona Science and Engineering Fair Finalist?

a. **All Junior Division students** are required to bring completed, approved, and signed AzSEF forms with them at check-in, and will be required to display approved forms at their project to be eligible for judging

b. Elementary students are required to bring completed, approved, and signed forms or project plans (AzSEF, School, etc.) with them at check-in, and are encouraged to display approved forms at their project

QUESTIONS?

Please contact **azsefsrc@azscience.org**
or call 602.716.2000

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GRADES 5-8 RESEARCH PLAN

SCIENTIFIC REVIEW COMMITTEE (SRC) APPROVAL FORM

Teachers and Parents: Students in grades 5–8 must use this form if their project involves Human Subjects, Vertebrate Animals, Hazardous Materials and/or Potentially Hazardous Biological Agents. AzSEF SRC preapproval is required **before** experimentation can begin. Complete this form, save as a PDF and submit to **azsefsrc@azscience.org**.

Be sure that all school/district safety guidelines and protocols are followed before submitting to AzSEF SRC and before starting your project.

Student's Name: _____ **Grade:** 5th ☐ 6th ☐ 7th ☐ 8th ☐

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Adult working with Student(s): _____ **Email:** _____

Teacher's Name: _____ **Email:** _____

School: _____ **School Phone:** _____

School Address, City, Zip: _____

Project Title: _____

This project involves:

☐ **Human Subjects* (includes surveys, observations, ingestions, etc.)**
☐ **Potentially Hazardous Biological Agents**
☐ **Vertebrate Animals Hazardous Chemicals**
☐ **Other**

***If human subjects are involved, please check that you have attached the following:** ☐ **Informed Consent Form** ☐ **Copy of Survey** (if applicable)

QUESTIONS

Q1: What problem are you studying? Why did you decide to investigate this problem?

Q2: How will you investigate this problem?

List all the steps in detail (your methods or procedures; additional sheets may be added).

Q3: Why is this the best way to study the problem (versus NOT using humans, vertebrates, potentially hazardous biological pathogens, etc.)?

Q4: Tell us how you will stay safe and keep everyone/everything else safe.

Q5: Write down 2-3 references (articles, books, etc.) used to learn about this topic from your library and Internet search. If you plan to use animals, an additional reference regarding animal care must be included.

Q6: Where will the project be completed? Check one or more:

Research Institution ☐ School ☐ Field ☐ Home ☐

By signature, I verify I have read and understand the rules for the Arizona Science and Engineering Fair and am approving my student(s) to be involved with the proposed project, and will do my part to oversee the safety of the student(s) and all subjects (human or animal).

Parent or Guardian Signature	Printed Name	Date

Teacher or Sponsor Signature	Printed Name	Date

If team project, parents of other team members:

Parent or Guardian Signature	Printed Name	Date

Parent or Guardian Signature	Printed Name	Date

FOR AzSEF SRC/IRB OR SCHOOL IRB USE ONLY

PREAPPROVAL:

☐ **Not Approved**, please revise using following comments:

_____

☐ **Conditionally Approved**, please revise using following comments, but no re-submission is required:

_____

☐ **Approved**

IRB/SRC Chair Name	Printed Name	Email	Date

IRB/SRC Secondary Name	Printed Name	Email	Date