

Congratulations on being selected from your Regional Fair to be an exhibitor at the 2019 Georgia Science & Engineering Fair. As you prepare for the GSEF competition, please review this handbook carefully with a teacher and parent. It contains important information and rules you must follow to be eligible for GSEF.

The Georgia Science & Engineering Fair will take place March 28-30, 2019 at the Classic Center in downtown Athens. Visit the GSEF website (www.georgiacenter.uga.edu/gsef) for the most up-to-date information about the GSEF event.

To qualify for GSEF, all projects must adhere to the Intel ISEF Rules & Guidelines for Pre-College Science Research (<https://student.societyforscience.org/international-rules-pre-college-science-research>). These guidelines outline the precautions that must be taken and the appropriate committee approvals that must be sought before beginning any scientific research and participating in an ISEF-affiliated fair.

Additional resources:

GSEF Website

www.georgiacenter.uga.edu/gsef

Intel ISEF Rules & Guidelines

<https://student.societyforscience.org/international-rules-pre-college-science-research>

Required Forms Wizard

<https://ruleswizard.societyforscience.org/>

GEORGIA SCIENCE & ENGINEERING FAIR

EXHIBITOR HANDBOOK

MARCH 28-30, 2019 ATHENS, GA



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GSEF projects must be entered in one of the 22 categories below. **Category selection is final; no changes will be made after registration.** Many projects could easily fit into more than one GSEF category; review the categories below and the more in-depth descriptions listed in the Project Category document at www.georgiacenter.uga.edu/gsef to select ONE that most accurately describes your project.

Life Sciences Categories
<p>ANIMAL SCIENCES</p> <ul style="list-style-type: none"> Animal Behavior Cellular Studies Development Ecology Genetics Nutrition & Growth Physiology Systematics & Evolution <p>BIOCHEMISTRY</p> <ul style="list-style-type: none"> Analytical Biochemistry General Biochemistry Medical Biochemistry Structural Biochemistry <p>CELLULAR & MOLECULAR BIOLOGY</p> <ul style="list-style-type: none"> Cell Physiology Cellular Immunology Genetics Molecular Biology Neurobiology <p>MICROBIOLOGY</p> <ul style="list-style-type: none"> Antimicrobials & Antibiotics Applied Microbiology Bacteriology Environmental Microbiology Microbial Genetics Virology <p>PLANT SCIENCES</p> <ul style="list-style-type: none"> Agriculture & Agronomy Ecology Genetics/Breeding Growth & Development Pathology Plant Physiology Systematics & Evolution

Medicine & Health Categories
<p>BEHAVIORAL & SOCIAL SCIENCES</p> <ul style="list-style-type: none"> Clinical & Developmental Psychology Cognitive Psychology Neuroscience Physiological Psychology Sociology & Social Psychology <p>BIOMEDICAL & HEALTH SCIENCES</p> <ul style="list-style-type: none"> Cell, Organ, & Systems Physiology Genetics & Molecular Biology of Disease Immunology Nutrition & Natural Products Pathophysiology <p>BIOMEDICAL ENGINEERING</p> <ul style="list-style-type: none"> Biomaterials & Regenerative Medicine Biomechanics Biomedical Devices Biomedical Imaging Cell & Tissue Engineering Synthetic Biology <p>COMPUTATIONAL BIOLOGY & BIOINFORMATICS</p> <ul style="list-style-type: none"> Computational Biomodeling Computational Epidemiology Computational Evolutionary Biology Computational Neuroscience Computational Pharmacology Genomics <p>TRANSLATIONAL MEDICAL SCIENCE</p> <ul style="list-style-type: none"> Disease Detection & Diagnosis Disease Prevention Disease Treatment & Therapies Drug Identification & Testing Pre-Clinical Studies

Math, Computing & Engineering Categories
<p>EMBEDDED SYSTEMS</p> <ul style="list-style-type: none"> Circuits Internet of Things Microcontrollers Networking & Data Communications Optics Sensors Signal Processing <p>ENGINEERING MECHANICS</p> <ul style="list-style-type: none"> Aerospace & Aeronautical Engineering Civil Engineering Computational Mechanics Control Theory Ground Vehicle Systems Industrial Engineering-Processing Mechanical Engineering Naval Systems <p>MATHEMATICS</p> <ul style="list-style-type: none"> Analysis Combinatorics, Graph Theory, Game Theory Geometry & Topology Number Theory Probability & Statistics <p>ROBOTICS & INTELLIGENT MACHINES</p> <ul style="list-style-type: none"> Biomechanics Cognitive Systems Control Theory Machine Learning Robot Kinematics <p>SYSTEMS SOFTWARE</p> <ul style="list-style-type: none"> Algorithms Cybersecurity Databases Human/Machine Interface Languages & Operating Systems Mobile Apps Online Learning

When selecting a category, consider the following: *Who will be the most qualified to judge my project? What area of expertise is the most important for the judge to have? (for example, a medical background or an engineering background?) What is the emphasis of my project? What characteristic of my project is the most innovative, unique or important? (For example, is it the application in medicine or the engineering of the machine? Is it inserting the proper gene or the method of computer mapping to demonstrate the results?)*

Earth, Energy & Environment Categories	
<p>EARTH & ENVIRONMENTAL SCIENCE</p> <ul style="list-style-type: none"> Atmospheric Science Climate Science Environmental Effects on Ecosystems Geosciences Water Science <p>ENVIRONMENTAL ENGINEERING</p> <ul style="list-style-type: none"> Bioremediation Land Reclamation Pollution Control Recycling & Waste Management Water Resources Management 	<p>ENERGY: CHEMICAL</p> <ul style="list-style-type: none"> Alternative Fuels Computational Energy Science Fossil Fuel Energy Fuel Cells & Battery Development Microbial Fuel Cells Solar Materials <p>ENERGY: PHYSICAL</p> <ul style="list-style-type: none"> Hydro Power Nuclear Power Solar Sustainable Design Thermal Power Wind

Physical Sciences Categories
<p>CHEMISTRY</p> <ul style="list-style-type: none"> Analytical Chemistry Computational Chemistry Environmental Chemistry Inorganic Chemistry Materials Chemistry Organic Chemistry Physical Chemistry <p>MATERIALS SCIENCE</p> <ul style="list-style-type: none"> Biomaterials Ceramic & Glasses Composite Materials Computation & Theory Electronic, Optical & Magnetic Materials Nanomaterials Polymers <p>PHYSICS & ASTRONOMY</p> <ul style="list-style-type: none"> Atomic, Molecular, & Optical Physics Astronomy & Cosmology Biological Physics Condensed Matter & Materials Mechanics Nuclear & Particle Physics Theoretical, Computational, Quantum Phys



REQUIRED FORMS & APPROVALS CHECKLIST

For ALL Grade 6-12 Scientific Research for Eligibility at Regional and State Fairs

Research forms must be reviewed and signed by local and Regional SRCs/IRBs as appropriate.

The following required forms and guidelines help students ensure that the research they are planning is safe, ethical, and approved by a parent, a teacher, and field experts. Students and mentors are strongly encouraged to use the [Required Forms Wizard](https://ruleswizard.societyforscience.org) tool to help determine what forms are required for the project (<https://ruleswizard.societyforscience.org>).

To be eligible for GSEF, all projects must obtain proper approvals and follow the [ISEF Rules & Guidelines](#).

<https://student.societyforscience.org/international-rules-pre-college-science-research>

It is the responsibility of the student and the Adult Sponsor to evaluate the study to determine if the research will require forms and/or approval prior to experimentation, especially projects using human participants, vertebrate animals, or potentially hazardous biological agents. Students are encouraged to consult with the local SRC/IRB to ensure they have followed all rules and completed all required forms.

Research forms must be reviewed and signed by local and Regional SRCs/IRBs as appropriate. Failure to adhere to the ISEF Rules and Guidelines may result in disqualification at any stage of the GSEF competition, including revocation of awards and honors.

Forms marked with a ♦ symbol must be signed and dated **BEFORE** experimentation begins.

Forms required for EVERY project:	
<input type="checkbox"/> GSEF Participation Agreement	(Required only for state fair [GSEF].) Required for <u>every student</u> .
<input type="checkbox"/> Official GSEF Abstract Form	(Required for state fair; regional or local fairs may have different Abstract requirements.) Official GSEF version is preferred, but 2019 ISEF Abstract Form (22 category) will also be accepted.
<input type="checkbox"/> 1 Checklist for Adult Sponsor	♦ The Adult Sponsor ensures that experimentation is within local, state, and Federal laws and Intel ISEF rules and that forms are completed by other adults (e.g. Qualified Scientist) as required.
<input type="checkbox"/> 1A Student Checklist Research Plan/Project Summary	See link for Research Plan/Project Summary instructions. The Research Plan is your first step. If changes are made during your research, they can be added to the original Research Plan as an addendum, recognizing that some changes may require returning to the SRC/IRB for appropriate review and approvals. If no additional approvals are required, the addendum serves as a Project Summary to explain the research that was conducted. If no changes are made from the original Research Plan, no Project Summary is required.
<input type="checkbox"/> 1B Approval Form	♦ One form per student. Signed and dated before experimentation begins and right after SRC has reviewed Forms 1, 1A, and any special forms. If project requires pre-approval, SRC signs either 2a or 2b before experimentation.
Additional forms required for specific types of research: (Use Required Forms Wizard)	
<input type="checkbox"/> 1C Regulated Research Institutional/Industrial Setting	Required if you conducted research at a <i>college/university, medical facility, industrial setting, or other lab or research setting</i> other than home, school or field.
<input type="checkbox"/> 2 Qualified Scientist	♦ Required if your research involves <i>human participants, vertebrate animals, potentially hazardous biological agents, or DEA-controlled substances</i> .
<input type="checkbox"/> 3 Risk Assessment	♦ Required if your research involves <i>hazardous chemicals, activities or devices, or DEA-controlled substances</i> . Also required for some <i>human participants</i> projects. Recommended for all student-designed inventions or prototypes.
<input type="checkbox"/> 4 Human Participants	♦ Required if your research involves <i>human participants</i> . Informed Consent Forms must be signed by research participants (see sample). IRB APPROVAL REQUIRED <u>BEFORE</u> EXPERIMENTATION.
<input type="checkbox"/> 5A/5B Vertebrate Animals	♦ Required if your research involves <i>vertebrate animals</i> . 5A is for research conducted at home, school, or field; 5B is for research conducted at a regulated research institution. SRC/IACUC APPROVAL REQUIRED <u>BEFORE</u> EXPERIMENTATION.
<input type="checkbox"/> 6A Potentially Hazardous Biological Agents	♦ Required if your research involves <i>microorganisms, rDNA, fresh/frozen tissue (including primary cell lines, human and other primate established cell lines and tissue cultures), blood, blood products, or body fluids</i> . SRC/IACUC/IBC APPROVAL REQUIRED <u>BEFORE</u> EXPERIMENTATION.
<input type="checkbox"/> 6B Human/Animal Tissue	♦ Required in addition to 6A if your research involves <i>fresh/frozen tissue (including primary cell lines, human and other primate established cell lines and tissue cultures), blood, blood products, or body fluids</i> .
<input type="checkbox"/> 7 Continuation/Research Progression	Required if your project <i>continues or expands upon a previous year's work</i> . Also must include Abstract and Research Plan for previous year.



Teachers and students in Georgia should consider the following judging criteria when planning science projects and school-level fairs. These guidelines are based on the Intel ISEF criteria. ISEF and GSEF offer a second set of criteria that may be applied to projects in engineering, mathematics and computer science, where appropriate. The judging process places special emphasis on the student's ability to discuss the project effectively during the oral interview, as well as the project's demonstration of originality, creativity, imagination, discovery, and inventiveness.

Displays should serve two functions: 1) to present the research clearly when the student is not present, and 2) to guide the personal interview toward an in-depth discussion. Judges may examine the student notebook (three-ring binder), which should include at least ISEF Forms 1, 1A and 1B, the Research Plan, any additional forms/permissions required by the specific research being conducted, and optional items such as a research paper.

Note: The points system indicated below applies to Senior Division judging only, although overall criteria may serve as a guide for Junior Division projects as well.

Most Projects	Engineering Projects (may be applied to some projects in mathematics and computer science)
I. Research Question (10 pts) <ul style="list-style-type: none"> clear and focused purpose identifies contribution to field of study testable using scientific methods 	I. Research Problem (10 pts) <ul style="list-style-type: none"> description of a practical need or problem to be solved definition of criteria for proposed solution explanation of constraints
II. Design and Methodology (15 pts) <ul style="list-style-type: none"> well-designed plan and data collection methods variables and controls defined, appropriate and complete 	II. Design & Methodology (15 pts) <ul style="list-style-type: none"> exploration of alternatives to answer need or problem identification of a solution development of a prototype/model
III. Execution: Data Collection, Analysis & Interpretation (20 pts) <ul style="list-style-type: none"> systematic data collection and analysis reproducibility of results appropriate application of mathematical and statistical methods sufficient data collected to support interpretation and conclusions 	III. Execution: Construction & Testing (20 pts) <ul style="list-style-type: none"> prototype demonstrates intended design prototype has been tested in multiple conditions/trials prototype demonstrates engineering skill and completeness
IV. Creativity (20 pts) <ul style="list-style-type: none"> project demonstrates significant creativity/originality/inventiveness in one or more of the above criteria 	
V. Presentation (35 pts) <p><u>Poster</u> (10 pts)</p> <ul style="list-style-type: none"> logical organization of material clarity of graphics and legends supporting documentation well selected and displayed <p><u>Interview</u> (25 pts)</p> <ul style="list-style-type: none"> clear, concise, thoughtful responses to questions understanding of basic science relevant to project understanding of interpretation and limitations of results and conclusions degree of independence in conducting project recognition of potential impact in science, society and/or economics quality of ideas for further research for team projects, contributions to and understanding of project by all members 	

The following is a summary of common display and safety issues. For any situation not addressed here, exhibitors must follow the Official ISEF Rules and Regulations: <https://student.societyforscience.org/international-rules-pre-college-science-research>

DISPLAY REGULATIONS



Maximum Size of Project

<i>Depth</i>	(front to back)	30 inches
<i>Width</i>	(side to side)	48 inches
<i>Height</i>	(tabletop to top)	72 inches

GSEF projects **must** be exhibited on the tabletop. No floor exhibits. No part of a GSEF exhibit may be placed on the floor or under the table. All project materials, supports, equipment, and demonstrations must be contained on the tabletop. Displays do not have to be trifold boards; pull-ups and pop-ups are allowed if within allowed dimensions.

Official Abstract

The complete, unaltered 8.5x11 Official GSEF Abstract Form (**preferred**) or the complete, unaltered 8.5x11 Official 2019 ISEF Abstract Form are the only abstracts that may be exhibited. It must be displayed vertically, preferably by taping it to hang from the front edge of the table. It is acceptable, but not preferred, to incorporate the form on the display board or to stand it in a document frame (no glass). Abstract Forms do not need to be stamped or embossed. **You may not have a section titled "Abstract" on your board unless the section contains only an Official Abstract Form** (not just the abstract text).

Other Forms to Tape to Table

If your research required the following forms, they must be taped to the front of your table/displayed vertically:

- Form (1C) Regulated Research Institutional/Industrial Setting
- Form (7) Continuation Project

Binder & Required Forms

Arrange **photocopies** (*not* originals - keep those at home in a safe place!) of all other required forms in numeric order in a **three-ring binder** placed on the table. Required forms include, but are not limited to:

- Form (1): Checklist for Adult Sponsor
- Form (1A): Student Checklist
- Research Plan/Project Summary
- Form (1B): Approval Form
- Forms (1C) through (7) as required for your project

Optional items such as research paper may also be included.

Log Book & Other Items on Tabletop

Although ISEF regulations no longer require a bound logbook, judges like to see this item and it is highly recommended. Your logbook should be on your table.

Other items on tabletop may include a photo album of the work, previous logbooks for Continuation projects, and items that are necessary to demonstrate the science if the board and binder are not sufficient, provided these items do not violate any other Display & Safety Regulations.

Continuations

A project that is a continuation of a previous year's work must be about the student's new work for this year, with minimal reference to the previous research. It is preferred for the project title or subtitle to mention which year the project is; e.g., "Year 2." Longitudinal studies may present only conclusive data from prior years. Continuation projects must have Form (7) taped to front of table.

Human Subject Consent Forms

When human participants are involved in a project, their signed consents should be obtained but **not** displayed or kept in display binder, as they are confidential. Place a note in your binder stating where these forms are being kept.

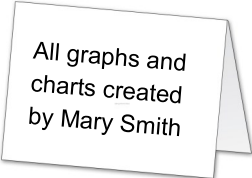
Allowable Handouts

The only handout allowed is an UNALTERED photocopy of the complete 8.5x11 Official Abstract Form. You are permitted (but not required) to bring up to 20 unaltered photocopies of your Official Abstract form to GSEF to distribute to judges. GSEF will *not* make these copies for you. You may not distribute any other items or forms of information.

SAFETY REGULATIONS

Displayed Graphs, Images, & Photos

Credits: You must cite the source of every photo, graph, table, chart or other images, including those made by the student and those taken from the internet, journals and books. The citation must state who created the graph/chart/table, who took the photograph, or where a photo or image came from. For example: "All photographs by Jon Kim," or "Image from www.wherever.com." Credit lines may be placed next to each item or elsewhere on the front of the board. If all graphs/images were created by the exhibitor or are from the same source, one clearly visible credit line or on a "tent" on the table is sufficient.



Content: Photos or images on board must not be deemed insensitive, offensive or inappropriate (e.g., no surgery, necrosis or dissection) by any member of the SRC, the Display & Safety Committee or GSEF staff. The decision made by any one of these groups is final.

Photograph Release

Photos/videos of people other than the finalist are not allowed unless a signed photograph release is available at the project. If the person is under 18, parent or guardian signature is required. Sample text: "I consent to the use of this visual image involving my participation/my child's participation in this research." Keep these releases in your binder. There is no specific official form for this purpose.

Mentor's Work / Acknowledgements

The mentor's name and institution must not appear anywhere on the display but may be mentioned in the optional research paper in the binder. A mentor's research is **not** a part of the student research project and must **not** be included in the display. Very minimal reference to work done by a mentor or others may be included *only* as background to clarify what the student's own research did and did not cover and must clearly indicate that it was not part of the student's work.

Replacement of Disqualified Items

If any GSEF representative requests that an object or item be removed from a display and that item is returned to the exhibit without specific permission from the GSEF Director, the project may be disqualified.

Audio-Visual or Multi-Media

At GSEF, electronic displays, e.g., PowerPoints or videos, for non-computer science projects are discouraged unless they are *necessary* to demonstrate the science. Judges are not required to view them. Displays must be under 30 seconds, with 15 seconds preferred. GSEF will discourage but ultimately is not responsible for equipment theft.

Electricity at Project

If you want electricity at your table, you must submit the Electricity Request Form and fee with your registration. Electricity will be approved only for projects that require it to demonstrate the research (e.g., some computer science and engineering projects). If electricity is approved, an outlet will be provided within nine feet of the exhibit. The exhibitor must bring an approved extension cord.

Lighting

Lighting will not be approved for decorative purposes but may be approved if necessary to demonstrate the science. The electricity fee (\$100) must be submitted with registration. Bulb and fixture must not pose risk of injury if touched. Cool LED light is preferred. Incandescent, halogen and other warm light sources must be caged, encased, or otherwise protected so that 1) it is not possible to burn any person or item with any part of the apparatus, bulb, fixture, or casing, and 2) no glass can escape if the bulb is accidentally broken.

All other Official ISEF Rules and Regulations regarding electricity must be followed. If you are using electricity, please be sure to read the complete rules thoroughly and follow them precisely:

<https://student.societyforscience.org/intel-isef-display-and-safety-regulations>

Lasers

Lasers may be used only when they follow the Official ISEF Rules and Regulations. Display & Safety Inspectors may revoke the privilege and require lasers to be removed if any careless or indiscriminate use is observed. Offenses may result in revoking the right to participate.

Stability

All parts of the exhibit must be stable. Particular care must be taken with tall or heavy displays to ensure that they cannot tip over onto participants, judges, or guests.

Other Safety Policies

GSEF staff and/or the Display & Safety Committee reserve the right to remove any item or entire project at their discretion for safety reasons or to protect the integrity of the GSEF and its rules and regulations.

Laptops/Tablets

If you are bringing a laptop or other valuable electronic device, consider investing in a security device such as a locking cable system to secure your item at the exhibit. GSEF will take measures to discourage theft/damage to exhibits or parts of exhibits, including electronics, but is ultimately not responsible should theft or damage occur.

THE FOLLOWING ITEMS ARE NOT ALLOWED AT PROJECTS

Not Allowed Per Safety Regulations:

- **Living or dead organisms**, including fungi, animals, plants and microorganisms
- **Taxidermy specimens, parts, pelts**
- **Preserved vertebrate or invertebrate animals** or animal parts, including cells
- Human or animal **food** of any kind
- Human or animal **parts or body fluids** (e.g., bones, urine, blood)
- **Plant materials** including potpourri, grain, birdseed, spices, leaves, flowers, logs, branches, etc. Plastic or other inorganic replicas or photographs should be used instead. (Exception: manufactured construction materials used in building the project or display)
- **Soil, sand, rock, cement, or waste** samples, even if permanently encased in acrylic
- **All chemicals**, including water.
- **All liquids, gels, powders, and creams** (e.g., shampoo, sunscreen, salt, soap, agar, etc.)
- **Dry ice** or other sublimating solids
- **Hazardous substances or devices** (e.g. poisons, drugs, firearms, weapons, ammunition, reloading devices, grease/oil and sublimating solids such as dry ice, etc.)
- **Sharp items** (e.g. syringes, needles, pipettes, knives)
- **Flames or highly flammable materials**
- **Glass** or glass objects unless deemed by the Display & Safety Committee to be an integral and necessary part of the project (e.g., glass that is an integral part of a computer screen)
- **Any apparatus with belts, pulleys, chains, or moving parts** with tension or pinch points that are not fully immobilized or shielded
- **Batteries** with open-top cells or wet cells
- **Drones or any flight-capable apparatus** unless propulsion power source is removed
- **3D printers** unless power source is removed
- Any apparatus or item deemed unsafe by any member of the SRC, the Display & Safety Committee, judges, or the GSEF staff (e.g., vacuum tubes or dangerous ray-generating devices, pressurized or empty tanks that previously contained combustibles, etc.)

Not Allowed Per Display Regulations:

- Any items that are **acknowledgments, self-promotions, or external endorsements** (such as naming the research institution or mentor, or patent pending statements)
- **Awards**, medals, flags, logos (including school and university logos)
- **Give-away items** such as flyers, pens, postcards, CDs, business cards, etc. (Exception: Exhibitors may give out up to 20 unaltered copies of the Official Abstract Form)
- **Postal addresses, URLs** (other than those used solely to cite the sources of photos), **email addresses, social media handles, QR codes, phone/fax numbers** of any exhibitor or his/her school or research institution
- **Active Internet** or email connections
- For Continuation projects, no prior years' written material or visual depictions on the display board. However, previous years' logbooks and binders may be on the table if desired and if clearly marked, e.g. "Year 1."



No changes, modifications, or additions to projects may be made after approval by the Display & Safety Committee.

Exhibitors who do not adhere to this regulation will fail to qualify for competition.



General Attendance Policy

Please do not register for this event unless you can commit fully. All exhibitors are expected to attend the entire event, including morning and afternoon judging sessions on Friday and the Saturday Attended Public Viewing and Awards Ceremony. Thursday evening early setup is optional.

No exceptions will be granted for conflicts with other events or activities, including academic or athletic competitions, social events such as weddings and proms, family or group travel commitments, or cultural events such as art shows, concerts, or performances. Students and their families must decide together which events will take priority. We realize that these other events are important to you and that some of you will have to make hard decisions about which event you want to attend. Notify us immediately if you have been selected for GSEF but you decide not to participate.

Exceptions may be granted only for serious medical situations, such as scheduled chemotherapy or dialysis, and for certain religious prohibitions, such as observant Jews who cannot travel on the Sabbath. Notify us early.

Judging

Judging outside of the officially scheduled periods is prohibited. Morning and afternoon judging involve different judge teams and are for different purposes and awards.

Team Attendance

If the exhibit is a team project, all members must register and pay the registration fee. Teams may be represented at GSEF by one or more members; however, individual judges have the freedom not to consider a team if they haven't had the opportunity to meet and interview all members. If the project advances to ISEF, all members must attend the international competition.

Awards Ceremony Attendance

Any student who misses the Awards Ceremony will be ineligible for the major and special awards, including scholarships, internships, ISEF Trips, Grand Awards, the Pinnacle Award, and large monetary awards. This is out of respect for the award sponsors, who often wish to present the awards in person and to have publicity photos taken with the winners they interviewed on Friday. The absent student may still be eligible for "honors" and some unsponsored awards, provided the substitute policy (below) is followed.

Substitute Policy

No substitutes are permitted during judging.

A student who cannot attend the entire Awards Ceremony may designate another student exhibitor to come to the stage at the time the absent student's name is called and to accept unsponsored awards on the absent student's behalf. The substitute's photo will be taken with the award, and if the photo is published, it will bear the name of the winner. Parents and teachers may not collect awards on behalf of students. GSEF does not record the names of substitutes, nor is GSEF responsible for the substitute's handling of the award after acceptance. If the absent student wins a monetary award, the substitute must get the tax paperwork to the winner to sign and return to GSEF within ten days. Awards unclaimed at the ceremony will be forfeited.

Exhibit Removal

Exhibits may not be removed until after the Awards Ceremony. Some awards are distributed by placing them on exhibits while the Awards Ceremony is being conducted. If an exhibit is removed early, honors ribbons and certain other awards will be forfeited.



SCHEDULE OF EVENTS*

LOCATION: THE CLASSIC CENTER AT 300 N. THOMAS STREET, ATHENS, GA 30601

thursday March 28

5:30 pm - **EARLY EXHIBIT SET-UP**
8:30 pm
Classic Center Grand Hall
Family and friends welcome. Exhibits may be set up Thursday evening and/or Friday morning but must be completely set up by 9:30 am Friday at the latest.

friday March 29

7:30 am - **EXHIBIT SETUP**
9:30 am
Classic Center Grand Hall
Exhibitors, parents, chaperones, and guests must exit Exhibit Hall by 9:30 am.

9:30 am - **EXHIBITOR FREE TIME**
11:45 am
Exhibitors free for an early lunch, hotel check-in, shopping, etc. Return for judging at 11:45 am.

9:30 am - **PARENTS/CHAPERONES FREE TO EXPLORE ATHENS AND UGA**
5:30 pm
Parents/chaperones are asked to remain clear of the Classic Center building after 9:30 am today. A GSEF parent hospitality room with free coffee and Wi-Fi is available across the street at the Hilton Garden Inn.

10:00 am - **JUDGES' DISPLAY & SAFETY COMPLIANCE INSPECTION**
11:45 am
Only **official judges and GSEF staff** are permitted in the Exhibit Hall. Your complete exhibit must be displayed. Electrical items that can be operated in an unattended mode should be turned on.

11:45 am - **EXHIBITOR INTERVIEWS**
3:00 pm
ALL Exhibitors must be at their projects. Exhibitors & Judges **ONLY** in the Exhibit Hall.

3:00 pm - **CONCESSION BREAK**
3:30 pm
Classic Center Atrium; concessions available
Students, remember to bring money for snacks! Please, no visitors (parents/chaperones/teachers) in the building during the break.

3:30 pm - **EXHIBITOR INTERVIEWS**
5:30 pm
ALL Exhibitors must be at their projects. Exhibitors & Judges **ONLY** in the Exhibit Hall.

5:30 pm **EXHIBITORS RELEASED**
Exhibitors and parents/chaperones are free to enjoy dinner and explore Athens. Exhibitors/parents/chaperones are not permitted in any part of the building at any time this evening.

saturday March 30

9:00 am - **EXHIBIT HALL OPEN TO PUBLIC**
3:00 pm
Classic Center Grand Hall
Families, friends, and public welcome.

1:00 pm - **ALL EXHIBITORS AT PROJECTS (MANDATORY)**
3:00 pm
Classic Center Grand Hall
All exhibitors must be at their projects to answer questions. Families, friends, and public welcome.

3:30 pm **EXHIBITORS LINE UP IN EXHIBIT HALL**
Classic Center Grand Hall
All exhibitors must be present. GSEF staff will be present to give instructions.

4:00 pm - **AWARDS CEREMONY**
6:00 pm
Classic Center Theatre
Exhibitors must be present or forfeit awards. Exhibits may not be removed until conclusion of ceremony.

Guests (parents, teachers, chaperones) must have a **ticket** to enter the Awards Ceremony. Limit one guest ticket per student; additional tickets may be available on site on first-come, first-served basis. Further information about tickets will be included in GSEF registration confirmation materials.

Livestream of Awards Ceremony will be available for viewing on devices or in a viewing room on site.

6:00 pm - **PROJECT TEARDOWN**
8:00 pm
Classic Center Grand Hall
After the Awards Ceremony, parents/chaperones should plan to meet students at their exhibits. Exhibits must be removed between 6:00—8:00 pm. Exhibits left after 8:00 pm will be removed by the clean-up crew.

6:30 pm - **INTEL ISEF PARTICIPANT MEETING**
7:00 pm
Classic Center Theatre Stage, Backstage
For **all** Intel ISEF 2019 delegates (those selected from their Regional Fair and those selected at GSEF): Report backstage immediately after the Awards Ceremony to take a group photo and receive important information about ISEF 2019.

Please review the **GSEF Attendance Policy** on page 9 of this document or posted at www.georgiacenter.uga.edu/gsef.

*Schedule is tentative at time of publication. For most up-to-date information, visit www.georgiacenter.uga.edu/gsef.

Most other questions are answered on the [GSEF website](http://www.georgiacenter.uga.edu/gsef) (www.georgiacenter.uga.edu/gsef) or by reading the [ISEF Rules](https://student.societyforscience.org/international-rules-pre-college-science-research) (<https://student.societyforscience.org/international-rules-pre-college-science-research>).

If I am selected for GSEF, do I have to attend the entire event?

- ▶ Students must attend the entire judging period on Friday and the afternoon public viewing and Awards Ceremony on Saturday. Thursday set-up is optional.
- ▶ No exceptions are made for schedule conflicts. This includes scholarly or athletic competitions, social events such as weddings and proms, travel plans, performances, concerts, etc. We realize that these other events are important to you and that some of you will have to make hard decisions about which event you want to attend. Notify us promptly if you have been selected for GSEF but decide not to participate.
- ▶ Exceptions may be granted for serious medical situations, such as chemotherapy or dialysis, and for certain religious prohibitions, such as observant Jews who cannot travel on the Sabbath. Notify us early.
- ▶ Teams may be represented by one or more members; however, individual judges have the freedom not to consider a team if they have not had the opportunity to meet and interview all members.

What can get me “kicked out” of GSEF?

- ▶ Presenting someone else’s work as your own.
- ▶ Refusing to follow instructions of GSEF staff or judges.
- ▶ Violation of GSEF Display & Safety Regulations

Why haven’t I received my GSEF registration confirmation email?

- ▶ We may not have processed your registration yet. It can take several weeks for your registration to make it from your Regional Fair into the GSEF system.
- ▶ It may have gone to your ‘Junk Mail’ folder.
- ▶ The **email address** on your GSEF Registration Form may have been **missing, illegible, or incorrect**. In this case, it is your responsibility to contact us (gsef@georgiacenter.uga.edu).

How do I know what forms I need?

- ▶ Everyone needs Forms 1, 1A, 1B, and a Research Plan. Most projects should have a Risk Assessment Form 3.
- ▶ Depending on the type of research you plan to do, you may need additional forms. Use the [Forms Wizard](https://ruleswizard.societyforscience.org) (<https://ruleswizard.societyforscience.org>) to determine this. If your project will involve interaction with other people, animals, bacteria, or tissues, you will very likely need more forms.

What do you mean I “used an old form” or “followed the old rules”?

- ▶ You must use the current year’s (2019) forms and know this year’s schedule and rules. They can be found on the [GSEF website](http://www.georgiacenter.uga.edu/gsef) (www.georgiacenter.uga.edu/gsef). We update frequently, especially as the fair date approaches. Always get your forms and instructions from here or from the [ISEF website](https://student.societyforscience.org/intel-isef-forms) (<https://student.societyforscience.org/intel-isef-forms>) – don’t rely on previous years’ information!

Are GSEF rules the same as ISEF rules?

- ▶ Mostly. Here are a few of the exceptions. Refer to the website for more:
- ▶ GSEF prefers to receive photocopies of your forms with your Registration Packet. You must also have **your own set of photocopies** in a binder at your exhibit.
- ▶ GSEF requires every exhibitor to submit a signed GSEF Participation Agreement, provided by your Regional Fair Director.
- ▶ GSEF exhibits must fit on top of a table 48”w x 30”d and have a maximum height of 72 inches. ISEF allows exhibits that stand on the floor or use additional space under the table, but NO floor space may be used at GSEF.

Is every Best in Category award given out every year?

- ▶ No. Some categories may not have a Best in Category award in any given year. Awards are given only if the judges feel that there are exhibits of sufficient quality in the category.

In which category should I exhibit to have the best chance of being selected to attend the Intel ISEF?

- ▶ ISEF delegates are selected without regard to category.

How many Georgia projects advance to the Intel ISEF?

- ▶ In 2018, four projects and one observer advanced from GSEF, and 26 students advanced from ISEF-affiliated Regional Fairs.

What kinds of projects usually win top awards?

- ▶ Projects that discover something that we did not already know – especially if that information is useful in some way.
- ▶ Projects based on solid and sufficient data that is processed accurately and presented clearly.
- ▶ Many top winners in Senior Division have the guidance of a research professional in their field.

What are the most common paperwork errors?

- ▶ Failure to do the forms that must be done *before* starting on your research project.
- ▶ Missing signatures or missing forms.

What are the most common research errors?

- ▶ Insufficient data due to small sample size or too few replications/repetitions.
- ▶ Having a conclusion that does not directly derive from your data. Or collecting the wrong type of data - data that can't support or disprove your stated hypothesis/purpose.

What are the most common GSEF display errors?

- ▶ Forgetting to display credits for every photo, chart, and graph, even your own.
- ▶ Including an *unofficial* abstract on the board. Only the unaltered 8.5x11 official abstract form may be displayed.
- ▶ Showing people in photos or videos without having their signed release at the exhibit.
- ▶ Glass. Followed by food (including spices, candy, salt), seeds, powders, gels, liquids, wax, chemicals, teeth, blood stains, heat sources, pinch points, sharps, sand, plant or animal matter (dead or alive), exposed electrical connections.
- ▶ Exceeding allowed dimensions (school, regional, GSEF and ISEF fairs may all have different requirements).

What are the expectations for different ages?

- ▶ Grades 6-10 are learning experimentation and correlation. They may: 1) take some action on one group and compare the results to a control group, or

2) observe how something influences or correlates with something else. Examples: Does [my idea] decrease the pollution in this stream? Is this protein always present when X happens?

- ▶ Grades 11-12 should be able to analyze their data to show its significance. They should consider how their research can potentially benefit society or the environment. Some projects may be moving toward inventing something new and useful, making a new discovery, or pushing the boundaries of current knowledge.

My friend was interviewed three times and I was interviewed eight times. Why?

- ▶ Some of the people talking with you may not have been judges. Members of the press and GSEF staff members often stop to talk with exhibitors, even though they do not “score” the project.
- ▶ Judges who have completed all their assigned interviews like to chat with students whose projects interest them but whom they are not assigned to judge. This is one of the perks of being a judge.
- ▶ Your topic may fit with a particular Special Award that happens to have sent lots of judges.
- ▶ You might just have a totally fascinating project.