

28th COASTAL GEORGIA REGIONAL

SCIENCE & ENGINEERING FAIR

Hosted by:



Generously sponsored by:



February 2 - 4, 2012

In affiliation with the
Georgia Science & Engineering Fair Hosted by



With Special Afternoon Activities Provided by the National Science Center



TABLE OF CONTENTS

Topic	Page
General Information	
What is the Science and Engineering Fair?	3
Who is eligible to enter?	4
How to enter	4
Classification of Projects	5
Important Dates and Deadlines	6
CGRSEF 2011 Schedule of Events	6
Contact Information	8
Project Display and Safety	9
Judging and Awards	
Elementary Judging Criteria	12
Junior/Senior Judging Criteria	15
Junior/Senior Judging Score Sheet	17
Practice for Judging	18
Awards	19
Required Paperwork for Participants	
Forms for Junior/Senior Projects	21
Required Paperwork for School Fair Affiliation and Teachers	
SRC/IRB Guidelines	23
Project Checklist for Teacher	24
Elementary Affiliation Form	25
Elementary Application for Certification	26
Junior/Senior Affiliation Form	27
Junior/Senior Application for Certification	28
Junior/Senior SRC/IRB Documentation Form	30
Appendix	
Tips to Encourage Participation	33
My Science and Engineering Fair Evaluation	34
Most Common Paperwork Problems	37

This booklet contains specific information for the **Coastal Georgia Regional Science and Engineering Fair (CGRSEF)**. We adhere to all rules and guidelines set up by the **Georgia Science and Engineering Fair (GSEF)** and the **International Science and Engineering Fair (ISEF)**. Both GSEF and ISEF have excellent websites which provide detailed information on rules and guidelines.

GSEF web site http://www.georgiacenter.uga.edu/oasp/ga_science_fair.phtml

ISEF web site – <http://www.societyforscience.org/isef/index.asp>

WHAT IS THE SCIENCE AND ENGINEERING FAIR?

The Coastal Georgia Regional Science and Engineering Fair is one of a number of learning opportunities which helps young people meet the challenges of the future. It provides a stage on which the elementary, middle, and high school students in this area can demonstrate their serious contributions to the advancement of science and engineering.

WHY ENTER THE SCIENCE AND ENGINEERING FAIR?

By participation in the fair, students learn how to isolate and solve important problems, all within the framework of organized logical thought and study. In addition, current Georgia Performance Standards (GPS) suggest for science:

“To become literate in science, students need to acquire understandings of both the Characteristics of Science and its Content. The Georgia Performance Standards for Science require that instruction be organized so that these are treated together. Therefore, **A CONTENT STANDARD IS NOT MET UNLESS APPLICABLE CHARACTERISTICS OF SCIENCE ARE ALSO ADDRESSED AT THE SAME TIME.** For this reason they are presented as co-requisites incorporating hands-on, student-centered, and inquiry-based approaches.”

(<https://www.georgiastandards.org/Standards/Pages/BrowseStandards/ScienceStandards.aspx>)

Keeping these guidelines in mind, it should be evident that participating in science fairs is in alignment with the educational goals of the state of Georgia.

The local school fair provides the initial opportunity for students to exhibit their research projects. Projects which show merit can be entered in the regional fair. Winners at the regional fair are then selected to compete in the **Georgia Science and Engineering Fair held at the Athens Classic Center in Athens, GA, March 29-31, 2012.** At both the CGRSEF and GSEF, the student's work is judged by professional scientists who not only look for an attractive functional presentation, but more importantly, for the contribution the work has made to new information and the basic understanding the students have for their research.

*Affiliation with the International Science and Engineering Fair will be dependent upon high school participation. **If 80% of the high schools in the region participate, we will affiliate with ISEF.** This will provide the teacher and student with the top project at CGRSEF with the opportunity to travel to Pittsburg, PA for this year's fair. The opportunity to travel to ISEF is always available to top winners at the state level.*



WHO IS ELIGIBLE TO ENTER THE REGIONAL SCIENCE AND ENGINEERING FAIR?

Projects will be accepted for the Coastal Georgia Regional Science and Engineering Fair **only** if they have successfully competed in their local school fair. Students from public, private, parochial and home schools which comply with the Health, Education, and Welfare Department regulations, pay a registration fee, and who meet the following conditions are eligible for entry. Students may enter only one exhibit. Students may receive guidance and information from others, but all work, investigations, and derived data must be their own.

Projects are judged at the regional level, and the judging for grades 6 - 12 involves individual student interviews. Please note that "**Junior Division**" projects are 6 - 8 grade projects, and "**Senior Division**" projects are those in grades 9 - 12. "**Elementary Division**" projects are 4 - 5 grade projects which will be judged (no student interviews) for overall 1st, 2nd, and 3rd place awards for each grade level on **individual projects**, as well as various special awards. **Students with Elementary level projects (grades 4 - 5) should not be present during judging of projects.**

At the Regional Science Fair, team, individual, or class projects will be accepted and judged. Junior/Senior teams can consist of 2 to 3 students, one of whom is the designated team leader. **All members on a Junior/Senior team project must attend the regional fair and participate in the judge's interviews.** Elementary teams can be larger or a full class. **Please note: NO Place Awards will be given for team projects at the Elementary level.**

For further information on rules for eligibility, see the ISEF website:

<http://www.societyforscience.org/document.doc?id=311>

For answers to FAQs: <http://www.societyforscience.org/page.aspx?pid=313>

HOW TO ENTER

**Elementary schools will be limited to a total of four (4) projects per school.
Middle schools will be limited to a total of fifteen (15) projects per school.
High schools will be limited to a total of thirty-five (35) projects per school.**

Elementary (4-5): Submit one **official entry form online** via www.ccgga.edu/sciencefair* per project (individual, team or class). Print two copies (one for your records and a second to be sent to CGRSEF) and send the completed entry form along with the **entry fee of \$10 per project.**

Junior (6-8) or Senior (9-12): Any individual or team must submit an **official entry form online** via www.ccgga.edu/sciencefair.* Print two copies (one for your records and a second to be sent to CGRSEF). **Send a copy of your entry form, two copies of your abstract, all other required forms (1A, 1B, Checklist, etc.), and an entry fee of \$15 per person.** Required forms must be 2010/2011 forms (62nd GSEF or 2011 ISEF), and they must be complete with all required signatures. Be aware that there are forms with dates that **MUST** be prior to the start of experimentation. ***The student must keep all original forms.*** Please make sure that all copies are of good quality and readable.

Forms can be found at: <http://www.societyforscience.org/document.doc?id=11>

Special forms involving vertebrates, human subjects, risk assessment, DNA, and tissue research must be attached to the entry form. Projects will be reviewed by the Scientific Review Committee prior to the regional fair. **All applications which are incomplete will be returned to the sponsoring teacher.** Projects not conforming to all rules will be disqualified. The Scientific Review Committee has the right to accept or decline any entry for any reason.

****If online entry is not possible for you, teachers will have access to printable forms that can be submitted.
Alternatively, you can contact Dr. Pause Tucker (912)279-5944 to obtain a copy.***

CLASSIFICATION OF PROJECTS

Exhibitors should assume responsibility for their classification and choose the category to which their project belongs, or if desired, the regional Science Fair Committee will classify the exhibit based on the abstract information. See http://www.societyforscience.org/isef/project_categories for more information.

Animal Sciences – Animal husbandry, development, ecology, pathology, physiology, population genetics, systematic, other studies of animals

Behavioral and Social Sciences – clinical and developmental psychology, cognitive psychology, physiological psychology, sociology

Biochemistry – general biochemistry, metabolism, structural biochemistry

Cellular and molecular biology – cellular biology, cellular and molecular genetics, immunology, molecular biology

Chemistry – analytical chemistry, general chemistry, inorganic chemistry, organic chemistry, physical chemistry

Computer science – algorithms, databases, artificial intelligence, networking and communications, computational science, computer graphics, computer system, operating system, software engineering, programming languages

Earth and planetary science – climatology, weather, geochemistry, mineralogy, paleontology, geophysics, planetary science, tectonics

Engineering: electrical and mechanical – electrical engineering, computer engineering, controls, mechanical engineering, robotics, thermodynamics, solar

Engineering: materials and bioengineering – bioengineering, chemical eng., civil eng., construction eng., industrial eng., processing, material science

Energy and transportation – aerospace and aeronautical engineering, aerodynamics, alternative fuels, fossil fuel energy, vehicle development, renewable energies

Environmental management – bioremediation, ecosystems management, environmental engineering, land resource management, forestry, recycling, waste management

Environmental sciences – air pollution/air quality, soil contamination/soil quality, water pollution/water quality

Mathematical sciences – algebra, analysis, applied mathematics, geometry, probability and statistics

Medicine and health sciences – disease diagnosis and treatment, epidemiology, genetics, molecular biology of diseases, physiology and pathophysiology

Microbiology – antibiotics, antimicrobials, bacteriology, microbial genetics, virology

Physics and astronomy – astronomy, atoms, molecules, solids, biological physics, instrumentation and electronics, magnetic and electromagnetic, nuclear and particle physics, optics, lasers, masers, theoretical physics, theoretical or computational astronomy

Plant sciences – agriculture/agronomy, development, ecology, genetics, photosynthesis, plant physiology (molecular, cellular, organismal), plant systematic, evolution

IMPORTANT DATES & DEADLINES

Wednesday 10/5/2011 5:00PM	CGRSEF Affiliation Deadline: Last day to submit school affiliation papers. We need to know by this date which schools will be participating in the regional fair. These must be sent to the School of Mathematics and Natural Sciences Office at CCGA in Brunswick (FAX: 912-279-5825)
Saturday 1/14/2012	Last Day to Hold School Science Fairs
Friday 1/20/2012 5:00PM	Deadline for submitting paper copies of exhibit entry forms and fees. Please submit a printed copy of the online entry form PLUS any other required forms for your students' projects (attach to the entry form, if applicable).

Complete one entry form per project (EVEN TEAM PROJECTS). *(Please Note: A social security number may be requested at a later date in order to issue some awards.)* Attach copies of the abstract and all other required certification forms. **Elementary Fees: \$10.00 per project (an additional \$2 per student will reserve their spot for lunch and afternoon activities). Junior/Senior Fees: \$15.00 per person,** whether individual or part of a team. **Quotas: up to 4 projects per elementary school, up to 15 projects per middle school, and up to 35 projects per high school.** Please inform us BEFORE **January 20, 2012** if your school's anticipated numbers are substantially higher or lower than they were last year.

All entry forms MUST be received by Dr. Kim Pause Tucker (Director) or Joan Rozmarynoski (Program Coordinator, School of Mathematics and Natural Sciences) by 5:00 p.m. Friday, January 20, 2012. The entry fees must accompany all entries from each school.

Coastal Georgia Regional Science and Engineering Fair
 Dr. Kim Pause Tucker, Director
 College of Coastal Georgia
 Department of Mathematics and Natural Sciences
 1 College Way
 Brunswick, GA 31520

Entries (including all required paperwork and fees) may be mailed or hand delivered to Joan Rozmarynoski, Program Coordinator, in the School of Mathematics and Natural Sciences office (Science Bldg. #260, CCGA campus in Brunswick), hand delivered to Dr. Kim Pause Tucker (Science Bldg. #283B, CCGA campus in Brunswick), mailed to the above address, **OR** hand delivered to the Camden Center in a envelope clearly addressed to Joan Rozmarynoski or Dr. Kim Pause Tucker to be sent to Brunswick. **Indicate school, science fair director, e-mail address, or fax on envelope in which entries are placed. Confirmation of receipt of your entries will be done via e-mail.** To process the forms more efficiently, all forms from any one school must be submitted at the same time, along with one check per school. **ALL forms which are not typed, printed legibly, OR FILLED OUT COMPLETELY will be returned to the sponsoring teacher.**

LATE APPLICATIONS WILL NOT BE ACCEPTED AND STUDENTS WILL NOT BE ELIGIBLE TO ADVANCE TO GSEF OR ISEF (REGARDLESS OF POST-MARK DATE, IF FORMS ARE MAILED). PLEASE ALLOW AT LEAST 3-4 BUSINESS DAYS BEFORE DEADLINE IF YOU ARE MAILING FORMS. IT IS THE RESPONSIBILITY OF THE TEACHER/SCIENCE FAIR COORDINATOR AT YOUR SCHOOL TO VERIFY ALL FORMS HAVE BEEN RECEIVED, BY CALLING JOAN ROZMARYNOSKI AT (912) 279-5880.

SCHEDULE OF EVENTS

Students' schedule

Thursday February 2, 2012	3:00 - 6:00 PM	Project Set-up College of Coastal Georgia Gymnasium in Brunswick is open for project set-up for all schools. Projects must be set-up at this time! ALL students must have their projects approved by the Safety Committee before leaving the gymnasium.
Friday February 3, 2012	10:00 - 12:00 AM	Student Interviews (Grades 6-12 students should be standing at their projects at 10 AM.)
	12:00 - 12:30 PM	Student pizza lunch
	12:30 - 4:30 PM	Student activities – Elementary students are also encouraged to attend! These will include a presentation by the National Science Center's Mobile Discovery Center! http://www.nscdiscovery.org/eo/outreachprograms/mobilediscovery.aspx Other fun activities will also be planned by the College of Coastal Georgia Department of Mathematics and Natural Sciences. Please RSVP for these!
Saturday February 4, 2012	Before 9:00 AM	Award list posted online and emailed to schools.
	9:00 AM- 1:00 PM	Fair open to the public for viewing of student projects.
	1:00 - 2:00 PM	Elementary awards ceremony Southeast Georgia Conference Center, College of Coastal Georgia, Brunswick. The public is welcome!
	2:00 - 3:00 PM	Junior/Senior awards ceremony Southeast Georgia Conference Center, College of Coastal Georgia, Brunswick. The public is welcome!
	3:00 - 5:00 PM	Meeting of GSEF representatives ALL GSEF PAPERWORK NEEDS TO BE OBTAINED AT THIS MEETING. This meeting will immediately follow the awards ceremony. A light reception will be provided to the State Fair Representatives and Alternates.
	12:00 - 5:00 PM	Projects may be removed during this time. All projects must be removed by 5:00 PM. <i>If projects are not removed, they will be discarded.</i>

Judges' Schedule

Friday February 3, 2012	8:00 - 8:30 AM	Judges' breakfast and information session
	8:30 - 10:00 AM	Judges view projects. <i>No teachers, students, or parents allowed during this time.</i> The judges are looking over projects and formulating questions for the students' interviews.
	10:00 - 12:00 AM	Student Interviews
	12:00 - 2:00 PM	Judges working lunch/scoring session.
	1:00 - 3:00 PM	Special awards judging and scoring session

The afternoon activities are greatly expanded for 2012! Elementary student participants may attend the lunch and the afternoon activities (for an additional \$2 to reserve their spot)! You must RSVP for these activities! Lunch will be 11:30-12:00 for the Elementary students and the activities will start for them at 12:00-4:00.

CGRSEF CONTACT INFORMATION

Director	Dr. Kim Pause Tucker	(912) 279-5944	ktucker@ccga.edu
Co-director	Dr. David Stasek	(912)279-5943	dstasek@ccga.edu
Committee			
Coordinator	Ms. Joan Rozmarynoski	(912) 279-5880 FAX: (912) 279-5825	jrozmarynoski@ccga.edu
Treasurer	Ms. Teresa Peeples	(912) 279-5840	tpeeples@ccga.edu
Scientific Review Committee			
	Dr. Keith Belcher, Scientific Review Chair	(912) 279-5922	kbelcher@ccga.edu
	Dr. Jamil Mortada		jmortada@ccga.edu
	Ms. Patricia Rugaber		prugaber@ccga.edu
	Mr. Chuck Sterner		csterner@ccga.edu
	Dr. Andrea Wallace		awallace@ccga.edu
	Dr. Gerard White		gwhite@ccga.edu
Elementary Judging & Awards Committees			
	Dr. Rebecca Yeomans, Elementary Judging Chair	(912) 279-5883	ryeomans@ccga.edu
	Ms. Melissa Canady, Awards Committee		scanady@ccga.edu
	Ms. Sheila Ledford, Awards Committee		sledford@ccga.edu
Junior/Senior Judging & Awards Committees			
	Mr. James Carpenter, Junior/Senior Judging Chair	(912) 279-5916	jcarpenter@ccga.edu
	Dr. Leon Gardner, Awards Chair	(912) 279-5927	lgardner@ccga.edu
	Ms. Katie Berhow, Judging		kberhow@ccga.edu
	Dr. Laura Lynch, Awards		llynch@ccga.edu
Fair Logistics Committee			
	Ms. Jenny McDonald, Student Assistants Coordinator	(912) 279-5917	jmcdonald@ccga.edu
	Dr. German Vargas, Set Up Committee Coordinator	(912) 279-5918	gvargas@ccga.edu
	Dr. Victor Vega	(912) 279-5946	vvega@ccga.edu
Communications/Publicity Committee			
	Dr. Jennifer Hatchel, Communications/Publicity Chair	(912) 510-3341	jhatchel@ccga.edu
	Mr. Treg Thompson, Photographer	(912) 510-3343	tthompson@ccga.edu
	Mr. Joe Peeples		jpeeples@ccga.edu
Hospitality Committee			
	Sheila Ebri, Hospitality Committee Chair	(912) 279-5933	sebri@ccga.edu
Student Activities Committee			
	Dr. Leah Allen, Student Activities Coordinator	(912) 279-5947	lallen@ccga.edu
	Dr. Gracia Toubia-Stucky		gstucky@ccga.edu

Find us on Facebook! <http://www.facebook.com/groups/261798670499567/>
Updates, fun facts, and other brief communication will be available through our Facebook page.



GSEF, Director:

Christine Burgoyne
The University of Georgia
Center for Continuing Education

(706) 542-3537
gsef@georgiacenter.uga.edu
FAX: (706) 542-7537

PROJECT DISPLAY & SAFETY RULES

(Also see Rules of the [GSEF/ISEF](#) listed on the respective websites)

Special Requests

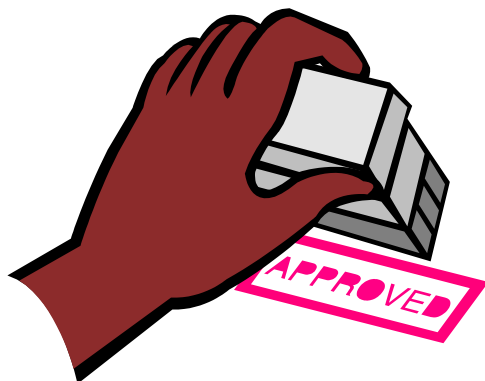
We strongly suggest that you create a display that does not require electricity. A request on the entry form **MUST** be made if an exhibit needs an electrical outlet, or if there are any other accommodations needed. **Exhibitors are required to furnish their own 25-foot grounded electrical extension cord necessary to reach floor-located power connections.** All decisions, regarding the granting of special requests, are left to the discretion of the Fair Committee. See [GSEF](#) rules regarding maximum size of display. Electricity requirements for projects must be justified at the level of GSEF or ISEF. Electricity for lighting on projects will not be permitted. Laptops may be used with projects after approval of the Setup Committee. ***If your project is chosen to proceed to GSEF, you will be charged \$100 for electricity at that level.***

NOT Allowed at Project or in Booth

1. Living organisms, including plants
2. Soil, sand, rock, and/or waste samples even if permanently encased in a slab of acrylic
3. Taxidermy specimens or parts
4. Preserved vertebrate or invertebrate animals
5. Human or animal food
6. Human/animal parts or body fluids (for example, blood, urine)
7. Plant materials (living, dead, or preserved) that are in their raw, unprocessed, or non-manufactured state (Exception: manufactured construction materials used in building the project or display)
8. All chemicals including water. (Projects may not use water in any form in a demonstration.)
9. All hazardous substances or devices [for example, poisons, drugs, firearms, weapons, ammunition, reloading devices, and lasers (as indicated in item 5 in the section of these rules entitled “Allowed at Project or in Booth BUT with the Restrictions Indicated”)]
10. Dry ice or other sublimating solids
11. Sharp items (for example, syringes, needles, pipettes, knives)
12. Flames or highly flammable materials
13. Batteries with open-top cells
14. Awards, medals, business cards, flags, logos, CDs, endorsements, and/or acknowledgments (graphic or written) unless the item(s) are an integral part of the project (Exception: Intel ISEF medal(s) may be worn at all times.)
15. Photographs or other visual presentations depicting vertebrate animals in surgical techniques, dissections, necropsies, or other lab procedures
16. Active Internet or e-mail connections as part of displaying or operating the project at the Intel ISEF
17. Prior years’ written material or visual depictions on the vertical display board. [Exception: the project title displayed in the Finalist’s booth may mention years or which year the project is (for example, “Year Two of an Ongoing Study”)]. Continuation projects must have the Continuation Project Form (7) vertically displayed.
18. Glass or glass objects unless deemed by the Display and Safety Committee to be an integral and necessary part of the project (Exception: glass that is an integral part of a commercial product such as a computer screen)
19. Any apparatus deemed unsafe by the Scientific Review Committee, the Display and Safety Committee, or Society for Science & the Public (for example, large vacuum tubes or dangerous ray-generating devices, empty tanks that previously contained combustible liquids or gases, pressurized tanks, etc.)

Allowed at Project or in Booth BUT with the Restrictions Indicated

1. Photographs and/or visual depictions if:
 - a. They are not deemed offensive or inappropriate by the Scientific Review Committee, the Display and Safety Committee, or Society for Science & the Public. This includes, but is not limited to, visually offensive photographs or visual depictions of invertebrate or vertebrate animals, including humans. The decision by any one of the groups mentioned above is final.
 - b. They have credit lines of origin ("Photograph taken by..." or "Image taken from..."). (If all photographs being displayed were taken by the Finalist or are from the same source, one credit line prominently and vertically displayed is sufficient.)
 - c. They are from the Internet, magazines, newspapers, journals, etc., and credit lines are attached. (If all photographs/images are from the same source, one credit prominently and vertically displayed is sufficient.)
 - d. They are photographs or visual depictions of the Finalist.
 - e. They are photographs of human subjects for which signed consent forms are at the project or in the booth.
2. Any apparatus with unshielded belts, pulleys, chains, or moving parts with tension or pinch points if for display only and not operated.
3. Any demonstration for judges or the public must be performed within the maximum size of the project permitted, an area 30"(Depth) by 48"(Width) by 108"(Height)
4. Class II lasers if:
 - a. The output energy is <1 mW and is operated only by the Finalist
 - b. Operated only during the Display and Safety inspection and during judging
 - c. Labeled with a sign reading "Laser Radiation: Do Not Look into Beam"
 - d. Enclosed in protective housing that prevents physical and visual access to beam
 - e. Disconnected when not operating *Note: Class II lasers are found in laser pointers and in aiming and range-finding devices. They pose a risk if the beam is directly viewed over a long period of time.*
5. Class III and IV lasers if for display only and not operated (*See the description of Class III and Class IV lasers in the Radiation section of the Hazardous Chemicals, Activities, or Devices.*)
6. Any apparatus producing temperatures that will cause physical burns if adequately insulated
7. The only items that may be displayed on the front of the provided tables are the forms listed in the section of these rules entitled "Required to be Visible and Vertically Displayed at the Intel ISEF."



Only the exhibitors or their designees are to be admitted to set up and remove exhibits.

AFTER SETUP, THE STUDENT or PARENT MUST REMAIN BY EXHIBIT UNTIL APPROVED BY THE SAFETY COMMITTEE.

EXHIBITS MUST BE REMOVED BETWEEN 12:00 - 5:00 PM ON SATURDAY, February 4, 2012. THEY MAY NOT BE REMOVED EARLY. The exhibitor assumes full responsibility for all damage or loss to the exhibit. Your signed application is your agreement to

abide by the aforementioned rules and regulations.

To be displayed, all projects **SHOULD** contain the following:

ALL PROJECTS (ELEMENTARY AND JUNIOR/SENIOR):

1. A scientific log that records the day by day events of your experimentation. **This must be a bound (stitched) notebook written in blue or black ink.**
2. A display following the project basic rules and safety regulations. For more information, see “Visual Display” in GSEF booklet.
3. (**Optional, but strongly recommended.**) A scientific research paper which supports the research you have done. It should include: Title Page, Table of Contents, Purpose and Acknowledgments, Review of Literature, Materials, Procedures, Results, Conclusions or Discussion, and Bibliography.
Note: Some awards are only available to those students who complete this paper.

ADDITIONAL REQUIREMENTS FOR JUNIOR/SENIOR PROJECTS ONLY:

4. A notebook containing all of the required forms:
 - a. Form 1 “Checklist for Adult Sponsor”
 - b. Form 1A “Student Checklist” (use same form for individual or team projects)
 - c. Form 1B “Approval Form”
 - d. Research Plan (Instructions on Form 1A).
 - e. Abstract - the abstract is a shortened version (max. 250 words) of your research. The abstract must be on the OFFICIAL ABSTRACT FORM (<http://www.georgiacenter.uga.edu/sites/default/files/Abstract-and-Instructions.pdf>). It must be typed with 12 point type, and printed out. **It should NOT be displayed on the project board.** (Please note that this form does not need to be embossed/certified in any way for CGRSEF or GSEF.)
 - f. Other forms as applicable
<http://www.georgiacenter.uga.edu/sites/default/files/gsef-forms-for-teachers-students.pdf>
(See the ISEF Rules Wizard if you are unsure:
<http://apps.societyforscience.org/isef/students/wizard/index.asp>.)**All of these forms are in addition to the copies submitted with the entry form.**

Students must retain original forms - the entry form and the notebook should contain copies only.

5. All forms required for research must be located at the project in a notebook but NOT displayed on the project board.

CRITERIA FOR JUDGING EXHIBITS

ELEMENTARY JUDGING

The judges will use the following criteria in judging Elementary projects.

ELEMENTARY SCORE SHEET

PROBLEM STATEMENT

- 0 You have no problem statement or question.
- 1 Your problem statement is not complete.
- 2 Your problem statement does not make sense to the *judge*.
- 3 Your problem statement is complete and is well written.
- 4 Your problem statement is complete, well written, and grammatically correct.
- 5 Your problem statement is complete, well written, grammatically correct, and shows imagination. You have a new or different idea.

HYPOTHESIS

- 0 You have no hypothesis.
- 1 Your hypothesis is not complete.
- 2 Your hypothesis does not make sense to the *judge*.
- 3 Your hypothesis is really a research question that could be answered by looking for information and writing up a report.
- 4 Your hypothesis is well written, logical, and is appropriate for your grade level.
- 5 Your hypothesis is well written, logical, and is new or creative. Your idea is your own and is not one that has been used many times.

EXPERIMENTAL DESIGN

- 0 Your project appears not to have an experimental design.
- 1 Your project looks like you might have an experimental design, but it does not make sense to the *judge*.
- 2 Your experimental design identifies the variables but there are too many variables and they lack the proper controls. It's best to compare only 2 things—for example, plant #1 gets sunlight and plant #2 gets no sunlight.
- 3 Your experimental design consists of a few, well-defined variables but there are no proper controls for the variables. Clearly identify what you will do to one variable and will not do to the other variable.
- 4 Your experimental design is adequate, clearly identifies the variables, and has the proper controls for those variables.
- 5 Your experimental design is outstanding, clearly identifies the variables, and has the proper controls.

EXPERIMENTAL PROCEDURES: Your procedure or steps should “read” like steps to assemble a toy (1, 2, 3, etc.).

- 0 You did not list your procedures or steps.
- 1 You only listed part of your procedures or steps.
- 2 Your procedures or steps are complete, but not listed in a logical order or not well-written, with grammatical errors.
- 3 Your procedures or steps are complete, listed in a logical order, are grammatically correct and are easy for a *judge* to understand.
- 4 Your procedures or steps are complete, listed in a logical order, are grammatically correct, well-written, and are easy for a *student* to understand.
- 5 Your procedures or steps are complete, listed in a logical order, are grammatically correct, well-

written, and are easy for *almost anyone* to understand.

MATERIALS AND MEASUREMENTS

- 0 You did not list the materials that you used.
- 1 You only listed some of the materials, or you did not include measurements.
- 2 You listed all materials used, but your measurements are not clear.
- 3 You listed all materials and measurements are clear.
- 4 You listed all materials, but your measurements are in US standards--cups, ounces, inches, etc.
- 5 You listed all materials, and your measurements were made precisely using metric standards--centimeters, grams, meters, liters, etc.

PROJECT PRESENTATION: Is your project arranged in a logical order?

- 0 Your project does not have any logical order.
- 1 Your project has correct parts but not in right places.
- 2 Your project has correct parts but is not neat.
- 3 Your project is cluttered and not arranged well.
- 4 Your project is neat and arranged well.
- 5 Your project is neat, grammatically correct, and has good use of color and space.

BACKGROUND RESEARCH: Did you include some background information about your topic?

- 0 You provided no evidence of background research on your topic.
- 1 You provided very little information about your topic.
- 2 You provided some information, but it's hard for the judge to understand.
- 3 You provided some information that you got from magazines, newspapers, and encyclopedias.
- 4 You provided some information that you got from science magazines, internet, science trade books, etc.
- 5 You provided information from more than one scientific source and you named them in a bibliography (grade appropriate).

LOGBOOK: It must be hand-written in blue or black ink and may include graph pages.

- 0 You have not included a logbook or journal.
- 1 You made a simple logbook or journal.
- 2 You used a spiral notebook, or other notebook, in which the pages can be removed.
- 3 You used a composition notebook and you kept some records of your work.
- 4 You wrote in your logbook and dated every log entry.
- 5 You kept your logbook or journal like a diary. You wrote in it almost every day. You wrote the date every time you worked on your project. You made sketches or diagrams of what you were doing.

NOTE: Your Science Log is NOT supposed to be "picture perfect." Judges are looking for evidence that you are learning from the inquiry process and that you learned from your mistakes. So do NOT erase or scribble over mistakes. Just cross them out and keep going. The best logs are dated daily and have little sketches or diagrams--for example: sketch of ball bouncing with measurements or sketches of daily seed growth.

DATA COLLECTION AND DISPLAY (data sheets, charts, diagrams)

- 0 You did not use any charts, tables, diagrams, or a graphic organizer to illustrate your data.
- 1 You used some data, but a *judge* does not understand it.
- 2 You used some data, but it does not go with the rest of your project.
- 3 Your data is accurate and easy for a *judge* to understand.
- 4 Your use of data is accurate and labeled correctly--charts, graphs, etc. have title and key.
- 5 Your use of data shows that you did the experiment more than one time.

ORIGINALITY: To what degree is the work effort, idea, or amount of participation that of the student(s) alone?

- 0 Your project looks like you copied it from a book or that an adult did it for you.
- 1 Your project looks like an adult might have helped you with difficult parts.
- 2 Your project looks like you did most of the work.
- 3 Your project looks like you did this by yourself or with your group.
- 4 Your writing, spelling, punctuation, and grammar are correct on the whole project.
- 5 Your writing, spelling, punctuation, and grammar are correct on the whole project and your idea is new or innovative.

_____ Total points (50 pts. Maximum) (revised 9/7/2006)

Polly Cox, Georgia Science and Engineering Fair Teacher of the Year
Clelia Scott, Presidential Award for Excellence in Science and Math Teaching
Dr. Mark Pilgrim, Coastal Georgia Regional Science and Engineering Fair Director 2007-2010

JUNIOR / SENIOR JUDGING

The judges will use the following criteria in judging the exhibits. Check to see if you can answer the following questions concerning your project.

Evaluation Criteria for Category Judging

The criteria and questions below are used by the Grand Awards Judges of the Intel® ISEF and are suggested as a guide for your category judging. Scientific Thought and Engineering Goals are separated into Ila. and Ilb. for appropriate use by category. There are also added questions for team projects.

I. Creative Ability (30 points)

1. Does the project show creative ability and originality in the questions asked?
 - a. The approach to solving the problem? The analysis of the data? The interpretation of the data?
 - b. The use of equipment? The construction or design of new equipment?
2. Creative research should support an investigation and help answer a question in an original way.
3. A creative contribution promotes an efficient and reliable method for solving a problem. When evaluating projects, it is important to distinguish between “gadgeteering” and ingenuity.

Ila. Scientific Thought (30 points)

If it's an engineering project, the appropriate questions are those found in Ilb. Engineering Goals.

1. Is the problem stated clearly and unambiguously?
2. Was the problem sufficiently limited to allow plausible approach? Good scientists can identify important problems capable of solutions.
3. Was there a procedural plan for obtaining a solution?
4. Are the variables clearly recognized and defined?
5. If controls were necessary, did the student recognize their need and were they correctly used?
6. Is there adequate data to support the conclusions?
7. Does the finalist/team recognize the data's limitations?
8. Does the finalist/team understand the project's ties to related research?
9. Does the finalist/team have an idea of what further research is warranted?
10. Did the finalist/team cite scientific literature, or only popular literature--i.e., local newspapers, Reader's Digest?

Ilb. Engineering Goals (30 points)

1. Does the project have a clear objective?
2. Is the objective relevant to the potential user's needs?
3. Is the solution workable? Acceptable to the potential user? Economically feasible?
4. Could the solution be utilized successfully in design or construction of an end product?
5. Is the solution a significant improvement over previous alternatives?
6. Has the solution been tested for performance under the conditions of use?

III. Thoroughness (15 points)

1. Was the purpose carried out to completion within the scope of the original intent?
2. How extensively was the problem covered?
3. Are the conclusions based on a single experiment or replication?
4. How complete are the project notes?
5. Is the finalist/team aware of other approaches or theories?
6. How much time did the finalist/team spend on the project?
7. Is the finalist/team familiar with scientific literature in the studied field?

IV. Skill (15 points)

1. Does the finalist/team have the required laboratory, computation, observational and design skills to obtain supporting data?
2. Where was the project performed--i.e., home, school laboratory, university laboratory? Did the finalist/team receive assistance from parents, teachers, scientists or engineers?
3. Was the project completed under adult supervision, or did the finalist/team work largely alone?
4. Where did the equipment come from? Was it built independently by the finalist/team? Was it obtained on loan? Was it part of a laboratory where the finalist/team worked?

V. Clarity (10 points)

1. How clearly does the finalist discuss his/her project and explain the purpose, procedure, and conclusions? Watch out for memorized speeches that reflect little understanding of principles.
2. Does the written material reflect the finalist's/team's understanding of the research?
3. Are the important phases of the project presented in an orderly manner?
4. How clearly is the data presented?
5. How clearly are the results presented?
6. How well does the project display explain the project?
7. Was the presentation done in a forthright manner, without tricks or gadgets?
8. Did the finalist/team perform all the project work, or did someone help?

VI. Teamwork

1. Are the tasks and contributions of each team member clearly outlined?
2. Was each team member fully involved with the project, and is each member familiar with all aspects?
3. Does the final work reflect the coordinated efforts of all team members?

JUNIOR/SENIOR PROJECT JUDGE SCORE SHEET

COASTAL GEORGIA REGIONAL SCIENCE & ENGINEERING FAIR SCORE SHEET	
Space:	Title:
Category:	Name:
Teacher:	School:
Grade:	
<i>These comments to be read by students & teachers</i>	
JUDGING AREAS* & COMMENTS/SUGGESTIONS/CONSTRUCTIVE CRITICISM	
CREATIVE ABILITY: originality, new methods, construction/design, materials used, new conclusions. (30 points) Comments:	
SCIENTIFIC THOUGHT: clear purpose & objective, searched for related facts, development of hypothesis, controlled & accurate observations, sufficient data, data tested for accuracy, conclusions limited to data or ENGINEERING GOALS: is objective clear, useful; solution workable, acceptable, and economic, improvement over existing methods, solution was tested. (30 points) Comments:	
THOROUGHNESS: purpose carried out, problem completely covered, conclusions based on single replication experiment, complete notes/logbook, student(s) aware of other approaches/theories, familiar with related literature. (15 points) Comments:	
SKILLS: does student(s) have skills to do work, where was the project done, was assistance received, and if so, from whom, was there a reasonable amount? (15 points) Comments:	
CLARITY/KNOWLEDGE: was student(s) able to discuss project, does written material reflect understanding, presented in an orderly manner, clear data/results, exhibit is self-explanatory, was all work done by student(s)? (10 points) Comments:	

Practice for Judging (Junior/Senior. Division Projects Only)

The Judging at a Regional Science & Engineering Fair is usually done by professionals in the field, teachers, and professors. The style of questioning is informal and personal.

Usually 1 or 2 judges will come to you after they have read your display board. They want to talk to you about your project. They want to find out how important this project is to you. They also want to know if you learned anything new and if you did it yourself.

Some of the questions judges might ask:

1. Where did you get your idea?
2. What will you do next?
3. Why did you do _____?
4. Why did you choose this project?
5. Who helped you?
6. What was the hardest thing to do?
7. What did you learn?
8. Were you surprised by anything?



Practice in front of your class, with your sponsor, or at home. Have them ask difficult questions about your research so that you will be prepared for the judges.

Find out about the fair from your sponsor. Be on time and well dressed.

Bring the following to the Fair:

1. Finished Display Board
2. Notebook with completed forms and Project Report
3. Log Book

Good luck!



All students who qualify for the Coastal Georgia Regional Science and Engineering Fair (grades 4 - 12) are awarded certificates of recognition.

Elementary (Grades 4 - 5)

Participation Ribbons - Ribbons are awarded to all elementary students (individuals and team members).

Overall Awards - Special ribbons and trophies are awarded to 1st, 2nd, and 3rd place for individual projects at each grade level (grades 4 and 5). Elementary team projects will receive a blue ribbon but are not eligible for overall awards. Elementary team projects are not eligible for overall awards.

Junior and Senior Division (grades 6-12)

Quality Ribbons - Junior/Senior projects of excellent quality will be awarded a ribbon. These are based on total points awarded by the judges and indicative of the overall quality of the project. Therefore, the number and distribution of the levels will vary across categories. Projects that receive a ribbon will be considered for advancement to GSEF; however, not all projects that receive a ribbon will advance.

Category Winners - A winner, one Junior and one Senior, in each of the seventeen official categories as well as the best Jr. and Sr. team project receive a special ribbon.

Division Winners - Eight awards, consisting of a special ribbon and a plaque, are provided each year. These are awarded to a winner and runner-up in the following divisions: Senior Division Life Science, Senior Division Physical Science, Junior Division Life Science, and Junior Division Physical Science.

Overall Winners- A special ribbon and trophy are awarded to one Overall Winner and one Overall Runner-Up.

State Representatives - Depending on an annual quota received from GSEF, approximately 20 projects and 5 alternates are selected on the basis of merit. Only projects that receive a quality ribbon will be eligible for advancement.

International Representative – *Given 80% high school participation, we will send one overall winner and his/her teacher to the International Science and Engineering Fair in Pittsburg, PA.*

Special Awards - These vary from year to year. Special awards contingent on regional affiliation with ISEF are marked with an asterisk (*) below.

The following special awards were presented in 2011:

Altamaha Riverkeeper
American Meteorological Society*
American Psychological Association*
Anderson-Waters Marine Science (Elementary, Junior, Senior)
ASM Materials Education Foundation*
Association for Women Geoscientists*
Awards of Promise (4th, 5th, and 6th grades)
Best of Botany Award (Elementary)
Broadcom MASTERS program*
Coastal Georgia Audubon Society
Dr. William T. Lipscomb Awards Presented by Pinova, Inc. and the Glynn Environmental Coalition
Glynn County Library Council Research Award
National Society of Professional Engineers*
NOAA*
Phi Delta Kappa (Elementary)
Ricoh Americas Corporation*
Southeastern District of Georgia Dental Association Medical/Dental Award
U.S. Air Force*
U.S. Army*
U.S. Metric Association*
U.S. Navy / U.S. Marine Corps*
CGRSEF Awards for Excellence in Science Teaching
Science Kit, Inc.
Ward's Natural Science

Junior/Senior Division

REQUIRED PAPERWORK

REMINDER TO ALL STUDENTS COMPETING IN THE JUNIOR AND SENIOR DIVISIONS

Please be sure to complete all of the following where applicable. Use 2012 forms only unless research began prior to June 1, 2011.

Forms are also available to download and print from GSEF's website:

<http://www.georgiacenter.uga.edu/sites/default/files/gsef-forms-for-teachers-students.pdf>,

OR from ISEF's website: <http://www.societyforscience.org/page.aspx?pid=517>

FOR EACH JUNIOR/SENIOR PROJECT, THE FIRST 5 ITEMS BELOW MUST BE COMPLETED AND SUBMITTED IN THE FOLLOWING ORDER

(Additional forms may be required as necessary)

***** (Students must keep all original forms) *****

1. Coastal Georgia Regional Science and Engineering Fair Entry Form. Please submit online via: www.cpga.edu/sciencefair
After submission, print two copies of your receipt. One for your records and one to be turned in with the following forms and your entry fee.*
2. [Abstract Form](#)
(Please note that this form does not need to be embossed/certified in any way for CGRSEF or GSEF.)
3. [Form 1](#) "Checklist for Adult Sponsor"
4. [Form 1A](#) "Student Checklist" (use same form for individual or team projects)
5. [Form 1B](#) "Approval Form"

Other forms may be required depending on your specific project:

<http://www.georgiacenter.uga.edu/sites/default/files/gsef-forms-for-teachers-students.pdf>

These forms are not meant to discourage students from participating. They are a necessary part of scientific research to ensure safety and ethics are practiced.

All ISEF forms can be downloaded in a single pdf document from:

<http://www.societyforscience.org/Document.Doc?id=11>

*If online submission is not a possibility for you, please contact your science teacher or Dr. Kim Pause Tucker (912) 279-5944, and you will be provided with a printed copy.

ADDITIONAL INFORMATION for TEACHERS (& Parents)



SCIENTIFIC REVIEW COMMITTEE (SRC) / INSTITUTIONAL REVIEW BOARD (IRB) GUIDELINES

These guidelines are to assist you in filling out your school's SRC/IRB documentation (required for Junior/Senior only), which each school submits with the affiliation agreement. **Deadline: Wednesday, October 5, 2011.**

What projects require approval prior to research from a school SRC? Any project involving humans, animals, pathogens, controlled substances, recombinant DNA, or tissues requires approval prior to beginning research.

What projects require approval prior to research from a school IRB? Any project involving humans requires prior approval prior to beginning research.

Each school's SRC/IRB reviews and approves student projects before and after experimentation. A combined SRC/IRB should be established at the school level to deal with human research projects. If this is not possible, the teacher/school should contact the Regional Fair Director for assistance in the evaluation of human research **prior to experimentation**.

1. **The School or sponsoring institution is REQUIRED to form a Scientific Review Committee (SRC) made up of the following:**
 - a. a Biomedical Scientist (PhD, MD, DDS, or DO)
 - b. a Science Teacher, and
 - c. an Animal Care Specialist.

2. **The purpose(s) of an SRC are:**
 - a. to PRE-approve experimental procedures of projects involving human subjects, nonhuman vertebrates, pathogens, controlled substances, recombinant DNA, and human/animal tissue.
 - b. to POST-review procedures and safety rules for above projects.
 - c. to review all remaining projects to make sure students followed applicable rules.

3. **The School or sponsoring institution must provide an Institutional Review Board (IRB) made up of the following:**
 - a. a science teacher, a school administrator, and one of the following:
 - b. a psychologist (may be your school psychologist), OR
 - c. a psychiatrist, medical doctor, physician's assistant, or registered nurse.

4. **The purpose of an IRB is**
 - a. to evaluate the potential physical or psychological risk of research involving human subjects.

The IRB may be combined with the SRC to form one Review Committee for all projects just by adding one person from the list of human subjects' reviewer above.

Other notes:

1. A fourth member should always be available, if needed, as a substitute.
2. One member must be familiar with proper animal care.
3. **For human subjects under age 18, student researchers must obtain informed written consent from all subjects and parent/guardian. This is a Federal law.**
4. If the student lives in a rural area and does not have access to a degreed biomedical scientist, the student or SRC must enlist the services of someone from another geographic area. The Rules and necessary forms should be sent to that person so he or she is familiar with the procedures.
5. Neither the Adult Sponsor nor the Qualified Scientist who oversees a specific project is permitted to serve on the SRC or IRB reviewing that project. Consequently, neither the Adult Sponsor nor the Qualified Scientist may sign the SRC portion of 1B Approval Form. This eliminates conflict of interest.
6. For more information, see the GSEF website: <http://www.georgiacenter.uga.edu/ppd/courses/academic-special-programs/georgia-science-and-engineering-fair> .

PROJECT CHECKLIST FOR TEACHERS

Junior/Senior Division Only

Student Name _____ Date _____

Project Title _____

PRIOR TO EXPERIMENTATION (ALL PROJECTS):

_____ Research topic approved by teacher (Date _____)

_____ Sponsor Checklist Form (Form 1) present

_____ signed by adult sponsor

_____ dated before experimentation start date

_____ Student Checklist (Form 1A) present

_____ projected start and end dates (for projects that require prior SRC/IRB approval)

_____ ACTUAL start and end dates

_____ Research Plan is attached

_____ work site information complete (if non-school work site was used)

_____ Approval Form (Form 1B) present

_____ signed by student and dated PRIOR TO EXPERIMENTATION START DATE

_____ signed by parent/guardian and dated PRIOR TO EXPERIMENTATION START DATE

_____ signed by SRC/IRB representative and dated PRIOR TO EXPERIMENTATION START DATE

_____ If project is a continuation from last year, includes Continuation Projects Form (Form 7), paperwork from last year's project, and appropriate box checked on Form 1A.

AFTER EXPERIMENTATION (ALL PROJECTS):

_____ Abstract (on official form) present

_____ signed and dated by student

_____ Any additional forms the project may require (listed on Checklist for Adult Sponsor, Form 1).

_____ Research Paper (optional this year)

_____ Logbook

_____ COPIES of Entry Form and other forms listed above, plus the Entry Fee sent **before 1/20/2012**

ELEMENTARY AFFILIATION AGREEMENT

28th COASTAL GEORGIA REGIONAL SCIENCE AND ENGINEERING FAIR

Return ONE completed copy. **Deadline for Certification is October 5, 2011**

The _____
(Specify COMPLETE name of local or school fair)

hereby affiliates with the 28th Coastal Georgia Regional Science and Engineering Fair conducted February 2 - 4, 2012 at the College of Coastal Georgia.

The AFFILIATING FAIR acknowledges that it has thoroughly read and will comply with the requirements of the current GSEF/ISEF Rules and the current Regional Science Fair Rules, and will ensure that all schools and students participating in its fair, comply with all the requirements of the RULES, and understand that failure to meet deadlines and requirements may cause its affiliation to be revoked.

The AFFILIATING FAIR agrees to hold its science fair before January 14, 2012, to state its affiliation with CGRSEF/GSEF/ISEF in its literature, and to use the rules furnished by CGRSEF/GSEF/ISEF.

The AFFILIATING FAIR agrees to appoint a Scientific Review Committee and to provide qualified judges who will select its finalist(s) in strict compliance with the GSEF/ISEF Rules.

The AFFILIATING FAIR agrees to send Exhibitors' entry forms and fees to be received by CGRSEF at CCG in Brunswick by **January 20, 2012 at 5:00 P.M.** The CGRSEF Director agrees to direct the 28th CGRSEF and hold the event at College of Coastal Georgia on **February 2 - 4, 2012**, to arrange CGRSEF judging, to make awards at its discretion to Exhibitors in the CGRSEF, and to provide a program of awards.

Local (or school) Fair: _____

Local/School Director's Signature

Date

Local/School Director's Name (printed)

Please check if you anticipate your students participating in the afternoon activities and lunch.

Up to 4 (four) projects per elementary school are allowed.

ELEMENTARY APPLICATION FOR CERTIFICATION

28th COASTAL GEORGIA REGIONAL SCIENCE AND ENGINEERING FAIR

Return ONE completed copy. **Deadline for Certification is October 5, 2011**

1. The _____
(Specify COMPLETE name of local or school fair)

requests to be recognized as a regularly scheduled event to precede the Coastal Georgia Regional Science and Engineering Fair that is held February 2 - 4, 2012 at the College of Coastal Georgia. This recognition conveys both the invitation and the authorization for meritorious projects, exhibited in the event, to be entered in the Regional Science and Engineering Fair in strict conformance with the regulations specified in the regional booklet and in the 2011-2012 GSEF/ISEF booklets or websites.

2. LOCATION OF SCHOOL OR LOCAL FAIR:

3. DATE(S) OF YOUR FAIR (**MUST BE BEFORE January 14, 2012**):

4. FAIR DIRECTOR: _____

Mailing Address: _____
City, state, zip code + four

WORK PHONE: _____ HOME PHONE: _____

EMAIL: _____ FAX: _____

5. ANOTHER SCIENCE FAIR CONTACT: _____

Mailing Address: _____
City, state, zip code + four

WORK PHONE: _____ HOME PHONE: _____

EMAIL: _____ FAX: _____

Up to 4 (four) projects per elementary school are allowed.

JUNIOR/SENIOR AFFILIATION AGREEMENT

28th COASTAL GEORGIA REGIONAL SCIENCE AND ENGINEERING FAIR

Return ONE completed copy. **Deadline for Certification is October 5, 2011**

The _____
(Specify COMPLETE name of local or school fair)

hereby affiliates with the 28th Coastal Georgia Regional Science and Engineering Fair conducted February 2 - 4, 2012 at the College of Coastal Georgia.

The AFFILIATING FAIR acknowledges that it has thoroughly read and will comply with the requirements of the current GSEF/ISEF Rules and the current Regional Science Fair Rules, and will ensure that all schools and students participating in its fair, comply with all the requirements of the RULES, and understand that failure to meet deadlines and requirements may cause its affiliation to be revoked.

The AFFILIATING FAIR agrees to hold its science fair before January 20, 2012, to state its affiliation with CGRSEF/GSEF/ISEF in its literature, and to use the rules furnished by CGRSEF/GSEF/ISEF.

The AFFILIATING FAIR agrees to appoint a Scientific Review Committee and to provide qualified judges who will select its finalist(s) in strict compliance with the GSEF/ISEF Rules.

The AFFILIATING FAIR agrees to send Exhibitors' entry forms and fees to be received by CGRSEF at CCG in Brunswick by **January 20, 2012 at 5:00 P.M.** The CGRSEF Director agrees to direct the 28th GRSEF and hold the event at College of Coastal Georgia on **February 2 - 4, 2012**, to arrange CGRSEF judging, to make awards at its discretion to Exhibitors in the CGRSEF, and to provide a program of awards.

Local (or school) Fair: _____

Local/School Director's Signature

Date

Local/School Director's Name (printed)

Please check if you anticipate your students participating in the afternoon activities and lunch.

Up to 15 projects per middle school and up to 35 projects per high school are allowed.

JUNIOR/SENIOR APPLICATION FOR CERTIFICATION

28th COASTAL GEORGIA REGIONAL SCIENCE AND ENGINEERING FAIR

Return ONE completed copy. **Deadline for Certification is October 5, 2010**

1. The _____
(Specify COMPLETE name of local or school fair)

requests to be recognized as a regularly scheduled event to precede the Coastal Georgia Regional Science and Engineering Fair that is held February 2 - 4, 2012 at the College of Coastal Georgia. This recognition conveys both the invitation and the authorization for meritorious projects, exhibited in the event, to be entered in the Regional Science and Engineering Fair in strict conformance with the regulations specified in the regional booklet and in the 2010-2011 GSEF/ISEF booklets.

4. LOCATION OF SCHOOL OR LOCAL FAIR:

5. DATE(S) OF YOUR FAIR (**MUST BE BEFORE January 14, 2011**):

4. FAIR DIRECTOR: _____

Mailing Address: _____
City, state, zip code + four

WORK PHONE: _____ HOME PHONE: _____

EMAIL: _____ FAX: _____

5. CHAIR OF SCIENTIFIC REVIEW COMMITTEE: _____

Mailing Address: _____
City, state, zip code + four

WORK PHONE: _____ HOME PHONE: _____

EMAIL: _____ FAX: _____

6. Ensure that the SCIENTIFIC REVIEW COMMITTEE DOCUMENTATION is completed and attached.

CHAIR, SCHOOL SRC (signature)

Date

CHAIR, SCHOOL SRC (printed)

DO NOT FILL IN THIS SECTION

The above named Science Fair has been recognized as a scheduled event to precede the 28th Coastal Georgia Regional Science & Engineering Fair and has authorization for meritorious projects exhibited in said Fair to be entered in the Regional Fair.

BY _____
Kimberly Pause Tucker, Director, CGRSEF

DATE: _____

**Up to 15 projects per middle school and
up to 35 projects per high school are allowed.**



SCIENTIFIC REVIEW COMMITTEE/INSTITUTIONAL REVIEW BOARD
DOCUMENTATION (SRC/IRB)
(Junior/Senior level Institutions Only)

Return ONE completed copy. **Deadline for Certification is October 5, 2011**

Members of the Scientific Review Committee (SRC)/Institutional Review Board (IRB) of the:

(Specify COMPLETE name of local or school fair)

(Location)

are the following:

1. Chairperson:

Name _____ Title _____

Affiliation _____

Mailing Address: _____
City, state, zip code + four

WORK PHONE: _____ HOME PHONE: _____

EMAIL: _____ FAX: _____

2. Name _____ Title _____

Affiliation _____

Mailing Address: _____
City, state, zip code + four

WORK PHONE: _____ HOME PHONE: _____

EMAIL: _____ FAX: _____

3. Name _____ Title _____

Affiliation _____

Mailing Address: _____

City, state, zip code + four

WORK PHONE: _____ HOME PHONE: _____

EMAIL: _____ FAX: _____

4. Name _____ Title _____

Affiliation _____

Mailing Address: _____

City, state, zip code + four

WORK PHONE: _____ HOME PHONE: _____

EMAIL: _____ FAX: _____

SIGNED: _____

Local/School Fair Director

DATE: _____

APPENDIX

Tips to Encourage Participation

If you have talented students who are interested in science, here are some ways to encourage them to participate in a science fair.

In the Classroom

Introduce the science fair at the beginning of each semester and again, at the end of the school year to get students interested in working on projects over the summer.

Determine a plan for working within a school's semester, or by scheduling time in science classes, so that everyone can be encouraged to participate.

Stress hands-on labs with data collection in your science classes. This reinforces concepts and helps students learn the scientific method in a concrete fashion.

Urge research experiments, rather than models or collections. To continue on to an Intel[®] ISEF affiliated fair, only research experiments are allowed.

Require students to write up their lab experiments using the scientific method. Make sure they have all the parts of an experimental summary: question, hypothesis, materials, procedures, and results in chart/graph form, analysis, and conclusion.

Outside of the Classroom

Encourage students to pursue their individual interests within the scientific topic being learned, and to go beyond their classroom learning.

Start a science club to help students that are not currently enrolled in a science class and to provide extra-curricular opportunities in science exploration and discovery.

Be familiar with the Intel[®] ISEF & GSEF Rules and Regulations so that you may advise your students. Hold a seminar to explain them.

Work with the community to connect students to mentors - at the local university, hospital, or veterinary practice.

My Science & Engineering Fair Evaluation

Student Name _____ Date _____

Project Title _____

My project taught me

The hardest thing to do on my project was

The part of my project that I enjoyed most was

I could have improved on

Next year I think I will

More Information on Forms and Dates

The Intel ISEF forms constitute written documentation of what will occur in a research project. They are designed to provide the information that is needed to review the project to ensure compliance with the Intel ISEF rules and with laws and regulations that apply to the project. The forms should be filled out and signed before any research takes place. **(Only Forms 1C, 7, and the abstract are done after the research.)** The dates of the signatures reflect when the approval or consent is given.

1. [Abstract Form](#): The abstract is a summary written after experimentation that explains the project. The date signed is the date the student researcher certifies that the statements are correct. (Please note that this form does not need to be embossed/certified in any way for CGRSEF or GSEF.)

[Form 1](#): Checklist for Adult Sponsor / Safety Assessment Form

The checklist is provided so that the adult sponsor can review what information (and therefore which forms) must be provided. The date signed is the date that the sponsor first reviews the project plan.

[Form 1A](#): Student Checklist / Research Plan

Explain clearly and in detail what will be done in the research project.

On this page, the student outlines what the project is about. Items that especially need to be clear are the following:

#5 Any project conducted in a similar area of research as previous projects should be considered a continuation. If the project is a continuation, explain on Form 7 as completely as possible how the project will differ from previous experimentation because **ONLY** a new and different research project is allowed. (If based on previous research, the current year project must demonstrate significant progress.)

#6 Explain when the actual experimental procedure (not the background literature review) will begin and end because **ONLY** a 12-month project that occurred within the last 18 months before this Intel ISEF is allowed.

#7 Explain where the experimental research will be done: home, university, field. Pathogens may **NOT** be cultured at home. Research animals must be housed in school or institutional settings only. Universities, research facilities, and industrial settings will require the additional documentation of Form 1C to explain what was done at each facility.

#9 Attach a research plan (next form).

[Form 1B](#): Approval Form

These statements attest that each of these people (or committees) approves or consents to this project. The dates should be signed as described below:

- A. Student Date—they attest that they understand the possible risks and they will read and follow the rules.
- B. Parent/Guardian Date—they consent to their child doing this project.
- C. Adult Sponsor Date—indicates when they approved this project.
- D. SRC Approval BEFORE Date that the committee reviews this project BEFORE the experimentation.
- E. Projects that must be pre-approved are research in these areas: human subjects, nonhuman vertebrate animals, pathogenic agents, controlled substances, recombinant DNA, and human or animal tissue.
- F. SRC Approval AFTER Date—this applies only to projects that needed pre-approval by the SRC but were done at a research institution and were pre-approved by that institution instead of the SRC. Date signed indicates when the affiliated SRC approved this project after it was completed. Attach all documentation from the research institution showing approval of the project.

- G. Final SRC Approval—all projects must be reviewed by the SRC after the experimentation is complete and shortly BEFORE they compete in the affiliated fair. The date signed shows the date that SRC gives final approval to this project.

[Form 1C:](#) Regulated Research Institutional / Industrial Setting Form

This form explains what the student researcher actually did and is signed after the project is completed. This form is only needed if the research was done at a research institution (university lab, for example) or in an industrial setting.

[Form 2:](#) Qualified Scientist Form

On this page, the scientist explains what will be done to oversee this project. The date signed indicates the date that they approve this project (before experimentation takes place).

[Form 3:](#) Risk Assessment Form

Required for projects using hazardous chemicals, activities or devices or regulated substances. Must be completed prior to student experimentation.

Page 21 GSEF & International Rules for Precollege Science Research: Guidelines for Science and Engineering Fairs / 2006-2007

[Form 4:](#) Human Subjects and Informed Consent Form

This page is filled out by the student researcher to explain to the IRB how the safety and well being of the test subjects will be ensured. The IRB reviews the project, checks the risk level and each member signs with the date they approve this project. This review and the date signed must be BEFORE any experimentation takes place.

Copies of this form are used (for informed consent) to explain very completely to the research subject and their parent (guardian) exactly what will happen to the subject in the project. Questionnaires, sample tests, etc., MUST be given to the IRB and to the parent/guardian. If they approve, they sign with the date that they approve. (Before the experiment begins) If a photo is to be displayed, the participant signs and dates it when they give permission.

[Form 5:](#) Vertebrate Animal Form (5A and 5B)

This form is filled out by the student researcher and describes the housing and care for the animals. The bottom of the form is filled out by the supervisor or scientist and is signed and dated when they approve this project with these housing conditions. (Before experimentation begins)

[Form 6A:](#) Potentially Hazardous Biological Agents Risk Assessment Form

This form is filled out by the student researcher and is required for all research involving microorganisms, rDNA and fresh tissue, blood and body fluids. SRC/IACUC/IBC/RAC approval required before experimentation. There is a section to be completed by the designated supervisor and others to be completed by the fair's SRC.

[Form 6B:](#) Human and Vertebrate Animal Tissue Forms

This form is filled out by the student researcher and explains the source of the tissue. The designated supervisor must sign to show approval the use of this tissue and the date (before experimentation) that they approve.

[Form 7:](#) Continuation Projects Form

Any project conducted by the student or team in a similar area of research as previous projects should be considered a continuation. Explain as completely as possible how the project is different from previous experimentation because ONLY a new and different research project is allowed. (It can be based on previous research, but must be new and different research.) Date signed is the date the student researcher is certifying that this information is correct.

Most Common Paperwork Problems

1. **Incomplete Research Plan 1A**
 - a. Must include start and end date
 - b. Must include detailed research plan
 - c. Must have all work site information completed

2. **Missing final SRC signature on the Approval Form 1B**
 - a. The SRC must sign the bottom of 1B to demonstrate that the paper went through SRC review prior to competition at the local, regional, and state level.

3. **Incorrect or incomplete Abstract**
 - a. Must be in proper format
 - b. Must be without acknowledgments
 - c. Must have checks properly marked and be signed
 - d. Must properly reflect current year's work done by student

4. **Missing Designated Supervisor Form 3**
 - a. This form must be completed for projects that involve chemicals, equipment, or other hazards
 - b. Most often missing, often incomplete without description of safety precautions taken

5. **Prior year's paperwork for continuations**
 - a. Continuing projects, even those with clear demonstration of significant progress, must provide prior year's research
 - b. Consider the project a continuation if prior work has been done in general research area

PROBLEMS THAT MAY RESULT IN THE WITHDRAWAL OF THE PROJECT FROM THE REGIONAL FAIR:

1. **Vertebrate animal projects without proper SRC/IRB approval or lacking appropriate detail in the research plan.**

2. **Human subject projects without evidence of proper prior approval or informed consents.**

3. **Projects involving the culture of potentially-pathogenic and pathogenic agents without appropriate detail about materials cultured, methods, or location of culturing and storage **MUST NOT BE DONE IN A HOME ENVIRONMENT.****

4. **Continuing projects without enough detail in the research plan to demonstrate significant progress, including an abstract that is often too similar to the one submitted the previous year(s).**

5. **Projects that have eligibility questions regarding either the number of students involved in the project (team to individual or too many team members), the longevity of the research involved, or the age of the participants.**