

SPECIAL AWARDING AGENCY Judge's Manual

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Introduction

Each year more than 50 professional organizations affiliate with Science and Engineering Fair of Houston (SEFH) as Special Award Sponsors. These organizations, representing government, industry, and educational institutes vary across a wide variety of scientific disciplines and provide awards to the nearly 1,000 students attending SEFH.

Special awards may take many forms, including certificates, cash, trips, equipment, and work fellowships. The criteria for the special awards are determined by the sponsoring Special Awarding Agency (SAA).

The success of our science fair depends to a large extent on the quality of your judging. The information and guidelines here will make your task easier and more enjoyable. This fair is a competition based upon the quality of the projects and experiments done by students. You are judging the results.

The purpose of this fair is threefold:

- To stimulate in young people an active interest in science and engineering
- To provide an educational experience through exposure to the judges and to the public
- To give public recognition to talented students for the work that they have done

Fairs range in scope from the local level, which may involve one class, one school, or one district, to city, county, state, or even national levels. Science and engineering fairs operate on a step basis. Students who have won in small fairs advance to larger fairs as representatives of the fairs in which they have won. Thus, an individual might participate in a local fair, move on to a city fair, then to a regional fair and there be chosen to represent that fair in the International Science and Engineering Fair (ISEF).

Benefits of being a Special Awarding Agency at Science & Engineering Fair of Houston

- Joining an exclusive group of corporations, associations, academic institutions and other organizations that provide more than \$50,000 annually in awards, scientific trips, internships, and scholarships
- Unique one-on-one interaction with the top 1,000 young scientists and researchers in the Houston area and its surrounding counties as your employees or members serve as SEFH judges and participate in this highly-regarded and rewarding process
- Launch point for long-term relationship with designated awardees, who can become life-long members, employees and/or supporters of your organization
- PR opportunities for your organization to showcase its support of science education, including media exposure through print, online, and on social media
- Exposure and acknowledgement on SEFH SAA website, social media, and in materials publicizing the participation and awards of your organization to the attendees, parents, and guardians of SEFH
- Interaction and networking opportunities with 50 estimated SAAs, including leading members of industry and academia
- On-site and SEFH specific benefits including: registration for SAA judges; inclusion in promotional materials; designated meeting area and lunch for on-site judges; inclusion in award ceremony photography

What are Special Awarding Agencies?

Special Awards are given for work in a variety of disciplines by organizations ranging from American Industrial Hygiene to the Women Engineers Society. Special Awards categories are determined by the organizations giving the awards and may consist of a single category or of several categories. Each participating organization determines the students eligible for its awards and, from among the eligible students, the winners. Awards consist of cash, scholarships, a certificate or plaque, trips to a laboratory or to professional meetings, subscriptions to professional journals, books, equipment, etc.

Registration of a Special Awarding Agency

To register as a SAA, please visit the SEFH website at sefhouston.org. **You must complete the registration of your SAA before recruiting judges.**

SAA's that are not pre-registered before the fair date will be allowed to judge projects at SEFH, however, they will not be mentioned at the award ceremony.

Special Awarding Agency Judging Procedures

SAA's recruit their own judges to choose the winners of their awards. Please note that a judge cannot serve as both a special award judge and a place award judge. **All Special Awarding Judges must register their attendance before judging projects at SEFH.**

The sponsoring organization, through its designated judging leader, is responsible for establishing final assignments of their judges. The SEFH abstract directory serves as the initial source of topics, titles, and location of projects. Project abstracts are sent to each SAA designated judging leader one week prior to the fair. It is the responsibility of each designated SAA leader to forward abstracts to members of the organization's judging party.

On the day of the Fair by 11:30 AM, the SAA Team Leader should pick up their Judging Record Folder from the Special Award Check in table. This folder contains a reporting sheet to provide final certification of judging results for all awards. The Special Awards Leader of each judging group is responsible for the folder. To be included in the Awards Ceremony your results must be submitted to the Check in table after 2 p.m. and before 4:30 p.m. on Saturday afternoon.

We recommend that each SAA provide a minimum of three (3) judges, although the number of judges per organization varies with the scope of the awards to be given and the number of projects to be interviewed. Coordinators of Special Awards should keep in mind that judging at SEFH takes place over a relatively short period and a sufficient number of judges will make selecting winners a less arduous task.

Judges are encouraged to come 30 minutes prior to the beginning of Special Award Judging. Plan to arrive no later than 12:30 PM for the judges' lunch and briefing. Student exhibitors will enter the hall at 1:15 PM and are expected to remain at their projects until 4:00 PM.

Judges should plan to spend about ten minutes with each project. Let the Judges' check in desk know if an exhibitor is not at their display. If the exhibitor cannot be found, your organization may choose to either evaluate the project board or disqualify it from your award's consideration.

Projects, whether individual or team, are considered the same. If you chose a project

which is incidentally a team project, be sure you have sufficient awards for each team member. Each project will have copies of their Abstract at their project. As you talk with students, the lead judge should pick up a copy of the Abstract of each project that you will consider for an award.

Final Certification of results is not official until the Leader has:

- Returned the Judging Record Folder and its certification sheet to the SAA check in table (Appendix A)
- Reviewed computer-generated documents to confirm proper inclusion of each award winner
- Signed and returned the printed documentation provided

***** Final awards documentation must be received before the special awards leader leaves the judging area. Failure to do so will result in the exclusion of the award from the Award Ceremony**

Judging Criteria

Special Award Judges receive criteria and coordination instruction through the organization they are representing and it's designated judging Team Leader. This Team Leader is responsible for establishing final assignments of their judges.

An SAA may choose to score projects based on criteria set forth by their organization. We also offer a scoring criterion found in the "Judging Record Folder" as suggestions to aid in your judging process. The judging sheet may be of value to you and your judges as they go out to review the projects (Appendix B).

Judging Tips for Special Awarding Agencies

Every SEFH affiliated fair has its own methodology for judging projects at their fair. We provide the following tips and judging criteria (Appendix C) as suggested aids in your process. The following points may be of value to you and your judges as they go out to review the projects.

Judges

- Examine the quality of the student's work, and how well the student understands their project and area of study. The physical display is secondary to the student's knowledge of the subject. Look for evidence of laboratory, field, or theoretical work, not just library research or gadgeteering.
- Judges should keep in mind that competing in a science fair is not only a competition but an educational and motivating experience for the students. The high point of the Fair experience for most of the students is their judging interviews.
- Students may have worked on a research project for more than one year. However, for judging, ONLY research conducted within the current year is to be evaluated. Although previous work is important, it should not unduly impact the judging of this year's project. See Form 7 displayed at their booth for detail on previous work.
- Generally, judges represent professional authority to student participants. For this reason, judges should use an encouraging tone when asking questions, offering suggestions, or giving constructive criticism. Judges should not criticize, treat lightly, or display boredom toward projects they personally consider unimportant. Always give credit to the student for completing a challenging task and/or for their success in previous competitions.
- Compare projects only with those competing at this Fair and not with projects seen in other competitions or scholastic events.
- It is important in the evaluation of a project to determine how much guidance was provided to the student in the design and implementation of their research. When research is conducted in an industrial or institutional setting, the student should have documentation, most often the Intel ISEF Form 1C, that provides a forum for the mentor or supervisor to discuss the project. Judges should review this information in detail when evaluating research.

Please be discreet when discussing winners or making critical comments in elevators, restaurants, or elsewhere, as participants, teachers or adult escorts might overhear. Results are confidential until announced at the awards ceremony. The individual judges for both Special Awards and Place Awards are responsible for ensuring that all items associated with judging, except for the official results certification, are collected and destroyed after judging.

Student Participants/Judge Interaction

At SEFH, we believe that all Participants are already winners. For many of these students, this week is the culmination of a year of work and passion for their research. While we strongly encourage you to truly probe the extent of the Participant's knowledge, it is also important to make sure that each Participant's overall SEFH experience is a positive one. We hope that the SAA judges understand that each Participant can be quite nervous and under some level of stress. Please be aware that the Participants are students on the first step of a STEM career and we hope through this competition to encourage them to continue to pursue science, engineering, and math.

If there is a Participant that you would like to connect with about further research opportunities or questions about their project, send an email to info@sefhouston.org with the Participant's name and/or project ID. DO NOT leave a personal business card, personal contact information behind with the Participant, or request their contact information. We will facilitate communication between yourself and the Participants. Participants have also been informed to not provide personal contact information or to accept contact information from others.

If at any point you view or are informed about an unfavorable or inappropriate interaction between a judge and a Participant(s), please report that information or have the Participant(s) report that information to the Associate Fair Director who will be located at the Central Check in station. It is important to foster a climate of open communication where all participants have an enjoyable experience during judging day.

Fair Project Categories

The categories listed below are those that will be used at SEFH.

Many projects could easily fit into more than one SEFH category. We highly recommend that your organization review abstracts from similar categories to determine what categories and projects to judge. For definitions of each category, visit the website sefhouston.org.

Animal Science	Energy & Transportation	Mathematics
Behavioral & Social Sciences	Environmental Sciences	Medicine & Health
Biochemistry & Microbiology	Engineering: Aerospace	Physics & Astronomy
Chemistry	Engineering: Chemical	Plant Sciences
Computer Sciences	Engineering: Civil/ Electrical & Mechanical	Robotics & Intelligent Machines
Earth & Space Sciences	Engineering: Materials & Bioengineering	

Attire

Please dress in business attire. Be sure to wear comfortable shoes. Participants are instructed to wear business attire. Judging day will certainly be exciting, but it will also be very long. It is important to make sure you are comfortable. There will be limited seating throughout the Exhibit Hall floors if needed.

Award Ceremony/Post Fair Follow-up

The Awards Ceremony will be held on February 22, 2020 in the Houston Room which is located in the University of Houston Student Center South. Winners of all awards are notified of their achievement in the days leading up to the event. All SAAs are encouraged to participate in the ceremony by presenting their award. SAAs are responsible for providing SEFH with the material to be awarded (e.g. certificates, gift cards, monetary gifts, award letters, etc.) two weeks prior to the Award Ceremony. If you chose a project which is incidentally a team project, be sure you have sufficient awards for each team member. SEFH will not be held responsible for organizing awards given the morning of the Award Ceremony.

In the event a tangible item is not presented to Awardees, SEFH will issue a letter notifying the student that the SAA responsible for the award will contact them in regards to it. Each SAA will receive their list of winners which includes the students name, teacher name, parent name and email. Due to FERPA rules and regulations, SEFH will not send out student personal information.

It is the responsibility of each organization to contact and make arrangements with Awardees once the Award Ceremony date has passed.

Fair Location

George R. Brown Convention Center
Exhibit Hall E
1001 Avenida De Las Americas
Houston, TX

Fair Parking

Please check the SEFH website for parking updates.

Special Awarding Agency Schedule

2020 Schedule

Saturday, February 15, 2020

11:30 AM	Special Award Agency Team Leader Check-in
12:00 PM – 1:00 PM	Lunch
1:15 PM – 4:15 PM	Phase II and Special Awarding Agency Judging
3:30 PM – 3:45 PM	Grand Award Judging Transition (Note: If a project is moved to Grand Award Judging, the project will not return to the judging floor.)
4:30 PM	Final Submission of results
4:30 PM – 6:30 PM	Public Day
6:30 PM	Fair closes

Saturday, February 22, 2020

12:00 PM – 1:00 PM	Award Presenter Check-in
1:00 PM – 3:00 PM	Awards Ceremony

Helpful Links

Fair main website:

<http://www.sefhouston.org>

Contact SEFH:

info@sefhouston.com

Appendix A



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SPECIAL AWARDING AGENCY WINNER CERTIFICATION REPORT

Thank you for serving as a Special Awarding Agency!
This certification report will be the only form of winner entry. Please be sure and submit this for to the SAO Check-in table before you depart from the fair. All forms are due no later than 4:30 PM.

A list of winners' contact information will be sent to your lead judge via email within the next few days. Thank you for your service and commitment to the future of STEM, see you next year!

Name of Special Awarding Organization: _____
Name of Award: _____

PROJECT ID	ABBREVIATED TITLE	PLACE (if designated)	AWARD DESCRIPTION

Lead Judge Signature: _____

Appendix B



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SPECIAL AWARDING AGENCY JUDGE SCORESHEET

Criteria

I. <i>Research Question</i>	IV. <i>Creativity</i>
II. <i>Design and Methodology</i>	V(a). <i>Presentation: Poster</i>
III. <i>Execution</i>	V(b). <i>Presentation: Interview</i>

Category: _____

Division: _____

PROJECT NUMBER	PROJECT TITLE	Score each project relative to total points listed.						TOTAL
		I.	II.	III.	IV.	V.(a)	V.(b)	
1		10	15	20	20	10	25	
Comments:								
2		10	15	20	20	10	25	
Comments:								
3		10	15	20	20	10	25	
Comments:								
4		10	15	20	20	10	25	
Comments:								
5		10	15	20	20	10	25	
Comments:								

Criteria							
I. <i>Research Question</i>	II. <i>Design and Methodology</i>	III. <i>Execution</i>	IV. <i>Creativity</i>	V(a). <i>Presentation: Poster</i>	V(b). <i>Presentation: Interview</i>		

PROJECT NUMBER	PROJECT TITLE	Score each project relative to total points listed.						TOTAL
		I.	II.	III.	IV.	V.(a)	V.(b)	
6		10	15	20	20	10	25	
Comments:								
7		10	15	20	20	10	25	
Comments:								
8		10	15	20	20	10	25	
Comments:								
9		10	15	20	20	10	25	
Comments:								
10		10	15	20	20	10	25	
Comments:								

JUDGE SIGNATURE: _____

Appendix C

JUDGING CRITERIA FOR PROJECTS

SCIENCE

- I. Research Question (10 points)**
 - clear and focused purpose
 - identifies contribution to field of study
 - testable using scientific methods
- II. Design and Methodology (15 points)**
 - well designed plan and data collection methods
 - variables and controls defined, appropriate, and complete
- III. Execution: Data Collection, Analysis, and Interpretation (20 points)**
 - systematic data collection and analysis
 - reproducibility of results
 - appropriate application of mathematical and statistical methods
 - sufficient data collected to support interpretation and conclusions
- IV. Creativity (20 points)**
 - project demonstrates significant creativity in one or more of the above criteria
- V.a. Presentation: Poster (10 points)**
 - logical organization of material
 - clarity of graphics and legends
 - supporting documentation displayed
- V.b. Presentation: Interview (25 points)**
 - clear, concise, thoughtful responses to questions
 - understanding of basic science relevant to project
 - understanding 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

ENGINEERING

- I. Research Question (10 points)**
 - description of a practical need or problem to be solved
 - definition of criteria for proposed solution
 - explanation of constraints
- II. Design and Methodology (15 points)**
 - exploration of alternatives to answer need or problem
 - identification of a solution
 - development of a prototype/model
- III. Execution: Construction and Testing (20 points)**
 - prototype demonstrates intended design
 - prototype has been tested in multiple conditions/trials
 - prototype demonstrates engineering skill and completeness
- IV. Creativity (20 points)**
 - project demonstrates significant creativity in one or more of the above criteria
- V.a. Presentation: Poster (10 points)**
 - logical organization of material
 - clarity of graphics and legends
 - supporting documentation displayed
- V.b. Presentation: Interview (25 points)**
 - clear, concise, thoughtful responses to questions
 - understanding of basic science relevant to project
 - understanding 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

