

SPECIAL AWARDING AGENCY
Judge's Manual

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Introduction

Due to the effects of COVID-19. SEFH 2022 will require all participants to wear face masks throughout the event regardless of medical exemptions.

The SEFH planning committee will continue to monitor public health conditions in our region as the fair approaches and will keep you informed on any additional precautions or changes to our plans for the fair. For the most up-to-date information, please refer to the [SEFH website](#).

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 Awards?

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

Judge Recruitment:

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.** Special Awards Judges must register at <https://www.aitracq.com/specialawardsjudge.php>

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.

Project Abstracts:

The SEFH abstract directory serves as the initial source of topics, titles of all projects cleared to compete at the fair. Abstract directory access instructions will be sent to the SAA's designated judging leader prior to judging. Prior to judging, it is recommended that a review of student abstracts be conducted to identify projects aligned with your organization and/or to reduce the number of projects to those in which your organization would like to further review on the day of the fair.

Special Awarding Agency Check-In Process:

To maintain a social distance on the day of the fair, SEFH has modified the timeframe of Special Award Judge Check-in. Starting at 12:45 PM through 1:45 PM, 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 starting at 2 p.m. and before 5:45 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 1:30 PM. Student exhibitors will enter the hall at 1:45 PM and are expected to remain at their projects until 5:00 PM.

Judges should plan to spend about ten minutes with each project. In the case where a student(s) is not at their project, consider skipping the project and returning at a later time. If after multiple attempts the students continues to be away from the project, please inform the Check-In desk. 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 day 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.

Life Science	Physical Science	Engineering
Animal Science	Chemistry	Aerospace Engineering
Behavioral & Social Sciences	Earth and Environmental Sciences	Biomedical Engineering
Biochemistry & Microbiology	Energy and Transportation	Chemical Engineering & Materials Science
Medicine and Health	Mathematics	Embedded Systems
Plant Sciences	Physics and Astronomy	Engineering Mechanics
	Systems Software	Environmental Engineering
		Robotics and Intelligent Machines

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 virtually on March 05, 2022. Winners of all awards are notified of their achievement in the days leading up to the Award Ceremony.

This year, all SAAs are encouraged to participate in the ceremony by submitting a 1-minute clip of a representative introducing the SAA and a description of the award being presented. This is will done in place of having an SEFH representative reading of the Agency Description during the ceremony.

If your SAA is interested in submitting a clip, the clip may not exceed 1-minute. The video will be played prior to the announcement of the award recipients names. A link to the video clip or file must be submitted to SEFH, info@sefhouston.org, no later than February 19, 2022.

As we are not having an in-person Awards Ceremony, each SAA is responsible for mailing awardees any and all material to be awarded (e.g. certificates, gift cards, monetary gifts, award letters, etc.) It is the responsibility of each organization to contact and make arrangements with Awardees. SEFH will not be responsible for mailing any awards for 2022.

Each SAA will receive their list of winners which includes the students name, teacher name, parent name and email. Due to FERPA and COPPA rules and regulations, SEFH will not send out student personal information.

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

December

Special Awarding Agency portal opens for registration.

Saturday, February 26, 2022

12: 45 PM	Special Award Agency Team Leader Check-in
12:45 PM – 1:45 PM	SAA team meetings and organization of judge teams
1:45 PM – 5:00 PM	Phase II and Special Awarding Agency Judging
4:15 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 – 6:30 PM	Grand Award Judging
5:45 PM	SAA Final Submission of results
5:15 PM	Fair closes

Saturday, March 05, 2022

7:00 PM Virtual Awards Ceremony

Helpful Links

Fair main website:

<http://www.sefhouston.org>

Contact SEFH:

<mailto:info@sefhouston.org>

Appendix A

	Presented by 																																												
<h3 style="margin: 0;">SPECIAL AWARDING AGENCY WINNER CERTIFICATION REPORT</h3> <p style="margin: 5px 0;">Thank you for serving as a Special Awarding Agency!</p> <p style="margin: 5px 0; font-size: small;">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.</p> <p style="margin: 5px 0; font-size: small;">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!</p> <p style="margin: 5px 0;">Name of Special Awarding Organization: _____</p> <p style="margin: 5px 0;">Name of Award: _____</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 10%;">PROJECT ID</th> <th style="width: 40%;">ABBREVIATED TITLE</th> <th style="width: 15%;">PLACE (if designated)</th> <th style="width: 35%;">AWARD DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p style="margin: 5px 0; text-align: center;">Lead Judge Signature: _____</p>		PROJECT ID	ABBREVIATED TITLE	PLACE (if designated)	AWARD DESCRIPTION																																								
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Appendix B

		SPECIAL AWARDING AGENCY JUDGE SCORESHEET																											
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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

