



Austin Energy Regional Science Festival 2018
IMPORTANT GUIDELINES AND CHANGES
JUNIOR/SENIOR DIVISION

2018 CHANGES, MODIFICATIONS AND REMINDERS

NOTE: Parking will be free of charge at the Palmer Events Center parking garage to all participants.

- Improved online registration and project management system.
- No paperwork will need to be submitted. All is handled online.

ISEF Rules Changes:

- Human Participant Studies Clarification: If a student does human participant research in a Regulated Research Institution (i.e. university, clinic, etc.). The student must have separate IRB approval documentation from each of those institutions.

AERSF Changes:

- Schools will no longer be charged the "School Fee" of \$45.
- Project fee has increased to \$20 per project.
- Category Name Change: "Health Sciences" has been renamed to "Health Sciences/Bio-Medical Engineering (BMED)"
- New updates to Scienteer (online system)
- Students can now access previous years Research Plan and Abstract via Scienteer.

Reminders:

- Schools and students must use Scienteer (online system) to participate
- Scienteer accounts should be created before a student starts research
- Students must obtain parental permission to create a student account
- Schools invoices will be e-mailed upon registration. Invoices must be paid before the deadline.

Major updates to Scienteer were made to make navigation, performance and management easier but the steps involved have not changed.



Austin Energy Regional Science Festival 2018 JUNIOR AND SENIOR SCHEDULE

ORIENTATION

There are two possible orientation dates for teachers and judges. Please choose the one that best fits your schedule.

TEACHER ORIENTATIONS

Thursday, 6:00 – 7:30 p.m. Orientation for Secondary Teachers
September 7, 2017 Austin Energy Assembly Room
721 Barton Springs Rd, Austin, TX 78704

Thursday, 6:00 – 7:30 p.m. Orientation for Secondary Teachers
September 14, 2017 Anderson High School Cafeteria
8403 Mesa Drive Austin, TX 78759

JUDGE ORIENTATIONS

Thursday, 5:30 – 7:00 p.m. Orientation for Judges
February 8, 2018 Anderson High School Cafeteria
8403 Mesa Drive Austin, TX 78759

Tuesday, 5:30 – 7:00 p.m. Orientation for Judges
February 13, 2018 Austin Energy Assembly Room
721 Barton Springs Road Austin, TX 78704

DOCUMENT REVIEW AND SUBMISSION DEADLINES

Thursday, 5:00 p.m. Deadline for Online **School** Registration, Deadline for
February 1, 2018 Online **Student** Science Project Registration - Deadline for
Online Registration for **Judges** and **Volunteers** - Deadline
to submit complete school packet to our office (See
Teacher's Checklist or Registration Form for details.)

All registrations must be separately completed online for each project, volunteer and judge. Schools only register once. Register online at www.sciencefest.austinenergy.com. **All registrations MUST BE Finalized by 5:00 p.m. on Thursday, February 1, 2018.** Late entries will be charged Late Fee Rates and accepted only if space is available. Schools with incomplete packets will also be charged late fee rates.

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FESTIVAL SCHEDULE

Wednesday February 21, 2018	3:00 – 7:00 p.m.	Check-in and set-up for the Junior and Senior Projects
Thursday February 22, 2018	8:00 a.m.	Senior Division Judges Sign-in, Review Requirements & Assignments
	9:00 a.m. – 12 noon	Senior Division Judging (<i>Attending students must be at their project</i>) <i>It is recommended that students be at their project at 8:45 a.m., 15 minutes before judging begins.</i>
	12:45 p.m.	Junior Division Judges Sign-in, Review Requirements and Assignments
	1:00 – 4:00 p.m.	Second-tier Judging for the Senior Division
	1:30 – 4:30 p.m.	Junior Division Judging (<i>Attending students must be at their project</i>) <i>It is recommended that students be at their project at 1:15 p.m., 15 minutes before judging begins.</i>
	4:30 – 9:30 p.m.	Public Viewing of Junior and Senior Division Projects
	7:00 – 9:30 p.m.	Junior and Senior Awards Ceremony
	9:30 – 10:30 p.m.	Dismantle Projects

Junior/Senior projects not picked up by 10:30 p.m. on February 22 will be set aside until Saturday, February 24. These projects can be picked up at Palmer Events Center on February 24 between 4:30 p.m. – 5:00 p.m. **Projects not picked up by 5:00 p.m. on February 24 will be discarded.**



Austin Energy Regional Science Festival 2018 STUDENT CHECKLIST – JUNIOR/SENIOR DIVISION

Please use this checklist to help complete the registration and check-in process for the Austin Energy Regional Science Festival.

1. Once your school has set up its online account, if you used Scienceteer last year, you can log in with your username and password at www.scienceteer.com . If you are new to Scienceteer, your teacher must give you a link to create an account.
2. Each and every student must have their own account on Scienceteer. (even if they are going to be on a team)
3. Each student must have a unique e-mail address (different from other students or teachers).
4. If you lose your password, contact your teacher, they can reset it.
5. Make sure your parents have an e-mail address. If they do not, help them create one with hotmail, gmail or yahoo, etc. The system will guide you in getting your parental permission. If you parents have no access to e-mail Scienceteer will instruct you to print out the forms, have them signed, and return them to your teacher.
6. Students can't access the online system until their parents have given permission.
7. Login at scienceteer.com and complete the required steps to setup your profile and signature.
8. Follow the online steps to complete your project.
9. The online system will guide you to create and fill out your forms and research plan. Follow the steps, step-by-step. The system will take care of your signatures as well.
10. If your school selects your project to advance see below:

Wednesday, February 21, 2018

- Check in at Palmer Events Center*, 900 Barton Springs Road, South Lobby, 3:00 p.m. – 7:00 p.m.
- Clear Registration, Display & Safety, and set up your project

Thursday, February 22, 2018

- Please be at your project 15 minutes before judging. Judging begins at 9:00 a.m. for Seniors and 1:30 p.m. for Juniors.
- If possible, attend the Awards Ceremony, 7:00 p.m. – 9:30 p.m. to celebrate your achievements and the accomplishments of other Central Texas students.
- Dismantle projects between 9:30 p.m. – 10:30 p.m. Projects not picked up by 10:30 p.m. will be set aside until Saturday, February 24, 2018 and can be picked up that day between 4:30 p.m. – 5:00 p.m. Projects not picked up by 5:00 p.m. on Saturday, February 24, 2018 will be discarded.

* Parking will be free of charge for all participants at the Palmer Events Center Garage.



Austin Energy Regional Science Festival 2018

SCHOOL REGISTRATION FEES AND INFORMATION

JUNIOR/SENIOR DIVISION

REGISTRATION STEPS

- Login to your Scienteer account at www.scienteer.com and follow the steps.
- Finalize school registration online at by selecting your winners in Scienteer.
- Register volunteers and judges online at www.sciencefest.org
 - Each school should provide one judge **and** one volunteer for every 10 registered school projects.

NOTE: All registration **MUST BE FINALIZED** by the deadline of February 1, 2018.
Late entries will be charged late fee rates and accepted only if space is available.

HOW TO CALCULATE REGISTRATION FEES LATE FEE: \$35 per project

I. Project Registration Fees (Max - 60 projects)
Number of Projects _____ x \$20 = \$_____

HOW TO PAY REGISTRATION FEES

Your school will be e-mailed an invoice from the Austin Science Education Foundation after The school finalizes registration online.



Austin Energy Regional Science Festival 2018 JUDGING CRITERIA FOR JUNIOR/SENIOR PROJECTS

Student(s) _____ School _____

Category _____ Row: Project # _____ Judge # _____

Title _____



Students are judged on EITHER 2a OR 2b

I. CREATIVE ABILITY

A. Idea for project	1 Assigned by teacher	3 Developed jointly with teacher	5 Originated by student
B. Approach used	1 "Cookbook"	3 Followed directions	5 Devised own approach
C. Analysis & interpretation of data	1 Minimal analysis	3 Notices relationships	5 Relationships clearly defined and implications noted
D. Materials & development	1 Basic "Kit"	3 Basic with modifications	5 Student created

2a. SCIENTIFIC THOUGHT for non-engineering-related

A. Posing the problem	1 Problem not evident	3 Problem unclear or untestable	5 Testable problem
B. Experimental design	1 No clear plan	3 Poorly organized plan	5 Logical approach
C. Variables/controls	1 No variables or controls stated	3 Variables confounded or not clearly stated	5 Variables listed, controls used
D. Conclusion	1 Unclear or inadequate conclusion	3 Weak conclusion not clearly supported by data	5 Conclusion clearly supported by project data

2b. ENGINEERING for engineering-related projects

A. Engineering goals	1 No clear goals established	3 Goals weak/incomplete	5 Goals clearly established
B. Design criteria	1 No clear plan	3 Disorganized	5 Logical approach
C. Feasibility	1 Neither workable nor economical	3 Workable OR economical	5 Workable and economical
D. Relevance	1 No potential use	3 Unclear potential application	5 Potential application demonstrated

3. SKILL

	1 Simple project poorly done	3 Simple project done well	5 Difficult project done well
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4. THOROUGHNESS

A. Adequate data	1 Insufficient data to support conclusions	2 Adequate data	3 Abundant data; limitations noted
B. Subject knowledge	1 Minimal knowledge of subject	2 Adequate knowledge of subject	3 In-depth subject knowledge relevant to work
C. Further research indicated	1 None cited	2 Few questions or further applications noted	3 Suggestions for further study and applications noted

5. CLARITY OF COMMUNICATION

A. Exhibit display	1 Display information unclear, disorganized, or incorrect	3 Display somewhat clear and informative	5 Display information clear and well presented
B. Written report & interview	1 Report missing or minimal information given	3 Report somewhat informative and moderate knowledge orally expressed	5 Concise, clear expression of knowledge, both written and oral

6. TEAM

A. Contribution of team members	1 Teamwork not evident	3 Members' roles not clearly demonstrated	5 Contributions of all members evident
B. Coordinated efforts	1 Presentation not coordinated	3 Presentation somewhat coordinated	5 Coordinated and Effective Presentation

Please place notes and comments on the back.

Sciunteer Student Steps

A. Registration & Parental Permission

B. Pre-Project steps:

- 1: Title and Category
- 2: Team Status
- 3: Project Start Date
- 4: Survey Questions
- 5: Research Plan
- 6: Extra Forms
- 7: Bibliography
- 8: Research Locations
- 9: External Signatures
- 10: Project Approval Method
- 11: Teacher Approval
- 12: IRB Approval
- 13: SRC Approval

C. Experimentation TIME

D. Post-Project Steps

- 14: Project End Date
- 15: Form 1C Signature
- 16: SRC Post-approval checks
- 17: Project Summary
- 18: Abstract

Confirmation, Choose New Category. (if advancing)

Survey Completion (if not advancing)

Student Research General Guidelines and Time Requirements

1. Create a reasonable timeline with specific goals and due dates. All projects will have to be 100% complete by the deadline in January.
2. Student Research at middle and high school level is a very involved process requiring a lot of preparation before students are even allowed to start experimenting.
 - a. 1 Week
 - i. Choosing a Topic: This is often the most difficult process. Students will need guidance. Students should be given assignments to be discussed in class (see “**Topics for Discussion**” attachment). The trick is to forget about science for a moment, try to discover each student’s passion and interests. A student doing research on a topic they enjoy will make them more dedicated and make the process more rewarding. Once they have a hobby or an interest, it is easy to find the science involved (science is in everything).
 - b. 2-3 Weeks
 - i. Start obtaining parental permission for each student to conduct research. This can take time so it should be an on-going activity during this phase. Parental permission must be obtained before the student starts experimentation.
 - ii. Do background research on selected topics. This is important! Students should learn as much as they can about their topic and all science related to it. That way they don’t repeat someone else’s experiment or mistakes. They should become experts in their topic before they start experimenting.
 - iii. Formulate a specific question, hypothesis or engineering goal. It should be very narrow, testable and focused. Start thinking about a procedure and how you will test.
 - iv. Think of a good scientific title for the project that is descriptive. A judge should be able to tell what a project is about, just by reading the title. Titles should NOT be creative, they should be DESCRIPTIVE:
 1. Bad Example (1): “Magnetism vs Plants”
 2. Bad Example (2): “Got Magnets?”
 3. Good Example : “The effect of 100 gauss magnetic field on the growth rate of Phaseolus vulgaris over the period of 10 days”

In the above “good” example, notice how the title is very specific to what exactly the student is testing:

- 100 gauss magnet: (typical refrigerator magnet with a specific strength of 100 gauss).
- Phaseolus vulgaris: Scientific name of the particular plant the student tested
- 10 days: The specific time scope of the experiment

- c. 2 or more weeks
 - i. Write up a research proposal, what you intend to do, what materials you will use and step by step instructions you will use. Include at least 5 legitimate references (bibliography) from where you retrieved your background research. References should be in APA format. "Google" or "Wikipedia" are not valid references. They can be web based but should be real peer reviewed publications.

- d. 1 or 2 weeks

Teacher will review all proposals before students begin their research. Some research will require prior review by special committee (in addition to the teacher).

 - i. Vertebrate Animal Studies
 - ii. Studies involving Human Participants as test subjects (including opinion surveys, etc.)
 - iii. Studies involving microorganisms (bacteria mold, etc.) (MUST BE DONE IN A LAB, CAN'T BE DONE AT HOME!!)

The online system will guide the student and teacher through this process step by step.

- e. Once the project has been approved, the student may begin the actual experimentation. The amount of time a student needs will depend upon the study.

- f. 1 week:
 - i. When the study is complete, the student will analyze and summarize their data and write an Abstract (brief summary of project including their question, hypothesis or engineering goal, general procedure and conclusions). The Abstract will be 250 words or less.

- g. 1 -2 Weeks
 - i. Students will create their Display boards to help them present their information to the judges. Students should practice their presentations. A good presentation will NOT be a memorized speech. Students should present as if they are teaching the subject to others. Judges will interact, ask questions etc. A student will have about 10 minutes to present and answer questions from each judge.

Topics for Discussion

1. List three of your favorite hobbies or things you enjoy doing.
2. If you had magic powers, list three things you would do to change the world.
3. If you were a great inventor, list three things you might create or make better.
4. What is the most fun thing you have ever done?