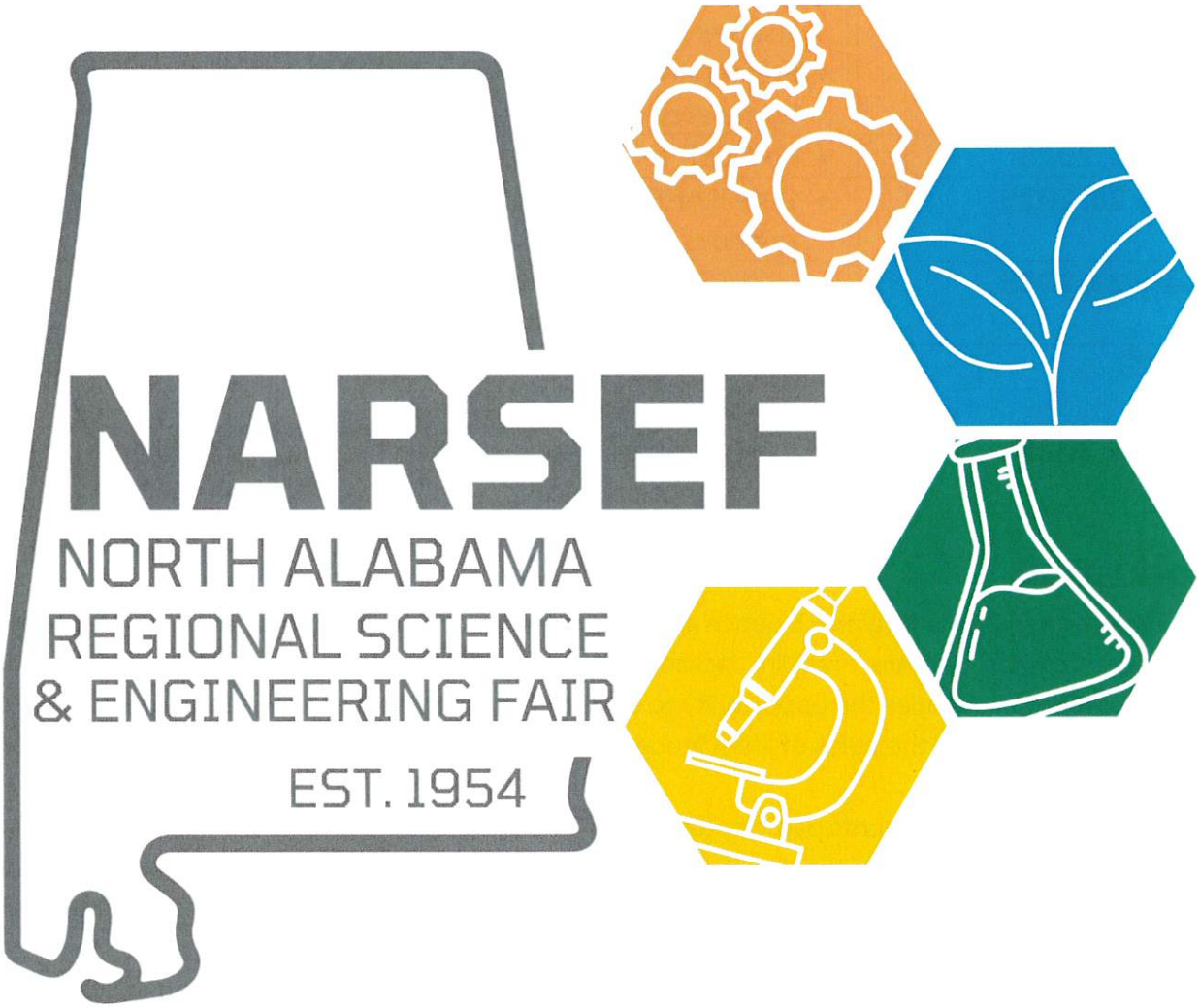

2024 – 2025 RULES AND PARTICIPATION HANDBOOK

Important Dates to Know

Opens August 19, 2024 **Closes December 13, 2024**	• Online teacher registration – must be completed before students can register
Opens August 26, 2024 **Closes January 24, 2025**	• Online student registration – must be completed with the teacher or project sponsor • Participant's research plan, abstract, and all forms must be completed by this date
February 5, 2025	• NARSEF fee of $30 per **student** due
February 28, 2025	• Late NAREF fee of $60 per **project** due if not paid by previous deadline
February 28, 2025	• NARSEF In-person full-day event at the University of Alabama in Huntsville – Judging during the day
April 2025	• Alabama Science & Engineering Fair (ASEF) held in Auburn, Alabama at Auburn University
May 10 – 16, 2025	• International Science and Engineering Fair (ISEF) will be held in Columbus, Ohio

Introduction

The North Alabama Regional Science and Engineering Fair (NARSEF) provides 6th – 12th grade students from Colbert, Cullman, Fayette, Franklin, Jackson, Lamar, Lauderdale, Lawrence, Limestone, Madison, Marion, Marshall, and Morgan counties the opportunity to showcase their independent or team research and design projects to local experts in the fields of life science, physical science, environmental studies, psychology, and engineering.

Last year, over 75 students participated, and over 63% of the presenters won an award or advanced to the state fair. The grand prize for the senior division (9th – 12th grades) is a trip to the International Science and Engineering Fair (ISEF). This fair brings together hundreds of science fair winners from all over the world to compete against each other.

The opportunities that NARSEF and their corporate donors have provided have helped to shape the future of hundreds of local students in addition to helping support and build STEM education programs throughout the North Alabama Region.

This handbook has been prepared by Amy Beth Ford and the NARSEF staff who can be reached at narsef@uah.edu or 256.824.6877.

Registration Checklist for NARSEF

1. Online Student Registration – **August 26, 2024 – January 24, 2025**
   a. Teachers must register themselves first using the STEM Wizard platform prior to allowing students to register by **January 24, 2025**. Teachers from previous years can email narsef@uah.edu and request that their account be re-activated.
      i. Teacher registration opens on **August 19, 2024**
      ii. Teacher registration closes on **December 13, 2024**
   b. Once the registration deadline has passed, NO ADDITIONAL students will be allowed to register. Therefore, teachers – please double check your NARSEF registration list against your class rosters.
2. Forms, Abstract, and Research Plan Submissions – **January 24, 2025**
   a. Research plan must be in Future Tense and distinguish between role of mentor and role of student
   b. Teacher is the "Adult Sponsor" and Mentor is the "Supervising Scientist"
   c. Dates on ALL forms must be BEFORE the "Actual Start Date" on Form 1A (except 1C and 5B)
   d. Forms 1, 1A, 1B, and 3 are required for all projects.
3. NARSEF Payment – **February 5, 2025**
   a. It is essential that you register only register students that you are very confident will be ready for NARSEF
   b. Fees are non-refundable regardless if a student/team drops or is disqualified
   c. Cost will be $30 **per student** for the regular deadline submission of all materials
   d. If the fee is not paid by February 5, 2025, the fee will increase to **$60 per project** and is due by February 28, 2025.

Project Categories

Many projects could easily fit into more than one NARSEF category. We highly recommend choosing the one that your project fits the best. NARSEF staff have the liberty to combine or change categories as needed. For questions on which category your project fits into best, please contact **narsef@uah.edu.**

NARSEF Categories	
100 – Animal & Plant Sciences	700 – Earth and Environmental Sciences & Environmental Engineering
200 – Behavioral & Social Sciences	800 – Biomedical Engineering & Biomedical and Health Sciences
300 – Cell, Molecular, Microbiology, & Biochemistry	900 – Physics, Astronomy, & Mathematics
400 – Chemistry	1100 – Robotic Systems & Communication Technology
500 – Engineering	1200 – Computational and Bioinformatics Sciences
600 – Energy	

Rules for Participating in NARSEF

Ethics Statement

Scientific fraud and misconduct are not condoned at any level of research or competition. This includes plagiarism, forgery, use or presentation of other researcher's work as one's own, and fabrication of data. Fraudulent projects will fail to qualify for competition in affiliated fairs and the ISEF. NARSEF reserves the right to revoke recognition of a project subsequently found to have been fraudulent.

Eligibility

1. Any student in grades 6-12 or equivalent, enrolled in a public, private, parochial, or home school in the region covered by NARSEF (Colbert, Cullman, DeKalb, Fayette, Franklin, Jackson, Lamar, Lauderdale, Lawrence, Limestone, Madison, Marion, Marshall, and Morgan counties) is eligible to participate in NARSEF.
2. Students may not have reached 21 years of age, on or before May 1st of the event year.
3. Team projects may have a maximum of three team members. Each team is encouraged to appoint a team leader to coordinate the work and act as spokesperson. However, each member of the team should be able to serve as spokesperson, be fully involved with the project, and must be familiar with all aspects of the project. The final work should reflect the coordinated efforts of all team members and will be evaluated using similar rules and judging criteria as individual projects.

General Requirements

1. All students competing in NARSEF must adhere to all of the rules as set forth in this document.
2. All projects must adhere to the Ethics Statement.
3. It is the responsibility of the student researcher(s) and the Adult Sponsor to evaluate the study to determine if the research will require forms and/or review and approval prior to experimentation, especially projects that include human participants, vertebrate animals, or potentially hazardous biological agents.
4. Projects must adhere to local, state, and U.S. Federal laws, regulations, and permitting conditions. In addition, projects conducted outside the U.S. must also adhere to the laws of the country and jurisdiction in which the project was performed.
5. The use of non-animal research methods the use of alternatives to animal research are strongly encouraged and must be explored before conducting a vertebrate animal project.
6. Introduction or disposal of non-native and/or invasive species (e.g. insects, plants, invertebrates, vertebrates), pathogens, toxic chemicals, or foreign substances into the environment is prohibited. It is recommended that students reference their local, state, or national regulations and quarantine lists.
7. NARSEF projects must adhere to ISEF display and safety requirements.

Project Display

Maximum Size of Project Display

- Depth (front to back) - 30 inches or 76 cm
- Width (side to side) - 48 inches or 122 cm
- Height (floor to top) - 108 inches or 274 cm
- All project materials and support mechanisms must fit within the project dimensions
- At NARSEF, fair-provided tables will not exceed a high of 36 inches (91 cm)
- If a table is used it becomes part of the project and must not exceed the allowed dimensions

Display Content for Projects Conducted at a Research Institution

The display must reflect only the work conducted by the student. Minimal reference to mentor's or other researcher's work must only reflect background information or be used to clarify differences between student's and others' work.

Photograph/Image Display Requirements

Display of photographs of other people other than that of the student researcher must have a photo release signed by the subject, and if under 18 years of age, also by the guardian of the subject.

Sample consent text: *"I consent to the use of visual images (photos, videos, etc.) involving my participation/my child's participation in this research."* (These forms must be available upon request, but shall not be displayed.

Roles & Responsibilities of Students & Adults

The Student Researcher(s)

The student researcher is responsible for all aspects of the research project including enlisting the aid of any required supervisory adults (Adult Sponsor, Qualified Scientist, etc.), obtaining necessary approvals (SRC, IRB, etc.), following the Rules & Guidelines of the ISEF, and performing the experimentation, engineering, and date analysis, etc.

Scientific fraud and misconduct are not condoned at any level of research or competition. This includes plagiarism, forgery, use of presentation of other researcher's work as one's own, and fabrication of data. Fraudulent projects will fail to qualify for competition. NARSEF reserves the right to revoke recognition of a project subsequently found to have been fraudulent.

The Adult Sponsor

An Adult Sponsor may be a teacher (preferred), parent, professor, and/or another professional scientist in whose lab the student is working. This individual must have a solid background in science and should have close contact with the student during the course of the project. The Adult Sponsor is responsible for ensuring the student's research is eligible for entry in the ISEF.

Qualified Scientist

A Qualified Scientist should have earned a doctoral/professional degree in a scientific discipline that relates to the student's area of research. Alternatively, the SRC may consider an individual with extensive experience and expertise in the student's area of research at the Qualified Scientist. The Qualified Scientist must be thoroughly familiar with local, state, and federal regulations that govern the student's area of research.

Designated Supervisor

The Designated Supervisor is an adult who is directly responsible for overseeing student experimentation. The Designated Supervisor need not have an advanced degree, but must be thoroughly familiar with the student's project, and must be trained in the student's area of research. The Adult Sponsor may act as the Designated Supervisor.

Scientific Review Committee (SRC)

The NARSEF Scientific Review Committee (SRC) is a group of qualified individuals that is responsible for evaluation of student research, certifications, research plans, and exhibits for compliance with the rules, applicable laws, and regulations at each level of science fair competition. Most proposed research projects involving vertebrate animals and/or potentially hazardous biological agents must be reviewed and approved BEFORE experimentation. Local or regional SRC prior review is not required for human studies previously reviewed and approved by a properly constituted IRB.

ALL projects, including those previously reviewed and approved by an IRB must be reviewed and approved by the SRC after experimentation and before competition in an Affiliated Fair. Projects which were conducted at a Regulated Research Institution (not home, high school, or field) and which were reviewed and approved by the proper institutional board before experimentation, must also be approved by the Affiliated Fair SRC.

Institutional Review Board (IRB)

An Institutional Review Board (IRB) is a committee that must evaluate the potential physical and/or psychological risk of research involving humans. All proposed human research must be reviewed and approved by an IRB before experimentation begins. This includes review of any surveys or questionnaires to be used in a project.

Federal regulations require local community involvement. Therefore, it is advisable that an IRB be established at the school level to evaluate human research projects. An IRB must consist of a minimum of three members including the following: an educator, a school administrator (preferably principal or vice principal), and a medical or mental health professional.

To avoid conflict of interest, no Adult Sponsor, parent, or other relative of the student, the Qualified Scientist, of Designated Supervisor who oversees the project may serve on the IRB reviewing that project.

Top 7 NARSEF Paperwork Problems to Avoid

1. Research plan lacks sufficient details and fails to provide thorough information to support the documentation provided. A properly written research plan must include:
    a. The proposed and actual start & end dates on Form 1A
    b. A detailed research plan – projects which cannot be assessed because the research plan is not sufficient and will fail to qualify
    c. All work site information completed
    d. Must identify **student and mentor roles**
2. Missing Form 3 – Risk Assessment
    a. Must be completed for projects that involve chemicals, equipment, or other potential hazards
    b. Often missing, and often incomplete without description of safety precautions taken
3. Project duration not within a single calendar year
4. Missing IRB or incomplete with missing signatures on Human Subjects Form 4
5. Tissue analysis and bioinformatic projects are incorrectly identified as vertebrate animal projects
6. Failure to include a **HIPAA Letter** from a mentor for all studies involving de-identified human data. This letter should be on the institution letterhead from the mentor. It should describe the data set and indicate that the data set was de-identified, prior to student use.
7. Research project lacks original student generated data

Judging at NARSEF

The Judging Process

- NARSEF will be held in-person at The University of Alabama in Huntsville
- Projects will likely have three to five official judge interviews. The students should be prepared for a 10-minute interview (presentation and Q&A).
- Special Award Judges will also meet with and interview students.

Awards & Honors

Grand Awards

ASEF: In addition to those who place 1st, 2nd, or 3rd in their categories, a select number of "state bids" will also be given out to those who have deserving projects in highly competitive categories to attend the Alabama Science and Engineering Fair.

ISEF: The top 2-3 scoring projects are selected to represent our region through a fully funded trip to the Regeneron International Science and Engineering Fair. This honor includes participation in the 2025 Regeneron ISEF where the student will compete against the best research students from all over the world.

Category Awards

Category awards are given to students in each of the categories represented at NARSEF. Awards are given to those placing in 1st, 2nd, and 3rd places based on scores. Category winners receive an automatic bid to the Alabama Science and Engineering Fair.

Special Awards

Special awards are sponsored by local organizations as well as by national organizations through our affiliated with ISEF. Special awards are chosen based on a combination of both established criteria for each award and student score.

STEM OUTREACH

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