JUDGING CRITERIA

The GSEF judging process emphasizes the student's ability to discuss the project effectively during the interview, as well as the project's originality, creativity, imagination, discovery, and inventiveness. Exhibits serve two functions: 1) to present the research clearly when the student is not present, and 2) to guide the interview toward in-depth discussion. Judges may examine the student notebook (3-ring binder preferred), which should include research forms (see below) and optional items such as a research paper. All exhibits must adhere to the **GSEF Display & Safety Regulations**.

GSEF GEORGIA SCIENCE+ ENGINEERING FAIR 2027

JUNIOR DIVISION (Grades 6-8)

Most projects:

I. SCIENTIFIC THOUGHT [10 pts]
- Clear purpose
- Testable using scientific methods
- Variables and controls defined, appropriate, complete
- Systematic data collection and analysis
- Conclusions based solely and directly on the collected data

Engineering projects: (and some math, computer science)

I. ENGINEERING GOALS [10 pts]
- Clear problem or need to be solved
- Clear criteria for proposed solution
- Identification of a solution
- Development of prototype that demonstrates intended design, has been tested, demonstrates engineering skill

All projects:

II. CREATIVITY [5 pts] • project demonstrates significant creativity/originality/inventiveness

III. PRESENTATION [5 pts]
- Student is interested and professional
- Can clearly explain the logic, purpose, procedures, and conclusions of the project
- Information in exhibit is presented in an orderly manner, with clear data and results
- Student has "ownership" of the topic and project

SENIOR DIVISION (Grades 9-12)

Most projects:

I. RESEARCH QUESTION [10 pts]
- clear and focused purpose
- identifies contribution to field of study
- testable using scientific methods

II. DESIGN & METHODOLOGY [15 pts]
- well-designed plan and data collection methods
- variables and controls defined, appropriate and complete

III. EXECUTION: Data Collection, Analysis & Interpretation [20 pts]
- systematic data collection and analysis
- reproducibility of results
- appropriate application of mathematical and statistical methods
- sufficient data collected to support interpretation and conclusions

Engineering projects: (and some math, computer science)

I. RESEARCH PROBLEM [10 pts]
- description of a practical need or problem to be solved
- definition of criteria for proposed solution
- explanation of constraints

II. DESIGN & METHODOLOGY [15 pts]
- exploration of alternatives to answer need or problem
- identification of a solution
- development of a prototype/model

III. EXECUTION: Construction & Testing [20 pts]
- prototype demonstrates intended design
- prototype has been tested in multiple conditions/trials
- prototype demonstrates engineering skill and completeness

All projects:

IV. CREATIVITY [20 pts] • project demonstrates significant creativity/originality/inventiveness in one or more of the above criteria

V. PRESENTATION [35 pts]

Poster (10 pts):
- logical organization of material
- clarity of graphics and legends
- supporting documentation well selected and displayed

Interview (25 pts):
- clear, concise, thoughtful responses to questions
- understanding of basic science relevant to project
- understanding of 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

REQUIRED RESEARCH FORMS

All projects (grades 6-12) must follow the International Rules, including forms and approvals.

Photocopies of all research forms must be displayed with the exhibit at GSEF, preferably in a 3-ring binder. Keep originals at home or in another safe place.

Required for ALL projects:

- ❑ **Official GSEF Abstract Form**
- ❑ **Form 1: Adult Sponsor Checklist**
- ❑ **Form 1A: Student Checklist**
- ❑ **Research Plan/Project Addendum**
- ❑ **Form 1B: Approval Form**
- ❑ **Form 2A: Support Disclosure Form**

Also required for SOME projects:

- ❑ **Form 2B: Qualified Scientist**
- ❑ **Form 2C: Regulated Research Institution**
- ❑ **Form 3: Risk Assessment**
- ❑ **Form 4: Human Participants**
- ❑ **Forms 5A/5B: Vertebrate Animals**
- ❑ **Form 6A: Potentially Hazardous Biological Agents**
- ❑ **Form 6B: Human/Animal Tissue**
- ❑ **Form 7: Project Continuation**