



## Georgia State Science and Engineering Fair (GSEF) Judging Guidelines - 2014

You and your middle school and high school students are encouraged to consider these new judging criteria when planning 2014 science projects and for school-level fairs. They are based on the new Intel ISEF criteria.

One major change is the option to use different criteria for science and engineering projects (the engineering criteria may also be used for some projects in mathematics, computer science and “inventions”).

The second change is a new emphasis on two areas: *Creativity/Originality* and *Presentation*. Please note that creativity does not refer to artistic display; it refers to creativity in selecting projects and research plans that demonstrate originality, imagination and inventiveness. Presentation emphasizes the ability to discuss the project effectively during the oral interview.

Students should design their posters so that the poster serves two purposes: It presents the research clearly when the student is not there, and it helps the live interview to become an in depth discussion. Judges will also examine the student notebook (three-ring binder), which should include at least a Safety Assessment (ISEF Form 1), Student checklist (ISEF Form 1A), a Research Proposal, and any additional forms/permissions required by the specific research being conducted.

<b>Most Projects</b>	<b>Engineering Projects (may include some projects in mathematics, computer science, and “inventions”)</b>
<b>I. Research Question (10 pts)</b> <input type="checkbox"/> clear and focused purpose <input type="checkbox"/> identifies contribution to field of study <input type="checkbox"/> testable using scientific methods	<b>I. Research Problem (10 pts)</b> <input type="checkbox"/> description of a practical need or problem to be solved <input type="checkbox"/> definition of criteria for proposed solution <input type="checkbox"/> explanation of constraints
<b>II. Design and Methodology (15 pts)</b> <input type="checkbox"/> well-designed plan and data collection methods <input type="checkbox"/> variables and controls defined, appropriate and complete	<b>II. Design and Methodology (15 pts)</b> <input type="checkbox"/> exploration of alternatives to answer need or problem <input type="checkbox"/> identification of a solution <input type="checkbox"/> development of a prototype/model
<b>III. Execution: Data Collection, Analysis and Interpretation (20 pts)</b> <input type="checkbox"/> systematic data collection and analysis <input type="checkbox"/> reproducibility of results <input type="checkbox"/> appropriate application of mathematical and statistical methods <input type="checkbox"/> sufficient data collected to support interpretation and conclusions	<b>III. Execution: Construction and Testing (20 pts)</b> <input type="checkbox"/> prototype demonstrates intended design <input type="checkbox"/> prototype has been tested in multiple conditions/trials <input type="checkbox"/> prototype demonstrates engineering skill and completeness
<b>IV. Creativity (20 pts)</b> <input type="checkbox"/> project demonstrates significant creativity/originality in one or more of the above criteria	
<b>V. Presentation (35 pts)</b> a. Poster (10 pts) <input type="checkbox"/> logical organization of material <input type="checkbox"/> clarity of graphics and legends <input type="checkbox"/> supporting documentation displayed b. Interview (25 pts) <input type="checkbox"/> clear, concise, thoughtful responses to questions <input type="checkbox"/> understanding of basic science relevant to project <input type="checkbox"/> understanding interpretation and limitations of results and conclusions <input type="checkbox"/> degree of independence in conducting project <input type="checkbox"/> recognition of potential impact in science, society and/or economics <input type="checkbox"/> quality of ideas for further research <input type="checkbox"/> for team projects, contributions to and understanding of project by all members	