



New York City Science and Engineering Fair (NYCSEF) Judging Criteria

Science Fair Judges

In order to execute one of the largest city-wide science fairs, NYCSEF is entirely dependent on service minded educators, scientists, mathematicians, and engineers who volunteer their time one Sunday and/or one weekday each Spring. These individuals evaluate science fair projects in two rounds of competition, determine which students will represent New York City at the Intel International Science and Engineering Fair, and which students to recognize at a separate Awards Ceremony. Science fair submissions come from over 50 private and public high schools throughout the five boroughs, and those students who qualify for the fairs value the feedback they receive from professionals in the field. It is a rewarding experience, both for our judges and for the students, and we hope you will consider registering as a judge for either or both events.

Qualifications:

For the *Preliminary Round*, judges should have a solid background in the category or categories they judge in. Naturally, educators (high school and higher education) in mathematics or sciences and professional researchers/scientists/engineers meet this qualification. For those adults who work closely with science fair competitors, either as their parents, teachers/administrators in their schools, or mentors of their research, we ask that you excuse yourself from judging any assigned science fair projects that may present a conflict of interest. *2019 Preliminary Round will be held on March 3rd, at the City College of New York.*

In the *Finals Round*, judges should hold a doctoral/professional degree that directly relates to research in the category that they are judging in, or a master's degree with significant years of experience. To prevent conflicts of interest in the scoring, no teachers, administrators, or parents may serve in this round. And because only the top 25% of projects are invited to the Finals Round, we ask mentors who work with competing projects to recuse themselves from judging in those categories.

2019 Finals Round will be held on March 19th, at the American Museum of Natural History.

Judging Science Fair Projects:

Serving as science fair judge entails more than volunteering your time and expertise. You are making a memorable impact on the lives of the some of the most talented students in New York City. Often times you are the first professional in a science or engineering field these students have encountered, outside of their science or math teachers. You are acting as an ambassador

for your profession, encouraging the next generation to pursue careers in science, technology, engineering and mathematics.

Science fair projects are assessed during a brief but guided conversation, with students presenting a concise summation, and answering pointed questions asked by judges while standing in front of a table top tri-fold poster board of their research findings. Some of the criteria used in scoring their projects include:

- 1) How independently the student(s) worked in the current year of research done
- 2) How well the student(s) followed scientific, engineering, computer programming, or mathematical methodologies
- 3) The detail and accuracy of research
- 4) Whether experimental procedures were used in the best possible way
- 5) Creativity and originality in research question, materials, methodologies, or analysis/interpretation of the data.
- 6) The ability of the student(s) to clearly and effectively communicate their research

Examples of questions that can be used during judging:

- How much does this project build upon or add to current knowledge in this area, field or topic?
- How logical is the experimental design?
- Did the research methods directly address the research problem?
- How thorough was the analysis of available data?
- How much initiative did the student have in carrying out the research project?
- How creative were the student's solutions to the research problem?
- What was the overall comprehension of the topic and supporting information?
- Was the student able to discuss the project clearly and effectively?

This interface between judges and students hopefully produces two outcomes: an assessment of the research project (an impartial evaluation on the project scorecards, but also immediate verbal feedback to the students on the merits or potential areas for improvement); and secondly, a more casual exchange about the student's work, research interests, and perhaps, how to pursue other opportunities in the sciences, mathematics or engineering, while in high school and beyond.

If you are interested in participating as a judge in either of the two events, please click **Volunteer to Judge** and fill out the Judge Sign Up Form. You will receive additional information and detailed instructions via email closer to the date of each event. If you need to contact the NYCSEF staff, please email us at nycsef.cuny.edu or call (718) 254-7252.