Minnesota Middle School Paper Competition

Judge Training

Seagate
We turn on ideas

Minnesota Academy of Science

Housekeeping

- Forms for Contact Info –make sure to provide e-mail address clearly
- At your request, MN Academy of Science is willing to inform your employer of your participation
- Clipboards and pencils are available for use by judges

Eligibility for Competition

Students must demonstrate through written report and oral presentation

- their original, creative, and innovative contributions to a research problem;
- an understanding of the scientific and/or technological principles underlying the research problem;
- appropriate research design, procedures, reproducibility of experimentation;
- interpretation of data and conclusions.

Categories

The six major disciplines awards will be made are

- Environmental science; Earth and Space Science
- Engineering
- Physical Sciences
- Life sciences
- Medicine and Health; Behavioral and Social Sciences
- Mathematics and Computer Science

What To Expect

- Duration
  - Student will make a presentation up to twelve minutes
  - Time warning cards at 5 minutes left and 3 minutes left and 1 minute left
  - Six minutes allowed for Q & A
- Only judges may ask questions; Anyone may watch the presentation
- Judges may confer on quality only after everyone else has left the room
- PowerPoint or similar presentation
- Seven rooms with up to seven presenters in each room.
- Scores will be normalized and tallied
- Best 7th and 8th Grade projects in each category, based on score, will receive a medal

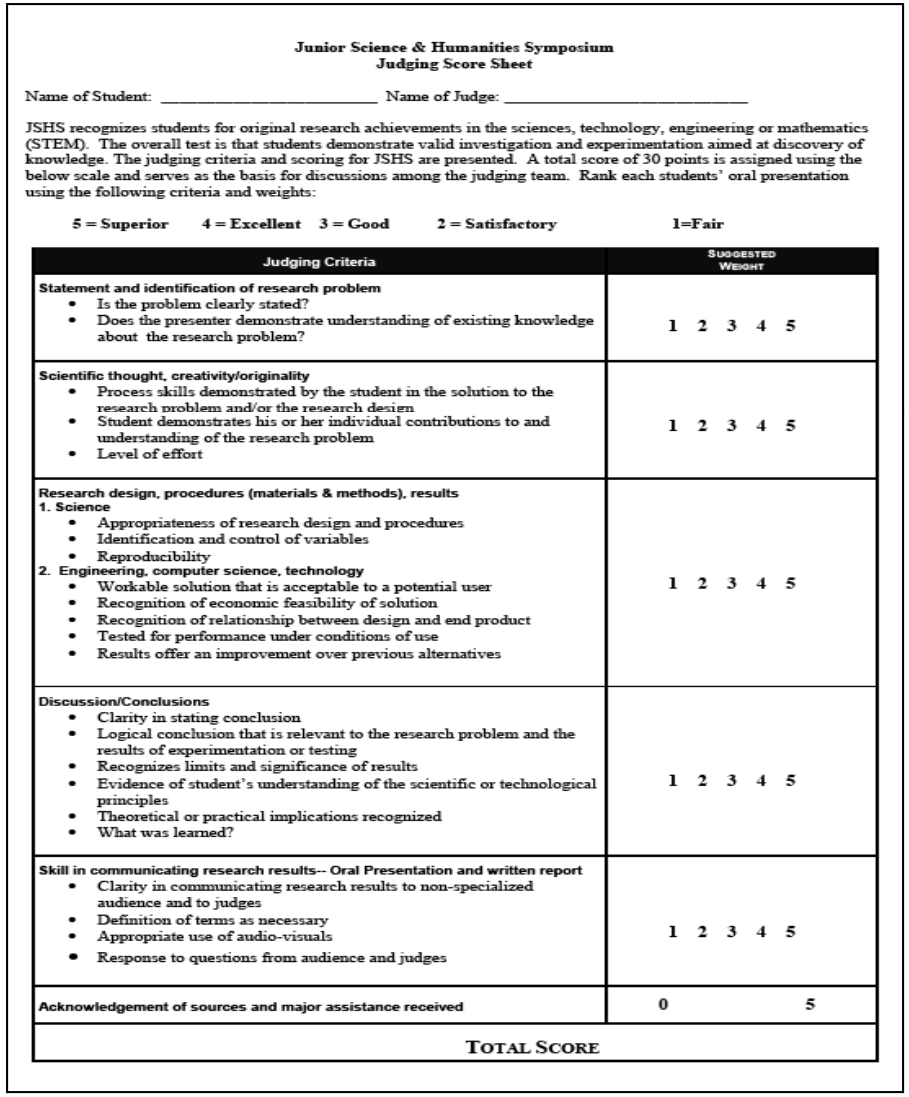
Scoring

1 to 5 points awarded in each of the following six categories

- Statement and identification of research problem
- Scientific or engineering thought; Creativity and originality
- Research or engineering design, procedures, results
- Discussion / conclusion
- Skill in communicating research results– Oral presentation and written reports
- Acknowledgement of sources and major assistance received

Judging Form

- Please legibly print
  - Student's name
  - Judge's name
  - Total score
- Circle scores
- Use extra spaces for notes and comments for your own benefit, students will not see this form
- Tally scores and ensure this is what you wish to score
- You will also get a sheet of the students in your room with space for ranking them. 1 = best. Double-check that your ranking matches your scoring.



Junior Science & Humanities Symposium
Judging Score Sheet

Name of Student: _____ Name of Judge: _____

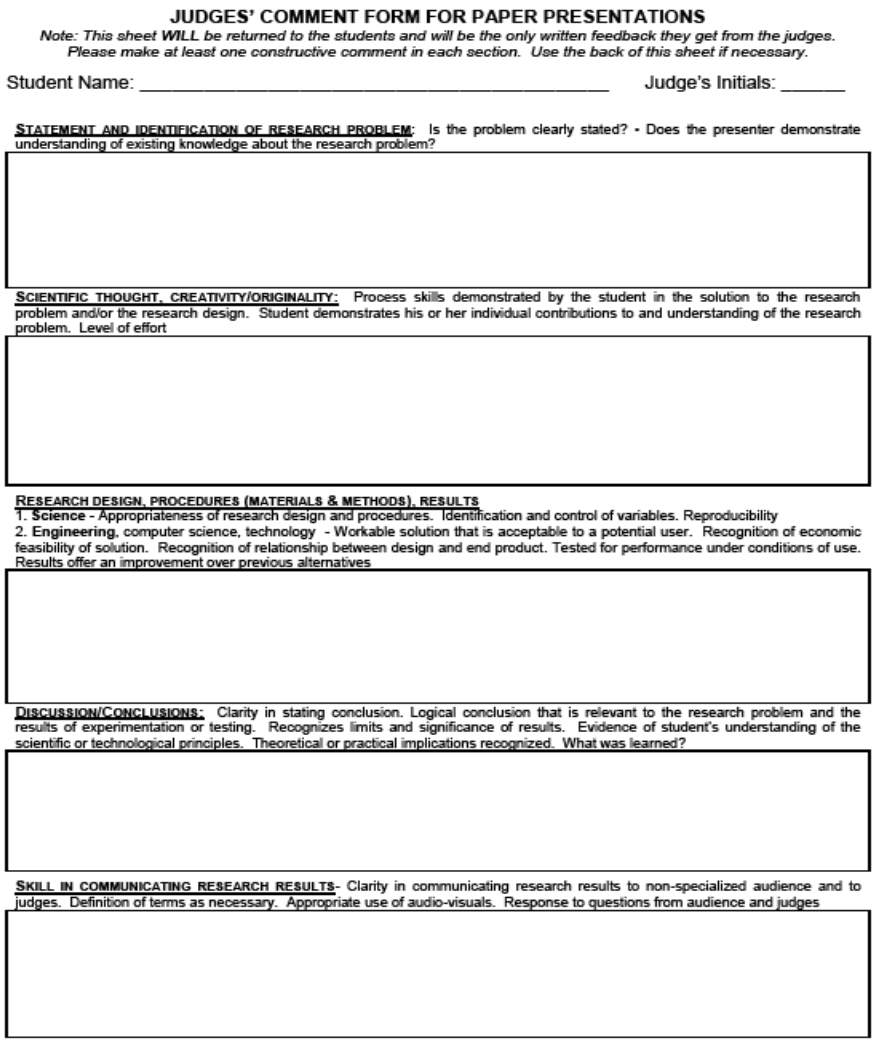
JSHS recognizes students for original research achievements in the sciences, technology, engineering or mathematics (STEM). The overall test is that students demonstrate valid investigation and experimentation aimed at discovery of knowledge. The judging criteria and scoring for JSHS are presented. A total score of 30 points is assigned using the below scale and serves as the basis for discussions among the judging team. Rank each students' oral presentation using the following criteria and weights:

5 = Superior 4 = Excellent 3 = Good 2 = Satisfactory 1=Fair

Judging Criteria	Suggested Weight
Statement and identification of research problem • Is the problem clearly stated? • Does the presenter demonstrate understanding of existing knowledge about the research problem?	1 2 3 4 5
Scientific thought, creativity/originality • Process skills demonstrated by the student in the solution to the research problem and/or the research design • Student demonstrates his or her individual contributions to and understanding of the research problem • Level of effort	1 2 3 4 5
Research design, procedures (materials & methods), results **1. Science** • Appropriateness of research design and procedures • Identification and control of variables • Reproducibility **2. Engineering, computer science, technology** • Workable solution that is acceptable to a potential user • Recognition of economic feasibility of solution • Recognition of relationship between design and end product • Tested for performance under conditions of use • Results offer an improvement over previous alternatives	1 2 3 4 5
Discussion/Conclusions • Clarity in stating conclusion • Logical conclusion that is relevant to the research problem and the results of experimentation or testing • Recognizes limits and significance of results • Evidence of student's understanding of the scientific or technological principles • Theoretical or practical implications recognized • What was learned?	1 2 3 4 5
Skill in communicating research results-- Oral Presentation and written report • Clarity in communicating research results to non-specialized audience and to judges • Definition of terms as necessary • Appropriate use of audio-visuals • Response to questions from audience and judges	1 2 3 4 5
Acknowledgement of sources and major assistance received	0 5
TOTAL SCORE	

Comments for Presenter

- Please leave constructive comments in each category
- What can the student do to improve
- Be as detailed as possible
- Use language the student will understand
- Avoid generalizations (such as "Need more statistics" -- which statistics would have improved the project?)



JUDGES' COMMENT FORM FOR PAPER PRESENTATIONS

*Note: This sheet **WILL** be returned to the students and will be the only written feedback they get from the judges. Please make at least one constructive comment in each section. Use the back of this sheet if necessary.*

Student Name: _____ Judge's Initials: _____

STATEMENT AND IDENTIFICATION OF RESEARCH PROBLEM: Is the problem clearly stated? • Does the presenter demonstrate understanding of existing knowledge about the research problem?

SCIENTIFIC THOUGHT, CREATIVITY/ORIGINALITY: Process skills demonstrated by the student in the solution to the research problem and/or the research design. Student demonstrates his or her individual contributions to and understanding of the research problem. Level of effort

RESEARCH DESIGN, PROCEDURES (MATERIALS & METHODS), RESULTS
1. **Science** - Appropriateness of research design and procedures. Identification and control of variables. Reproducibility
2. **Engineering**, computer science, technology - Workable solution that is acceptable to a potential user. Recognition of economic feasibility of solution. Recognition of relationship between design and end product. Tested for performance under conditions of use. Results offer an improvement over previous alternatives

DISCUSSION/CONCLUSIONS: Clarity in stating conclusion. Logical conclusion that is relevant to the research problem and the results of experimentation or testing. Recognizes limits and significance of results. Evidence of student's understanding of the scientific or technological principles. Theoretical or practical implications recognized. What was learned?

SKILL IN COMMUNICATING RESEARCH RESULTS- Clarity in communicating research results to non-specialized audience and to judges. Definition of terms as necessary. Appropriate use of audio-visuals. Response to questions from audience and judges

Final Suggestions

- Be consistent
- Be specific in your constructive criticisms / suggestions
- Do not talk about a presentation when there is anyone else in the room (student presenter, parents, teachers, other students)
- Acknowledge the best, encourage the rest