
School Science Fair Tips & Tricks

Stephanie Jones

Intel NWSE fair director

www.nwse.org

Why hold a science fair?

Science fairs give students the opportunity to study a topic that interests them. Projects can be as varied as your students' interests, such as sports, music, art, rocketry, psychology, and computers. Through their projects, students will discover that science is found in every niche of the universe.

Two types to consider

Open House

- Scalable
 - From classroom to cafeteria
 - One or many teachers
- Students present to other students, parents and teachers

Judged Event

- Adds competition to science
 - More logistics
 - Recruiting judges
 - Award ceremony
 - More community involvement
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The Basics

Both types of science fairs require:

- Student projects
 - This is the hardest part. Mentoring students doing inquiry projects is time consuming. The Intel Middle School Curriculum is a great guide for beginning teachers.
 - Space, date, and administrative approval
 - Definitely interconnected, if you need the gym you may be scheduling around sporting events. Cafeterias are good to use since the tables are already there. If you want projects to enter the state fair there is a February 14th deadline.
 - Visitors
 - Every science fair should include the students sharing their project with others. This could be younger students if the fair is held during the school day, or parents if it is held in the evening.
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NWSES Middle School Rules

We have adapted the International Rules for Pre-college Science Research (Intel ISEF) to meet the needs of 5th-8th graders. They cover the “potentially risky” topics of:

- Human subjects
 - Vertebrate animals
 - Microbes
 - Human and Animal tissues
 - Hazardous substances and devices
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Size matters

If this is your first year, keep it simple. Dealing with the basics is enough. Add depth to the fair by including the following:

- Student registration
 - A must if more teachers are involved.
 - Exhibits grouped by category
 - Necessary for competitive judging.
 - Refreshments
 - From cookies and punch to a PTA fundraiser.
 - Certificates of Participation
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Judged Science Fairs

First recruit a committee of volunteers to help with all the details. This is not a one person job.

- Key Volunteer jobs

- Judge recruitment and assignments
 - Refreshments for judges, students, etc (seek donations from local bakeries and groceries)
 - Awards planning
 - Logistics (setting up tables, exhibit layout, clean-up)
 - Project registration
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Care and Handling of Judges

■ Recruiting

- ❑ Start with parents, ask them to recruit coworkers.
- ❑ Ask other teachers in the district. High school and college students can judge younger students.
- ❑ Post a notice on www.nwse.org

■ The Right Ratio

- ❑ The state fair tries for 1 judge for every 3 projects.
 - ❑ Smaller ratios work for smaller fairs. A judge should be able to spend 5-10 minutes with a project.
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Care and Handling of Judges

- Thanking judges
 - Food and coffee
 - Thank you notes and/or certificates of appreciation
 - How to Judge
 - Competitive
 - A group of no less than 3 judges interview all projects in a category. Each judging team then picks 1st, 2nd, 3rd and honorable mention.
 - Evaluative
 - A judge is assigned a set of specific projects and creates written remarks for each.
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Example Judge Sheet 1

Science Fair Central

Sample Judge's Worksheet

(Page 1)

Project Title: _____



Directions: Circle the number that best describes the project. The lowest score is zero and the highest score is three.

Evaluation Criteria

PROBLEM: To what degree is the problem new and/or different and how well is it written?

- (0) no problem statement
- (1) incomplete problem statement
- (2) complete problem statement, and well written
- (3) complete, well-written problem statement and a new idea for the student

HYPOTHESIS: To what degree is this a testable prediction?

- (0) no hypothesis
- (1) incomplete hypothesis
- (2) hypothesis present, but not completely testable
- (3) well-written, testable hypothesis

Example Judge Sheet 2

Title	Comments	Score	Rank
A fuel comparison			
A novel approach to			

Intel ISEF Judging Criteria

Creative Ability	Scientific Thought	Engineering Goals	Thoroughness	Skill	Clarity	Teamwork
originality in questions, investigation, approach	design, variables, controls, ties to further research, conclusions	clear objective, workable solution, economical, potential use, end product	replication, subject knowledge, completeness of notes	possesses necessary skills, help provided	in discussion or written work, display	contribution of team members
30-I 25-T	30-I 25-T	30-I 25-T	15-I 12-T	15-I 12-T	10-I 10-T	0-I 16-T

Example Judge Sheet 3

EXHIBIT #: HS-BE-018

Name(s): Michelle Cobb

School: Columbia River High School

Category Behavioral & Social Sciences

Category Judges Comments to Students

Note to Students: These comments are intended to help and encourage your continuing efforts in science research. They are not part of the rating system used to make the awards. We commend your interest and enthusiasm in science and thank you sincerely for contributing to another successful NW Science Expo.

Part I : A particular strength we noted:

- Experimental design
- Communication of finding
- Depth of Knowledge
- Other: [please show comments]

Part II : An area for you to consider:

- Appropriate use of statistics
- Attention to experimental controls
- Clarity of presentation
- Other: [please show comments]

Part III : For more information on researching your topic:

Awards for Students

These always require advanced planning.

- Donations from local businesses
 - Model cars
 - Gift cards
 - Certificates
 - Ribbons for place winners
 - Trophies or plaques for best projects
 - Qualifying for the State Fair
 - Intel NWSE accepts up to 20 projects from a school. Must be submitted by Feb. 14th.
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Other considerations

- Budget
 - Printing, refreshments, awards
 - Public relations
 - Publicity
 - Inviting VIP's
 - Scheduling visits by other students
 - Data entry
 - Registration information
 - Judging results
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Citations

Information for this presentation was obtained from:

- <http://school.discovery.com/sciencefaircentral/scifirstudio/teachers.html>
 - <http://www.showboard.com/>
 - http://www.spioneers.org/documents/pdf/organizing_fair.pdf
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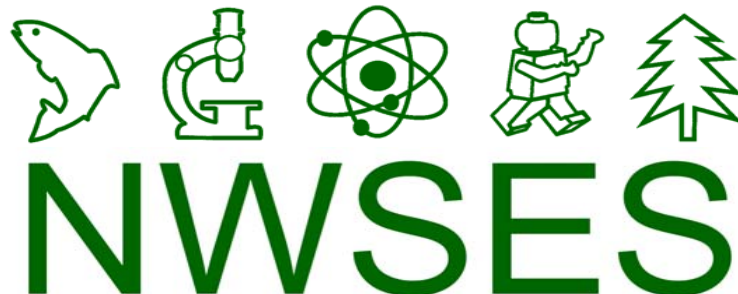
Contact information

Stephanie Jones

nwse@pdx.edu

503 725-8748

All information from this presentation posted at
www.nwse.org on the Opportunities page.



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