



Merit Judges Judging Workshop 2017

BASEF



- Bay Area Science and Engineering Fair - one of the largest and longest-running science fairs in Canada (1960)
- The Bay Area Science and Engineering Fair draws students in grades 7 through 12 from the City of Hamilton (including Ancaster, Dundas and Stoney Creek), the Regional Municipality of Halton (including Burlington, Oakville and Milton) and Six Nations in Southern Ontario. Students from Haldimand, Norfolk and Brant Counties have participated since 2003.
- The fair attracts over 400 participants annually, from grade seven to 12. BASEF is affiliated with the Canada Wide Science Fair and the Intel International Science and Engineering Fair, and several of the top projects from BASEF are sent on to compete at these events.

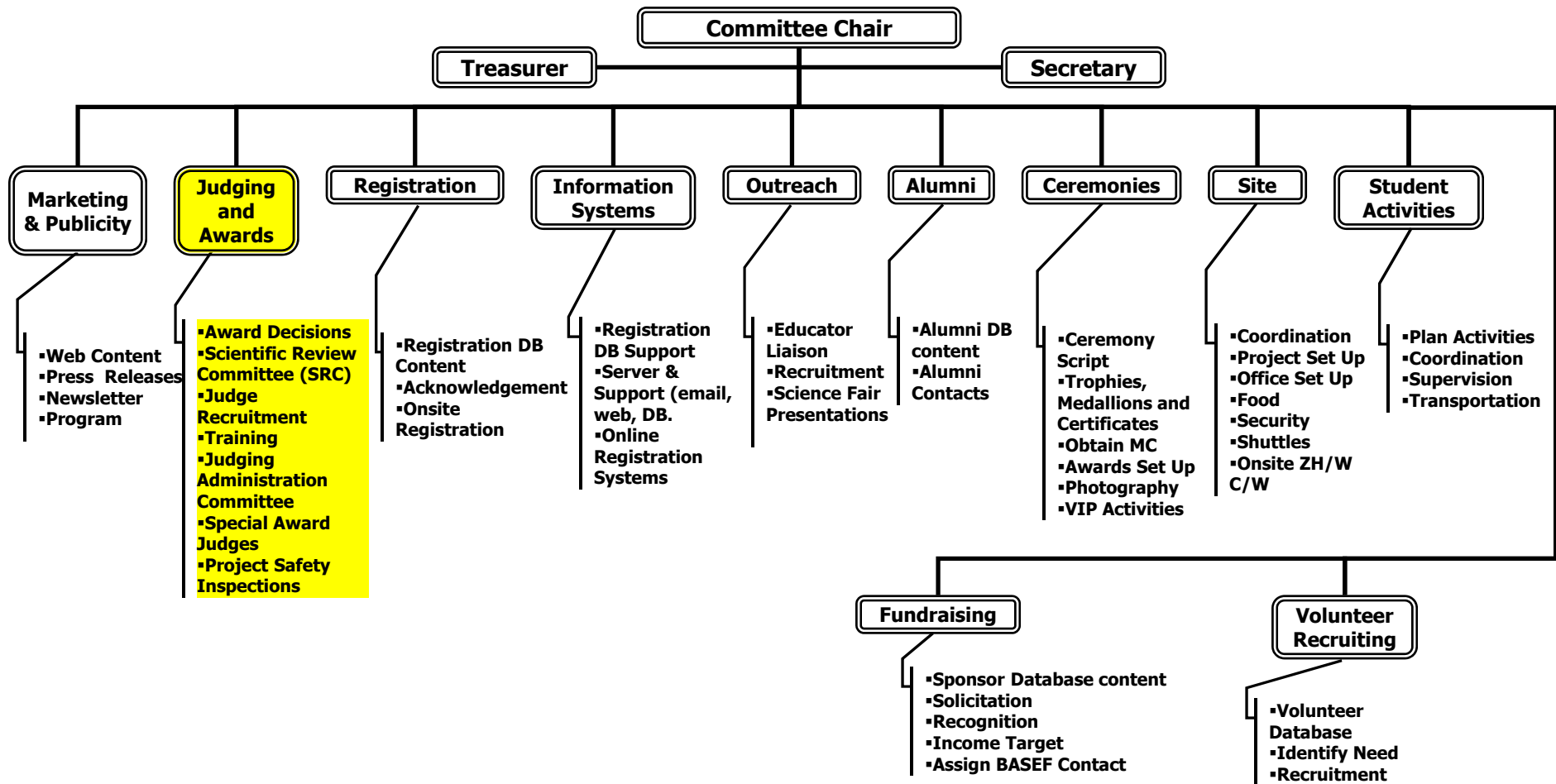
BASEF



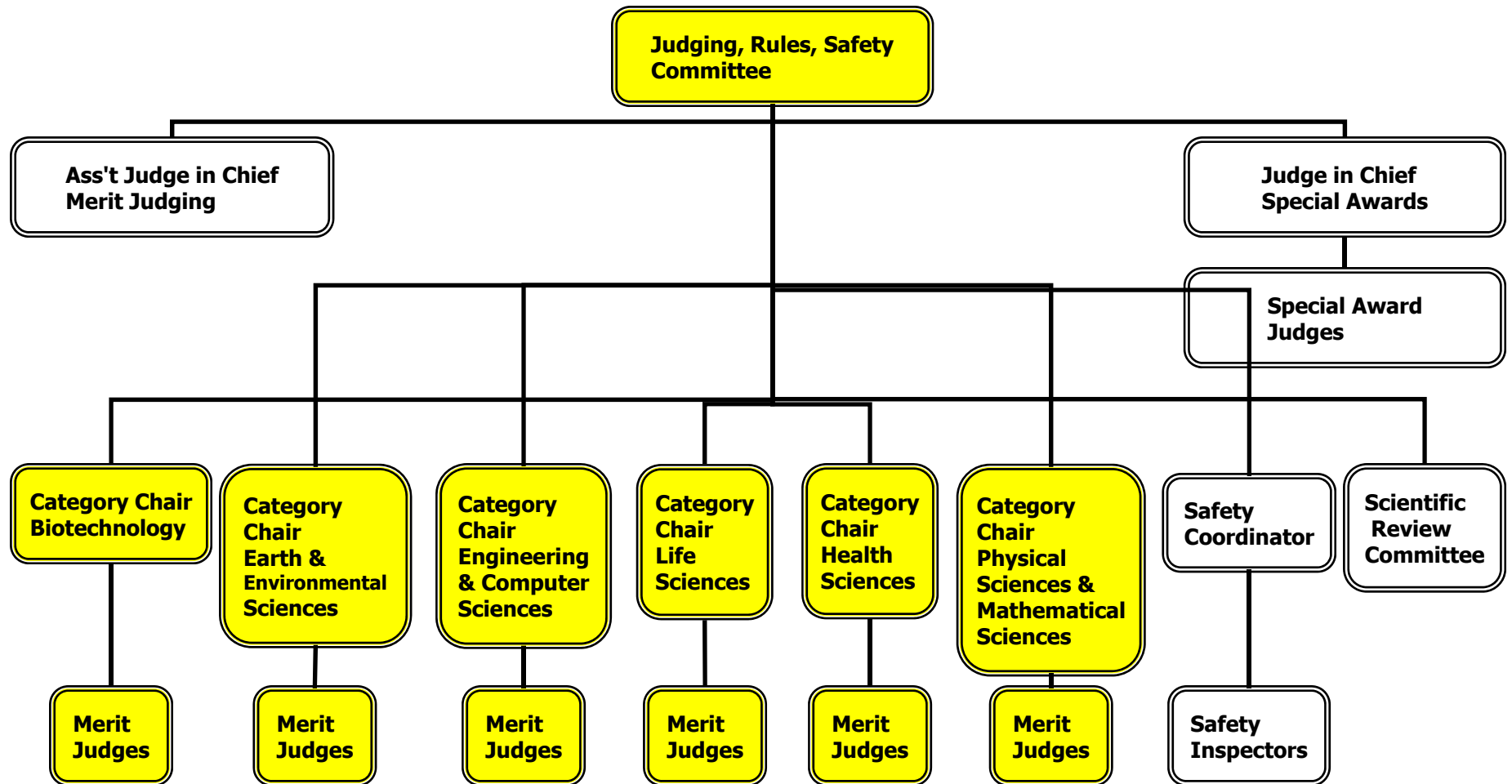
- The mission of BASEF is to promote project-based science and encourage youth to conduct research in areas of science, engineering and technology, utilizing the scientific method or engineering design process.
- BASEF believes all students should be given the opportunity to participate in science fairs. Students learn invaluable academic and life skills through researching, experimenting, displaying and presenting their projects.
- The judging process and public viewing components allow students to practice their “people” and communication skills and gain self-confidence and a sense of accomplishment for a job well done.



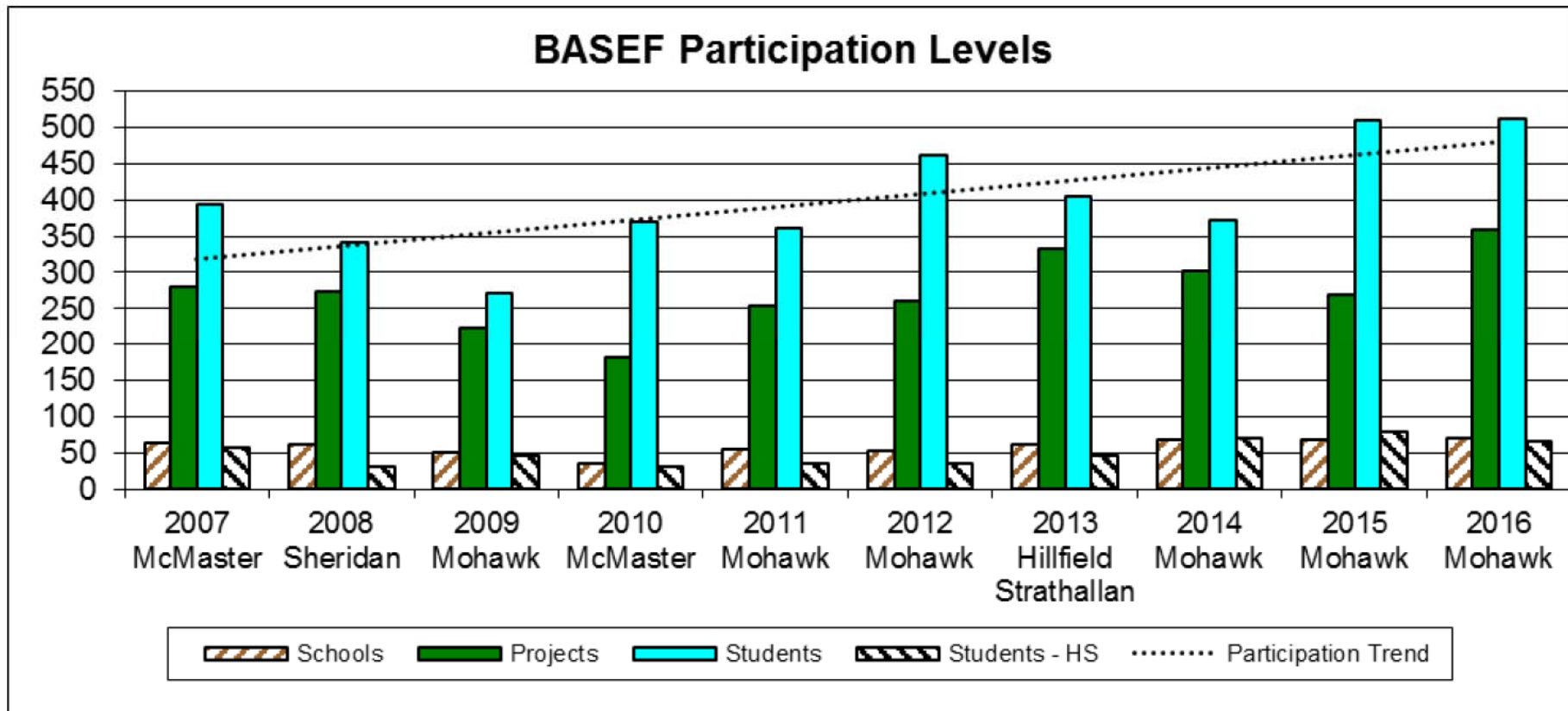
BASEF Organization



BASEF Judging Team



BASEF



BASEF 2016 Highlights



BASEF 2016 Highlights

- Celebrated 56th Anniversary Year
- Over \$200,000 in cash, prizes, trips, scholarships and participation awards were distributed
- Activity Day morning with presentations - 1,100 students - 600 students and 500 BASEF entrants
- 16 students won all-expense paid trips to compete in the Canada Wide Science Fair in Montreal, Quebec
- 5 high school students won all-expense paid trips to compete in the Intel International Science & Engineering Fair in Phoenix, Arizona
- 233 students received Merit Awards, \$12,000+ in cash, and \$116,500 in merit scholarships
- 170+ special awards were distributed, totalling \$26,800 in cash plus \$10,000 in scholarships and one internship valued at \$2,000
- Awards also given to one Champion Teacher and three new schools

Typical Science Fair



Typical Science Fair



The Judging Arena



What to Expect on Judging Day



- 8:00 Judges Arrive - Coffee and snacks
- 8:30 General Welcome and Introduction
- 9:00 Category meetings with all judges and category chairs
- 9:30 Preliminary judging without students present
- 11:30 Judges Meet with category chairs - preliminary discussion
- 11:45 Judges' Luncheon
- 1:00 Student Interviews With Judges - 10-15 minutes/project
- 4:00 Judging interviews end
- 4:00 Tally of scores - report to category chairs
- 4:30 Submit scoring sheets - resolve any scoring issues

Conduct of Volunteers

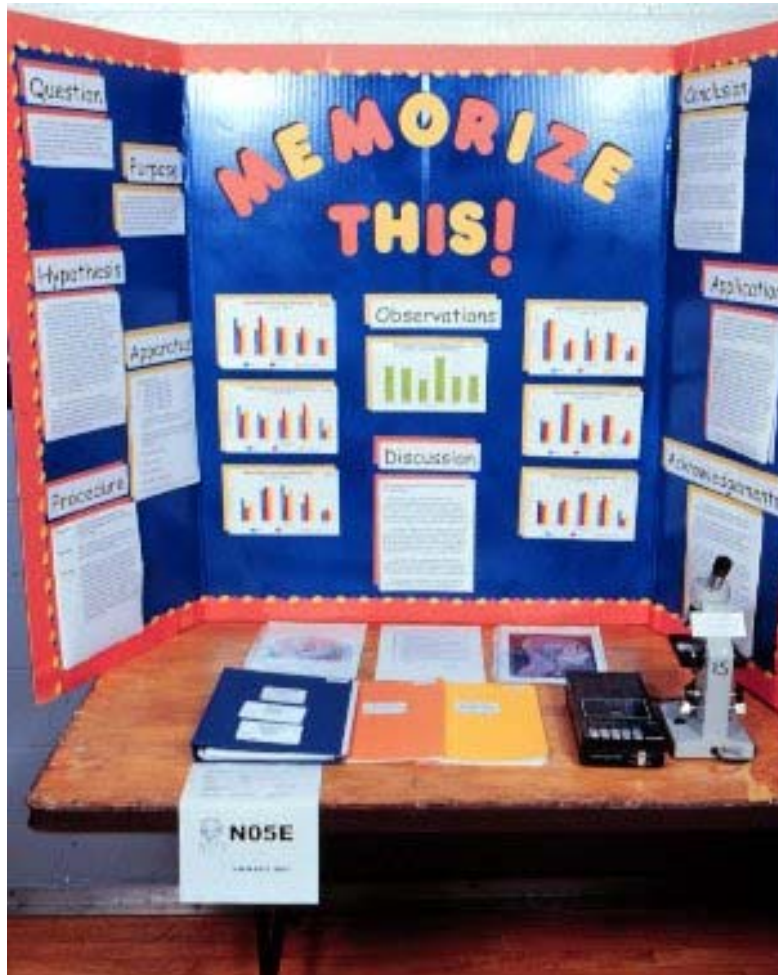


- As an adult volunteer BASEF judge, you are in a position of trust with the children you will be interviewing.
- All judges are to behave in a responsible manner.
- If you observe any problem, unsafe or inappropriate behaviour, promptly report it to any member of the BASEF Organizing Committee.

Projects



Projects



Judging Form



Bay Area Science and Engineering Fair 2006 - Judging Form																																																										
Project: Advanced Coding																																																										
Judge: I. Knowbeter																																																										
Project ID: M27																																																										
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A. Scientific Thought (maximum 45 marks)																																																										
<ol style="list-style-type: none"> Select whether the project is either an experiment, study, or innovation. Determine the level of the project by matching the description with the project. Circle the deserving mark out of a maximum of 45. 																																																										
Definition	Level 1 (acceptable)	Level 2 (fair)	Level 3 (good)	Level 4 (excellent)																																																						
Experiment Investigation undertaken to test one or more hypotheses.	Duplication and reporting of an experiment to test a previously confirmed hypothesis.	Extension of a known experiment through modification of its procedure, data collection, analysis or application.	A new approach to the design, modification or application of an existing experiment with control of some variables.	A new experimental approach to a research problem in which most of the significant variables are controlled.																																																						
Study A collection and analysis of data showing evidence of a correlation, or pattern of scientific interest. Variables are identified and controlled.	Study and presentation of printed material related to the basic issue.	Study of material collected through compilation of or expansion of existing data and through observation. The study attempts to address a specific issue.	Study based on new observations and research of a previously studied topic. Appropriate analysis of data and correlations made.	A new approach to the study of a problem which correlates information from a number of sources. The report also offers new insights or solutions to the problem.																																																						
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NOTE: This form will be machine scanned; please DO NOT FOLD. Use this form ONLY for the Project # printed in the ID Section.				Score: A																																																						

B. Display (maximum 10 marks)			Score: B
<ul style="list-style-type: none"> Is workmanship neat and carefully done? Is lettering clear? Are colours strong and suitable? Is the layout complete, logical and self-explanatory? Is the content clearly and logically presented? Is the display simple and visually balanced? Does it capture attention? Does it have impact? Is there good balance and use of contrasts? Do the backboards, table and all displays meld together? 			
Circle: 1 2 3 4 5 6 7 8 9 10			
C. Notebook / Work Journal (maximum 20 marks)			Score: C
<ul style="list-style-type: none"> Is the notebook clear, concise and neat? Is it different from the backboard display? Is it well organized? Is there a journal summarizing actual work noting both successes and failures? Is there a bibliography? Are there acknowledgements? 			
Circle: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20			
D. Abstract (maximum 5 marks)			Score: D
<ul style="list-style-type: none"> Is the abstract present? Does the abstract contain all aspects of the project? Is the information concise, complete, and accurate? Is the abstract well written? (grammar, syntax and spelling) 			
Circle: 1 2 3 4 5			
E. Interview (maximum 20 marks)			
Student is unsure of the material or the process of the project and has difficulty answering questions about the project.	Student can summarize the project adequately and can answer the majority of questions about the project.	Student explains the project well and can answer all questions about the project clearly and logically.	Score: E
Circle: 6 7 8 9 10	Circle: 11 12 13 14 15	Circle: 16 17 18 19 20	
Please note some constructive comments for students.			

Judging Form



A. Scientific Thought (maximum 45 marks)

1. Select whether the project is either an experiment, study, or innovation.
2. Determine the level of the project by matching the description with the project. Circle the deserving mark out of a maximum of 45.

Definition	Level 1 (acceptable)	Level 2 (fair)	Level 3 (good)	Level 4 (excellent)
Experiment Investigation undertaken to test one or more hypotheses.	Duplication and reporting of an experiment to test a previously confirmed hypothesis.	Extension of a known experiment through modification of its procedure, data collection, analysis or application.	A new approach to the design, modification or application of an existing experiment with control of some variables.	A new experimental approach to a research problem in which most of the significant variables are controlled.
Study A collection and analysis of data showing evidence of a correlation, or pattern of scientific interest. Variables are identified and controlled.	Study and presentation of printed material related to the basic issue.	Study of material collected through compilation of or expansion of existing data and through observation. The study attempts to address a specific issue.	Study based on new observations and research of a previously studied topic. Appropriate analysis of data and correlations made.	A new approach to the study of a problem which correlates information from a number of sources. The report also offers new insights or solutions to the problem.
Innovation The development and evaluation of models or innovative devices, using techniques or approaches from the field of technology or engineering.	Building models or other devices that duplicate existing technology; minimal reporting.	Make improvement to an existing technology or use an existing technology for new applications.	Design and build an innovative adaptation of an existing technology for a new application.	Build a novel technology or integrate technologies to form an innovative system that has commercial or human benefit.
Score out of a possible 45 marks.	15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35	25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40	30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45

A	Score:
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Side One

Step One

- Choose a Definition.
 - Experiment
 - Study
 - Innovation

Judging Form



A. Scientific Thought (maximum 45 marks)

1. Select whether the project is either an experiment, study, or innovation.
2. Determine the level of the project by matching the description with the project. Circle the deserving mark out of a maximum of 45.

Definition	Level 1 (acceptable)	Level 2 (fair)	Level 3 (good)	Level 4 (excellent)
Experiment Investigation undertaken to test one or more hypotheses.	Duplicate reporting of an experiment or a previous hypothesis.	Extension of known experiments through modifications to procedures, collection, analysis or application.	A new approach to the design, application or use of existing technology with controlled variables.	A new experimental approach to research with most of the variables controlled.
Study A collection and analysis of data showing evidence of a correlation, or pattern of scientific interest. Variables are identified and controlled.	Study and presentation of printed material related to the basic issue.	Study of material collected through compilation of or expansion of existing data and through observation. The study attempts to address a specific issue.	Study based on new observations and research of a previously studied topic. Appropriate analysis of data and correlations made.	A new approach to the study of a problem which correlates information from a number of sources. The report also offers new insights or solutions to the problem.
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Side One

Step Two

- Choose a level

A

Score:

Judging Form



Definition	Level 1 (acceptable)	Level 2 (fair)	Level 3 (good)	Level 4 (excellent)		
Experiment Investigation undertaken to test one or more hypotheses.	Duplication and reporting of an experiment to test a previously confirmed hypothesis.	Extension of a known experiment through modification of its procedure, data collection, analysis or application.	A new approach to the design, investigation or application of an existing technology with controlled variables.	A new experimental approach to a research problem in which most of the significant variables are controlled.		
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Score out of a possible 45 marks.	15 16 17 18	20 21 22 23	25 26 27 28	30 31 32 33		
	19 20 21 22	24 25 26 27	29 30 31 32	34 35 36 37		
	23 24 25 26	28 29 30 31	33 34 35 36	38 39 40 41		
	27 28 29 30	32 33 34 35	37 38 39 40	42 43 44 45		
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A	Score:					

Side One

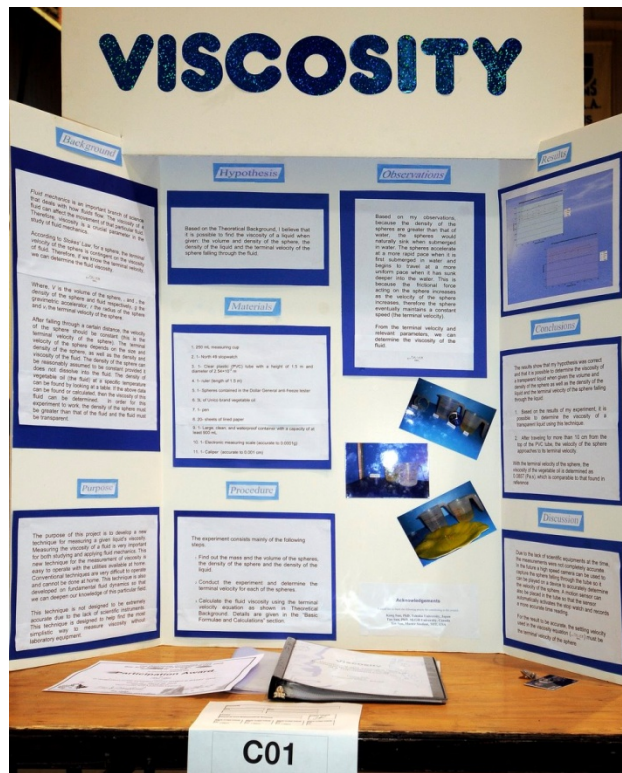
Step Three

- Choose the appropriate score for the Definition and Level chosen
- Transfer number chosen to Score box

Study, Experiment or Innovation?

EXPERIMENT:

Investigation undertaken to test one or more hypotheses.

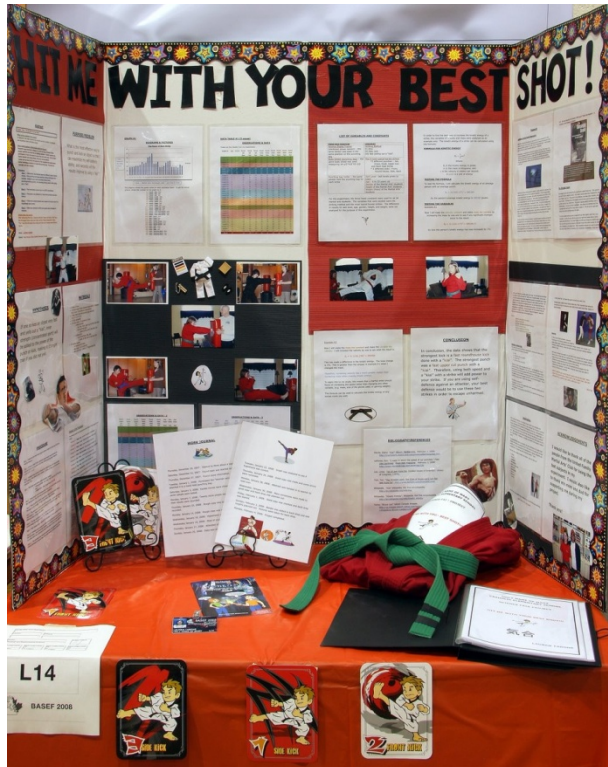


To develop and test a new technique for measuring a liquid's viscosity

Study, Experiment or Innovation?

EXPERIMENT:

Investigation undertaken to test one or more hypotheses.



To discover the most powerful way to punch and kick an object, so that one can maximize their self-defence ability.

Study, Experiment or Innovation?

EXPERIMENT:

Investigation undertaken to test one or more hypotheses.

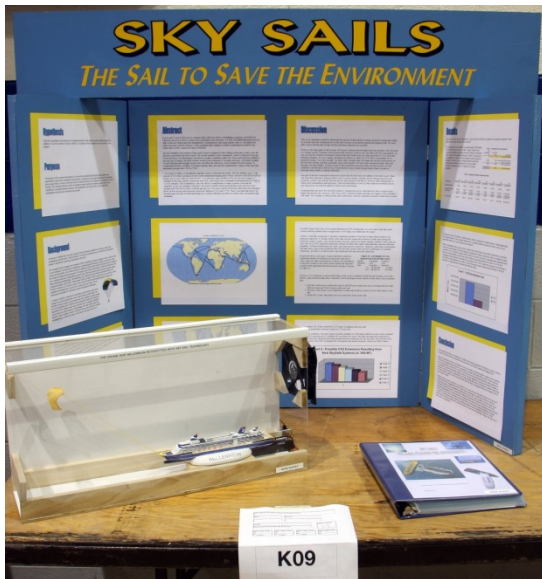


The purpose of my project was to see if fatigue would affect your hand-eye coordination and accuracy.

Study, Experiment or Innovation?

STUDY:

A collection and analysis of data showing evidence of a correlation, or pattern of scientific interest. Variables are identified and controlled.



The purpose of this research and analysis is to show that wind-assisted (Skysail) ship propulsion can significantly reduce fuel consumption and emissions. Commercial vessels that transport goods and people across large bodies of water are the most likely to benefit from the use of tethered kites to propel the vessel forward. The resulting reduction in fuel consumption (where wind power replaces engine power), also contributes to reducing harmful emissions. The calculations in this study show to what extent fuel consumption and emissions reductions are possible.

Study, Experiment or Innovation?

STUDY:

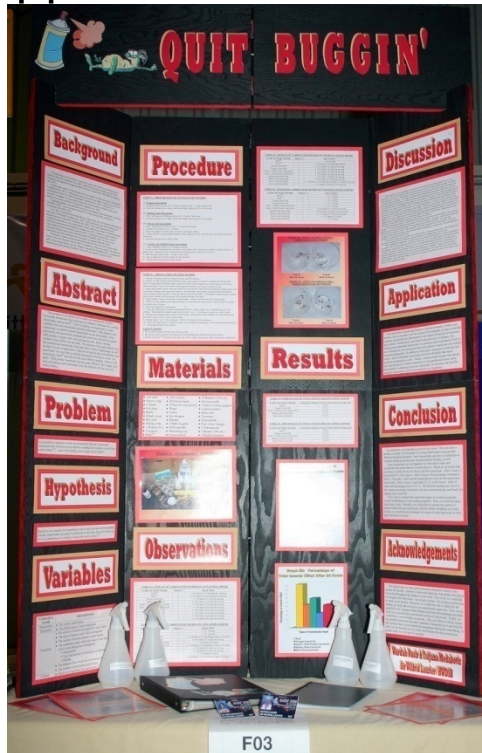
A collection and analysis of data showing evidence of a correlation, or pattern of scientific interest. Variables are identified and controlled.

The purpose of this project is to study the effects of hypocalcemia and its subsequent results on the depolarization rates on the myocardial cells in patients with congestive heart failure.

Study, Experiment or Innovation?

INNOVATION:

The development and evaluation of models or innovative devices, using approaches from the field of technology or engineering.

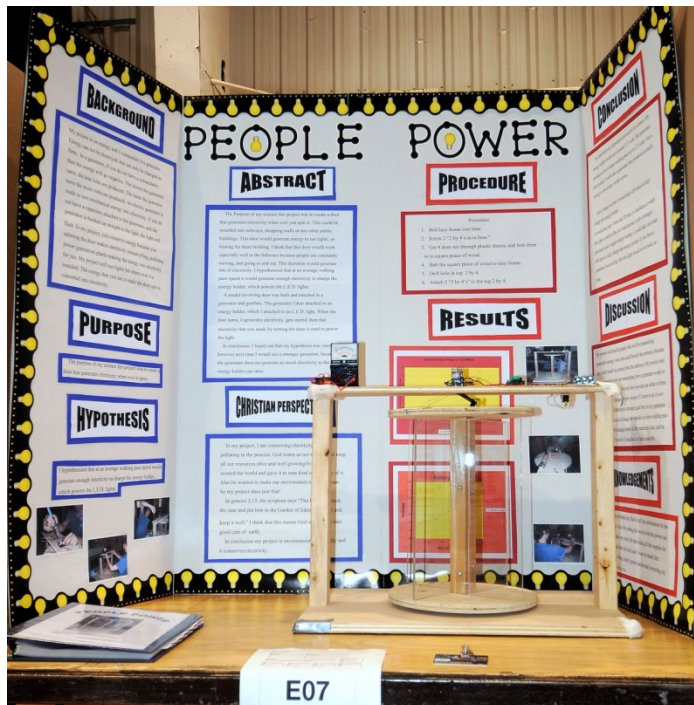


The purpose of our project is to synthesize homemade, more environmentally friendly insecticides that will serve as effective substitutes for synthetic products, such as Raid.

Study, Experiment or Innovation?

INNOVATION:

The development and evaluation of models or innovative devices, using approaches from the field of technology or engineering.

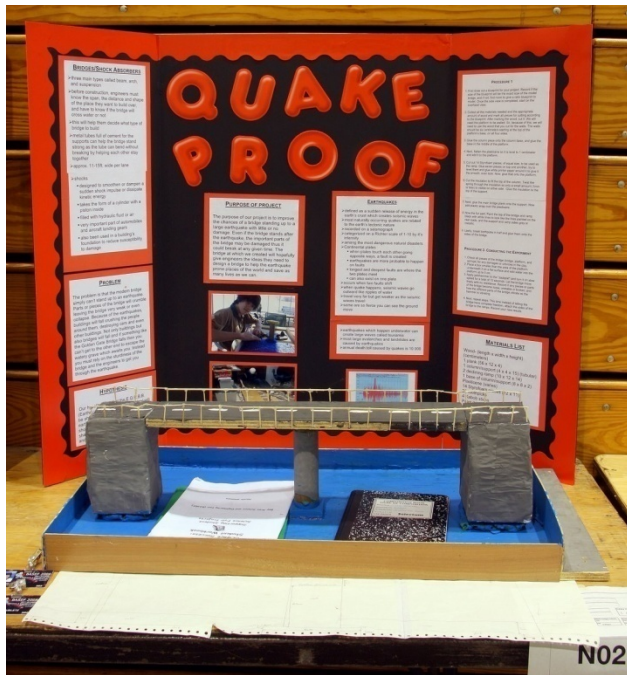


To create a door that generates electricity when ever you spin it. This could be installed into all the subways, and it would run the lights in the subway because people are constantly going through the doors. I hypothesized than average walking pace wolud generate enough electricity to do this.

Study, Experiment or Innovation?

INNOVATION:

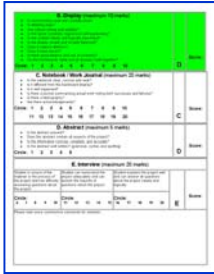
The development and evaluation of models or innovative devices, using approaches from the field of technology or engineering.



The purpose of our project is to better the chances of an bridge standing up top a earthquake with little or no damage.

Even if a bridge stands after the earthquake the important parts of the bridge may be damaged, thus leaving the bridge with very little chance of standing up to the next quake which may come.

Judging Form



Side Two

Step Four

- Circle the appropriate score for Skill and Dramatic value
- Transfer number chosen to 'B' Score box

<p>B. Display (maximum 10 marks)</p> <ul style="list-style-type: none">• Is workmanship neat and carefully done?• Is lettering clear?• Are colours strong and suitable?• Is the layout complete, logical and self-explanatory?• Is the content clearly and logically presented?• Is the display simple and visually balanced?• Does it capture attention?• Does it have impact?• Is there good balance and use of contrasts?• Do the backboards, table and all displays meld together? <p>Circle: 1 2 3 4 5 6 7 8 9 10</p>	<p>B</p>	<p>Score:</p>
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Judging Form

Side Two

Step Five

- Circle the appropriate score for Notebook/Work Journal
- Transfer number chosen to 'C' Score box

<p align="center">C. Notebook / Work Journal (maximum 20 marks)</p> <ul style="list-style-type: none"> • Is the notebook clear, concise and neat? • Is it different from the backboard display? • Is it well organized? • Is there a journal summarizing actual work noting both successes and failures? • Is there a bibliography? • Are there acknowledgements? 										C	Score:
Circle:	1	2	3	4	5	6	7	8	9		
	11	12	13	14	15	16	17	18	19	20	



Judging Form

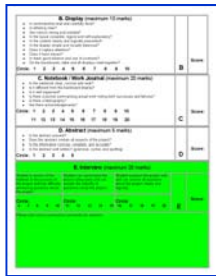
Side Two

Step Six

- Circle the appropriate score for Abstract
- Transfer number chosen to 'D' Score box

<p style="text-align: center;">D. Abstract (maximum 5 marks)</p> <ul style="list-style-type: none"> ▪ Is the abstract present? ▪ Does the abstract contain all aspects of the project? ▪ Is the information concise, complete, and accurate? ▪ Is the abstract well written? (grammar, syntax and spelling) <p>Circle: 1 2 3 4 5</p>	D	Score
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Judging Form



Side Two

- Step Seven
- Circle the appropriate score for Student's understanding
- Transfer number chosen to 'E' Score box and add notes

Student is unsure of the material or the process of the project and has difficulty answering questions about the project.	Student can summarize the project adequately and can answer the majority of questions about the project.	Student explains the project well and can answer all questions about the project clearly and logically.		
Circle: 6 7 8 9 10	Circle: 11 12 13 14 15	Circle: 16 17 18 19 20	E	Score:
Please note some constructive comments for students.				

Judging Projects



Before starting to judge take a quick walk-around of all of your assigned projects, to get a feel for what they are about, what they look like, and where they are located.

To judge a project do the following:

- Read through the backboard in some logical order; assess its impact, and how well it tells the "story" of the project. Were you able to understand quickly what the project is trying to do, and what the results were?
- If equipment or devices are part of the display, do they serve an obvious purpose, based on what you have seen so far?

Judging Projects



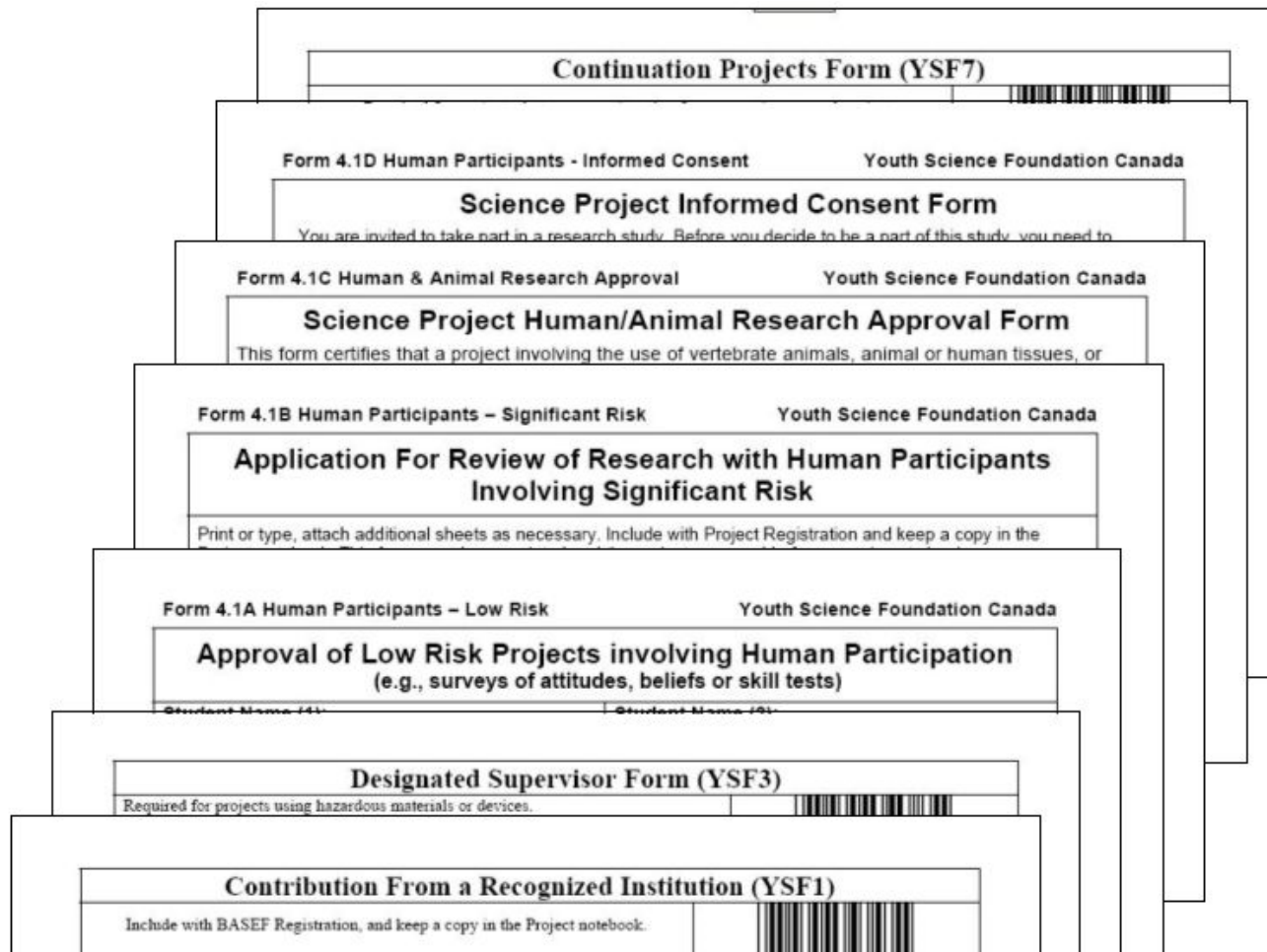
- Read through the abstract. Assess it
(If missing, ask for it in interview. No abstract = 0)
- Read through the workbook (journal and/or full report). Assess it. (If missing, ask for it in interview. No workbook = 0)
- Write down your questions and compliments, for use in the interview, and add to comments section of the judging form.
- Initial the morning section of the Project Placard
- Note your marks
- Focus on individual, independent assessment in the morning judging and for the interview process - if you have questions, you can collaborate with senior judges later in the day.

Judging Projects



- Once all projects are marked and interviewed:
Write down the rank order of the projects you have judged, based on your overall impressions of the day.
- Which one is best?
- Which should be at the bottom of the list?
- Now check the total mark you have assigned to each project.
- Is your impression consistent with the marks you've assigned?
Decide if you need to review anything.

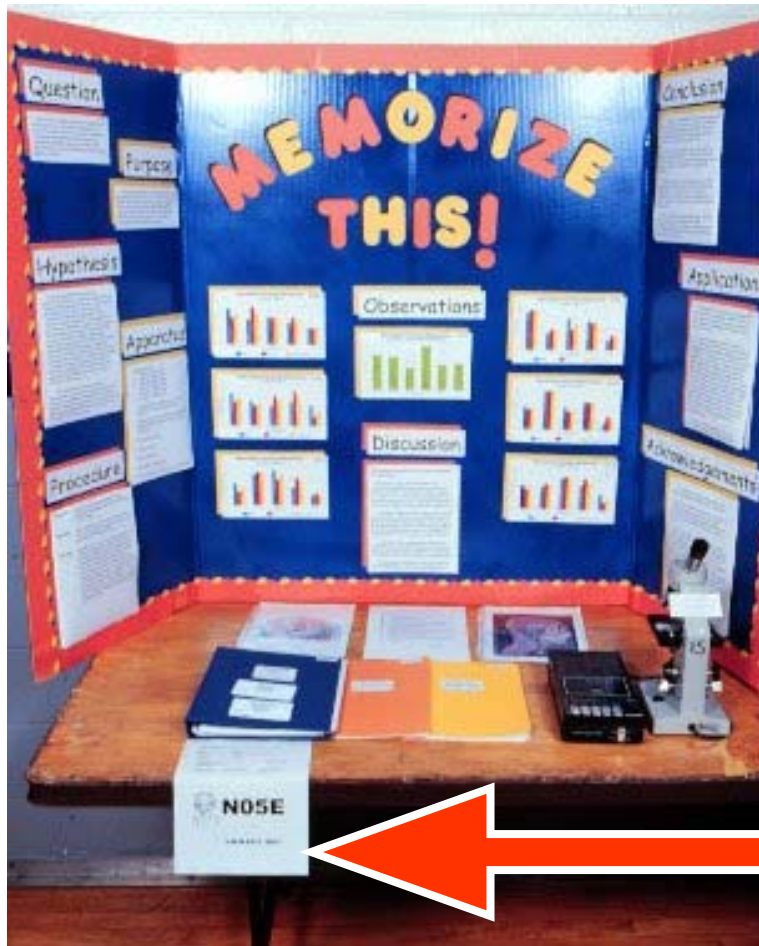
Other Forms to Look For



Interviews



Interviews



- When you have completed the interview portion of judging a project, sign the placard on the project table.



Interview Tips



- Be genuine
- Show you are interested
- Let the students present their findings
- Listen actively
- Encourage conversation by asking students about their projects and their methods
- Ask questions - at their level of understanding
- Sign the placard
- End meeting on a positive note

Judging Tips and Tricks

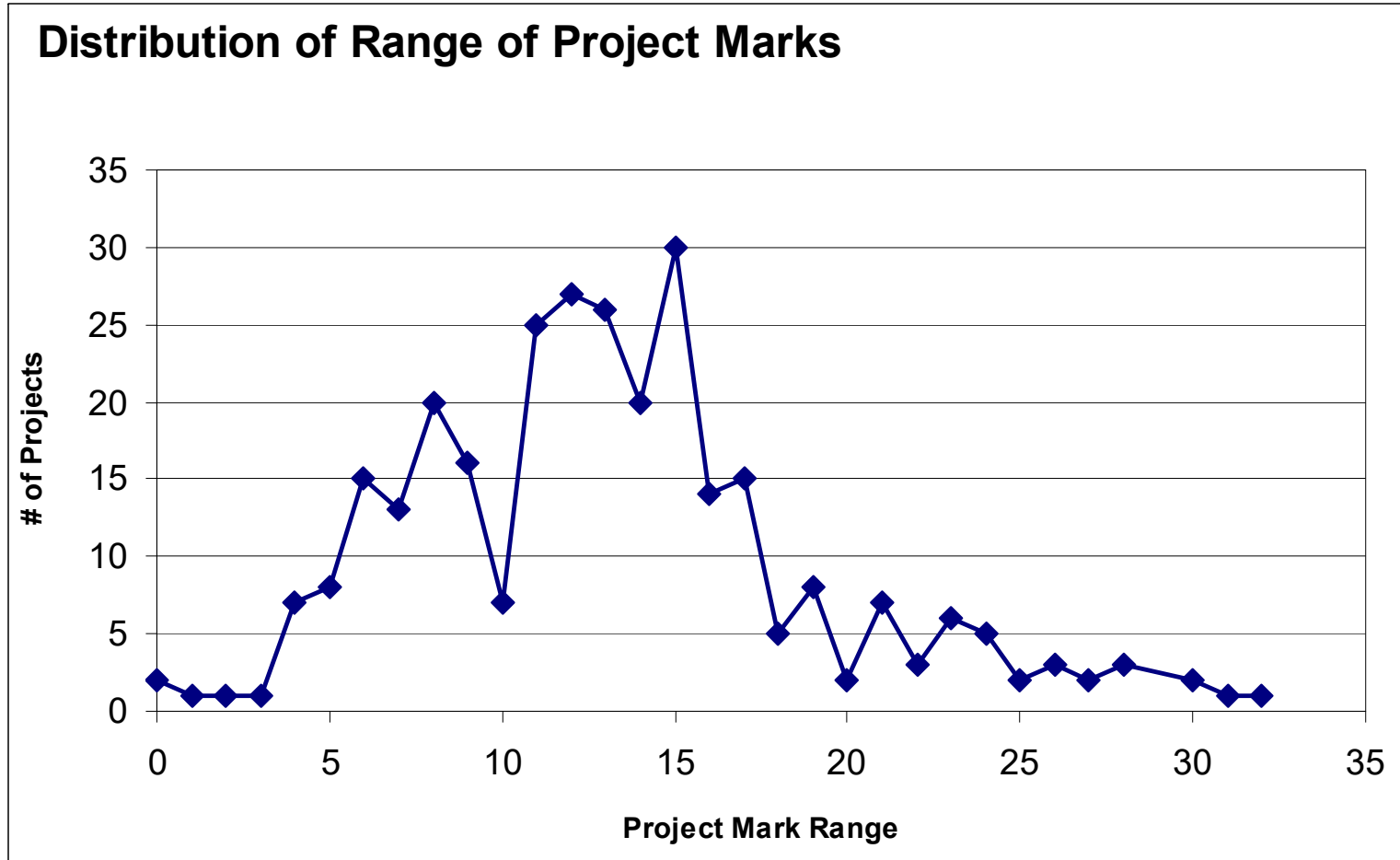


- Get there early
- Look at all of your assigned exhibits before starting to judge your exhibits
- Be aware of your scheduled interview times, as printed on your project judging forms
- Set timing goals for your exhibits.
(10-15 min per project)
- Exhibitors' understanding is as important as the project
- All students should be acknowledged & commended for their effort in putting forward a project (no matter what grade)
- Revise your scores as many times as you need to
- Don't tally judging sheet in front of Exhibitors
- If stuck on a project, see your Category Chair
- Judging should be finished by about 4:00p.m.
- Be prepared to stay until 4:30p.m. or until the Judge and Category Chair Meeting is completed.

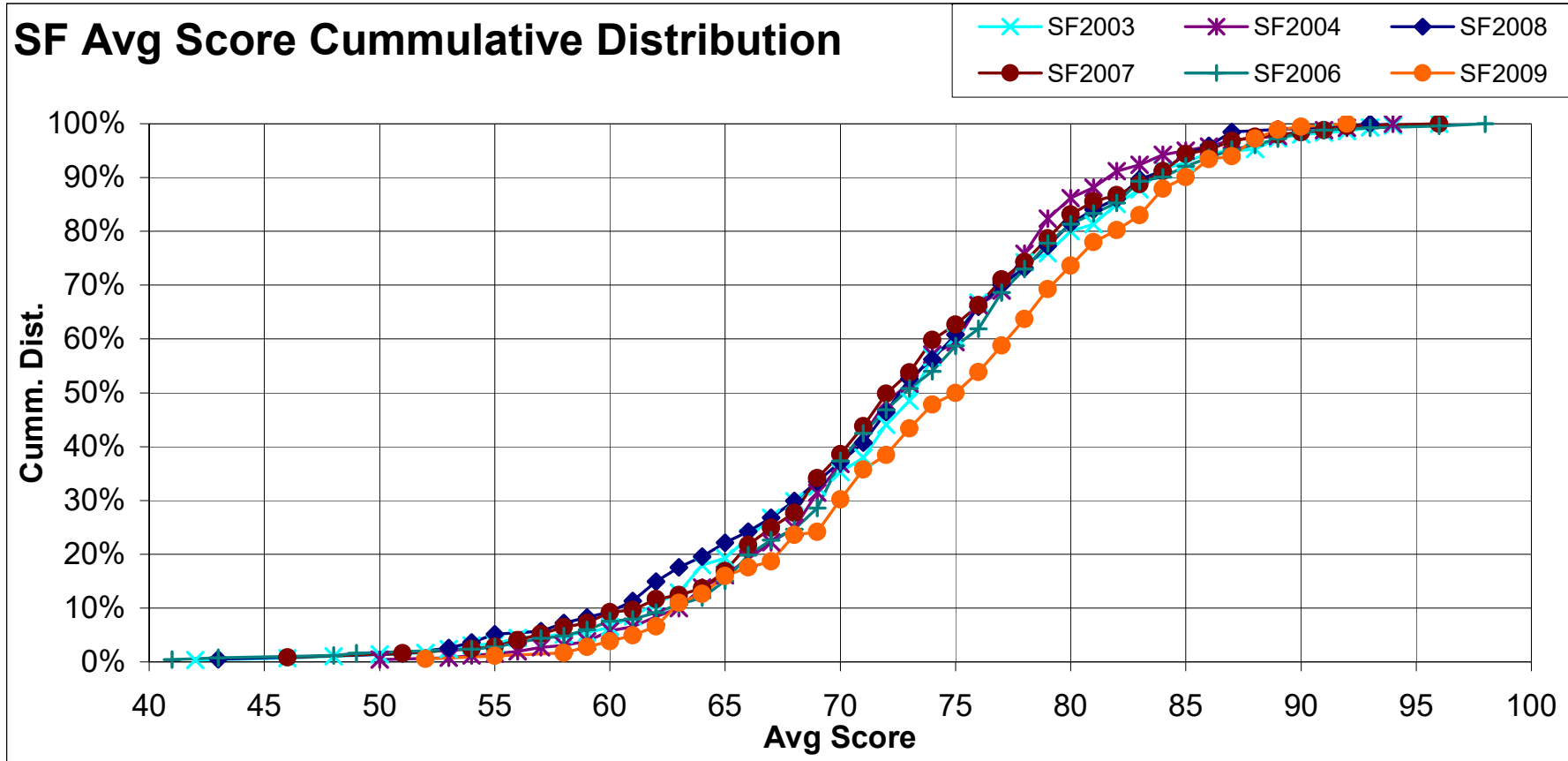
Working the Data



Working the Data



Typical Distribution of Average Project Scores



2016 Awards Ceremony



2016 CWSF Team



CWSF 2016

**Montreal
Quebec**

2016 ISEF Team



ISEF 2016

**Phoenix
Arizona**

Past Participant



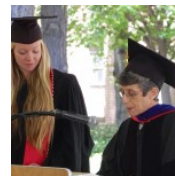
Kayla Cornale

"Sounds into Syllables(TM) II: Windows to the World of Childhood Autism", is the second phase of a teaching system she developed to help children with autism overcome social communication difficulties - with music

Encana Best in Fair Award at the 2006 Canada Wide Science Fair



Youth in Motion's Top 20 Under 20 ranking in 2006

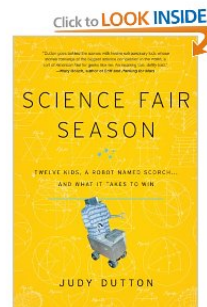


2007 CNN's Young Hero Award Winner

Attended Stanford University, California 2007-2012

B.A., Master of Linguistics

Currently with Athletics Ontario as its Para-Athletics Coordinator. Her role is to oversee and manage the merging and development of services for athletes with a disability into mainstream Athletics Ontario programs.

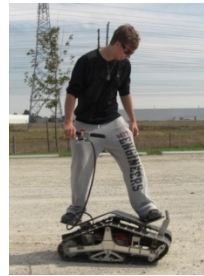


Past Participant



"The Uno: Tomorrow's Transportation Solution"

Ben Gulak



The Uno - #1 Invention of the Year 2008 Popular Science

Appeared on Dragon's Den and asked the Dragons for \$1.25-million for 20% of the Uno. All five opted in, making it the biggest deal in show's history at the time

TED Fellow



Rolling Stone
CULTURE

Gear Up

All the Technology That Rocks

How Inventor Ben Gulak Went From Science-Fair Nerd to the Playboy Mansion

By **SABRINA RUBIN ERDELY**

POSTED: October 28, 2:00 PM ET

Other Inventions:

The Shredder a "cool stand-up power sport vehicle"

The Mule a remote-controlled all-terrain vehicle

Past Participant



Aaron Hakim



Youth in Motion's Top 20 Under 20 ranking in 2008

Participant at Sanofi-Aventis Biotech Challenge, and the Intel International Science and Engineering Fair. In 2007, he was the only high school student exhibiting at the Canadian Genetics Society Conference.

Attended Yale University majoring in Economics with a combined BS/MS in Molecular, Cellular and Developmental Biology

TEDxYale Speaker



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