

We've Changed our Name!
Formerly (HWHSEF)
Hamilton-Wentworth
and Halton Science
and Engineering
Fair

BASEF

NOON

Bay Area Science and Engineering Fair
<http://basef.mcmaster.ca>

Fair Dates: April 3-6, Mohawk College, Fennell Campus, Hamilton
Registration Dates: February 13 (noon) to March 6 (noon)

Calling all students in grades 7 through OAC! It's time to gear up for the 2002 Science and Engineering Fair, taking place April 3-6 at Mohawk College in Hamilton. Project registration will be available online between February 13 and March 6 on the Fair 2002 website: <http://basef.mcmaster.ca>

Start Your Projects!

The 2002 Fair is open to students registered in grades 7 to OAC in schools within the regions of Hamilton and Halton, including independent or private schools, as well as home schools. If your school conducts a science fair, you may only advance to BASEF through your school's fair. If your school does not conduct a science fair, you may enter into BASEF directly. We do require however that you still enter as a representative of your school and school board. All registrations from any source are subject to the "maximum number of projects" limits.

Projects are entered in one of the following categories:

- Life Sciences
- Biotechnology
- Physical Sciences
- Engineering Sciences
- Computing and Mathematical Sciences
- Earth and Environmental Sciences.

There is a maximum of two students per project, and each school is restricted to eight projects at the junior level, sixteen in the intermediate level, and sixteen in senior level.

The levels are:

- Junior (grades 7 & 8)*
- Intermediate (grades 9 & 10)*
- Senior (grades 11 to OAC)*

All intermediate and Senior students must complete a research plan prior to experimentation. For details and the required forms please see the science fair website (<http://basef.mcmaster.ca>).

For detailed information please check our website <http://basef.mcmaster.ca>, or ask your teacher.

Please enter early, as places are limited and entries may be turned away once the limit is reached. Registration begins February 13, 2002 at noon.

Students must be present for afternoon judging on Thursday April 4, 2002. Exceptional circumstances must be discussed with the Judge-in-Chief prior to registration.

Prizes and Awards

Last year at our 2001 fair, over \$9000.00 in cash was presented for Merit and Special Awards. The total value of the trip awards to the Canada Wide and International Fairs was nearly \$20,000.00. In addition, McMaster University's Faculties of Science and Engineering awarded four scholarships of \$500 each. In 2002, the major prizes will include up to 16 student trips to the Canada-Wide Science Fair (to be held in Saskatoon May 11-19, 2002) and up to 4 student trips to the International Science and Engineering Fair (to be held in Louisville, Kentucky May 12-18, 2002.) The trips are all expenses paid, and include adult chaperones.



Public viewing of the projects

Safety and Ethical Considerations

There are safety and ethical considerations that must be adhered to for all projects. Please see our website for details.

- Electrical components such as switches and wiring must be of an approved variety.
- Projects requiring 110V power must use a grounded plug.
- No water or gas sources of any type are available.
- Any equipment incorporating lasers or other potentially harmful radiation must meet provincial regulations.
- No living vertebrate animals shall be displayed in exhibits.
- Any project involving vertebrate animals, human subjects, tissue or DNA may be required to meet additional regulations. Contact the Judge-in Chief or check the website for further details prior to experimentation.
- All displays must be freestanding and fit within the space provided. Maximum dimensions are:
Height: 274 cm (including provided table)
Width: 122 cm (side to side)
Depth: 76 cm (from to back).

Activity Day 2002...can't wait!

Activity Day will be held on Friday, April 5, 2002 ALL DAY beginning at Mohawk College at 8 a.m. The day is FREE OF CHARGE to science fair participants and is comprised of a series of fun and educational activities. The day is intended

Fair 2002 Schedule

Wednesday, April 3

Project set-up beginning at 4 p.m. in the Fennell Campus Gymnasium, Mohawk College (Corner of West 5th and Fennell Avenue).

Thursday, April 4*

Judging of projects, all day. Students must be present for judging during the afternoon between 1 p.m. and 4 p.m.

Friday, April 5*

Student Activities Day! Sign up for a variety of exciting activities and excursions as part of your registration. Lunch will be provided.

Saturday, April 6

Projects will be open for viewing by the public, followed by the Awards Ceremony.

*We are considering providing bus transportation between Halton and Mohawk College on April 4th and 5th. Visit our website for details.

to give each student a break from the hectic pace of the fair.

To give you an idea of what the day is about, let's take a quick look at last year. The day began with drop-off at 8:00 a.m. and ended with a pick-up at 4:30 p.m. The morning consisted of a series of great field trips. The students signed up for their activities when they registered for the fair online. They gave first, second, and third choices and activities were assigned on a first-come, first-served basis. (All events are usually space restricted.) Field trips have included swimming, skating, bridge building, sports domes activities, dance lessons, lab and business tours and airplane flights with The Young Eagles. A hotdog and hamburger lunch was provided for the students back at the college. (Special diets and allergies must be noted upon registration.) In the afternoon, the students were off and running again on the second half of their chosen

activities. The day ended at 4:30 p.m. with everyone reporting back to Sheridan College for parent/guardian pickup.

Plans are underway for 2002, and organizers are busy lining up the day's events. The Young Eagles have once again expressed interest in taking the students on flying tours over the region. With all the great venues Hamilton and Halton have to offer, we know the organizers will put together a fantastic day for the students. All science fair participants are invited to attend and of course we're always looking for volunteers to help plan and conduct our day. **Keep your eyes on our website at <http://basef.mcmaster.ca> for updates.**

If you can lend a hand, or have any questions or comments please email the BASEF 2002 Student Activities Committee at basef.activities@mcmaster.ca.

Fair 2001 Review

Approximately 280 students participated in the 41st Hamilton-Wentworth & Halton Science and Engineering Fair in April 2001, held at Sheridan College in Oakville. Nine students went on to participate in the Canada-wide Science Fair held at Queen's University in Kingston, while two students earned spots on Team Canada, which competed at the International Science and Engineering Fair in San Jose, California.

Grand prize winners from 2001:

HDSEF Committee trophy:

(Elementary school accumulating most points)
St. Bernadette, Hamilton

Herb Gildea Memorial trophy:

(Secondary school accumulating the most points)
St. Mary's High School, Hamilton

IISF trip award winners:

"REALE Global Warming Solutions II"
Geoff Olynyk, Aldershot H.S., Burlington

"The effects of heavy metal toxicity on developing invertebrate nervous system"
Eva Vertes, Highland H.S., Dundas

CWSF trip award winners:

"Building Blocks of the Future"
Hsinwen Than, St. Mary's H.S., Hamilton



Canada Wide Science Fair Trip award winners and chaperones from Hamilton and Halton pose with the Honourable Jim Wilson, Ontario Minister of Energy, Science and Technology in Kingston.

"How can we prevent buildings from collapsing during severe earthquakes?"
Queenie Leung, Oakville
Christian H.S., Oakville

"Electromagnetic Fields"
Jenna Bihun, Alysha Keir Holy Spirit H.S., Hamilton

"The Trans Neural Pathway: Combining Computers and Research" Jeff Alfonsi, St. Mary's H.S., Hamilton

"Memorize This!"
Olivia Potvin, Siobhan Kiely St. Bernadette, Hamilton

"The effects of heavy metal toxicity on developing invertebrate nervous system"
Eva Vertes, Highland H.S., Dundas

"REALE Global Warming Solutions II" Geoff Olynyk Aldershot H.S., Burlington

"H2O No!" Daniel Teoh, St Teresa of Avila, Hamilton

Alternate CWSF Entry:

"Visual Turbulence" Alexander Bilyk, St. Joachim, Hamilton



Eva Vertes with her multiple-award winning project: *"Nerves and Metals - The effects of heavy metal toxicity on developing invertebrate nervous system"*

Philosophy of Judging

Science fairs provide a unique learning opportunity for students, teachers, and members of the community to explore science and to increase public awareness of science and the world we live in. Though science fairs are generally a competition, they also provide opportunity for students to display their creative scientific activity beyond the classroom and in the world. The young person comes into direct contact with the scientific and industrial community within the project development.

The judging official, a member of the scientific and technical community is an essential piece of this experience. The onus is on the judge to provide an experience that is **positive and enriching**. The experience of judging contributes directly to the student's learning experience as well as the judge's. All judging interviews should be a **positive experience** for each exhibitor. Most students enjoy the chance to talk about their project with someone both knowledgeable and sympathetic who represents scientific authority. This interaction may directly influence the future scientific activity of the student. The judge must be **encouraging, positive, constructive in criticism**, and should discuss future research possibilities with the student. All students should be treated fairly in the amount of time given to them for interviews, and in the type of comments made.

Judging is a difficult task and should be viewed as an individual process with each student. A student's score should be graded independently, using their knowledge, comprehension and foresight as indicators of their mark. This allows students to be graded independently based on their individual knowledge and experience. Only after scoring is completed does relative ranking take place for the competitive aspect of the science fair experience.

Want to Help?

The Bay Area Science and Engineering Fair owes its continuing success to the efforts of hundreds of volunteers from our education and business communities. You can help too! For more information, contact us at [http://basef@mcmaster.ca](mailto:basef@mcmaster.ca), or see other contact information below.

Are you a Teacher?

We encourage your comments, suggestions and participation in making our science fair even more beneficial to students and teachers alike. Our education

system is undergoing change, and we welcome your input to ensure we continue to provide a meaningful and relevant experience to your students and to you. Please contact Sue Olynyk at basef.awards@mcmaster.ca



A judge talks with fair participants.

Would you like to be a Judge?

In order to ensure a fair and balanced judging process, we try to have every project judged by at least three qualified judges. Given the high quantity and quality of entries, each judge only has time to efficiently judge a small number of projects. We generally require up to 150 judges each year, who are prepared to devote a day of their time to the process. Judges bring their skills and experience to bear in assessing the merits of entries, and also provide feedback to the students. If you are interested in judging and have at least a high school education and some relevant experience, we would like to hear from you. We offer training to all judges. Please contact our Judge-in Chief, Tom Crawford, at basef.judging@mcmaster.ca

Are you a Science Fair Alumnus?

Did you enjoy and benefit from your experience at a science fair in the past? Perhaps you are interested in helping other students enjoy a similar experience. If you could spare

some time, or simply want to keep in touch with what's going on each year, we'd certainly like to hear from you. We'd be happy to add you to our mailing list. Contact our Alumni Chair Barb Owen at basef.alumni@mcmaster.ca

A Student Participant's Perspective

Jeff Alfonsi was a gold medal winner at the 2001 Hamilton-Wentworth and Halton Science & Engineering Fair. He was also awarded a trip to the Canada Wide Science Fair held in Kingston, Ontario in May 2001, where his project received an Honourable Mention. In his statement below, he talks about the impact these two fairs had on his life.

CWSF: Can't Wait Start Fast? – by Jeff Alfonsi

No that's not what CWSF stands for; CWSF stands for Canada-Wide Science Fair. But the notion of starting now certainly pertains to the Canada-Wide Science Fair.

My name is Jeff Alfonsi. I am an OAC student, a first time science fair participant, and a 2001 CWSF survivor. In fact, my work received an Honourable Mention at CWSF. When I was asked to write a student's perspective of the Canada-Wide Science Fair I had no problem jotting down a list of reasons and advantages to compete in this fair, or any other science fair for that matter. By the time the list was finished, I felt that CWSF served as a complement to education- every student should compete in a science fair. Here's why:

The CWSF was of paramount importance to my education. For the first time in my life I had to combine science – problem solving, accurate laboratory skills, innovation- with art -writing, speaking, and designing a clear and attractive backboard- into one project. From this integration of art and science, I discovered my multifaceted skills and capabilities, and I learned much from the wise and experienced comments from mentors and judges. In addition to practical skills, I learned invaluable transferable skills: time management, how to clearly communicate my thoughts, work ethic, and interview skills. After the fair, I was in awe over the project I completed; you too will feel pride and awe at a project that you completed.

I was once told that you could only learn when you are around people who are smarter than you, or completed a project for the CWSF. When I first arrived in the exhibit hall and set my project up at the end of an aisle marked "Senior Computers and Mathematics", I perused the projects around me: to the left an artificial intelligence project, and across from me, someone had made an entire operating system. At that point I realized that I wasn't in Kansas anymore. Nonetheless, I got to meet some unique people who exhibited novel projects. And upon talking to them I was inspired to challenge myself beyond the rigor of my current project in my future endeavours. Outside of the exhibit hall, the Fair allowed me to take a boat cruise, eat endless bowls of ice cream, and get a week off school. During the one week of the CWSF, you will realize that all the late nights and sweat you put into your project is a small price to pay for this great experience.

Why was CWSF a complement to my education? It forms everything you have learned in school- and I mean everything, even kindergarten finger painting- into one project. This project is a reflection of your education, which is then compared alongside some of the smartest students and edifiers in Canada. After the fair, you can determine your strengths and weaknesses and begin to improve them for the next year. Undoubtedly, this experience extended beyond the scope of any classroom I have ever been in. My only regret is not starting earlier, so my advice to you is: Can't Wait Start Fast.

Become a Sponsor

You, or someone you know, might be interested in helping us in other ways. The Science Fair is made possible by donations that take many forms: operating funds, donations and loans of equipment and supplies (from food to photocopiers), offers of

services of all types (from printing to busing) and prizes and awards to name a few. We provide recognition of our donors at various levels. BASEF is a registered charity and we can provide tax receipts for cash donations. If you want to know more, please contact

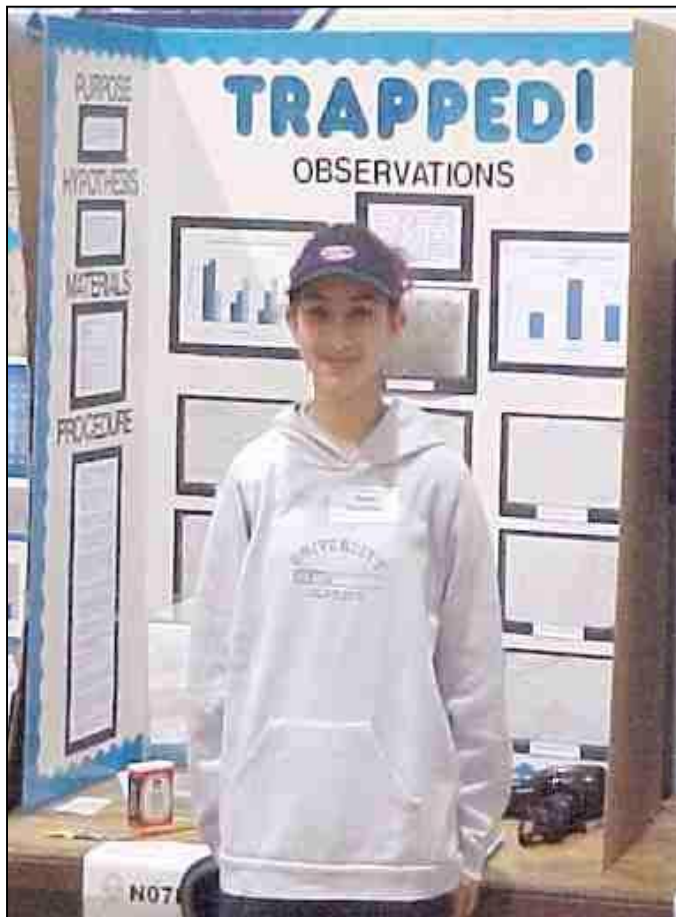
our Funding Chair, Barry Brusey at basef.fundraising@mcmaster.ca



Students with their project

BASEF

BAY AREA SCIENCE AND ENGINEERING FAIR



Contact Information

Website:

<http://basef.mcmaster.ca>

Visit our website for more information on all aspects of Fair 2002.

Paper Mail:

Our regular mailing address is:

Bay Area Science and Engineering Fair

c/o McMaster University,
JHE343C,
1280 Main Street West
Hamilton ON L8S 4K1.

Electronic Mail:

basef@mcmaster.ca

We will be monitoring our e-mail on a daily basis. It's one of the best ways to ask questions and get prompt replies.

Voicemail:

Hamilton **905-974-7975**

Oakville **905-693-7076**

You can leave a message at either of these numbers and someone will get back to you as soon as possible.

Our next newsletter is scheduled for November 2001. Is there something special that you would like to see in that newsletter? Would you like to add something to that newsletter? Contact us by email: basef@mcmaster.ca