



BASEF 2014

Annual Report

Earth Home
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Big ideas ...
Infinite possibilities

**Bay Area Science and Engineering Fair
Sponsored by ArcelorMittal Dofasco**



About BASEF

The Bay Area Science and Engineering Fair (BASEF) is the regional fair for the City of Hamilton, Region of Halton, Six Nations, and the counties of Brant, Haldimand and Norfolk. BASEF is open to over 100,000 students from grades 7 to 12 attending public, separate, independent, private and home schools. BASEF is a registered charity* run by a diverse group of committee volunteers from business, education, industry and the community.

Mission

To promote project based science and encourage youth to conduct research in areas of science, engineering, mathematics and technology, utilizing the scientific method or engineering design process.

We believe 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.

Goals

Our goal at BASEF is to make science fair participation a rewarding and enjoyable experience. Students may not win big in their first or even second science fair competition, however they gain the tremendous opportunity to meet other students interested in science and technology, and get a chance to meet and learn from some of our successful science fair veterans.

* BASEF is a registered charity 118951565RR0001

Major Activities

BASEF volunteers organized and staged the 54th Annual Regional Fair, March 26-29, 2014, at Mohawk College in Hamilton.

BASEF was excited about using Mohawk's new David Braley Athletic Centre as the venue for the fair. The administration and staff of the college gave excellent support, cooperation and assistance to BASEF and provided a warm welcome to our students, volunteers, and visitors.

BASEF's **YES** (Youth Engaging in Science) Outreach Program provided guidance and mentors for 5 projects in two secondary schools.

BASEF continues to provide Activity Morning during the fair for both BASEF participants and classes of Grade 7-8 students. The Activity Morning show is filled to capacity each year with many schools on a waiting list to attend.

Teacher's Activity Day workshop is now available as a full day of training by BASEF's very experienced former Chief Judge, Tom Crawford.

Science Success! Materials developed by BASEF continue to be used at the regional, national and international level.

BASEF committee members regularly volunteer their time to assist teachers through judging at school science fairs, mentoring students, and easing newcomers through the regulations, rules, and scientific review requirements.



Fair Highlights

Over **\$157,000** in cash, prizes, trips, scholarships and participation awards.

155 students received Merit Awards



sponsored by Primary Fluid Systems. Total value \$8,520. All Merit Award winners received merit scholarships provided by Mohawk College and Sheridan College. Total value \$77,500.



153 special awards were presented totaling \$24,175 in cash, \$3,500 in scholarships and one internship valued at \$2,200. Eight new \$500 special awards were added this year.



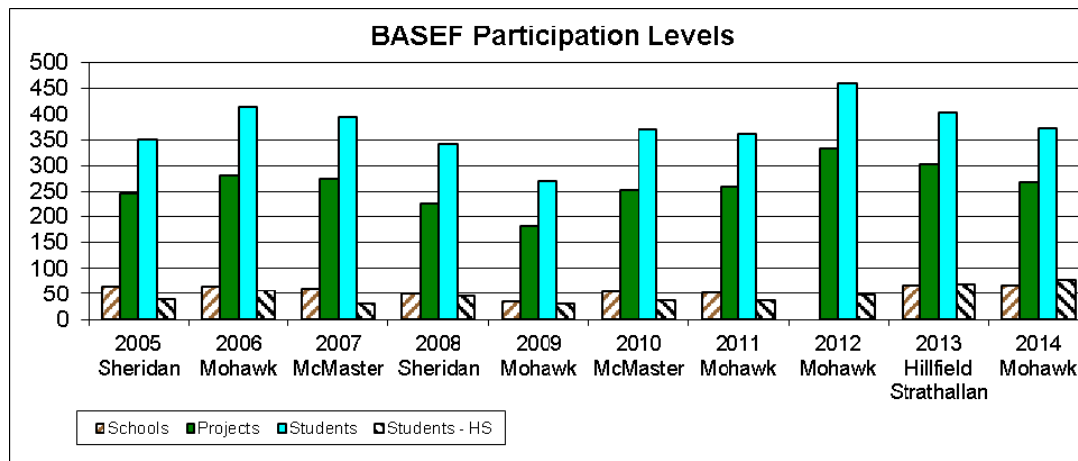
Three high school students advanced to compete in the Intel International Science & Engineering Fair (ISEF) in Los Angeles, California, May 11-16, 2014.

16 students advanced to compete in the Canada Wide Science Fair (CWSF) in Windsor, Ontario, May 10-17, 2014



Activity Morning

BASEF Activity Morning is a major outreach event for both BASEF participants and local Grade 7-8 students, designed to create interest in BASEF. Approximately 700 students from eight schools and nearly 400 BASEF students attended. The keynote address given by GM Canada provided insight into the new Cadillac ELR automobile and the technology behind it. It turns out that BASEF's Chief Judge's firm worked on the radar technology for this automobile. It is a small world. The McMaster Venture /Leap program presentation kicked off the morning, the Hamilton Amateur Astronomers gave a tour of the universe, and the McMaster Chemistry professors finished with an intensive chemistry show showing how inventiveness makes chemistry interesting.



National & International Competition Results

Twenty of the top students won trips to the Canada Wide Science Fair (CWSF) in Windsor, Ontario, or to the Intel International Science and Engineering Fair (IISEF) in Phoenix, Arizona.



National Competition Results - Canada Wide Science Fair

Isabella O'Brien St. Augustine Catholic Elementary School, Dundas	Trouble in Paradise: Can shell recycling help buffer the ocean acidification? Gold Medal Discovery Challenge Award - Environment – Junior Level
Nart Barileva and Aagnik Pant Abbey Park High School, Oakville	Solvent-Based Cellulose Crystallinity Minimization to Improve Biofuel Production Silver Medal
Jack Mogus Emily Carr Public School, Oakville	Jocks, Girdles and Guards - A Dilatant Anomaly! Silver Medal
Alex Tomala Cardinal Newman Catholic Secondary School, Stoney Creek	An Innovative Approach to Multi-core Processor Interconnection Networks Silver Medal Discovery Challenge Award - Information Technology – Senior Level
Jessica Bohm St. Augustine Catholic Elementary School, Dundas	How Crude is Your Oil? Comparing the Toxicity of Light and Heavy Crude Oil Bronze Medal
Eduard Brenninkmeijer Oakville Christian School, Oakville	Flood Water Purification at Home Bronze Medal
Federico Cao and Adree Khondker Westdale Secondary School, Hamilton	Augmenting Solar Energy: Application of Thermoelectric Effect on Photovoltaics Bronze Medal
Katie Brent Notre Dame Secondary School, Burlington	Telemetric Vest: Wearable Computing for Patient Welfare Bronze Medal Australian National Youth Science Forum Award
Patrick Lutz St. Augustine Catholic Elementary School, Dundas	Eco Melt Bronze Medal
Caroline Mahut M. M. Robinson High School, Burlington	Feeding, Fueling and Forging the Future Bronze Medal
Dana Torbina Appleby College, Oakville	Ultrasonic Vision Bronze Medal



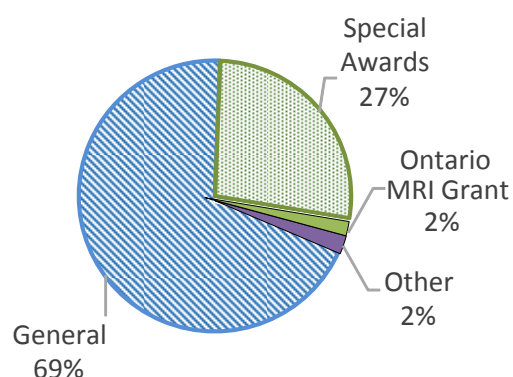
International Competition Results - Intel International Science and Engineering Fair

Three BASEF students competed as part of "Team Canada" at the Intel International Science and Engineering Fair, Los Angeles, California. **Calvin Rieder's** project "Passive Manipulation of Thermal Radiation - Dual Purpose Condensers to Provide Potable Water" won an **IISEF Grand Award (Second)** in the Environmental Management category.

Financial Highlights – Statement of Operations

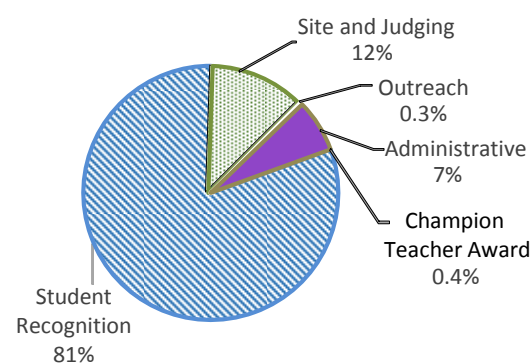
For the year ended August 31, 2014 (unaudited)

Revenue	2014	2013
General	\$ 60,413	\$ 72,226
Special Awards	23,550	14,125
Ontario MRI Grant	1,393	-
Other	1,912	1,639
	<u>\$ 87,268</u>	<u>\$ 87,990</u>



Summary of Expenses

Student Recognition	\$ 79,508	\$ 72,651
Champion Teacher Award	406	199
Site and Judging	11,769	2,305
Outreach	250	545
Administrative	6,617	7,835
	<u>\$ 98,550</u>	<u>\$ 83,535</u>



Excess (deficiency) of Revenue Over Expenses	<u>\$ (11,282)</u>	<u>\$ 4,455</u>
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Disbursements to Students

Participation awards	4,058	5.1%
Trophies and medals	1,872	2.3%
Photography and audio visual	535	0.7%
Merit awards	7,921	10.0%
Special awards	23,275	29.3%
Canada Wide Science Fair	30,357	38.2%
Intel International Science and Engineering Fair	11,490	14.4%
	<u>\$ 79,508</u>	<u>100.0%</u>

Administration Expenses

Office expenses	2,336	35.3%
Marketing and publicity	242	3.6%
Registration	1,132	17.1%
Fundraising	359	5.4%
Bank charges and interest	647	9.8%
Volunteers	454	6.9%
Ceremony and sponsor recognition	1,447	21.9%
	<u>\$ 6,617</u>	<u>100.0%</u>

Sponsorship

Title Sponsor			
 ArcelorMittal DOFASCO HAMILTON			
Diamond (\$10,000+)	Platinum (\$5,000+)	Gold (\$2,500+)	
 MOHAWK COLLEGE  Primary Fluid Systems Inc.	 THE HAMILTON SPECTATOR <small>thespec.com</small>  McMaster University	Lifetouch TaylorLeibow Accountants Union Gas Limited	
Silver (\$1,000+)		Bronze (\$500+)	
Boehringer Ingelheim Canada Canadian Linen & Uniform Service Esso Imperial Oil Foundation Halton Catholic District School Board Halton District School Board Hamilton Chamber of Commerce Hamilton Halton Construction Association Hamilton-Wentworth Catholic District School Board Hamilton-Wentworth District School Board Hillfield Strathallan College Investigative Science Inc. John Deere Canada ULC Ontario Power Generation- Nanticoke Station Walters Inc.		BattleGoat Studios D.E.N.M. Engineering Ltd Hamilton Community Awareness & Emergency Response Omicron Machining Partners in Research Friends Hamilton Wentworth Occasional Teachers McMaster University Faculty of Science Optimist Club of Stoney Creek	
Benefactors			
Banting & Best Level (\$1000+)	Bondar Level (\$500+)	Polanyi Level (\$200+)	McGill Level (\$50+)
Dr. Peter Child & Mrs Ola Lunyk Child Dr. Ranjan & Dr. Monalisa Sur Mr. David Walker	Mr. Peter & Mrs. Susan Olynyk Ms. Mimi Van den Broeck	Mr. John & Mrs. Eleanor O'Flynn	Mr. Norman Young Mr. Richard Talbot

Sponsors donating in-kind services continued to help us provide an exceptional experience for BASEF participants. Key donations included: printing, posters, newspaper advertising, trip winners' jackets, photo ID tags, accounting, and web hosting.

