

OFFICIAL PROGRAM

BASEF 2011

51st Annual Bay Area
Science and Engineering Fair

March 23 – March 26, 2011

Mohawk College of Applied Arts and Technology

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**Big ideas.
Infinite possibilities.**



Mohawk College welcomes you to the

51st Annual
Bay Area Science and Engineering Fair



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Thanks

Cover image for BASEF 2011 Official Fair Programme courtesy of NASA and NOAO/AURA.
Fair Programme printed courtesy of ArcelorMittal Dofasco

Bay Area Science and Engineering Fair
c/o Mohawk College
135 Fennell Ave West, Room F175
Hamilton, Ontario L8N 3T2

BASEF 2012
Mohawk College
March 28 to March 31, 2012



mail: basef@basef.ca
web site: www.basef.ca

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A MESSAGE FROM THE 2011 BASEF CHAIR

Ray Kranyak

Science Fairs have got to be one of the greatest things going - for three reasons:

If you love to see excited kids ...

If you love science and engineering ...

And if you happen to witness exhibits that really change things in society.

Several former BASEF award winners pop into my head when I ponder society changers.

Kayla Cornale of Burlington - Kayla wanted to improve communications with her autistic cousin. She used the young girl's ability to memorize songs to devise a way for her cousin to talk, read and emote through melodies played on a piano. Kayla's now patented teaching system 'Sounds into Syllables' for helping children with autism overcome their communication and social development difficulties started at BASEF. She won top awards at several international science fairs, and her system is now being tested in several Ontario school districts. Kayla is currently studying at Stanford University in California.

Ben Gulak of Milton – Ben's prize-winning BASEF project on magnetic levitation morphed into an invention that could lead to a major eco-friendly development in small motor vehicles. Within four years of his first science fair win he developed a revolutionary new self-balancing unicycle/street bike, the electric-powered Uno. Ben is currently studying at the Massachusetts Institute of Technology and, with the help of \$1.25 million of venture capital from the CBC-TV show Dragon's Den, has started BPG Technologies to develop the Uno commercially.

Romita Sur of Ancaster – Romita's science fair project results were so profound that a Hamilton hospital adopted her finding and altered one of its methods for treating a type of skin cancer. She had found that the algorithm used to measure the required laser treatment could be improved. The Juravinski Hospital people agreed. Romita is now a Science undergrad at McMaster University

This is the 51st year of operation for BASEF, whose mission is 'to encourage young people in science and engineering'.

My hope for this year's student exhibitors is that you meet new friends, enjoy your experience and, above all, capture the passion of science fairs that leads to new research and the discoveries of tomorrow. You students are now part of over a half century of BASEF Alumni. I congratulate each of you on a job well done and wish you the best of luck.

BASEF is a volunteer driven registered charity. I would like to acknowledge the tremendous efforts of this year's Organizing Committee, who have dedicated countless hours toward making BASEF 2011 a success. My thanks also to the over 200 Merit and Special Awards Judges and to the nearly 60 volunteers who help run registration, safety and other fair activities. A very special thank you to the staff of the host site, Mohawk College.

Our Honourary Co-Chairs, Joyce Savoline and Sophia Aggelonitis, Members of Provincial Parliament, continue the tradition of community support to our cause. I am grateful to them for this.

ArcelorMittal Dofasco, the Fair's title sponsor for the fifth year, over 30 other sponsors, and the many Special Awards donors make it possible for BASEF's students to excel in science and engineering. This year the total value of merit awards, special awards, scholarships and trip awards is expected to top \$165,000.

Raymond T. Kranyak
Chairman, BASEF 2011

BASEF 2011 SCHEDULE OF EVENTS

Wednesday, March 23 – On-Site Project Setup/Safety Check

4:00 – 8:00 pm	Registration, set-up and safety checks	Mohawk Gymnasium
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Thursday, March 24 - Student Activity Morning

7:45 – 9:00 am	BASEF students arrive for Morning Activity	Mohawk Gymnasium
9:05 – 9:30 am	Presentation – McMaster Venture/Leap	Mohawk Theatre
9:30 – 10:15 am	Presentation - Venture/Leap	Mohawk Theatre
10:15 – 11:15 am	Richard Gilbert - keynote speaker “Moving People and Freight Without Oil” Presentation - McMaster Venture/Leap	Mohawk Theatre
11:15 am – 12:00 pm	Presentation – McMaster Chemistry Professors	Mohawk Theatre
12:00 – 1:00 pm	BASEF students to bring their own bagged lunches. Students are not permitted to go elsewhere for lunch and must remain at their projects in the gym.	Mohawk Gymnasium
1:00 – 4:00 pm	Judging interviews for BASEF students (BASEF participants must remain at their projects during judging)	Mohawk Gymnasium

Friday, March 25 – *Fair not open to Public and students*

Saturday, March 26 - Public Viewing & Awards Ceremony

9:00 am - 12:00 noon	Public Viewing - Projects are to remain in place until end of Award Ceremony.	Mohawk Gymnasium
12:00 noon	Gym closes. NO project take-down allowed at this time	Mohawk Gymnasium
12:00 pm - 1:15 pm	Champions of Science luncheon	By Invitation
1:00 pm	Awards Ceremony seating opens	Mohawk Theatre
1:30 - 3:30 pm	Awards Ceremony	Mohawk Theatre
3:30 - 4:00 pm	Project take-down	Mohawk Gymnasium
4:00 - 5:30 pm	Meeting with chaperones for trip winners and their parents	Mohawk Gymnasium



A MESSAGE FROM HONOURARY CO-CHAIR

Burlington MPP Joyce Savoline

Congratulations to the participants in the Bay Area Science & Engineering Fair. You have dedicated your time and effort to this Fair and I look forward to seeing the fruits of your labour. I would also like to take this opportunity to thank all of the people who make today possible; the BASEF committee members, volunteers, teachers, and parents of the participants, who together contribute to the success of this event.

Now more than ever, science and technological advancements are critically important to Ontario's future success in a competitive world economy. The BASEF provides a wonderful opportunity for students to test their ideas and push the limits of their chosen field with ideas and projects that may one day change the world.

The BASEF event provides an excellent showcase for the talents of Ontario students and offers them a unique opportunity to realize success on a national and international level. I applaud the efforts of each entrant and I wish you every success today and in your future endeavors.

Kind regards,

Joyce Savoline

MPP -Burlington
Co-Chair BASEF



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Burlington ON L7R 4B7
Tel: 905-639-7924 Fax: 905-639-3284

Queens Park Office:

Main Legislative Building
Toronto ON M7A 1A8
Tel: 416-325-5362 Fax: 416-325-5357

BASEF 2011 ORGANIZING COMMITTEE

MOHAWK COLLEGE, BASEF 2011 HOSTS

President, Rob MacIsaac, V.P. Academic, Cheryl Jensen

CHAIR

Ray Kranyak

REGISTRAR

Steve Procyszyn

JUDGE IN CHIEF

Tom Crawford

TREASURER

Eleanor O'Flynn, C.A.

RECORDING SECRETARY

Sandi Bryce

FUNDRAISING

Sue Olynyk (Chair), George Geczy, Tom Crawford,
Roslynne Crawford, Ola Lunyk Child, Peter Olynyk

STUDENT ACTIVITIES

Kevin Hunt, Kirk MacDonald

JUDGING TEAM

Tom Crawford, Roslynne Crawford, Jim Casey,
Cathy Hamilton, George Geczy, Shannon Clark

SCIENTIFIC REVIEW

Tom Crawford, George Geczy,
Dr. Michael Coughlin, Dr. Robert Brown,
Steve Procyszyn, Donna Stack-Durward

REGISTRATION TEAM

Steve Procyszyn, Lino Pin, Janice Rocchi,
Christine Rowthorn, Morris Hucal,
Kevin MacIsaac, Zenon Holadyk

MOHAWK COLLEGE REPS

Jay Robb, Peter Olynyk

AWARDS AND CEREMONY

Gerard Chiasson, Wayne Bowdish
MC's: Peter Olynyk, Cathy Collins

FOOD PLANNING

Mike Goulet, Mimi Spearing

"CHAMPIONS OF BASEF" CHAIR

Ola Lunyk Child

A MESSAGE FROM HONOURARY CO-CHAIR



Sophia Aggelonitis, MPP
Hamilton Mountain

Congratulations to all of the students participating in this year's Bay Area Science and Engineering Fair (BASEF). This fair gives you an opportunity to showcase your hard work and creativity in the field of science and technology.

We want you to be successful. That is why investing in your education is a priority for our government. These investments will help ensure that you have the greatest opportunities to develop your skills and help build a stronger Ontario.

Thank you to all the dedicated volunteers, sponsors and local educational institutions for supporting this important event. It is because of the work that you do that BASEF students consistently are amongst the best in the world.

I wish all the participating teams the best of luck.

Yours sincerely,

Sophia Aggelonitis
MPP Hamilton Mountain, Co-Chair - BASEF

BASEF 2011 ORGANIZING COMMITTEE Cont'd. SPECIAL AWARDS

Jim Casey, Cathy Hamilton

INFORMATION SYSTEMS

Ken Moyle, George Geczy, Gerard Chiasson

OUTREACH

Wuchow Than

SPECIAL PROJECTS & YES INITIATIVE

Vanessa Scanga, Ryan Buist

VOLUNTEER RECRUITMENT AND COORDINATION

Helen Barton, Glen Whitwell

PHOTOGRAPHY, GRAPHICS and PHOTO TEAM

Wayne Bowdish, Jim Hamilton, Al Bates,
Dorothea Dragotoiu, John Novak

MARKETING AND PUBLICITY

George Geczy, Roslynne Crawford,
Helen Barton

SAFETY

Neil Manmohan

FAIR PROGRAM

Janis Johnson

FAIR PROGRAM REVIEW SUB-COMMITTEE

Janis Johnson, Sue Olynyk, Roslynne
Crawford, Cathy Hamilton, Eleanor O'Flynn

TRIP CHAPERONES

IISEF: Cathy Collins (lead), Ray Kranyak
CWSF: Cathy Hamilton (lead),
George Geczy, Allison Boyd

FACILITIES

Dan Bowman

SPONSOR REPRESENTATIVE

Sandy Walker

DISTRICT SCHOOL BOARD ADVISORS

Halton Catholic: Susan Paradiso
Halton: Ron Ballentine
Hamilton Wentworth Catholic : Morris Hucal
Hamilton Wentworth: Klaas Walma, Heather Gardner
Six Nations (INAC): Anne Noyes

COMMITTEE MEMBERS AT LARGE

Kristin Spafford, Brooke Chornaby

MOHAWK COLLEGE - EMERGENCY PROCEDURES
BAY AREA SCIENCE & ENGINEERING FAIR (BASEF) – MARCH 23-26, 2011



The following emergency procedures apply to Mohawk College's Fennell Campus. Please review and familiarize yourself with them so you know how to respond quickly and appropriately in the event of an emergency.

EMERGENCY EVACUATION AND FIRE ALARMS

- 1) At the sound of the alarm, go immediately to the nearest exit and leave the building.
- 2) Take a position away from the building. Remain outside until an "ALL CLEAR" has been given.
- 3) **EXTENDED EVACUATION** – You will be directed by Security and/or Fire Wardens to a sheltered location. If instructed, please move quickly and calmly to the designated location.

PERSONAL SAFETY

If you require immediate assistance for First Aid, Medical or Security reasons, contact Security Services by any of the following methods:

- 1) Dial Extension 55 on any College phone.
- 2) Emergency intercoms are located in the hallways throughout the College. Press the round button to speak directly to a Security Officer.
- 3) Bell pay phones have an emergency button identified by a yellow label. A sign above the phones identifies your location. Press the Emergency button and give your location to the Security Officer.
- 4) Outside Emergency Intercoms. These are recognizable by a blue light. Press the red button to speak directly to a Security Officer.

Emergency Situations:

Main Security Desk	Dial 55 on College phones or press the Emergency button on Bell pay phones, or press the button on the intercom
Police/Fire/Ambulance	Dial 9-911 on College phone or 911 on Bell pay phones

Non-Emergency Situations:

Main Security Desk	Dial 2003 on College phones Dial 905-575-2003 or 905-575-2316 on other phones
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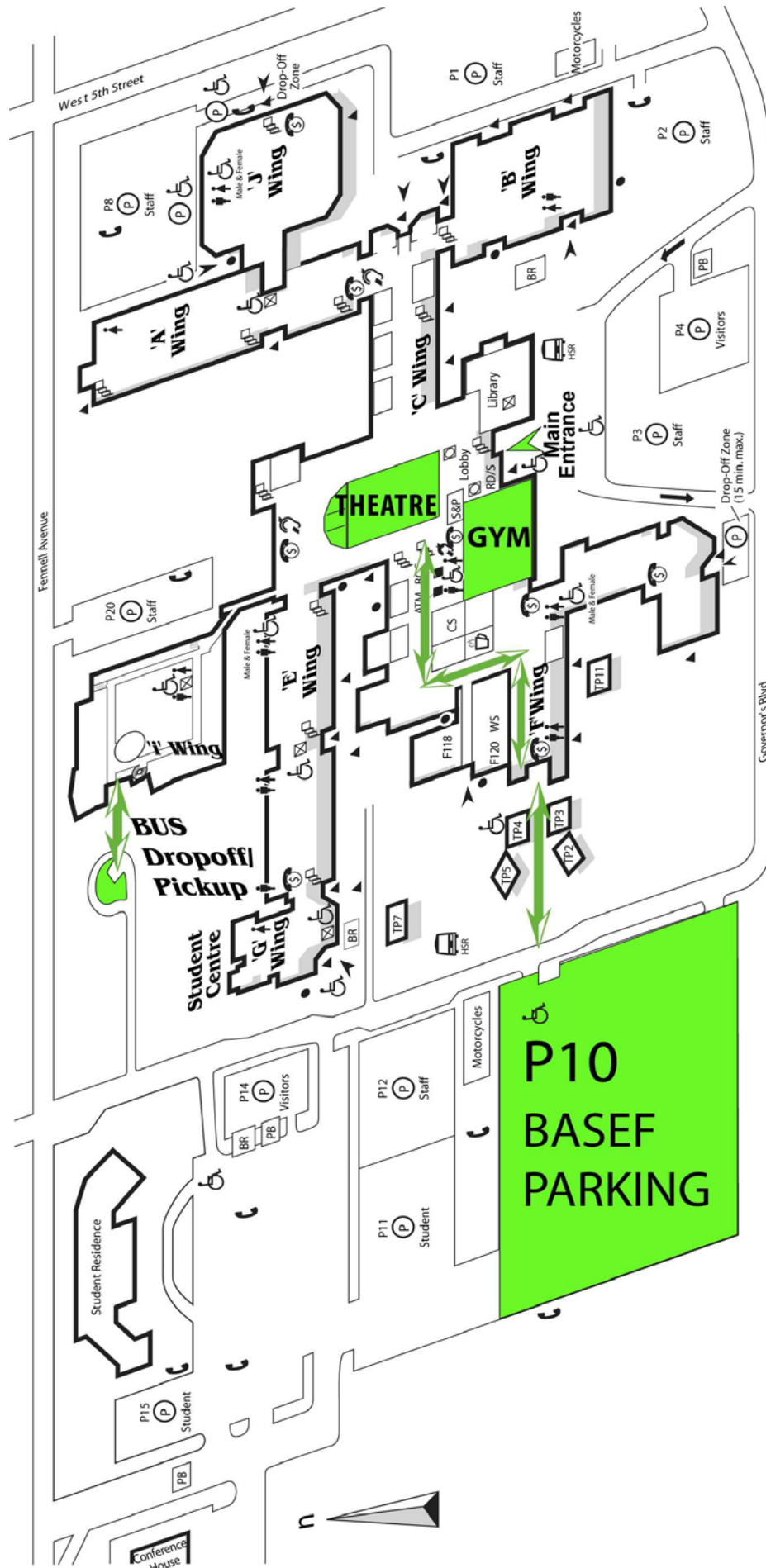
LOCKDOWN AND HOLD AND SECURE

- 1) If you hear a recorded announcement of a lockdown, immediately cease all activity.
- 2) **REMAIN CALM.** If you are able to do so, safely exit the building immediately.
- 3) **If you are in a hallway**, move to a room or other place of safety immediately.
- 4) **If you are in a classroom or office**, secure the doors, if possible, turn out lights, cover windows or pull shades. Remain quiet and out of sight, staying away from windows or doors.
- 5) Silence cell phones or other sound devices, stay quiet and await instructions. **DO NOT** open the door under any circumstances.
- 6) **If you are in an open area, such as Cafeteria, Library or Gymnasium**, follow the same steps as above. If there are no doors, take shelter under desks, tables, chairs or behind bookcases or other furniture or equipment.
- 7) **END OF LOCKDOWN:** a recorded announcement will be given by Security advising that the emergency situation outside the college has ended.

BASEF 2011

MOHAWK
COLLEGE OF APPLIED ARTS AND TECHNOLOGY

Fennell Campus



Wednesday March 23
Project Registration & Setup in Gym
4:00 pm to 8:00 pm
Parking in Lot P10

Thursday March 24
Activity Morning & Project Judging
Students arrive 7:45 to 9:00 am
Bus drop-off/pickup at i-Wing circle
Judging 1:00 to 4:00 pm
Parking in Lot P10

Saturday March 26
Public Viewing in the Gym
9:00 am to 12 noon
Theatre opens 1:00 pm
Awards Ceremony 1:30 to 3:30 pm
Parking in Lot P10

- Disabled Access
- Pay Telephones (Quick Change Card)
- Pay Telephones with Volume Control
- Washrooms
- Accessible Washrooms
- Elevator
- Wheelchair Lift
- Parking (General Parking P10, P11, P13, P15)
- Emergency Phones
- Smoking Area
- Non-Smoking Area

The “Parent Pages” (or How to Survive Science Fair!)

Congratulations on your wise decision to allow your child to participate in BASEF 2011 !

For many students, it is the first time they are rewarded for their academic endeavours. Make no mistake, all student participants are rewarded with an enriching experience and a certificate of participation, not to mention the opportunity to meet and speak with other top students, and the official BASEF goody bag. One parent noted that the students are treated like attendees at a convention.

Many students and parents view science fair projects as a dreaded, compulsory school assignment and have no idea of the available rewards for successful science fair participants. At BASEF 2010, over \$138,000 in cash, prizes, awards and scholarships were shared by 375 students. We awarded 138 gold, silver or bronze Merit Awards (including almost \$7,000 in cash and \$69,000.00 in merit scholarships), 144 Special Awards (cash and scholarships totaling nearly \$20,000) and twenty all expense paid trips. Each of our medal winners received a \$500 entrance scholarship to Mohawk or Sheridan College.

Location of Events:

Note: All science fair activities will take place at Mohawk College, Fennell Campus in the Fennell Gymnasium or the McIntyre Theatre. Any changes or revisions to the plan will be posted on the BASEF website and will be announced at the fair.

Parking and Science Fair Location at Mohawk College: There will be signs directing you to the Science Fair as you enter the College from the Fennell Avenue or West 5th Street entrance. In general, parents are instructed to park in Lot P10. There is a campus map included in this programme or you can find a similar map at:

<http://www.mohawkcollege.ca/Assets/Documents/Maps/Fennell+PDF+Map.pdf>.

Please note there will be a \$5.00 fee for parking after 5:00 p.m. weekdays and all day on Saturday, March 26. Higher rates apply at other times. Volunteers, parking attendants and Security staff will be able to guide you to the Fennell gym.

Day by Day - Parent Responsibilities:

Day 1

Project set up for the fair occurs **ONLY** on **Wednesday, March 23, 2011 from 4:00 – 8:00 pm at Mohawk College, Fennell Campus. Park in Lot P10, then carry your projects into the Gym.** Projects not set up by 8:00 pm will be deemed as "no shows" and deleted from the judging process. Your child will visit a registration desk and find out their assigned display area in the gym. They will also visit the Activity Day desk, have their photographs taken for ID badges and receive their goody bag. After the project is set up, one of our many safety inspectors will ensure that the project meets all safety guidelines. **Students cannot leave until their projects have been safety checked and passed.** The registration process and project set up usually takes less than an hour. **Be sure that all of the safety rules and regulations regarding project size, display materials and ethical guidelines with respect to human and animal testing have been followed.** Complete details are available on the official website: <http://basef.ca>

Day 2 - Student Activity Morning, Thursday, March 24, 2011, 8:00 am – 12:00 noon

Students will be welcomed by volunteers in the McIntyre Theatre beginning at 8:00 am. Events start at 9:00 am and include McMaster Leap/Venture, keynote speaker Richard Gilbert on Podworld (future transportation), and the McMaster Chemistry professors.

Day 2 - Lunch - Thursday, March 24, 2011 12:00 noon - 12:45 pm

BASEF student exhibitors must bring their own lunch, and eat in the gym as there are no cafeteria facilities available for Science Fair students.

The “Parent Pages” (or How to Survive Science Fair!) (Cont’d.)

Day 2 - Afternoon Judging, Thursday, March 24, 2011 12:45 – 4:00 pm

Students are required to be at their projects for judging between 1:00 – 4:00 pm. **Teachers and parents are not allowed on the Gym floor after 12:45 pm** in preparation for judging, which starts promptly at 1:00 pm. Typically, each student will be interviewed by at least four judges.

Day 3 - Friday, March 25, 2011

The fair is NOT open to students or the public on this day. The fair committee will be busy compiling results, writing cheques, engraving trophies and preparing for the awards ceremony.

Day 4 - Public Viewing and Awards Ceremony, Saturday, March 26, 2011

We ask that your children be at their projects for Public Viewing which takes place from 9:00 am - 12:00 noon. This is followed by the Awards Ceremony from 1:30 pm to approximately 3:30 pm in the McIntyre Theatre right across the hall from the gymnasium. Grand Prize trip winners and their parents/guardians will be required to stay after the ceremony for a brief meeting. There will be a break from 12 noon until 1:15 pm. There will be limited food service available on campus so you may want to bring your lunch. **Students may not remove their projects until after the Awards Ceremony.**

We strongly recommend that you attend the public viewing with your child. It will give you an opportunity to view all of the great projects on display, and to see your own child doing presentations for visitors.

The Awards Ceremony is the culmination of the Fair and where the hard work of our students is recognized. Project take down occurs after the Awards Ceremony because many of our participants are photographed and interviewed by the press in front of their award winning projects.

Note: Our trip award winners and a parent are required to attend a mandatory information meeting immediately after the Awards Ceremony (approximately 4:00 – 5:00 pm).

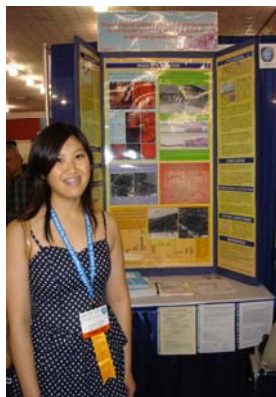
Miscellaneous Information:

Dress code: We suggest neat and casual, with the emphasis on neat.

Food Allergies and Medical Issues: We ask that you remind the BASEF folks at the Registration Desk and throughout the fair, of any food allergies or special medical issues that pertain to your children.

**There! Wasn't that easy?
Congratulations to you and your
young scientists and engineers!**

***Big ideas, Infinite possibilities.
BASEF is only the beginning for many of
our students.***



At IISEF 2010

Vivian Leung, Grade 12 student at Abbey Park High School in Oakville won 2nd place from the National Antivivisection Society and placed 4th in her Category, Cellular and Molecular Biology. Vivian took home \$2500.

Be sure to visit the BASEF website (basef.ca) throughout the year. You'll find project pictures and abstracts from the last year's fair, resource materials and important information about the next fair. Also follow the BASEF winners at basef.ca as they compete at the National and International Science Fairs. Their progress can be found under the “Recent News” column, with links to Facebook and Twitter.


The YES Mentorship: Our Second Year!

The YES (Youth Engaging in Science) Mentorship pairs at-risk youth with mentors in science at the university, college and in-school levels. Founded by Bay Area Science and Engineering Fair (BASEF) Organizing Committee members, Vanessa Scanga and Ryan Buist, the YES Mentorship recognizes the needs of elementary and high school students in Hamilton and provides them with the opportunity of engaged learning. This initiative lends mentorship and guidance towards participating in the annual regional BASEF. If you are interested in participating through the YES Mentorship and in learning more about its opportunities, please contact Vanessa at youthengaginginscience@gmail.com.

BASEF has been instrumental in supporting the YES Mentorship and created a Special Projects Chair to spur this initiative. The Mentorship is grateful to its partners in the founding year, 2010 and in this year's continuation. They are: BASEF, McMaster Let's Talk Science, Hamilton Roundtable for Poverty Reduction, Hamilton Wentworth Catholic District School Board and Hamilton Wentworth District School Board. We would like to thank our participating mentors, in particular the Bowdish and Provatas research groups. We are proud of all YES Mentorship students for their diligence and engagement in science.

THANKS TO BASEF 2011 VOLUNTEERS


Mehrdokht Allahyarkia	Ankur Malik
Dana Bee	Nancy Meadows
Danish Bhatti	Syed Nabi
Gail Britton	Vivian Pang
Sunny Buskermolen	Mustafa Qassim
Joy Carson	Abid Raihan
Sally Chopp	Elena Ramirez Cortes
Wilma Chopra	Doug Scott
Trixie Ellithorn	Fayez Sheikh Alzoor
Victoria Flaxman	Julia Shen
Annie Fu	Bhavin Shukla
Xin Guan	Brenda Sloane
Aleah Henry	Kieran Smith
Ling Mai Iv	Raza Syed
Xuefei Jiang	Preyesha Tapiawala
Michele Joch	Jo-Anne Teoh
Mary Johnston	Tam Truong
Linda Kennedy	Sandy Walker
Melanie Kitney	Elizabeth Wells
Lorna Krauss	Jason Wong
John Paul Leblanc	Meng Ying Xie
Joy Liu	Rakesh Yogalingam



Do the math:

1 innovative and world-class institution
+ 1 diverse and open economy

unlimited investment opportunities

 To learn how McMaster University and the City of Hamilton are working together to grow Hamilton's economy, visit: investinhamilton.ca



BASEF Champion Teachers 2011 Recognition Winners

The Organizing Committee of the
Bay Area Science and Engineering Fair
congratulates the following teachers

David Bortolussi
Sir Wilfrid Laurier



...has sacrificed his time to his students to ensure that each student has a chance to accomplish as much as they can."

"...encourages his students to attend BASEF through examples of positive awards as well as through the fact that all students he chooses to represent the school in BASEF wish to give back to him by winning the best school award."

"...deserves to be recognized for the work he puts into each day, to help each person."

Lisa Grant
St. Augustine



Hamilton-Wentworth Catholic Schools
150 years of 'Believing, Achieving, Serving'

"... is the students' mentor, resource person and their biggest fan which goes a long way to boosting the confidence of her students."

"...runs a very large fair at St. Augustine that is well organized and she involves high school, college and university students, parents and community members as judges."

"...has created a reputation for excellence in this area that goes beyond our community."

Annette Vanderwoerd
Trinity Christian School, Burlington



"... showed a passion for organizing our school's science fair ... I could really tell that she loves what she does!"

"... took time out of her own lunch breaks to interview each student to make sure they were on the right track."

"...encouraged everyone that was able to, to sign up for BASEF."

CONGRATULATIONS TO THE 2011 BASEF CHAMPION TEACHERS!!

The Champion Teacher Recognition Award includes induction in the BASEF Champion Teacher Hall of Fame, a plaque, and \$100. A panel of BASEF Organizing Committee members selects the Champion Teacher Recognition Award winners from among those nominated online by their peers, parents and students.

This award recognizes a science teacher who displays a remarkable ability to empower and excite student interest in science and who actively promotes the Bay Area Science and Engineering Fair.

SPONSORS 2011

TITLE \$15,000 +

ArcelorMittal Dofasco

DIAMOND \$10,000 +

Mohawk College
Primary Fluid Systems
Youth Science Canada

PLATINUM \$5,000 +

Bell
McMaster University
McMaster-Mohawk Bachelor of
Technology Partnership
Ontario Power Generation
The Hamilton Spectator

GOLD \$2,500 +

Lifetouch
Taylor Leibow Accountants & Advisors
Union Gas Ltd.

SILVER \$1,000

ASECO Integrated Systems
Boehringer Ingelheim Canada
Canadian Linen & Uniform Service
City of Hamilton, Economic Development
Dept
D.E.N.M. Engineering
Edward Oldham, Patent & Trademark Agent
Halton Catholic District School Board
Halton District School Board
Hamilton Halton Construction Association
Hamilton-Wentworth Catholic District
School Board
Hamilton-Wentworth District School Board
Hillfield Strathallan College
Youth Science Ontario

BRONZE \$500 +

Ballagh & Edward LLP
BattleGoat Studios
Deloitte & Touche LLP
Dillon Consulting
Halton Region Economic Development
Division
Hamilton Community Awareness &
Emergency Response
John Deere Foundation
Pioneer HiBred

BENEFACTORS 2011

BANTING & BEST \$1,000 +

Mr. Peter Child & Mrs. Ola Lunyk Child
Mr. David Walker
Drs. Ranjan & Monalisa Sur

POLANYI \$200 +

Mr. Tom & Mrs. Roslynne Crawford
Mr. John & Mrs. Eleanor O'Flynn



www.hamiltoncaer.com

Community Awareness and Emergency Response (CAER) is a community-based volunteer organization that has been established since 1980. CAER members plan, practice and co-ordinate activities to enhance safe operating practices and reduce the risk of emergency situations that could threaten the Hamilton-Wentworth Community

FRIEND \$100+

American Society for Quality (ASQ)
-Hamilton Section
CIMM – Hamilton Section
Hamilton Wentworth Occasional
Teachers
Optimist Club of Stoney Creek
1345000 Ontario Inc



FUTURE READY

Congratulations to our next generation of hometown inventors, innovators and entrepreneurs.

51st

TECHNOLOGY **AT ITS FINEST!**

*Mohawk College and the Faculty of Engineering
Technology are proud to support
Bay Area Science & Engineering Fair 2011*

M O H A W K C O L L E G E . C A





Helping our youth learn about science... and themselves

Congratulations to these exceptionally talented young people—they help us discover the infinite potential of science and technology.



ACTIVITY MORNING 2011

sponsored by



McIntyre Theatre, Mohawk College

9:00 am – 12:00 noon - Thursday, March 24, 2011.

Venture & LEAP Programs – McMaster University

Venture is a non-profit organization with a mandate to introduce children to the exciting world of engineering, science, and technology through fun and innovative interactive, hands-on activities. Venture runs two summer camps for elementary school students.

- Engineering and Science Camp for Grades 1-8: activities in chemistry, physics and biology and mechanical, civil and materials engineering
- Computers and Technology Camp for Grades 3-8: computing and software familiarity through project design and interaction with state of the art technology

LEAP is a non-profit Engineering summer program run by McMaster University, whose main goal is to introduce high school students to the exciting world of Engineering. LEAP Programs introduce high school students to the many varied disciplines of engineering.

- Engineering Technology (Engineering Physics, Software Engineering, Mechatronics & Robotics)
- Engineering Design (Mechanical, Materials, and Civil & Environmental Engineering)
- BioEngineering (Biomedical, Biochemical and Medical Engineering).

LEAP also offers a Headstart Programme to students entering first year Engineering at McMaster.

KEYNOTE: Richard Gilbert

PODWorld *The Essential Future of Transportation*

Richard Gilbert has had a varied career, including working as a high-school teacher in the 1950s, a university professor and researcher in the 1960s and 1970s, a municipal politician in the 1970s and 1980s, and a consultant since the early 1990s. His work as a consultant focuses on transport and energy issues, and also urban governance. His main client over the last 17 years has been the Paris-based Organization for Economic Cooperation and Development (OECD). He has also worked for the International Energy Agency, the governments of Austria, Canada, The Netherlands, and the U.S. and numerous private sector clients in Asia and North America.

He has authored, co-authored or edited 14 books and several hundred scholarly and popular articles, book chapters, and major reports for clients. His most recent book, written with Anthony Perl, is *Transport Revolutions: Moving People and Freight Without Oil*. The book explores how societies with great dependence on the motorized movement of people and goods could survive into an era of severe energy constraints.

McMaster Chemistry Profs

- COOI- CHE-m CaBaReT

The department of Chemistry & Chemical Biology at McMaster is a vibrant place to study and do research in the chemical sciences. The quality of faculty, the quality of facilities and the strong links between the Chemistry department and other departments and programs means that McMaster Chemistry & Chemical Biology is one of the best departments in Canada to do productive research and gain hands-on access to modern instrumentation.

Randy Dumont has been a professor of chemistry at McMaster University for 20 years. Over many years teaching first year, Randy learned a repertoire of chemistry demonstrations from which the show “-COOI- CHE-m CaBaReT” evolved. Randy and Paul Harrison will be presenting the show to BASEF this year.

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Grover, Velma
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Jayanth, Preethi
Jonasson, Peter
Lasowski, Fran
Malig, Monika
McDermott, Mark
Mitchell, Ryan
Mossman, Karen
Ng, Melody
Nolte, Sara M
O'Brien, Jonathan
Puchta, Alicja
Sciullo, Luana
Small, Cherrie
Szabo, Eva
Thind, Eemaan Kaur
Whelan, Fiona
Workenhe, Samuel

McMaster University, student

Ambroszkiewicz, Lucy
Aswalkar, Apurv
Bowman, Jordan
Cheng, Jackey
Eom, Ho-Jun
Han, James SeongJun
Huynh, Angela
Jayakumaran, Gowtham
Kalan, Lindsay
Kim, John Taehun
Pearce, Kyle
Vacar, Danny
Webber, Brandon
Yin, Charles

McMaster University, retired

Brown, David
Johnston, Mary
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Johnson, Ross K.

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Harrison, Eric

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Stevens, Donald

UGDSB, retired
Holliday, George

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A01, Star Powered Performance

Ryan Hunt, Patrick Cupido
J 7-8, Earth and Environmental
St. Margaret Mary, HWCDSB

A02, Concrete Results

Mark MacCauley,
J 7-8, Engineering and
Computing
Holy Spirit, HWCDSB

A04, Data Transmission Through Optical Technology

Alex Tomala,
J 7-8, Engineering and
Computing
Immaculate Heart of Mary,
HWCDSB

A05, Hard on the Ticker

Taylor Schenk,
J 7-8, Life Sciences
Trinity Christian School,
Independent

A06, What's In Your Salt Shaker?

Adam Chen, Nick Dobrovolskis
J 7-8, Earth and Environmental
Hillfield Strathallan College,
Independent

A07, Exploring Earth's Final Frontier

Jacob Weaver,
S 11-12, Engineering and
Computing
Highland, HWDSB

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Mirna Attalla,
S 11-12, Physical Sciences &
Math
King's Christian Collegiate,
Independent

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Jess Sussman, Nathan Reynolds
J 7-8, Engineering and Computing
Ryerson, HWDSB

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Mikaela Brough,
J 7-8, Health Sciences
W. H. Morden Public School, HDSB

A11, Hamilton Harbour: Polluted or Not?

Zoe Haskell-Craig, Fiona Wadsley
J 7-8, Earth and Environmental
Ryerson, HWDSB

A12, Sleep? Haven't Heard of It.

Gaven Mann,
J 7-8, Health Sciences
W. H. Morden Public School, HDSB

A13, The Heart Is A Breasts Best Friend

Andrea Dafel,
J 7-8, Health Sciences
Oakville Christian School,
Independent

A14, Lifting with H2O

Cameron Clasper,
J 7-8, Engineering and Computing
Oakville Christian School,
Independent

A15, THWAC! Tilting Head Wheelchair Automatic Control

Sarah Alderson, Noah Linton
J 7-8, Engineering and Computing
Guardian Angels, HWCDSB

A16, Do Solar Panels Expire?

Natalie Ciancone, Annie Cupido
J 7-8, Earth and Environmental
St. Margaret Mary, HWCDSB

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Patrick Chong,
J 7-8, Engineering and Computing
Canadian Martyrs, HWCDSB

A18, Environmentally Friendly

Ethanol Alternative
Peter Kahama,
S 11-12, Earth and
Environmental
King's Christian Collegiate,
Independent

A19, Glass fibre reinforcing polymer bars, optimizing spending taxpayers money

Hosam Sennah Sennah,
J 7-8, Engineering and
Computing
Al-Falah Islamic School,
Independent

A20, Junkbot- Something From Nothing

Hira Nadeem, Maria Gagarine
J 7-8, Engineering and
Computing
Ancaster Meadow, HWDSB

B01, The Hit Inside The Helmet

Marcus Malavolta,
J 7-8, Health Sciences
Regina Mundi, HWCDSB

B02, Protecting That Pill

Catherine Ross,
S 11-12, Health Sciences
King's Christian Collegiate,
Independent

B03, Hey Copper Can You Arrest These Germs?

Jessica Knight,
I 9-10, Life Sciences
St. Jean de Brebeuf, HWCDSB

B04, Oil Spill Absorbency

Kevin Samardzic,
J 7-8, Earth and Environmental
Appleby College, Independent

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Jessica Ramos,
J 7-8, Health Sciences
Appleby College, Independent

B06, Horse Sense

Meghan Veerasammy,
J 7-8, Life Sciences
Appleby College, Independent

B07, Kick Me

Josh Lodewyks,
J 7-8, Physical Sciences & Math
Trinity Christian School,
Independent

B08, Drink Up!

Adriana Roberts,
J 7-8, Biotechnology
Appleby College, Independent

B09, Hot or Cold? Explorations in Tone

Harry Lau,
J 7-8, Physical Sciences & Math
Appleby College, Independent

B10, Sticky Colours

Julie Gate,
J 7-8, Physical Sciences & Math
Appleby College, Independent

B11, Bringing Down the House

Andrew Roberts,
J 7-8, Engineering and Computing
Appleby College, Independent

B12, We are what we eat: Food shopping habits in the Hamilton population

Alex Bercik, Mark Moon
J 7-8, Health Sciences
Ancaster Senior, HWDSB

B13, Protect This House

Danny Davies,
I 9-10, Health Sciences
Hillfield Strathallan College,
Independent

B14, Simplifying SODIS

Sarah Flaherty,
I 9-10, Engineering and Computing
Westdale, HWDSB

B15, Sweet Science

Nicole DeRaaf,
J 7-8, Physical Sciences & Math
Trinity Christian School,
Independent

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Braden VanDyk,
J 7-8, Biotechnology
Trinity Christian School,
Independent

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Karli VanderLaan, Alexander VanderLaan
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Trinity Christian School,
Independent

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Robyn Wimmers,
J 7-8, Engineering and Computing
Trinity Christian School,
Independent

B19, Keeping It Cool - The Effect Insulation Type Has on the Resistance of Heat

Holly Dunne, Whitney Way
J 7-8, Earth and Environmental
Hillfield Strathallan College,
Independent

B20, Fifa Fever Frenzy

Will Jackson, Naman Arora
J 7-8, Engineering and Computing
Hillfield Strathallan College,
Independent

C01, Battery in a Bucket

Jenna D'Aurizio,
J 7-8, Earth and Environmental
W. H. Morden Public School,
HDSB

C02, Music To My Ears?

Camille Intson, Alannah Hewitt
J 7-8, Health Sciences
Hillfield Strathallan College,
Independent

C03, The Sugar Race

Taylor VanderMeulen,
Brandon VanderMeulen
J 7-8, Life Sciences
Trinity Christian School,
Independent

C04, Geodesic Domes

Ryan Korol,
J 7-8, Engineering and Computing
Trinity Christian School,
Independent

C05, Mmm...Muffins

Kirsten Walraven,
J 7-8, Physical Sciences & Math
Trinity Christian School,
Independent

C06, Prevention or Intervention?

Marina D'Amico, Katrina Mendoza
J 7-8, Health Sciences
Mother Teresa, HWCDSD

C07, London Bridge Is Falling Down

Mark Zijlstra,
S 11-12, Earth and Environmental
King's Christian Collegiate,
Independent

C08, Universal Newborn Alpha-1

Antitrypsin Screening in Canada
Gavin Hermanson,
J 7-8, Health Sciences
Ryerson, HWDSB

C09, Simply Green Simply Clean

Janna Ormond, Madison Cunha
J 7-8, Earth and Environmental
St. Joseph, HWCDSD

EXHIBITOR LISTING (Cont'd.)

C10, Porous Biodegradable Polymer as a Scaffold for Guided Tissue Regeneration

Sandra Ghobrial,
S 11-12, Biotechnology
King's Christian Collegiate,
Independent

C11, Under Pressure

Charles Brenninkmeijer,
Spencer Lapko
J 7-8, Engineering and
Computing
Oakville Christian School,
Independent

C12, Busting The Five Second Rule

Evan Adcock,
J 7-8, Life Sciences
Trinity Christian School,
Independent

C13, Stabilizing the pH of Coffee

Youssef Habib,
S 11-12, Physical Sciences &
Math
King's Christian Collegiate,
Independent

C14, Crime Seen

Mitchell Kwakernaak,
J 7-8, Physical Sciences &
Math
Trinity Christian School,
Independent

C15, Smile Awhile - it just might make your day!

Esther van der Woerd,
J 7-8, Health Sciences
Trinity Christian School,
Independent

C16, Human Echo-location

Daniel Bzowey, Malcolm
Wallace
J 7-8, Health Sciences
W. H. Morden Public School,
HDSB

C17, How Sweet It Is

Taylor Vos,
J 7-8, Life Sciences
Trinity Christian School,
Independent

C18, Have A Drink, What Do You Think?

Cassandra Rufenach,
J 7-8, Health Sciences
Hillfield Strathallan College,
Independent

C19, Let The Universe Stretch Your Imagination

Sylvie Bronsard, Matthew
Chong
I 9-10, Physical Sciences &
Math
Westdale, HWDSB

C20, Not Enough Time?

William Kim, Eugene Chan
J 7-8, Health Sciences
W. H. Morden Public School,
HDSB

D01, Toothbrush Or Terror?

Christopher Chiasson,
J 7-8, Life Sciences
W. H. Morden Public School,
HDSB

D02, Electrolytes Energize!

Tori Barnes,
J 7-8, Health Sciences
Trinity Christian School,
Independent

D03, To Be Cool... Is To Be Uncool

Polly Psarakis,
J 7-8, Health Sciences
Mother Teresa, HWCDSD

D04, Music and Memory

Emma Holland, Abigail
Hudecki
J 7-8, Health Sciences
Ryerson, HWDSB

D05, Charged Up

Emily Dalingwater, Carah
Malcolm
J 7-8, Earth and Environmental
Dalewood, HWDSB

D06, Nature's Mop

Matthew Smrke,
J 7-8, Earth and Environmental
Oakville Christian School,
Independent

D07, Miracle Gro - Is it Really a Miracle?

Peter-George Vastis,
J 7-8, Life Sciences
Hillfield Strathallan College,
Independent

D08, Musical Memories

Julia Bryson, Dana Nickerson
J 7-8, Health Sciences
Dalewood, HWDSB

D09, Diabetics and Athletics

Robert Anderson,
J 7-8, Health Sciences
Oakville Christian School,
Independent

D10, The Invisible Threat? - Observing the effects on Wi-Fi on seed germination

Valen Varangu Booth, Louis
Garber
J 7-8, Life Sciences
Dalewood, HWDSB

D11, Waste Power

Georgie Beeden,
J 7-8, Earth and Environmental
Hillfield Strathallan College,
Independent

D12, Win the Race to a Stronger Skeleton

Katherine Barnard,
J 7-8, Health Sciences
St. Marguerite d'Youville,
HWCDSD

EXHIBITOR LISTING (Cont'd.)

D13, Snow Heating Today... For a Flood Free Tomorrow

Nicholas Cunningham, Spencer
Cunningham
J 7-8, Engineering and
Computing
Oakville Christian School,
Independent

D14, Pop!

Olivia Tharme, Julia McNobb
J 7-8, Physical Sciences & Math
Ryerson, HWDSB

D15, Nature White: The All Natural Teeth Whitener

Abraham Mallo,
S 11-12, Health Sciences
King's Christian Collegiate,
Independent

D16, "WATT" A WASTE

Adrian Hucal,
J 7-8, Earth and Environmental
Our Lady of Peace, HWCDSD

D17, Running on Nutrition

Meagan D'Attoma,
J 7-8, Health Sciences
Oakville Christian School,
Independent

D18, Green Valley Homes

Ishaan Kapur,
I 9-10, Earth and Environmental
Hillfield Strathallan College,
Independent

D19, Distract... Distract... Distractions

Jennifer Harrison, Hannah Stahl
J 7-8, Health Sciences
Sir William Osler, HWDSB

D20, Playground Prescription

Lauren Smith,
J 7-8, Health Sciences
Hillfield Strathallan College,
Independent

E01, Helpful or Harmful? Childhood Leukemia Treatments and their Side-effects

Kirsten Reid,
J 7-8, Health Sciences
Oakville Christian School,
Independent



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EXHIBITOR LISTING (Cont'd)

E02, Escaping the Landfill

Abby Lobert,
J 7-8, Earth and Environmental
Trinity Christian School,
Independent

E03, Don't let the PRESSURE get to you!

Kurt Barbato, Jessica Raynor
J 7-8, Engineering and Computing
Rolling Meadows Public School,
HDSB

E04, Bouncing Balls

Aya Halabieh, Alexa Shelley
J 7-8, Physical Sciences & Math
Sunningdale Public School, HDSB

E05, Plants Purify Pee

Yiquan Lok,
I 9-10, Earth and Environmental
Hillfield Strathallan College,
Independent

E06, Detrivores

Jason Olaco,
J 7-8, Earth and Environmental
St. David, HWCDSB

E07, Ready.. Set.. Grow!

Sara Biancucci,
J 7-8, Earth and Environmental
St. David, HWCDSB

E08, Wigglers Help Mother Earth

Anthony Tran,
J 7-8, Earth and Environmental
St. David, HWCDSB

E09, Is It Getting Hot In Here ?

Adele Cuicani, Claudia DeRosa
J 7-8, Earth and Environmental
St. David, HWCDSB

E10, Don't Acid Rain on my Parade

Allison Kielbasa,
J 7-8, Earth and Environmental
St. David, HWCDSB

E11, Ocean Life and Oil Spills

Jacob Maltese,
J 7-8, Earth and Environmental
St. David, HWCDSB

E12, Cleaning Up Oil Spills

Cristina Ertsinian,
J 7-8, Earth and Environmental
St. David, HWCDSB

E13, Abiotic Hazards

Zoila Rossi Ricciardone,
J 7-8, Earth and Environmental
St. David, HWCDSB

E14, Conversion

Tony Doan, Ethan Hammond-Srsan
J 7-8, Earth and Environmental
St. David, HWCDSB

E15, Does playing videos games affect memory and hand-eye test performance?

Grant Forsythe, Nick Perkic
J 7-8, Health Sciences
Ryerson, HWDSB

E16, "Water, water, everywhere, nor any drop to drink"

Atmospheric Water Condensers to Provide Pure Drinking Water Part 2

Calvin Rieder
J 7-8 Engineering and Computing
Oakville Christian School
Independent

E17, Everything is Not What it Seems

Emilee Fisher, Abby Preuss
J 7-8, Health Sciences
Oakville Christian School, Independent

E18, Memory Mnemonics

Tatiana Stepaniuk,
Rachel Anderson
J 7-8, Health Sciences
Sir William Osler, HWDSB

E19, Die Bacteria Die!

Nick Denomey,
J 7-8, Life Sciences
Sir William Osler, HWDSB

E20, Mushroom Compost: The Boom of the Future?

Hilary Mann, Mary Ma
S 11-12, Earth and Environmental
North Park Collegiate and Vocational
School, GEDSB

F01, Isolation of hydrocarbon-degrading bacteria in hypersaline environments

Alice Cooper, Alicia Levina
I 9-10, Earth and Environmental
Hill Park, HWDSB

F02, How Sweet It Is

Sierra Pellizzari,
J 7-8, Life Sciences
St. Therese of Lisieux, HWCDSB

F03, Don't Suffocate Me!

Montana Gaydos-Manning,
J 7-8, Earth and Environmental
St. Therese of Lisieux,
HWCDSB

EXHIBITOR LISTING (Cont'd)

F04, Temperature and Resonance

Denys Linkov,
J 7-8, Physical Sciences & Math
W. H. Morden Public School,
HDSB

F05, Do You Remember?

Lily Wu,
J 7-8, Health Sciences
Dalewood, HWDSB

F06, Germs: They Grow Up So Fast!

Erin McHarge, Andrew Tedeschi
J 7-8, Life Sciences
St. Therese of Lisieux, HWCDSB

F07, Radical Antioxidants

Adriana Skaljic,
J 7-8, Health Sciences
St. Therese of Lisieux, HWCDSB

F08, Which Liquid Best Rusts Metal

Abd El Aziz Hendy,
J 7-8, Earth and Environmental
Al-Falah Islamic School,
Independent

F09, Rain Sleuth - Electronic Rain Detector

Connor Martin,
J 7-8, Engineering and Computing
Oakville Christian School,
Independent

F10, Visual or Audio

Khadeja Khan,
J 7-8, Health Sciences
Al-Falah Islamic School,
Independent

F11, Will EMF Stunt Your Growth?

Janelle van Leeuwen,
I 9-10, Earth and Environmental
Hillfield Strathallan College,
Independent

F12, How Gravity and Buoyancy Affect Motion Underwater

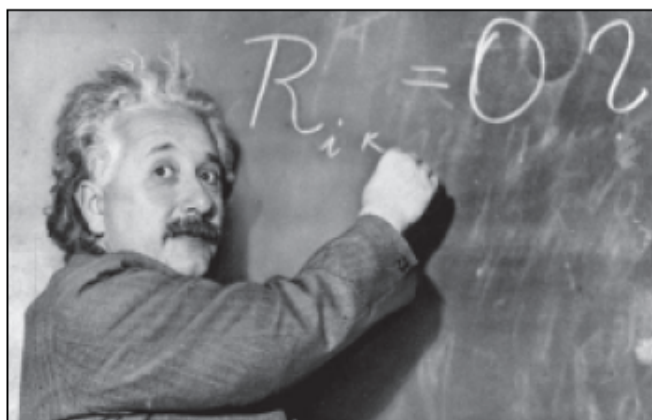
Corey Feng,
J 7-8, Physical Sciences & Math
Rolling Meadows Public School,
HDSB

F13, Do dogs and their owners look alike?

Jenna Rolland-Mills,
J 7-8, Health Sciences
Sunningdale Public School,
HDSB



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~ Albert Einstein

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Patrick J. Daly, Chairperson of the Board
Patricia Amos, Director of Education

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EXHIBITOR LISTING (Cont'd)

F14, How's Your Spin?

Vincent Shadbolt,
J 7-8, Engineering and Computing
Ancaster Meadow,
HWDSB

F15, Roller Coaster

Manvir Bassi,
J 7-8, Physical Sciences & Math
Ancaster Meadow,
HWDSB

F16, Understanding Genetics

Riley Hambly,
J 7-8, Life Sciences
Ancaster Meadow, HWDSB

F17, Paper Towel Highest Price = Highest Quality?

Jake Mandryk,
J 7-8, Physical Sciences & Math
Ancaster Meadow, HWDSB

F18, Air Powered Engines

Matthew Mcguire,
J 7-8, Engineering and Computing
Ancaster Senior, HWDSB

F19, Tin-Can Telephone?

Lulu Faidi, Lily Stratton
J 7-8, Physical Sciences & Math
Ancaster Meadow, HWDSB

F20, Is It True?

Lacey Wice, Lindsay Kastrau
J 7-8, Engineering and Computing
Ancaster Meadow, HWDSB

G01, Electromagnetic linear mass accelerator

Victor Lam,
J 7-8, Engineering and Computing
Ancaster Meadow, HWDSB

G02, Rat vs. Guinea Pig; Who's smarter?

Ashley Wohl,
J 7-8, Life Sciences
Ancaster Meadow, HWDSB

G03, The Breesball

Caleb Radley, Brandon Chong
J 7-8, Physical Sciences &
Math
Ancaster Meadow, HWDSB

G04, Vocal Range

Julia Wiepjes, Kaitlyn Nash
J 7-8, Health Sciences
Ancaster Meadow, HWDSB

G05, Factor of Age in the Perception of Optical Illusions

Farwa Khan, Erin Fearon
J 7-8, Health Sciences
Forest Trail Public School,
HDSB

G06, Mirror Mirror on the Wall, Are We Alone In This All?

Siddhant Chandgadkar,
Jamshied Shamlou
J 7-8, Earth and Environmental
Forest Trail Public School,
HDSB

G07, One Push, A remote Controlled Door Lock

Griffin Yacynuk,
J 7-8, Engineering and
Computing
Canadian Martyrs, HCDSB

G08, Mybrary@

Katie Brent,
J 7-8, Engineering and
Computing
Canadian Martyrs, HCDSB

G09, The Sound of Silence: Improving Highway Noise Barriers

Spencer Bird, Jacqueline
Jorgensen
S 11-12, Engineering and
Computing
Bishop Ryan, HWCDSB

G10, Glaciers: How Can We Prevent Their Melting?

Anisha Rao,
J 7-8, Earth and Environmental
Sir William Osler, HWDSB

G11, Hockey Is Your Head Worth It? A Study of Head Injuries and Concussions in Hockey.

William Kelly,
J 7-8, Health Sciences
Hillfield Strathallan College,
Independent

G12, Reaction Or Distraction?

Justin Connolly, Gabriel Leon-
Reyes
J 7-8, Health Sciences
Holy Name of Jesus,
HWCDSB

G13, More Power!

Peter Esposto, Steven
Beltrano
J 7-8, Physical Sciences &
Math
Annunciation of Our Lord,
HWCDSB

G14, Drip Drip Drop

Heather McBrien, Stephanie
Ryall
J 7-8, Earth and Environmental
Ryerson, HWDSB

G15, Pass on Gas - Eco- friendly Transportation - Air: The Power of the Government

Tanner Gariepy,
J 7-8, Engineering and
Computing
St. Augustine, HWCDSB

G16, The Fear Factor

Yajur Iyengar,
J 7-8, Life Sciences
Dalewood, HWDSB

EXHIBITOR LISTING (Cont'd)

G17, Magnetic levitation(MAGLEV)

Naroze Butt,
J 7-8, Engineering and Computing
Al-Falah Islamic School,
Independent

G18, Do You Want Flies With That?

Graeme Kempf,
J 7-8, Health Sciences
Ancaster Senior, HWDSB

G19, The Performance of Structures During Earthquakes

Jennifer Wilson,
I 9-10, Earth and Environmental
Ancaster High, HWDSB

G20, Green Vs Clean

Adam Tweedle,
J 7-8, Earth and Environmental
Our Lady of the Assumption,
HWCD SB

H01, What's Left of our World

Samna Aziz,
J 7-8, Earth and Environmental
Ancaster Meadow, HWDSB

H02, UV rays. Pollution and Bad Weather Conditions VS. Hair

Ashley Yu,
J 7-8, Engineering and Computing
Ancaster Meadow, HWDSB

H03, Turn Up The Heat

Trystan Cull, Nicki Hossack
J 7-8, Earth and Environmental
Ancaster Meadow, HWDSB

H04, Conserving Highway Energy

Meena Alnajar,
J 7-8, Engineering and Computing
Ancaster Meadow, HWDSB

H05, Battle Of The Blades

Iman Samadmoten,
J 7-8, Engineering and Computing
Al-Falah Islamic School,
Independent

H06, Legs or Wheels

Sean McLean,
J 7-8, Engineering and Computing
W. H. Morden Public School,
HDSB

H07, Electrolysis of Water

Kaleb Laakes,
J 7-8, Physical Sciences & Math
W. H. Morden Public School,
HDSB

H08, The Collatz Conjecture: An Unsolvable Math problem?

Martin Boote,
J 7-8, Physical Sciences & Math
Canadian Martyrs, HCDSB

H09, The Earth's Tilt and Axis

Mariyam Naeem,
J 7-8, Earth and Environmental
Al-Falah Islamic School,
Independent

H10, Stealthy Shapes - How to Make an Aircraft Invisible to Radar?

Maham Tasneem,
J 7-8, Engineering and Computing
Al-Falah Islamic School,
Independent

H11, Reading Out Loud or Silently, Which One Sticks It In Your Head

Suhaib Choudhury,
J 7-8, Health Sciences
Al-Falah Islamic School,
Independent

H12, Remotely Possible

Omer Younus,
J 7-8, Engineering and Computing
Al-Falah Islamic School,
Independent

H13, Multitasking: Help or Hinder

Kenni Dobson, Dirk Grebenc
J 7-8, Health Sciences
W. H. Morden Public School,
HDSB

H14, Green With Envy

Lyndsey Coutinho,
Andrea Araujo
J 7-8, Earth and Environmental
Holy Name of Jesus,
HWCD SB

H15, Cat Litter vs Sawdust

Chris Bojin, Jimmy Yu
J 7-8, Earth and Environmental
Holy Name of Jesus,
HWCD SB

H16, I Will Survive

Daniella Nasseh,
Annamaria Misale
J 7-8, Life Sciences
St. Therese of Lisieux,
HWCD SB

H17, Invisible to Visible

Yehyun Kyung, Leen Ayoub
J 7-8, Physical Sciences & Math
Forest Trail Public School,
HDSB

H18, To sleep or not to sleep

Simran Mann, Alexandra Tuccillo
J 7-8, Health Sciences
Forest Trail Public School,
HDSB

H19, The Effect of Color on Blood Pressure

Shaheer Jah,
J 7-8, Health Sciences
Al-Falah Islamic School, Independent,
HDS

H20, Deforestation

Couby Cheng, Mila Urosevic
J 7-8, Earth and Environmental
Sunningdale Public School,
HDS

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J01, Organic V.S Non-Organic

Jayde Kocsis, Kyzie Javier
J 7-8, Earth and Environmental
Holy Name of Jesus,
HWCD SB

J02, NO NAME VS. BRAND NAME: Could YOU tell the difference?

Bailey Hoy, Laurence Trudelle
J 7-8, Health Sciences
Forest Trail Public School,
HDSB

J03, WAAS With The GPS

Yvonne Alama, Sierra
Robertson-Roper
J 7-8, Physical Sciences &
Math
Dalewood, HWDSB

J04, Get a Grip

Rachel Hisey,
J 7-8, Health Sciences
Trinity Christian School,
Independent

J05, Celiac Diagnosis

Rebecca Gillett,
J 7-8, Health Sciences
Sir William Osler, HWDSB

J06, Maximizing Power Output of a Reverse Electrodialysis Cell

Michael Lenover,
J 7-8, Engineering and
Computing
Canadian Martyrs, HCDSB

J07, Acid Rain Effects

Robert Holford, Rean
Heckroodt
J 7-8, Earth and Environmental
Sir William Osler, HWDSB

J08, A Solution to Water Pollution

Arin Leffler, Kaylene Nguyen
J 7-8, Earth and Environmental
Sir Wilfrid Laurier, HWDSB

J09, Turn that Frown Upside Down

Rudi Barwin,
J 7-8, Health Sciences
Dalewood, HWDSB

J10, Holographic Projections

Moeyyad Qureshi, Tuneer
Mondal
J 7-8, Engineering and
Computing
Westview, HWDSB

J11, Chemical vs. Organic

Ryan Cameracci, Ryan Bastel
J 7-8, Earth and Environmental
St. Therese of Lisieux, HWCD SB

J12, Battle of The Antioxidants

Juliana Sunavsky, Adam
Sunavsky
J 7-8, Health Sciences
St. Mark, HWCD SB

J13, Fire Retardant Capacity of Canadian Corn Cob Ash (CCCA)

Mark Rafla,
S 11-12, Physical Sciences &
Math
King's Christian Collegiate,
Independent

J14, Measuring the Speed of Light with a Microwave Oven

Mariam Jama,
J 7-8, Physical Sciences & Math
Al-Falah Islamic School,
Independent

J15, The Hole Truth

Radu Birsan,
J 7-8, Health Sciences
Dalewood, HWDSB

J16, Got Worms?

Brandon Elliott, Nathan Fiorino
J 7-8, Earth and Environmental
St. Therese of Lisieux, HWCD S

J17, Ice Cold Rockets

Andrew Crowther, Jack
Leighninger
J 7-8, Physical Sciences & Math
Dalewood, HWDSB

J18, Wound Irrigation

Madeline Madronich, Emma Farr
J 7-8, Health Sciences
Ancaster Senior, HWDSB

J19, Salt in Teenage Diets

Daniel Martinez,
S 11-12, Health Sciences
King's Christian Collegiate,
Independent

J20, It's A Bird It's A Plane...Oh No!

Ally Dunlop,
I 9-10, Life Sciences
Hillfield Strathallan College,
Independent

K01, The Effect of Blueberries on Cognitive Function

John Stremble,
J 7-8, Health Sciences
St. Augustine, HWCD SB

K02, The Chemistry of Soap: Soap Synthesis

Rumaina Khalid,
J 7-8, Health Sciences
Al-Falah Islamic School,
Independent

K03, Still Craving a Cigarette?

Erica Bozzo,
J 7-8, Health Sciences
St. Mark, HWCD SB

K04, Masked Murderers

Alexandra Zanina, Jasmine
Bustard-Johnson
J 7-8, Health Sciences
W. H. Morden Public School,
HDSB

EXHIBITOR LISTING (Cont'd)

K05, A Hair Raising Experiment

Bethany Didtrek,
J 7-8, Earth and Environmental
W. H. Morden Public School,
HDSB

K06, HYDROGEN FUEL CELL

Daniel Abbott, Brennan Falcone
J 7-8, Earth and Environmental
St. Therese of Lisieux, HWCDSB

K07, Can you create an organic cream that works the same as a store bought cream?

Chrissel Sturgess,
J 7-8, Health Sciences
St. Mark, HWCDSB

K08, The Spudtacular Potato Obstacle

Kimberly Franklin,
J 7-8, Life Sciences
St. Mark, HWCDSB

K09, The Degradation of Vitamin C (ascorbic acid) in vegetables at high temperatures.

Hannah Schreutelkamp,
S 11-12, Health Sciences
King's Christian Collegiate,
Independent

K10, What's Your Preference?

Christina Shibish,
J 7-8, Health Sciences
St. Augustine, HWCDSB

K11, Personal Space and Communication

Ethan Tomkins, William
Richardson
J 7-8, Health Sciences
Jean Vanier, BHNCD SB

K12, Potato Battery

Pavlo Grinchenko, Christopher
Montanari
J 7-8, Engineering and Computing
Forest Trail Public School, HDSB

K13, Colon Cancer Correlation with Squating

Keltie Steele, Amanda Klumpp
J 7-8, Health Sciences
Ryerson, HWDSB

K14, Remember With Colour

Michelle Wang, Shannon
Fenwick
J 7-8, Health Sciences
W. H. Morden Public School,
HDSB

K15, We're on the Rebound

Karley Hamilton, Beth
Sharpley
J 7-8, Physical Sciences &
Math
St. Augustine, HWCDSB

K16, There's Bugs in my Bag!

Catharine Bowman,
J 7-8, Earth and Environmental
St. Augustine, HWCDSB

K18, Fungi Spores

Genevieve Dietrich,
J 7-8, Life Sciences
St. Anthony of Padua, HCDSB

K19, What Medium?

Emily Muscat,
J 7-8, Earth and Environmental
St. Anthony of Padua, HCDSB

K20, A Puff a Day Your Life Gone Away

George Rivas - Gonzalez,
J 7-8, Health Sciences
Pope John Paul II, HWCDSB

L01, Can Taste Buds See?

Anna Rzepka,
J 7-8, Health Sciences
St. Anthony of Padua, HCDSB

L02, Better Sweet

Jamyang Choetso, Otilia
Rehnstrom
J 7-8, Health Sciences
W. H. Morden Public School,
HDSB

L03, Hot Wheels...Beat That!

Alina Yao, Liberty Alleston
J 7-8, Physical Sciences &
Math
Hawthorne Village Public
School, HDSB

L05, Beat it Up

Mitchell Bonaccorso,
J 7-8, Health Sciences
St. Augustine, HWCDSB

L06, Go green

Omema Saleri,
J 7-8, Earth and Environmental
Al-Falah Islamic School,
Independent

L07, Magnetic fields: Tools for Healing or Health Hazards?

Ream Elbadri, Emma Jennings
S 11-12, Life Sciences
North Park Collegiate and
Vocational School, GEDSB

L08, Germ Warfare: 2011

Stephanie Kiely, Jennifer
Coreas
J 7-8, Health Sciences
St. Augustine, HWCDSB

L09, Aerodynamics

John Mayne,
J 7-8, Physical Sciences &
Math
St. Augustine, HWCDSB

EXHIBITOR LISTING (Cont'd)

L10, pH (acid or alkaline)

Miriam Zerrouk,
J 7-8, Earth and Environmental
Al-Falah Islamic School, Independent

L11, Squirmy wormy composting

Stefanie Scornaiench, Makayla Berta
J 7-8, Earth and Environmental
Mother Teresa, HWCDSB

L12, DEEP LAKE WATER COOLING

Jared Dempster, Gabriel Damasceno
J 7-8, Earth and Environmental
Forest Trail Public School, HDSB

L13, Which Fruit Lasts The Longest

Zain Jamal,
J 7-8, Life Sciences
Hawthorne Village Public School,
HDSB

L14, Global Warming and Me

Addia Nasir,
J 7-8, Earth and Environmental
Al-Falah Islamic School, Independent

L15, The Efficacy of Blackberry and Hibiscus Extract as Natural Indicators

John S Mikhaeil,
I 9-10, Physical Sciences & Math
King's Christian Collegiate,
Independent

L16, Water Purification

Justin Cheng, Paul Spill
J 7-8, Earth and Environmental
McKenzie Smith Bennet Public School,
HDSB

L17, Which Truss do you trust?

Tyler (Hyun Kee) Lee, Jesse Kochenka
J 7-8, Engineering and Computing
St. Augustine, HWCDSB

L18, Organic Plastic FTW

Emina Dzambic, Arabella Boskovic
J 7-8, Earth and Environmental
Sir Wilfrid Laurier, HWDSB

L19, Young and Wired:

Block Those ELF Waves

Andy Reid,
J 7-8, Engineering and Computing
St. Augustine, HWCDSB

L20, S'OILED SOIL

Summer Chaudhry, Mei Vong
S 11-12, Earth and Environmental
North Park Collegiate and
Vocational School, GEDSB

M01, Can I Offer You A Drink?

Emma Robertson,
J 7-8, Life Sciences
Sir Wilfrid Laurier, HWDSB



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EXHIBITOR LISTING (Cont'd)

M02, Make room for a mushroom

Alka Mutnjakovic,
J 7-8, Life Sciences
St. Joseph, HWCDSB

M03, Quick Thinking

Bethany Pehora,
J 7-8, Health Sciences
W. H. Morden Public School,
HDSB

M04, Ethanol: Nature's Fuel

Ishan Aditya,
I 9-10, Biotechnology
MacLachlan College,
Independent

M05, Seed Germination

Ariana Terstegee,
J 7-8, Life Sciences
Jarvis District Christian School,
Independent

M06, Chemical Fertilizer Vs Compost

Nicole Haverkamp,
J 7-8, Life Sciences
Jarvis District Christian School,
Independent

M07, Dissolving Dilemma

Ashley Prinzen,
J 7-8, Physical Sciences &
Math
Jarvis District Christian School,
Independent

M08, French Fry Frenzy!

Aiden Eising,
J 7-8, Life Sciences
Jarvis District Christian School,
Independent

M09, To Yeast or Not To Yeast

Justin Owedyk,
J 7-8, Life Sciences
Jarvis District Christian School,
Independent

M10, Oil Busters

Clara Skerrett,
J 7-8, Physical Sciences &
Math
Jarvis District Christian School,
Independent

M11, Aerial Ace

Tim Lucas,
J 7-8, Engineering and
Computing
Jarvis District Christian School,
Independent

M12, Freeze Frame

Hannah Brierley,
J 7-8, Earth and Environmental
Adelaide Hoodless, HWDSB

M13, Plants vs Pollution

Kelly Nash, Jordan Jaslowski-
Tamosiunas
J 7-8, Life Sciences
Adelaide Hoodless, HWDSB

M14, Brain Music!

Emily Smithers,
J 7-8, Health Sciences
W. H. Morden Public School,
HDSB

M15, tooth brushes and toilets

Nick Fraser, Colton Davies
J 7-8, Life Sciences
Adelaide Hoodless, HWDSB

M16, Teeth Trauma

Hannah Bailey, Amber Scarlett
J 7-8, Health Sciences
Adelaide Hoodless, HWDSB

M17, Brand Name Vs. Generic Brand

Rebecca Norton, Annagrace
Desjardins
J 7-8, Health Sciences
Adelaide Hoodless, HWDSB

M18, Household Chemicals v.s Plants

Alexander Mullens, Shuming Cui
J 7-8, Earth and Environmental
Adelaide Hoodless, HWDSB

M19, Dawn vs Palmolive

Emily Magill, Tatjana Rodic
J 7-8, Life Sciences
Adelaide Hoodless, HWDSB

M20, Sunlight or Darkness?

Spencer Campbell, Brandon
Clark
J 7-8, Life Sciences
Adelaide Hoodless, HWDSB

P01, Bird wing vs. Plane wing

Nicholas Li, Benjamin McBain
J 7-8, Engineering and
Computing
Sunningdale Public School,
HDSB

P02, Solar Panels

Andrea Szafran,
J 7-8, Earth and Environmental
St. Agnes, HWCDSB

P03, A,B,C=Synergy

Erica Nguyen,
J 7-8, Life Sciences
Sir Wilfrid Laurier, HWDSB

P05, Trash or Treasure

Ben Weingartner,
J 7-8, Earth and Environmental
Sir William Osler, HWDSB

P06, Sound Waves

Elliot Jarmain,
J 7-8, Physical Sciences & Math
St. Anthony of Padua, HCDSB

EXHIBITOR LISTING (Cont'd)

P07, What Do YOU Remember?

Patricia Gombas, Jordan Wales
J 7-8, Health Sciences
Forest Trail Public School, HDSB

P08, Water Purification System

Jacob Deery, Keenan Pereira
J 7-8, Earth and Environmental
St. Anthony of Padua, HCDSB

P09, Stop! Look and Listen

Bo Yuan, Eric Della Ventura
J 7-8, Health Sciences
St. Augustine, HWCDSB

Q01, Full Fat vs Lite

Sophia Rikic,
J 7-8, Health Sciences
Adelaide Hoodless, HWDSB

Q02, Oil Spills in the Ecosystem

Lindsay Bushey,
J 7-8, Earth and Environmental
St. Mark, HWCDSB

Q03, How Permanent are Permanent Markers?

Alessia Bradshaw, Sandra Klodnicki
J 7-8, Health Sciences
St. Mark, HWCDSB

Q04, Eco Glue

Gregor McEdwards,
J 7-8, Earth and Environmental
St. Vincent de Paul, HWCDSB

Q05, Solar Energy

Brandon Boragno,
J 7-8, Earth and Environmental
St. Vincent de Paul, HWCDSB

Q06, Melt Away

Kassandra Mancini,
J 7-8, Earth and Environmental
St. Vincent de Paul, HWCDSB

Q07, Outstadin' OJ

Alex Ohorodnyk, Kiran Malik
J 7-8, Physical Sciences & Math
Rotherglen School (Oakville),
Independent

Q08, Titration Observation Fascination

Dominic Najjar, Bennett Rouleau
J 7-8, Physical Sciences & Math
Rotherglen School (Oakville),
Independent

Q09, Electrolicious

Eric Tolic, Steven Molnar
J 7-8, Physical Sciences & Math
Rotherglen School (Oakville),
Independent

Q10, Iodine 'n Starch

James Ting, Malcolm Beard
J 7-8, Physical Sciences & Math
Rotherglen School (Oakville),
Independent



Thanks to our sponsors we're going places!

National & International Science Fair Competitors



The BASEF Students and Volunteers gratefully acknowledge the support of all of our sponsors

SPECIAL AWARDS – 2011

Special Awards are donated by organizations and groups to recognize deserving projects that deal with topics of interest to the donor.

Acquired Brain Injury Awards

Prize: 1st: \$75, 2nd: \$25

Criteria: Two projects relating to the brain, especially acquired brain injuries, their causes, or therapies.

American Society for Quality (ASQ) – Hamilton Section Award

Prize: \$100

Criteria: Best project demonstrating the use of quality tools and principles

ArcelorMittal Dofasco

Chemical Testing Award

Prize: \$100

Criteria: Use of chemical testing and/or chemical principles to solve a technical problem.

Commercial Award

Prize: \$100

Criteria: Commercial and business planning tools in developing a potentially new or improved commercial product

Engineering & Maintenance Technology Award

Prize: \$100

Criteria: Engineering & Maintenance Technology principles and design to solve a technical problem.

Environment Award

Prize: \$100

Criteria: Physics, chemistry or engineering to explore or solve a technical problem associated with environmental issues.

Hot Mill Award

Prize: \$100

Criteria: Creative principles and design to solve a manufacturing or process problem.

Human Resources Training and Development Award

Prize: \$100

Criteria: Teaching and training techniques in explaining or exploring a technical problem.

Information Systems Award

Prize: \$100

Criteria: Information Systems and design to solve a technical problem.

Medical Department Award

Prize: \$100

Criteria: Scientific principles in exploring or solving a problem related to human health issues.

Process Automation Award

Prize: \$100

Criteria: Project best displaying the use of Process Automation principles and design to solve a technical problem.

Product Development Business Process Award

Prize: \$100

Criteria: Product Development principles and design in developing a new consumer product with commercial potential.

Product Research & Automotive Applications Award

Prize: \$100

Criteria: Project that best displays the innovative application of materials, products, processes or design principles.

Quality Systems Award

Prize: \$100

Criteria: Quality Systems principles and design to solve a technical problem.

Research and Development Award

Prize: \$100

Criteria: Investigative research and scientific principles to explore or solve a technical problem.

Steelmaking Award

Prize: \$100

Criteria: Engineering and Materials Science principles to solve a technical problem.

SPECIAL AWARDS (Cont'd.)

Artistically Inspired Display Award

Prize: Two cash awards of \$50 each

Criteria: To the most artistically inspired display

Bell Communication and Technology Award

Prize: 1st - \$150, 2nd - \$100

Criteria: Communication between people, machines or people and machines

Canadian Institute of Mining, Metallurgy and Petroleum (Hamilton Branch) Awards

Prize: Two cash awards of \$100 each.

Criteria: For projects relating to mining, metallurgy or petroleum

Canadian Nuclear Society (Golden Horseshoe Branch) Awards

Prize: Two cash awards at the intermediate or senior levels for \$125 each & two at the junior level for \$75 each.

Criteria: For projects relating to nuclear science and engineering, energy research or climate sciences

Cancer Assistance Program Awards

Prize: Two cash awards of \$100 each.

Criteria: For outstanding projects on topics related to cancer prevention.

Chemical Institute of Canada, Hamilton Section Award

Prize: Three cash awards of \$100 each.

Criteria: Project related to chemistry, chemical engineering, or chemical technology.

Conservation Halton Environmental Sciences Award

Prize: Two awards, \$100 each

Criteria: Top two environmental projects by Halton students

Dillon Consulting Science/Engineering and Biological Sciences Awards

Prize: Two cash prizes of \$200 each

Criteria: To one project showing excellence in Science and or Engineering and to a second project showing excellence in Biological Sciences

Doris Casey Disability Solutions Award

Prize: \$100

Criteria: Most innovative and creative technical solution focused on assisting individuals to overcome or compensate for physical or cognitive disabilities.



**HSC is proud to support
the 2011 Bay Area
Science & Engineering Fair**

*Congratulations to all participants
for your commitment to
inquiry and discovery.*



Hillfield Strathallan College
Here Excellence is a Way of Life

SPECIAL AWARDS (Cont'd.)

Dr. Laura Blew Award

Prize: Two cash prizes of \$80 each

Criteria: Project that involves study of society, human social interaction and the rules and process that bind and separate people, not only as individuals, but as members of associations, groups and institutions

Dr. M. Doyle Award

Prize: Total value of \$275 prize includes: a cash award, a plaque and a trophy for the winner's school

Criteria: Best biology project.

Dr. Colin J.L. Lock Memorial Chemistry Award

Prize: \$100

Criteria: Project demonstrating the best application of chemistry.

Dr. Nicola Simmons Award in Cognition Studies

Prize: \$100

Criteria: Project in cognition studies.

Dr. Odette Tunks Innovation Award

Prize: Two cash awards of \$100 each

Criteria: Most creative or innovative project

Edward H. Oldham Patent Award

Prize: One (1) gift-in-kind US Provisional Patent Application (there will be 2 runner ups to this award)

Criteria: Assistance in preparation of a US Provisional Patent. The winner will be the "best" patentable entry at BASEF.

Electrical Construction Association of Hamilton Award

Prize: \$250

Criteria: Best, safest use of electricity in a creative manner.

Farncombe Family Digestive Health Research Award

Prize: Two cash awards of \$250 each

Criteria: Project that explores digestive health, related diseases or general family nutrition through experimentation or in depth literature

Gowlings Innovation Award

Prize: \$250

Criteria: Best project exploiting multiple areas of intellectual property protection, namely trademarks, patents, industrial design and copyright. The prize includes a complimentary consultation with a patent or trademark agent at the Gowlings Hamilton office.

Hamilton Association daVinci Award

Sponsored by the Hamilton Association for the Advancement of Literature, Science & the Arts

Prize: \$300, honorary membership in the Association and an invitation to attend meetings

Criteria: The best candidate combination of personal initiative with the use of the scientific method

Hamilton Chamber of Commerce Innovation Award

Prize: 1st \$250, 2nd \$150, 3rd 100

Criteria: Awarded to the most deserving projects with potential commercial applications for students from Hamilton focused on improving our local environment, communities or quality of life

Hamilton Wentworth Occasional Teacher Local

Environment and Education Award

Prize: \$50 and certificate

Criteria: Junior project which most effectively educates others about an environmental issue

Healthy Lifestyles Award

Prize: \$50 and certificate

Criteria: Junior project which most effectively educates others regarding the role of nutrition and/or exercise in maintaining a healthy lifestyle

Presentation and Aesthetics Award

Prize: \$50 and certificate

Criteria: Junior project which demonstrates a high level of visual appeal, creativity and overall quality of presentation

SPECIAL AWARDS (Cont'.d)

Hidden Science Award

- Prize: \$100 with a library of Nikula Tesla's ideas and discoveries
Criteria: Project that best reflects Nikula Tesla's ideas and discoveries with emphasis on protecting the planet or alternate energies or increasing the efficiency of the human body.

Hillfield Strathallan College Awards of Excellence

Design and Engineering

- Prize: \$100
Criteria: Senior project that best displays innovation in identifying an ergonomic design problem

Environmental Sciences

- Prize: \$100
Criteria: Junior or Intermediate project that best displays innovation in identifying an environmental problem

Health Sciences

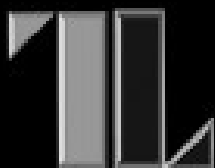
- Prize: \$100
Criteria: Intermediate project that best displays excellence in sampling design in a health science project

Horizon Utilities Corporation Award

- Prize: Three awards of \$300 each
Criteria: Projects that best demonstrate the production of electrical energy from "green sources" or new, viable approaches to using electrical energy more efficiently

Hydro One Energy Ambassador Award

- Prize: Cash award of \$100, to be sent after the fair.
Criteria: Project with outstanding scientific quality and whose primary focus is the distribution, supply management, use or conservation of electrical energy (or alternatively, other forms of energy if suitable projects relating to electrical energy are not available)



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SPECIAL AWARDS (Cont'd.)

IEEE (Institute of Electrical & Electronic Engineers) Hamilton Section Awards

Prize: Two cash awards of \$100 each

Criteria: Best use of Electronics in a science or engineering project,

Intel Excellence Awards (*affiliated with the Intel International Science & Engineering Fair*)

Prize: \$200 (U.S.) (to be forwarded after the fair.)

Criteria: The top winner of Computer Science category in Intermediate or Senior level.

International Science & Engineering Affiliated Fair Awards for regional science fairs affiliated with the Intel International Science & Engineering Fair

Prize: certificates

Criteria: deserving intermediate and senior projects related to topics of interest to the following organizations

American Meteorological Society: For an Intermediate or Senior project. Best ability and creativity in an atmospheric science exhibit.

American Psychological Association: Outstanding research in Psychology under the category of behavioural and social sciences.

ASM Materials: outstanding exhibit in materials science.

Association for Women Geoscientists: Project by female student(s) demonstrating high standards of innovativeness and scientific excellence in the geosciences.

Herbert Hoover Young Engineer Award: Outstanding Engineering Project.

International Society for Optical Engineering: Best project in the area of Optical Science or Engineering.

MU Alpha Theta: Intermediate or Senior project demonstrating the most challenging, original, thorough and creative investigation or problem involving mathematics.

Ricoh Sustainable Development Award: Most outstanding project, selected among all the general award categories, whose principles and technical innovations offer the greatest potential for increasing our ability to grow environmentally friendly and socially responsible businesses.

Society for In Vitro Biology: Grade 11 project exhibiting in the areas of plant or animal in vitro biology or tissue culture.

Yale Science & Engineering Association: Most outstanding grade 11 project exhibiting in the areas of Computer Science, Engineering, Physics, or Chemistry.



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Chair of the Board

Lou Piovesan
Director of Education

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CONGRATULATIONS

to all BASEF 2011 participants and

BEST WISHES

for continued success in all
of your endeavours!

**From the Halton Catholic District School Board
– committed to developing inquiring minds,
which will create solutions to tomorrow's challenges.**

SPECIAL AWARDS (Cont'd.)

James A. Winger Award sponsored by Hamilton Amateur Astronomers

Prize: \$100 award plus an astronomy book

Criteria: Best project in demonstrating an understanding of a topic related to astronomy or physics

John. W. Howard Materials Research Award

Prize: \$100

Criteria: Project demonstrating innovation in engineering materials, especially concrete.

Joseph Brant Memorial Hospital Award

Prize: \$100

Criteria: Project which displays the most innovative, and creative technical medical aid or devices for individuals.

Laurentian Chapter of SETAC Award

Prize: \$200

Criteria: Best project and presentation on a topic related to Environmental toxicology, chemistry, pollution, contamination, remediation or environmental protection.

LEAP Award of Innovation

Prize: \$200 off of a \$600 registration fee for the 2011 LEAP Summer Program

Criteria: Senior project (grades 9-12) that demonstrates creativity and innovation

McMaster Engineering Society Award

Prize: Two cash awards of \$200 each

Criteria: Best junior engineering project demonstrating excellent understanding of engineering and its applications.

McMaster Science for Peace Pugwash Awards

Prize: \$150 for three projects: \$25 Junior, \$50 Intermediate, \$75 Senior

Criteria: Best projects using science to solve global issues and promote peace and human rights

McMaster University Faculties of Science & Engineering Tuition Awards

Prize: Five \$500 tuition awards, to be redeemed upon acceptance of successful admission to either of the Faculties of Science or Engineering.

Criteria: Excellent science or engineering projects.

Mechanical Contractors Association of Hamilton Award

Prize: \$250

Criteria: Best intermediate or senior engineering project.



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SPECIAL AWARDS (Cont'd.)

Michael G. DeGroote Institute for Infectious Disease Research Internship Award

Prize: One paid Summer Internship of 6 weeks as a research assistant in a laboratory of at the M.G. DeGroote IIDR Institute at McMaster University (value of \$2,152.50)

Criteria: Best senior student project in infectious disease, drug discovery or human health.

Mohawk College School of Engineering Technology Awards

Building & Construction Sciences Awards

Prize: \$50

Criteria: Project related to any branch of civil engineering

Prize: \$50

Criteria: Project related to planning, design, operation of any transportation mode or facility

Prize: \$50

Criteria: Project related to building sciences, building materials, energy conservation in structures

Chemical and Environmental Engineering Technology Awards

Prize: \$100

Criteria: Intermediate or senior project related to applied chemistry.

Prize: \$50

Criteria: Junior project in environmental studies

CSAIT Computer Excellence Award

Prize: \$50

Criteria: Project which demonstrates thorough understanding of computer applications and design in today's world.

Electrotechnology Department Engineering Technology Award

Prize: Two cash awards of \$50 each

Criteria: \$50 to junior project in engineering studies and \$50 to a deserving senior/intermediate project in engineering studies

Mechanical & Industrial Engineering Technology Awards

Prize: \$100

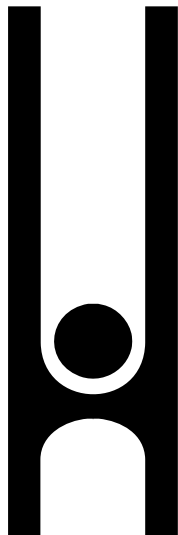
Criteria: Project related to industrial engineering or manufacturing, must be industry applicable and can include quality systems and instruments

Mathematics Awards

Prize: Two cash awards of \$75 each

Criteria: Projects in the mathematics division, or any project from any division demonstrating a thorough understanding of statistics

Halton District School Board



***The Halton District School Board
would like to congratulate
all participating students in the 2011
Bay Area Science and Engineering Fair.
Best wishes for continued success!***

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SPECIAL AWARDS (Cont'd)

National Science & Engineering Research Council (NSERC) Awards

Prize: \$250 to each of two projects.

Criteria: Projects demonstrating innovative and creative research by the student.

Nelson Steel Awards

Prize: Two cash awards of \$50 each

Criteria: Related to two of the following fields: Steel, Environmental or Chemistry. Preference given to junior levels

Nipissing University Regional Science Fair Award

Prize: One scholarship award of \$1,000

Criteria: To a senior project, any category to be paid out upon registration at Nipissing University

OCRI-SCCRI Regenerative Medicine Award

Prize: Two awards of \$250 each

Criteria: Awarded to an outstanding project in the field of biology that demonstrates creative and critical thinking. Preference will be given to projects that relate to regenerative medicine and its applications to human health.

Ontario Association of Medical Laboratories

Prize: One cash award of \$100, to be sent after the fair

Criteria: Outstanding project in disciplines such as biochemistry, chemistry, microbiology, toxicology, and forensic science, and incorporating analytical laboratory techniques or physical methods of analysis.

Ontario Ministry of the Environment Award

Prize: One cash award of \$100, to be sent after the fair.

Criteria: To an outstanding project, any level, any category, which demonstrates a creative approach to an environmental problem that could lead to cleaner air, land or water.



Good luck to all the participants!

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- Manufacturing

ALL STUDENTS ACHIEVING THEIR FULL POTENTIAL

SPECIAL AWARDS (Cont'd.)

Primary Fluid Systems Awards

Junior or Intermediate Engineering Awards

Prize: Two cash prizes each of: \$250, \$150, \$100

Criteria: Deserving projects in junior or intermediate engineering.

Junior or Intermediate Physical Sciences Awards

Prize: Two cash prizes each of: \$125, \$75, \$50

Criteria: Deserving projects in junior or intermediate physical sciences.

Junior or Intermediate Earth & Environmental Sciences Awards

Prize: Two cash prizes each of: \$125, \$75, \$50

Criteria: Deserving projects in junior or intermediate earth & environment.

Procor Engineering Awards

Prize: Junior: \$50, Intermediate: \$100,
Senior: \$150

Criteria: Excellent engineering projects

Professional Engineers Ontario (Hamilton-Burlington Chapter) Engineering Awards

Prize: 1st: \$250, 2nd: \$150, 3rd: \$100

Criteria: Top 3 outstanding Engineering Projects

Professional Engineers Ontario (Oakville Chapter) Engineering Awards

Prize: Two awards of \$100 each

Criteria: Engineering projects.

Royal Botanical Gardens Award

Prize: \$100 gift certificate from RBG shop plus 1 year RBG Family Membership

Criteria: Best project in botanical or environmental sciences

Safety Management Systems Software Award

Prize: \$100 and a plaque

Criteria: A project that incorporates the most innovative integration of programming code to analyze data or to operate a piece of equipment.

SPIE Optics & Photonics Science Fair Award

Prize: \$500 for here awards: 1st prize: \$250, 2nd prize: \$150, 3rd prize: \$100

Criteria: Projects best demonstrating scientific research and engineering applications of optical, photonic, imaging and optoelectronic technologies.

University of Ontario Institute of Technology Innovation Award

Prize: Two prizes of \$100 each, to be sent after the fair.

Criteria: Outstanding projects demonstrating the most innovative development, adaptation, or use of technology in any subject area. One award must go to a junior project.

University of Ottawa Admission Scholarship

Prize: \$1000 admission scholarship (or two \$500 scholarships for a pair project) toward tuition fees, upon being accepted into and registration in an undergraduate program in the Faculties of Engineering, Science or Health Sciences at the University of Ottawa

Criteria: The most deserving Senior project

Venture Science and Engineering Innovation Award, McMaster University

Prize: Free registration to Venture Engineering Science Camp and a certificate

Criteria: One junior project that demonstrates creativity and originality.

**Congratulations and good luck
to all participants of
the 2011 Bay Area
Science and Engineering Fair!**



JOHN DEERE

MERIT AWARDS



Sponsored by Primary Fluid Systems

Merit Awards recognize the tremendous amount of thought and effort that has gone into the projects entered into the Bay Area Science and Engineering Fair. They are the result of an extensive judging process undertaken by up to 150 independent judging volunteers who have come forward from educational institutions, local government organizations, business and industry in our regions.

All participants in the Bay Area Science and Engineering Fair are eligible to win Merit Awards.

The Awards are issued to projects that meet the following criteria:

Scoring:

over 90% and ranking in top 7.5% of category:

over 80% and next 10% of category:

over 75% and next 12.5% of category:

over 75% and not in the top 30% of category:

earns **Gold medal** & cash award

earns **Silver medal** & cash award

earns **Bronze medal** & cash award

earns **Honourable Mention** certificate
and cash award

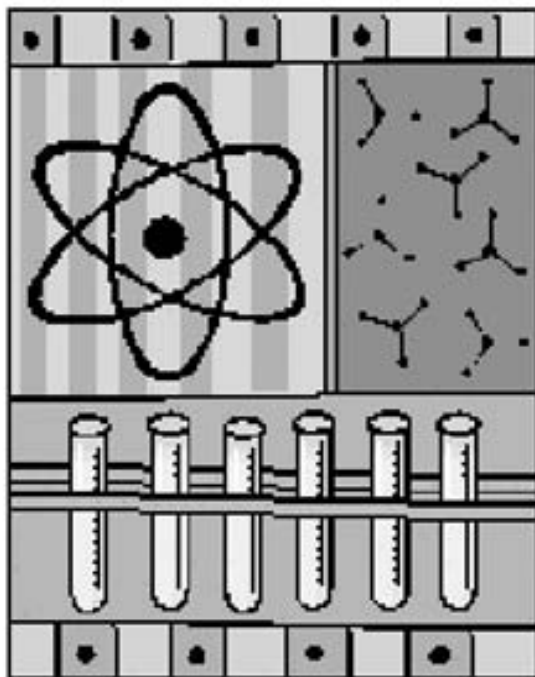
For Junior, Intermediate, Senior levels in:

- Health Sciences (Human)
- Life Sciences (Non-human)
- Physical and Mathematical Sciences
- Biotechnology
- Engineering and Computing Sciences
- Earth & Environmental Sciences

Mohawk College Tuition Scholarships

Mohawk College will provide \$500 scholarships to ALL BASEF 2011 Merit Award Medal (Gold, Silver, Bronze) winners. The scholarship may be used toward first year tuition upon the recipients' acceptance and registration in any full-time program at Mohawk College. If multiple scholarships are accumulated over more than one year, only one of these scholarships may be used.

Proud sponsor of BASEF and the 2011 Merit Awards



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by most people
because it is dressed
in overalls and
looks like work"

Thomas A. Edison



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GRAND PRIZE AWARDS

Winners of Grand Awards have designed, researched and presented excellent projects.

ARCELORMITTAL DOFASCO PINNACLE AWARDS



BASEF's Pinnacle Awards are presented to each of the top three projects in the fair. These awards are based on the project's Merit Award score. Each winner receives an engraved plaque; trophies are awarded to the winners' schools.

DRS. RANJAN SUR AND MONALISA SUR AWARD

For the best intermediate or senior level project at the fair, a plaque to the winner's school.

ROY MIDDLETON MEMORIAL AWARD



Best Junior level project at the fair, a plaque to the winner's school.

SUSAN JOYCE MEMORIAL AWARDS



For the top project in each of the six categories at the Junior level, a keeper trophy for each student.

HERB GILDEA MEMORIAL TROPHY



A trophy is awarded to the secondary school accumulating the most points. Points are earned from the number of projects entered from intermediate and senior levels of each school and those projects earning Gold, Silver, Bronze and Honourable Mention Merit Awards.

BASEF COMMITTEE TROPHY

A trophy is awarded to the elementary school accumulating the most points.

Points are earned from the number of projects entered from the junior level of each school and those projects earning Gold, Silver, Bronze and Honourable Mention Merit Awards.



GRAND PRIZE TRIP AWARDS

INTEL INTERNATIONAL SCIENCE & ENGINEERING FAIR TRIP AWARDS



All-expense-paid trips to the 2011 Intel International Science & Engineering Fair, to be held in Los Angeles, California, USA from May 8 to 13, 2011. Chosen from excellent secondary school (Intermediate & Senior level) projects, up to 4 trips, two singles and a pair project (dependant on funding levels), will be awarded. Winners must be able to travel into the USA (Canadian citizenship or landed immigrant status, with valid passport in-hand)

Sponsors are:

- McMaster University
- McMaster-Mohawk Bachelor of Technology Partnership
- Mohawk College
- Union Gas

CANADA WIDE SCIENCE FAIR TRIP AWARDS

Advancement to the 2011 Canada Wide Science Fair (all trip expenses paid), to be held in Toronto, Ontario from May 14 to May 21, 2011. Up to 16 trips (dependant on funding levels) will be awarded for excellent projects. All projects entered in BASEF 2011 are eligible.

Sponsors are

- ASECO Integrated Systems
- Boehringer Ingelheim Canada
- City of Hamilton, Economic Development Dept.
- DENM Engineering Ltd.
- Edward Oldham, Patent & Trademark Agent
- Halton Catholic District School Board
- Halton District School Board
- Hamilton Halton Construction Association
- Hamilton Wentworth Catholic District School Board
- Hamilton Wentworth District School Board
- Hillfield Strathallan College
- Ontario Power Generation - Nanticoke Generating Station
- Youth Science Ontario in partnership with
Ontario Ministry of Research & Innovation and Youth Science Canada



TORONTO 2011

TEAM ONTARIO at CWSF

Along with all other Ontario CWSF trip winners, BASEF students awarded CWSF trips will be named to "Team Ontario". Each Ontario CWSF trip-winner will receive a Team Ontario jacket.





May 14-21, 2011
Toronto

Youth Science Canada's
50th annual
Canada-Wide Science Fair

Youth Science Canada congratulates all BASEF 2011 participants and looks forward to welcoming BASEF's team to the 50th annual Canada-Wide Science Fair.



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Bold Future

Because we believe in big ideas and infinite possibilities, ArcelorMittal Dofasco is proud to sponsor and be part of the Bay Area Science and Engineering Fair.

