

OFFICIAL PROGRAM

BASEF 2013

53rd Annual Bay Area
Science and Engineering Fair

March 20 – March 23, 2013

Hillfield Strathallan College

Mohawk College

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**Big ideas.
Infinite possibilities.**



Hillfield Strathallan College
Here Excellence is a Way of Life



It is truly an honour for Hillfield Strathallan College to be a host site for the BASEF Science Fair this year. We have long supported this great event and it has been a wonderful showcase for our students' work over the years.

I want to personally welcome you all to our campus and hope that you have an opportunity to explore our facilities, including the DiLoreto Science Wing in the new Michael G. DeGroote Senior School.

I also want to extend congratulations and good luck to all of the participants and a heartfelt thanks to all of the volunteers who have worked so hard to put on this showcase of science education.

Warm regards,
Marc Ayotte
Head of College

299 Fennell Avenue West, Hamilton, ON L9C 1G3
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Cover image for BASEF2013 Official Fair Program:

Three possible ways to 'roll up' a graphene sheet to make carbon nanotubes. Top to bottom are called "zigzag", "armchair", and "chiral".

Created by Michael Ströck, February 1, 2006.

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A MESSAGE FROM THE 2013 BASEF CO-CHAIRS

This year continues to be one of change for BASEF, which has thrived on change since the first Hamilton area science fair was held in the James Street Armouries in 1961. That year they had 70 projects.

Last year BASEF had over 350 projects. However, 5000 people came to see the exhibits in 1961 - many more than in recent years. This is likely a result of our much busier, changed world and the explosion of available leisure time activities.

In 1961, John Moore, 15, a grade 11 student at Barton Secondary School exhibited a "computer machine", the year microchips were first commercially available. Today BASEF students take computers for granted, using them to conduct experiments, write up project results, and even work interactively in their project displays.

Mohawk College is undergoing major campus changes this year, with some exciting upgrades and renewal of their facilities. The construction has resulted in the BASEF 2013 projects being accommodated at Hillfield Strathallan College, which is generously providing their facilities to BASEF. On behalf of the BASEF 2013 Organizing Committee we extend a special thank you to the staff of both host sites this year: Hillfield Strathallan College and Mohawk College.

Another bit of activity that shows how BASEF has changed is our appearance in the Discovery TV program "Canada's Greatest Know-It-All", Season Two. Many of our 2012 Merit Award students participated in a segment where the "know-it-alls" were challenged to create a Science Fair project in a day. The BASEF organizers provided a judging panel, but it was the students who had the final say on which project won the competition.

This is the 53rd year of operation for BASEF, whose mission is 'to encourage young people in science and engineering'. We hope this year's student exhibitors meet new friends, enjoy their experience, and capture the science fair passion that leads to new research and the discoveries of tomorrow. We congratulate each participant on a job well done and wish them the best of luck in their future endeavours.

BASEF's motto "Big Ideas... Infinite Possibilities" is truly what the BASEF experience is -- to the students, judges, parents, award sponsors, and the many visitors to the fair.

BASEF is a volunteer driven registered charity. We acknowledge with thanks the huge efforts of this year's Organizing Committee members who have dedicated countless hours toward making BASEF 2013 a success. Our thanks also to the over 200 Merit and Special Awards Judges and to the more than 100 volunteers who help run registration, safety and other fair activities.

We are grateful to our Honourary Chair, Zach Douglas, who continues the tradition of community support to the BASEF vision. Zach is the President of McMaster Innovation Park, an entity affiliated with McMaster University, which is transforming a 37-acre brownfield industrial site into an internationally recognized world class research and development park.

ArcelorMittal Dofasco is returning as the Fair's title sponsor for the seventh year. Together with over 35 other sponsors and benefactors, as well as over 45 Special Awards donors, they 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 \$150,000.

Be sure to attend the BASEF awards ceremony to celebrate our students' successes and see what changes are in store for BASEF as we embrace renewal and growth in the coming years.

Helen Barton
Co- Chair BASEF 2013

Kevin Hunt
Co-Chair BASEF 2013

BASEF 2013 SCHEDULE OF EVENTS

**Projects, Judging and Public Viewing are at Hillfield Strathallan College (Hillfield)
Activity Morning and Awards Ceremony are at Mohawk College (Mohawk)**

Note: the Hillfield Strathallan College Gymnasium is not wheelchair accessible.



Wednesday, March 20 – On-Site Project Setup/Safety Check

4:00 – 8:00 pm	Registration, set-up and safety checks	Hillfield Gymnasium
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Thursday, March 21 - Student Activity Morning & Judging of Projects

7:45 – 9:00 am	BASEF students arrive for Morning Activity	Mohawk Theatre
9:05 – 9:30 am	McMaster Engineering Venture / Leap – Video Session	Mohawk Theatre
9:30 – 10:00 am	Care Go Technology Presentation	Mohawk Theatre
10:00 – 10:10 am	Southern Ontario Gliders Group – Part 1: The Evolution of Model Airplanes	Mohawk Theatre
10:00 – 10:50 am	Keynote speaker: Ford Motor Company Electrified Vehicle Technology	Mohawk Theatre
10:50 – 11:00 am	Southern Ontario Gliders Group – Part 2: The Science of Model Airplanes	Mohawk Theatre
11:00 – 11:30 am	Pond Biofuels Presentation – Steven Martin	Mohawk Theatre
11:30 am – noon	McMaster Chemistry Show – Professors Randy Dumont and Paul Harrison	Mohawk Theatre
12:00 – 12:20 pm	BASEF students bussed from Mohawk to Hillfield	
12:20 – 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.	Hillfield Gymnasium
1:00 – 4:00 pm	Judging interviews for BASEF students (BASEF participants must remain at their projects during judging)	Hillfield Gymnasium

Friday, March 22 – *Fair not open to the public or students*

Saturday, March 23 - Public Viewing & Awards Ceremony

9:00 am - 12:00 noon	Public Viewing - Projects are to remain in place until end of Awards Ceremony.	Hillfield Gymnasium
12:00 noon	Gym closes. NO project take-down allowed at this time.	Hillfield Gymnasium
11:45 am - 1:15 pm	Champions of Science luncheon	By Invitation Mohawk
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	Hillfield Gymnasium
4:00 - 5:30 pm	Meeting with chaperones for trip winners and their parents	Hillfield Gymnasium



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Hamilton, ON, L8P 0A1
905-667-5500 | www.mcmasterinnovationpark.ca

A MESSAGE FROM HONOURARY CHAIR, ZACH DOUGLAS



It is my pleasure as Honourary Chairperson to once again welcome you to the annual Bay Area Science and Engineering Fair (BASEF).

I know from my own experience how important events like this can be in awakening a love of science and engineering in young people. Through participation in BASEF students are exposed to science, engineering and technology in a very important manner. The hands-on, project-based approach to the practice of these disciplines leads directly to thinking innovatively. Ultimately, innovation leads to new solutions to the challenges we face and to new opportunities for growth, both personally and as a society.

The success of an event like this depends on the hard work of teachers, parents, and event organizers. I would like to acknowledge this and thank them for their commitment and efforts.

Finally, to all the students who are participating in the fair, I want to recognize your hard work and dedication. Congratulations and all the best in the future.

Zach Douglas,
President & CEO
McMaster Innovation Park

Mr. Douglas is the President of McMaster Innovation Park (MIP), an entity affiliated with McMaster University, which has a mandate to redevelop a 37 acre brown field industrial site and transform it into an internationally recognized, world class research and development park.

Since its inception, MIP has completed two buildings and has another under construction. As of the end of 2012 there are more than thirty tenants employing approximately 400 people on-site with the expectation that the numbers will grow to more than 500 once the McMaster Automotive Resource Centre is completed. Details of MIP's development are available at www.mcmasterinnovationpark.ca.

Prior to 2006 Mr. Douglas held leadership positions with Crown Investment Corporation of Saskatchewan and Saskatchewan Opportunities Corporation. Over the past 30 years, he has established relationships with the business, financial and economic development communities across Canada, and has worked closely with stakeholder groups to encourage collaborative approaches to economic development financing and business development.

Mr. Douglas holds a Bachelor of Law degree from the University of Saskatchewan.

BASEF 2013 ORGANIZING COMMITTEE

HILLFIELD STRATHALLAN COLLEGE, BASEF 2013 CO-HOST

Head of College, Marc Ayotte

MOHAWK COLLEGE, BASEF 2013 CO-HOST

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

CO-CHAIRS

Helen Barton and Kevin Hunt

PAST CHAIR

Ray Kranyak

TREASURER

Eleanor O'Flynn, C.P.A., C.A.

REGISTRAR

George Geczy; Ass't: Rob Lenjosek

JUDGE IN CHIEF

George Geczy; Ass't: Neil Manmohan, Mary Johnston

SCIENTIFIC REVIEW

George Geczy (Chair), Dr. Robert Brown, Rob Lenjosek,
Donna Stack-Durward, Jo-Anne Teoh, Neil Manmohan

SPECIAL AWARDS COORDINATOR

Julianna Giancarlo; Ass't: Jim Casey

SAFETY

Neil Manmohan

FUNDRAISING

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

STUDENT ACTIVITIES

Kevin Hunt

CANADA-WIDE & INTERNATIONAL CHAPERONES

CWSF: Dan Bowman (lead),
Stephanie Fazzari, George Geczy
IISEF: Cathy Hayman (lead), Ming Chong

INFORMATION SYSTEMS

George Geczy, Gerard Chiasson, Ken Moyle

OFFICIAL FAIR PROGRAM

Lisa Camara

HILLFIELD STRATHALLAN COLLEGE REPS

Chris Kwiecien, Cameron Playfair

MOHAWK COLLEGE REPS

Dana Jacobs, Peter Olynyk

SPONSOR REPRESENTATIVE

Sandy Walker

FACILITIES

Dan Bowman

AWARDS AND CEREMONY

Gerard Chiasson (Chair), Wayne Bowdish, Neil Manmohan
MC's: Peter Olynyk, Cathy Hayman

"CHAMPIONS OF BASEF"

Ola Lunyk Child (Chair), Peter Child, Linda Kennedy

OUTREACH

Peter Child (Chair), Allison Boyd, Ming Chong,
George Geczy, Wuchow Than, Glen Whitwell

SPECIAL PROJECTS & YES INITIATIVE

Vanessa Scanga, Ryan Buist

VOLUNTEER RECRUITMENT AND COORDINATION

Glen Whitwell, Jim Monkelbaan

PHOTOGRAPHY & GRAPHICS

Wayne Bowdish

MARKETING AND PUBLICITY

Helen Barton (Chair), Wayne Bowdish, Roslynn Crawford,
George Geczy, Antonella Giancarlo, Glen Whitwell

FOOD PLANNING

Dan Prowse

DISTRICT SCHOOL BOARD ADVISORS

HCDSB: Susan Paradiso
HDSB: Ron Ballentine, Ingrid Munson
HWCDSD: Morris Hucal, Rob Lenjosek
HWDSB: Sandra McEachern
Six Nations (INAC): Alex Randall, Joe Restoule-General

COMMITTEE MEMBERS AT LARGE

Allison Boyd, Brendan Chancellor-Maddison,
Brooke Chornaby, Holly Brown, Stephanie Fazzari,
Rose Manzella

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

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





Hillfield Strathallan College
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EMERGENCY PROCEDURES
BAY AREA SCIENCE & ENGINEERING FAIR (BASEF)
MARCH 20 TO 23, 2013

FIRE SAFETY PLAN

FSP.2

PROCEDURES FOR OCCUPANTS

IN CASE OF FIRE:

- A) CALMLY NOTIFY ALL OCCUPANTS IN THE IMMEDIATE AREA OF A FIRE CONDITION.
- B) IF SAFE TO DO SO, LEAVE THE BUILDING IMMEDIATELY BY THE NEAREST AND SAFEST EXIT, TAKING YOUR KEYS AND CLOSING DOORS BEHIND YOU.
- C) SOUND THE ALARM BY ACTIVATING A MANUAL PULL STATION.
- D) CALL THE FIRE DEPARTMENT FROM A SAFE LOCATION BY DIALING 911, GIVING YOUR NAME AND SAY THERE IS A FIRE AT:

Hillfield Strathallan College
299 Fennell Avenue West, Hamilton, Ontario

IF YOU HEAR AN ALARM OR ARE NOTIFIED OF A FIRE:

- A) IF SAFE TO DO SO, LEAVE THE BUILDING IMMEDIATELY BY THE NEAREST AND SAFEST EXIT, TAKING YOUR KEYS AND CLOSING ALL DOORS BEHIND YOU.
- B) CALL THE FIRE DEPARTMENT FROM A SAFE LOCATION BY DIALING 911, GIVING YOUR NAME AND SAY THERE IS A FIRE AT:

Hillfield Strathallan College
299 Fennell Avenue West, Hamilton, Ontario

IF YOU REMAIN IN THE BUILDING

IF YOU CANNOT EXIT THE BUILDING DUE TO EXCESSIVE SMOKE, HEAT OR FIRE YOU SHOULD SEEK REFUGE IN A SAFE LOCATION.

- A) KEEP SMOKE FROM ENTERING THE ROOM BY CLOSING THE DOOR AND USE WET TOWELS AND DUCT TAPE TO SEAL CRACKS AROUND THE DOOR. SEAL VENTS OR AIR DUCTS THE SAME WAY.
- B) MOVE TO THE MOST PROTECTED ROOM AND IF POSSIBLE, OPEN THE WINDOW FOR FRESH AIR.
- C) KEEP LOW TO THE FLOOR WHERE THE AIR IS CLEANER.
- D) CALL 911 AND ADVISE THE FIRE DEPARTMENT OF YOUR LOCATION.
- E) LISTEN FOR INSTRUCTIONS FROM AUTHORITIES.

DO NOT USE THE ELEVATOR
DO NOT PROCEED TO THE ROOF AREA

MOHAWK COLLEGE EMERGENCY PROCEDURES
BAY AREA SCIENCE & ENGINEERING FAIR (BASEF)
MARCH 21 AND 23, 2013



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.

[illegible]

Wednesday, March 20, 2013	Thursday, March 21, 2013	Friday, March 22, 2013	Saturday, March 23, 2013
4:00PM-8:00PM Project Setup Hillfield Strathallan Gyms	8:30AM-12:00PM Student Activities Mohawk Theatre 1:00PM-4:00PM Judging Hillfield Strathallan Gyms	Closed to Public	9:00AM-12:00PM Public Viewing Hillfield Strathallan 1:00PM-3:30PM Awards Ceremony Mohawk Theatre 3:30PM-5:00PM Project Takedown

The Parent Pages (or how to survive Science Fair!)

Congratulations on your decision to allow your child to participate in BASEF 2013!

For many students, it is the first time they are rewarded for their academic endeavours. All BASEF student participants are rewarded with an enriching experience. Students get to participate both in Activity Morning and Judging. Along with a certificate of participation, students will come away with the experience of meeting new people - both judges and other top students - and with the official BASEF goody bag.

Many students and parents view science fair projects as a dreaded, compulsory school assignment and have no idea of the rewards available to successful science fair participants. BASEF awards cash prizes, awards and scholarships. The top winners have the chance to win all expense paid trips to national and international science fairs.

Location of Events: Hillfield Strathallan College (HSC) and Mohawk College

Note: Science Fair events will be located at both at HSC and Mohawk this year, due to construction at Mohawk. Projects will be in the HSC gymnasium. Activity Morning and the BASEF awards ceremony will be in the Mohawk College 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 Projects at Hillfield Strathallan College (HSC): There will be signs directing you to the Science Fair as you enter the College from the Fennell Avenue entrance. The HSC roadway has a loop at the building entrance which is for loading and unloading only. The loop is not a parking location. If you are staying at HSC for more than a few minutes please use the free parking area. Volunteers will be able to guide you to the gymnasium.

Parking and Activity Day/Awards Ceremony at Mohawk College: There will be signs directing you to the Activity Morning and Awards Ceremony location as you enter the College from the Fennell Avenue or West 5th Street entrance. Parents are instructed to please **park in Lot P10**.

There is a campus map showing both HSC and Mohawk included in this program.

Parking ticket machines for Mohawk parking are located at the entrances to P15 and P13. The machines accept cash only: coins, and \$5 & \$10 notes ONLY. The machines do not give change. See "Day by Day" for daily parking instructions.

Day by Day - Parent Responsibilities

Day 1 – Registration and Set-up – PLEASE NOTE IMPORTANT LOCATION CHANGE THIS YEAR!!

Project set up for the fair occurs **ONLY** on **Wednesday, March 20, 2013 from 4:00 – 8:00 pm** at **Hillfield Strathallan College (HSC)**. **Parking is free. If you are planning to stay more than a few minutes, please use the free parking areas and not the drop off loop.** 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 have their photograph taken for an ID badge 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://www.basef.ca/>**

The Parent Pages (or how to survive Science Fair!)

Day 2 - Student Activity Morning, Thursday, March 21, 2013 @ 8:00 am – 12:00 noon

Students will be welcomed by volunteers at the McIntyre Theatre beginning at 8:00 am. The Activity Morning Event starts at 9:00 am. Details on the program can be found on the BASEF website at: <http://www.basef.ca/activities>

Day 2 - Lunch - Thursday, March 21, 2013 @ 12:00 noon - 12:45 pm

BASEF student exhibitors will be transferred by HSC school buses from the McIntyre Theatre to the HSC gymnasium.

Students must bring their own lunch and eat in the gym. There are no cafeteria facilities available.

Day 2 – Afternoon Judging, Thursday, March 21, 2013 @ 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 permitted 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.

When picking students up after Judging (4pm), park free in the HSC parking lot close to the gymnasium. The drop off and loading loop at the building entrance is designed for quick stops. To minimize congestion, please do not wait in the loop for students.

Day 3 - Friday, March 22, 2013

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 23, 2013

There will be limited free parking at HSC. Overflow parking will be in Mohawk Lot P10. A flat rate of \$5 will apply at Mohawk. Busing will be provided by HSC to move people between P10, the Mohawk McIntyre Theatre, and the HSC gymnasium.

We ask that your children be at their projects in the HSC gymnasium for Public Viewing from 9:00 am - 12:00 noon. This is followed by the Awards Ceremony at Mohawk from 1:30 pm to approximately 3:30 pm in the McIntyre Theatre. 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 the Mohawk campus, and none at HSC, so you may want to bring your lunch. **Students may not remove their projects until after the Awards Ceremony. Students will be returned to HSC after the Awards Ceremony via HSC buses to dismantle and remove their projects. Once the students are moved to HSC, parents may also use the HSC busing transportation if they wish.**

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 the 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 an 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. BASEF should be considered a public facility regarding food allergies.

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

Be sure to visit the BASEF website (basef.ca) throughout the year. You'll find project pictures and abstracts from 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 in "Team BASEF", with links to Facebook and Twitter.

BASEF Outreach: Resources Available to Students, Teachers, and Parents

The Bay Area Science and Engineering Fair offers students the opportunity to explore problems that matter to them using a longer term, project-based approach. BASEF offers a wide range of resources to help students conduct their research; from help getting started, to technical considerations such as how to design a project display, or finding answers to ethical and safety questions. We also offer help to parents and teachers working in support of the young researchers.

The main portal for this help is our website. If you only have time to explore one resource, a definitive guide called "Science Success" is a good place to start. It is available at www.basef.ca/outreach. "Science Success" consists of 4 parts: a guide for teachers, a student workbook, and two slide presentations useful for groups of students, teachers or parents.

www.basef.ca/resources contains a large number of links to a **range of resources**, with a detailed description of what can be found there. There are even design plans for a commonly-used **wooden display board** that can be shipped world-wide. To see what a typical BASEF project looks like, **visit our project archives** at www.basef.ca/2012awards and www.basef.ca/pastresults

Students, teachers and parents can access help directly from BASEF by emailing us at outreach@basef.ca. Experienced science fair veterans, professional scientists, engineers and educators are available to provide **chalk-talks or workshops**. This is particularly valuable for students attending schools not supportive of science fairs in the BASEF catchment area. **Mentors** can be arranged on request by emailing outreach@basef.ca. The BASEF Outreach program can also help you assemble a team of **judges** for your school fair, including how to actually organize the judging and evaluate the results.

Teacher's Activity Day is an all day seminar for teachers covering everything you wanted to know about science fair projects, including a detailed description of the application process for students entering BASEF, safety, judging, and how to avoid the most common pitfalls encountered during registration. This course can be booked by emailing outreach@basef.ca.

Youth Engaging in Science (YES) offers students from equal opportunity schools the chance to work collaboratively with researchers and engineers toward completion of a science project eligible for entrance into BASEF (see the YES box below).

If you are not a scientist, it can be difficult to advise students on the ways of science. Fortunately, many articles have been written to assist those running science fairs (access these by emailing outreach@basef.ca) Also enquire about our talks on **how science is done**. Recent presentations given by BASEF volunteers include: An introduction to BASEF; How to get started and complete your science fair project; The difficulties science fair participants have with the concept of a hypothesis; How science fairs may encourage the "prepared mind" for innovation; and How science and Aboriginal culture may be related.

Project-based science, as promoted by science fairs, is one of the best ways to engage young people in a longer term, focused initiative where they can explore their own interests, exercise their curiosity, and experience the thrill of discovery. BASEF provides a friendly competition to encourage this in-depth exploration of new ideas. We at BASEF Outreach are here to help you get started with your project. **Need help?** Email outreach@basef.ca or visit our website at www.basef.ca.

The YES Mentorship: Our 4th Year!

The YES (Youth Engaging in Science) Mentorship pairs at-risk youth with mentors in science and engineering at the university, college and in-school levels. Founded by BASEF Organizing Committee members, Vanessa Scanga and Ryan Buist, the YES Mentorship recognizes the needs of primary and secondary school students and provides them with the opportunity of engaged learning by lending mentorship and guidance toward participating in the regional BASEF. If you are interested in participating in YES and wish to learn more about its opportunities, please email us at youthengaginginscience@gmail.com

BASEF has been instrumental in supporting the YES Mentorship and has created a Special Projects Chair to foster this initiative. The Mentorship is grateful to its partners: BASEF, McMaster Let's Talk Science, Hamilton Roundtable for Poverty Reduction, Hamilton Wentworth Catholic District School Board and Hamilton Wentworth District School Board. We thank our participating mentors at McMaster this year for their outstanding project supervision of our secondary school mentees.

We are proud of all YES Mentorship students for their diligence and engagement in science and we wish all project participants the best of luck in this year's regional fair. GO TEAM YES!

THANKS TO BASEF 2013 VOLUNTEERS!



Naroon Ahmad
Shoayb Assanyinaq
Steven Beck
Dana Bee
Helena Collins
Roz Crawford
Tom Crawford
Lyndsey Dunn
Taylor Eldridge
Thomas Flaxman
Victoria Flaxman
Ed Gillis
Mary Helen Gillis
Trevor Gosselin
Xin Guan
Daniel Hoeksema
Jordan Ingram
Ling Mai Iv
Lauren Jewett
Michele Joch
Mary Johnston

Darshita Joshi
Linda Kennedy
Lorna Krauss
Jordan Ladoccear
Joy Liu
Saleem Mirza
Kurns Narrog
Abolain Nawabeet
Milan Paulovic
Sue Reaume
Mohammed Sabseibi
Doug Scott
Bhavin Shukla
Gusien Sivatha
Forst Squires
Brenda Sloane
Adam Talbot
Norman Young
Mateusz Zalewski
Chris Zucznski

Photo Team

Al Bates
Jim Hamilton
Lauren Jewett
Jennifer Kerr
John Novak

Registration Team

Rob Lenjosek
Kevin MacIsaac
Zenon Holadyk
Nancy Carter
Kerry Dwyer-Mitchell
Janice Rocchi
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Bay Area Science & Engineering Fair

1st Annual Golf Tournament

Thursday, September 5, 2013

Southern Pines Golf Course

11:00 am Shot Gun Start

Steak dinner to follow on site

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BASEF 2013 Champion Teacher Recognition Award Winner

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

**Dr. Rebecca Kahama
King's Christian Collegiate**

"...one of the finest teachers I know who is truly committed to her job and the well-being of her students and their education."

"...spends an exorbitant amount of time providing resources and guidance for her students... stays late, sacrifices lunches, and works around each student's schedule to provide amazing opportunities and support."

"In 3 years of Dr. Kahama taking our students to BASEF... it became highly esteemed and something our students began to anticipate... we have been a champion school 2 years in a row."

"Her efforts need to be rewarded for her hard work and her dedication; she is honestly one in a million."

"All the students at our school attending BASEF can agree that we wouldn't have been able to do it without her."



CONGRATULATIONS TO THE 2013 BASEF CHAMPION TEACHER!!

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.

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BENEFACTORS - 2013

Through their personal donations, individuals support the BASEF. Together with corporate and organizational sponsorship donations, benefactor donations help to make the fair what it is. BASEF's benefactor levels celebrate famous Canadian scientists and engineers

Banting and Best Benefactors (\$1000+)

Sir Frederick Banting and Dr. Charles Best were the co-discoverers of insulin used in the treatment of diabetes. In 1923, Dr. Banting was awarded the Nobel Prize in Medicine

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Mr. David Walker

Bondar Benefactors (\$500+)

Dr. Roberta Bondar was the first Canadian woman to have flown in space as an international astronaut on board the Space Shuttle Discovery. Dr. Bondar is a trained physician, scientist, astronaut and photographer.

Mr. George Geczy

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John Charles Polanyi won the 1986 Nobel prize for chemistry for using chemiluminescence of molecules to explain energy relationships in chemical reactions

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McGill Benefactors (\$50+)

Elsie McGill was Canada's first woman graduate in electrical engineering. She also held a master's degree in aeronautical engineering. She is considered the first woman to be a designer of airplanes; During World War II her primary responsibility was the production of the Hawker Hurricane fighter aircraft.

Mr. Norman Young

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Dr. Michael Smith won the 1993 Nobel Prize in Chemistry for discovering site-directed mutagenesis: how to make a genetic mutation precisely at a spot in a DNA molecule

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



BASEF ACTIVITY MORNING 2013



Presentation Schedule

March 21, 2013

9am – Noon

McIntyre Theatre, Mohawk College

9:00 am – 9:05 am

Introduction – Sponsor Comments

9:05 am – 9:30 am

Venture/Leap – McMaster University Video Session and Interactive Presentation starting at 9:20 am (Session is designed to accommodate classes arriving after 9 am)

9:30 am – 10:00 am

Care Go Technology

10:00 am – 10:10 am

Southern Ontario Gliders Group: Part 1: The Evolution of Model Airplanes

10:10 am – 10:50 am

Key Note Speaker: Ford Motor Company
Electrified Vehicle Technology

10:50 am – 11:00 am

Southern Ontario Gliders Group: Part 2: The Science of Model Airplanes

11:00 am – 11:30 am

Pond Biofuels – Steven Martin CEO

11:30 am – Noon

McMaster University Chemistry Show – Professors Randy Dumont and Paul Harrison

Note:

Grade 7-8 Students will be arriving by Bus up until 9:30 am due to bus schedules.

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Yoan Kagoma
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Institute/IIDR

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McMaster University

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Anne Gannon
Peter Summers
Jane A. Foster
Tomasz Czarny
Matthew Workentine
Warren Foster
Sara Cormier
Julie Kaiser

McMaster University (continued)

Karl Zimmermann
Zhongyuan Tu
Kyle Stephenson
Michelle Reid
Nikola Lukenda
Stefanie Mak
Brian Tuinema
Jennifer Stearns
Ho Jun Eom
Akshita Puri
Andrew Park
Angela Huynh
James SeongJun Han
Peter Jonasson
Kyuwon (Rosa) Lee
Michael Xu
Neha Dewan

McMaster University Students

Beth McNally
Ian Sinke
Kyle Novakowski
Michael Dorrington
Fiona Whelan
Lucy Ambroszkiewicz

McMaster University/ MacAUTO

Stephen Bieda

Mohawk College

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Brian Minaji
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Michael Danby

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Kyle Spyksma

Retired

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Eric McNair
Trixie Ellithorn
Luciano Giancarlo
Marvin McDonald
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Good luck to all BASEF 2013 participants.



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Rose McQueen
Hansa Patel
Norman P. Young
George Holliday
Warren Johnson
Carl Easton
Otto Zander
Kathryn Lafferty
Paul-Benoît Latour
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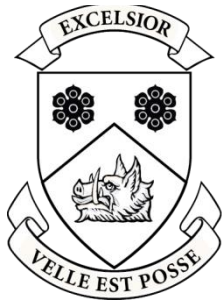
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Acquired Brain Injury Awards

Susan Olynyk

ArcelorMittal Dofasco Awards

See list on next page

Artistically Inspired Display Awards

Cathy Hayman, Cathy Hamilton

Bay Area Restoration Council Award

Chris McLaughlin, Kelly Pike, Ilona Feldmann

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

Shannon Clark

Canadian Nuclear Society (Golden Horseshoe Branch) Awards

Jason Sharpe

Cancer Assistance Program Awards

Helena Streun, Derek Bishop

Chemical Institute of Canada, Hamilton Section Award

Barry Smallbone, Don Barclay, Bert Halliday

Colin O'Flynn Electrical Engineering Award

John O'Flynn

Dillon Consulting Awards

Natalie Szponar, Shawn Taylor

Doris Casey Disability Solutions Award

Jim Casey

Dr. Colin J.L. Lock Memorial Chemistry Award

Dr. Nicola Simmons, Kit Simmons

Dr. Nicola Simmons Award in Cognition Studies

Dr. Nicola Simmons, Kit Simmons

Electrical Construction Association of Hamilton Award

Joe Kurpe

Farncombe Family Digestive Health Research Institute Award

Elena Verdu

Gowling Lafleur Henderson LLP

Alex Ross

Hamilton Academy of Dentistry Award

Dr. Frank Stechey

Hamilton Association daVinci Award

Tony Petric, LudvikPrevec, Michael Jefferson

Hamilton-East Wentworth Rotary Awards

Paul Crossman

Hamilton Wentworth Occasional Teacher Local Awards

Barbara Wallace, Rian McLaughlin, Barry Naidoo,
Nancy Meehan

Hidden Science Award

Victor Starecky, Darren Vivian, Cheryl James

Hillfield Strathallan College Awards of Excellence

Marc Edgar

Horizon Utilities Corporation Award

Paul Wardell, Greg Vande Kuyt

IEEE (Institute of Electrical & Electronic Engineers)

Hamilton Section Awards

Blair MacCuish

International Science & Engineering Affiliated Fair Awards

Cathy Hayman

James A. Winger Award sponsored by Hamilton Amateur Astronomers

Don Pullen, Jim Wamsley

John. W. Howard Materials Research Award

Dr. Nicola Simmons, Kit Simmons

Laurentian Chapter of SETAC Award

Eve Gilroy, Dave Rogers, Joel Nichols,

Oana Birceanu, Ludiwine Clouzot

LEAP Award of Innovation

Ashlee Spence

McMaster Dept. of Chemistry and Chemical Biology Award

Marlena Whinton, Farnaz Heidar Zadeh

McMaster University Faculties of Science & Engineering Tuition Awards

Dr. Robert Fleisig, Ms. Arlene Dosen

Mechanical Contractors Association of Hamilton Award

Anthony DeChellis

M.G. DeGroote Institute for Infectious Disease Research Internship Award

Dr. Karen Mossman, Dr. Dawn Bowdish

Mohawk College School of Engineering Technology Awards

Chris Blackwood, Brian Stefanchuk, Brian Minaji

Nelson Steel Award

Shannon Clark

The Picobits Creative Technology Award

Jake Baillie, Angela Robson

Primary Fluid Systems Awards

Sandy Walker

Professional Engineers Ontario Hamilton-Burlington Chapter Awards

David Dean, Erika Kadar, Michelle Chin,
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Royal Botanical Gardens Award

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SPECIAL AWARD JUDGES (continued)

SPIE Optics & Photonics Science Fair Award

Diana Glennie, Osman Ahmed, Andrew Knights

Venture Engineering Innovation & Science Award

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Leap Engineering Innovation & Science Award

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PROJECT LISTING

A01 Do You Cheat?

Karl Lepp, Samuel Han
Int 9/10 Health Sciences Human
Abbey Park High School, HDSB

A02 Born This Way

Chelsea Liu
Sr 11/12 Health Sciences Human
Abbey Park High School, HDSB

A03 Arah Proteins, Peanuts, and Parasites

Eisha Ahmed
Sr 11/12 Health Sciences Human
Abbey Park High School, HDSB

A04 Do First Person Shooters Affect Eyesight

Yusuf Atcha
Jr 7/8 Health Sciences Human
Al-Falah Islamic School, IND

A05 Do Video Games Improve Hand-Eye Coordination Better than Sports?

Abdullah Zaidi
Jr 7/8 Health Sciences Human
Al-Falah Islamic School, IND

A06 The Effect of Modern Aesthetics on the Humans mental and Physical Abilities

Hamza Bajwa
Jr 7/8 Health Sciences Human
Al-Falah Islamic School, IND

A07 The Effect of Simple Anti-Microbial Procedures in Lowering the amount of bacteria in the household setting

Hiba Abbas
Jr 7/8 Biotechnology
Al-Falah Islamic School, IND

A08 The Effect of Various pH Levels on the Rate of Corrosion

Mana'al Mirza
Jr 7/8 Earth & Env Sci
Al-Falah Islamic School, IND

A09 The effect of video games on the brain and the body

Saif Islam
Jr 7/8 Health Sciences Human
Al-Falah Islamic School, IND

A10 Does an affordable electric toothbrush remove more plaque than a manual toothbrush?

Afreen Sheikh
Jr 7/8 Health Sciences Human
Al-Falah Islamic School, IND

A11 Are Hybrid Cars Really a Green Replacement for Gasoline Fueled Cars

Mohammad Moahid
Jr 7/8 Earth & Env Sci
Al-Falah Islamic School, IND

A12 What metal melts the fastest?

Mahnoor Naeem
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Al-Falah Islamic School, IND

A13 What Is The Best Form Of Liquid To Drink During Aerobic Activity To Replenish An Athlete's Energy?

Saifullah Khan
Jr 7/8 Health Sciences Human
Al-Falah Islamic School, IND

A14 which metal is the most resistant to corrosion?

abdallah al baity
Jr 7/8 Phys & Math Sci
Al-Falah Islamic School, IND

A15 ultimate energy..

khalid radwan
Jr 7/8 Health Sciences Human
Al-Falah Islamic School, IND

A16 What Common Household Material Is The Best At Sounproofing

Anosha Murtaza
Jr 7/8 Eng & Comp Sci
Al-Falah Islamic School, IND

A17 Acid and Tooth Decay

Imaan Ahmed
Jr 7/8 Health Sciences Human
Al-Falah Islamic School, IND

B01 Suck - Squeeze - Bang - Blow

Matthew McGuire
Int 9/10 Eng & Comp Sci
Ancaster High, HWDSB

B02 Effects of Magnetism on Plant Growth

Rishabh Moudgil
Sr 11/12 Earth & Env Sci
Ancaster High, HWDSB

B03 Bringing Home More Than Homework

Margaret Williams
Jr 7/8 Life Sciences Non-Human
Ancaster Senior, HWDSB

B04 What Is Your Mouths Worst Enemy

Jordan Savage
Jr 7/8 Life Sciences Non-Human
Appleby College, IND

B05 Radiation: It's Everywhere

Aadam Ahmed
Jr 7/8 Life Sciences Non-Human
Appleby College, IND

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Trajan Mitchelson
Jr 7/8 Life Sciences Non-Human
Appleby College, IND

B07 Toxic Liquids

Kathryn Brown
Jr 7/8 Earth & Env Sci
Appleby College, IND

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Michael Tiganila, Johnathan Lukic
Sr 11/12 Health Sciences Human
Appleby College, IND

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Victor(Alex) Chu
Jr 7/8 Health Sciences Human
Appleby College, IND

B10 Solar Desalination

Aryan Luthra
Jr 7/8 Earth & Env Sci
Appleby College, IND

B11 Honey Helps: Antibacterial Properties of Honey

Lauren Kirigin
Jr 7/8 Life Sciences Non-Human
Appleby College, IND

B12 Colorimetric Detection of Plasmodium Falciparum via Aptasensor Technology

Junyi (Sarah) Wu
Sr 11/12 Health Sciences Human
Assumption College School, BHNCD

B13 Influence of Road Salt Runoff on Vegetation

Roberto Ceron
Sr 11/12 Life Sciences Non-Human
Barton, HWDSB

B14 Electrolytic measurement of the acetic acid concentration of household vinegar

Maria Wolos, Kyle Young
Sr 11/12 Phys & Math Sci
Barton, HWDSB

B15 Hospitality Of Martian Soil

Lakshmi Sreekumar, Fatemah Shamkhi
Int 9/10 Earth & Env Sci
Barton, HWDSB

B16 The Correlation Between Music and Memory

Victoria Wong, Omaira Chaudhary
Sr 11/12 Health Sciences Human
Barton, HWDSB

B17 why apples turn brown, and ways to prevent browning

Olivia McDonald, Leshae Moses
Jr 7/8 Earth & Env Sci
Bellmoore, HWDSB



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Hamilton-Wentworth Community

C01 The Burger Project

Nicolas DeSilva, Noah Taylor
Jr 7/8 Health Sciences Human
Bellmoore, HWDSB

C02 Which battery should you rely on?

Megan McDonald, Taylor-Rae Tremain
Jr 7/8 Eng & Comp Sci
Bellmoore, HWDSB

C03 Gender and Short-Term Memory

Mackenzie Cooper
Jr 7/8 Health Sciences Human
Bellmoore, HWDSB

C04 How Does Music Affect Learning

Vanessa Pribicevic
Jr 7/8 Health Sciences Human
Bellmoore, HWDSB

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C05 Pellet vs. Phonebook

Adam Pedro, Tyler Sherriff
Jr 7/8 Phys & Math Sci
Bellmoore, HWDSB

C06 Magnet power

Ryan Garden
Jr 7/8 Eng & Comp Sci
Bellmoore, HWDSB

C08 SOLAR POP, A COST EFFECTIVE AND ENVIRONMENTALLY FRIENDLY APPROACH TO INDOOR LIGHTING

Daniel Knight
Jr 7/8 Eng & Comp Sci
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C09 Fruit Batteries

Nathan Buggeln, Kevin Allan
Jr 7/8 Phys & Math Sci
Caledonia Centennial Public School, GEDSB

C10 The Skittle Challenge

Emma Hartick, Ciera McPherson
Jr 7/8 Health Sciences Human
Caledonia Centennial Public School, GEDSB

C11 The Flight of Paper Airplanes

Darby Henning, Kieran McGill
Jr 7/8 Phys & Math Sci
Caledonia Centennial Public School, GEDSB

C12 Music and Concentration

Jillian Parker
Jr 7/8 Health Sciences Human
Caledonia Centennial Public School, GEDSB

C13 How Far Does a CD Hovercraft Travel

Brayden Postma
Jr 7/8 Phys & Math Sci
Caledonia Centennial Public School, GEDSB

C14 Where the Wild Wolves Roam: Factors for an Ideal habitat

Olivia Cerilli
Jr 7/8 Earth & Env Sci
Canadian Martyrs, HCDSB

C15 Scenting for Success

Vidhiya Jeyanathan, Nicola Lawford
Jr 7/8 Health Sciences Human
Dalewood, HWDSB

C16 Does Mother Nature Really Know Best?

Anand Sergeant, Henry Challen
Jr 7/8 Health Sciences Human
Dalewood, HWDSB

C17 Is Seeing Believing...or is Tasting for Sure?

Nikita Ohayon
Int 9/10 Health Sciences Human
Hamilton Academy of Performing Arts, IND

D01 The Smartscope

Gabrielle Ranger
Int 9/10 Eng & Comp Sci
Hamilton Academy of Performing Arts, IND

D02 How Does Fear Change with Age?

Veronica Higgins
Int 9/10 Health Sciences Human
Hamilton Academy of Performing Arts, IND

D03 Is Coffee Just For Breakfast?

Erin Pitt
Jr 7/8 Earth & Env Sci
Hamilton Academy of Performing Arts, IND

D04 What's In Your Water?

Emily Steadman, Sophia Ratevosian
Jr 7/8 Earth & Env Sci
Hamilton Academy of Performing Arts, IND

D05 The Many Wonders of Alcohol

Alex Christiansen
Jr 7/8 Life Sciences Non-Human
Hamilton Academy of Performing Arts, IND

D06 Should I Wash My Hands?

kristie link
Int 9/10 Life Sciences Non-Human
Hamilton Academy of Performing Arts, IND

D07 Which One Do You Like Best?

Kaylee Marko
Int 9/10 Health Sciences Human
Hamilton Academy of Performing Arts, IND

D08 Recycle Your Light

Emanuel Furman
Int 9/10 Eng & Comp Sci
Hamilton Academy of Performing Arts, IND

D09 Does Music Have An Effect On Plant Growth?

Addison Holley
Jr 7/8 Life Sciences Non-Human
Hamilton Academy of Performing Arts, IND

D10 Ray, Mel, and the Beanstalk!

Noah Smith
Jr 7/8 Life Sciences Non-Human
Hamilton Academy of Performing Arts, IND

D11 acid+water+plants=Growth?

Erika Ott
Jr 7/8 Earth & Env Sci
Hamilton Academy of Performing Arts, IND

D12 Tapped

Rivky Zians, Ela Levigoren
Jr 7/8 Health Sciences Human
Hamilton Hebrew Academy Zichron Meir School, IND

D13 Wrap It Up

Nick Denomey
Int 9/10 Life Sciences Non-Human
Highland, HWDSB

D14 ROUNDABOUT TIME ?

Haydn Wain-Lowe
Jr 7/8 Earth & Env Sci
Hillfield Strathallan College, IND

D15 Fulfillment Center System

Kevin Boenisch
Jr 7/8 Eng & Comp Sci
Hillfield Strathallan College, IND

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D16 Environmental Meltdown

Christian Kwecien-Delaney, Jacob Kennedy
Jr 7/8 Earth & Env Sci
Hillfield Strathallan College, IND

D17 Greenhouse Gas and the Temperature in a Terrarium

Gabrielle Lamy, Holly Hamilton
Int 9/10 Earth & Env Sci
Hillfield Strathallan College, IND

E01 How to store past wind

Liam Younger, Mark Belostotsky
Jr 7/8 Earth & Env Sci
Hillfield Strathallan College, IND

E02 Stability vs Maneuverability: An Aerodynamic Study

Thomas Lim, Michael Curtis
Jr 7/8 Phys & Math Sci
Hillfield Strathallan College, IND

E03 The Dirt Behind Composting

Nicholas Klid, Krishnan Shyamkumar
Int 9/10 Earth & Env Sci
Hillfield Strathallan College, IND

E04 Windows of Opportunity to Save Energy

Christopher Kolios
Int 9/10 Phys & Math Sci
Hillfield Strathallan College, IND

E05 Wind Powered Cars

Ryan Bennett, Bryan Huck
Int 9/10 Phys & Math Sci
Hillfield Strathallan College, IND

E07 Beat on the Brain

Kieran Hussey
Jr 7/8 Health Sciences Human
Hillfield Strathallan College, IND

E08 Enviro-Bond: Polymer Powerhouse??

Lukas Bauer, Kenji Marshall
Jr 7/8 Earth & Env Sci
Hillfield Strathallan College, IND

E09 Three Senses & Food

Emily Maradin, Alyssia Silenzi
Jr 7/8 Health Sciences Human
Hillfield Strathallan College, IND

E10 Spotlight on Frequency

Matthew Tutty, Maddie Brimble
Int 9/10 Phys & Math Sci
Hillfield Strathallan College, IND

E11 Complicated Cuteness

Brooke Dolny, Isabelle Rotsaert
Jr 7/8 Health Sciences Human
Hillfield Strathallan College, IND

E12 Bean Soaked

Sydney Hobbes
Jr 7/8 Earth & Env Sci
Hillfield Strathallan College, IND

E13 Are We Eating Frankenfoods?

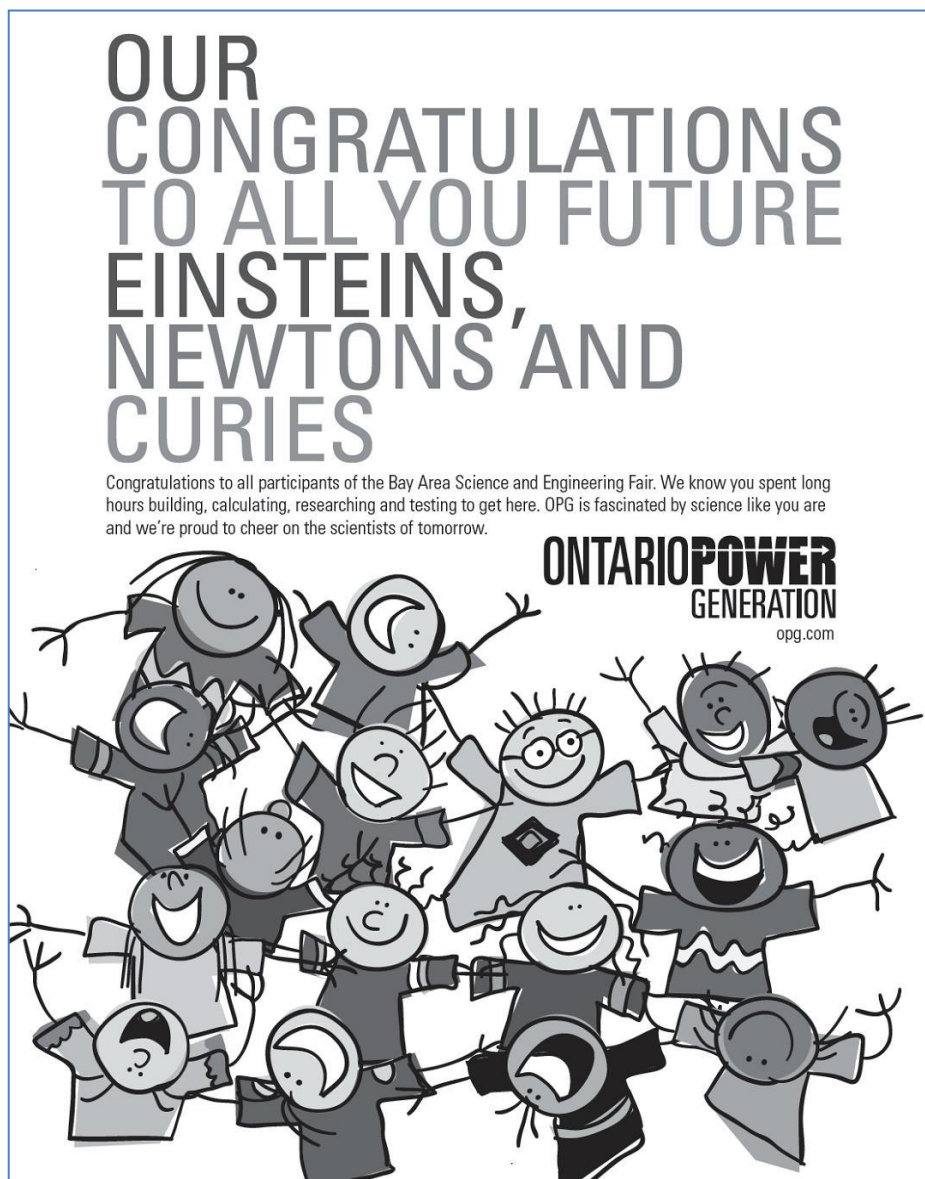
Elias Larrazabal
Jr 7/8 Biotechnology
Hillfield Strathallan College, IND

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Brooke Rowland, Tosin Mohammed
Jr 7/8 Life Sciences Non-Human
Hillfield Strathallan College, IND

E15 UPF 50+: Unnecessary Price For sun protection

Bijan Anvari
Int 9/10 Health Sciences Human
Hillfield Strathallan College, IND



PROJECT LISTING (Continued)

E16 Cool Sun

Sarah Williams-Habibi
Jr 7/8 Eng & Comp Sci
Hillfield Strathallan College, IND

E17 Rust Busters

Ariana Spytkowski
Jr 7/8 Phys & Math Sci
Holy Spirit, HWCD

F01 COLOUR ME U.V. SAFE

Christina Roglich
Jr 7/8 Earth & Env Sci
Holy Spirit, HWCD

F02 Home Sweet Home

Adriana Wiech, Sydney Anderson
Jr 7/8 Earth & Env Sci
Immaculate Conception, HWCD

F03 Diabetes in Ongwehoweh

Alexis Thomas
Jr 7/8 Health Sciences Human
J. C. Hill Elementary, SNS

F04 The Effects of Gasoline on First Nations Plant Life

Jessica McNaughton
Jr 7/8 Earth & Env Sci
J. C. Hill Elementary, SNS

F05 Which Arrow is the Best?

Brady Smith, Vaughn Montour
Jr 7/8 Eng & Comp Sci
J. C. Hill Elementary, SNS

F06 Worms 'n Dirt

Aleria McKay, Mikenzie Sandy
Jr 7/8 Earth & Env Sci
J. C. Hill Elementary, SNS

F07 The Five White Gifts

Brianna Fraser
Jr 7/8 Health Sciences Human
J. C. Hill Elementary, SNS

F08 On Reserve vs. Off Reserve Water Quality

Tiana Sandy
Jr 7/8 Health Sciences Human
J. C. Hill Elementary, SNS

F09 From Deer tail to Human being A biography of Lyme Causing Tick

Lulu Xi
Jr 7/8 Health Sciences Human
Janet Lee, HWDSB

F10 The Brain Game

Brittany Zandstra
Jr 7/8 Health Sciences Human
Jarvis District Christian School, IND

F11 The Scoop on Poop

Josh Prinzen
Jr 7/8 Earth & Env Sci
Jarvis District Christian School, IND

F12 Is It Worth It?

Emily Huyser
Jr 7/8 Health Sciences Human
Jarvis District Christian School, IND

F13 Can You Please Repeat That?

Cassandra Eggink
Jr 7/8 Health Sciences Human
Jarvis District Christian School, IND

F14 Follow that Recipe

Laura Zandstra
Jr 7/8 Phys & Math Sci
Jarvis District Christian School, IND

F15 Rock Candy

Alice Eggink
Jr 7/8 Phys & Math Sci
Jarvis District Christian School, IND

F16 Flushed Away

Braden Zandstra
Jr 7/8 Earth & Env Sci
Jarvis District Christian School, IND

F17 Battle of the Suds

Michelle Lucas
Jr 7/8 Phys & Math Sci
Jarvis District Christian School, IND

G01 Visual Deception? Or Optical Illusion?

Robert Sager, Krista Kartick
Jr 7/8 Health Sciences Human
Jean Vanier, BHNC

G02 Photoelectric Effect

Shakeel Rashid
Jr 7/8 Phys & Math Sci
John William Boich, HDSB

G03 the Influence of music on exercise

Olivia Browning
Jr 7/8 Health Sciences Human
John William Boich, HDSB

G04 The Silent Reminders Clock

Alexandra Peetsma
Jr 7/8 Eng & Comp Sci
John William Boich, HDSB

G05 Illusion + Perception = Deception

Mackenzie Collyer
Jr 7/8 Health Sciences Human
John William Boich, HDSB

G06 Relation Between Caffeine and Blood Pressure

Hasaan Sobaan
Jr 7/8 Health Sciences Human
John William Boich, HDSB

G07 The Picto-Shirt

Rose Peyvandi
Jr 7/8 Health Sciences Human
John William Boich, HDSB

G08 What works best? Commercial or Home remedy cleaners?

Asia Ruggiero
Jr 7/8 Life Sciences Non-Human
John William Boich, HDSB

G09 The Effects of Music on Moods and Decision Making

Olivia Kabelin
Jr 7/8 Health Sciences Human
John William Boich, HDSB

G10 Peer Pressure

Peyton Donnelly-Lowe
Jr 7/8 Health Sciences Human
John William Boich, HDSB

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PROJECT LISTING (Continued)

G11 How music affects the ability to concentrate

Julia Marin
Jr 7/8 Health Sciences Human
John William Boich, HDSB

G12 Toxic Beuty

Dhwani Bhadresha
Jr 7/8 Health Sciences Human
John William Boich, HDSB

G13 Determining the Efficiency of Commercial Antacids and Natural Antacids

Do Eon (Joshua) Lee
Sr 11/12 Health Sciences Human
King's Christian Collegiate, IND

G14 Can Natural Materials Remove Heavy Metals in Water?

Jessie Babra, Christina Low
Int 9/10 Phys & Math Sci
King's Christian Collegiate, IND

G16 Arrowplastic - Synthesis and Biodegradation

Rachel Hanke
Sr 11/12 Earth & Env Sci
King's Christian Collegiate, IND

G17 Synthesis of Jatropa and Canola Biodiesel and Analysis of Their Effectiveness as Fuels

Matthew Bergman
Sr 11/12 Earth & Env Sci
King's Christian Collegiate, IND

H01 Natural Catalyst in Aspirin

Tayo Dosunmu
Sr 11/12 Health Sciences Human
King's Christian Collegiate, IND

H02 Bean Tenderizer

Beverly George
Sr 11/12 Health Sciences Human
King's Christian Collegiate, IND

H03 Quantifying CCL2 and Beta Actin in Skeletal Muscle to Assess Risk of Obese and Overweight Subjects of Ethnic Groups

Ishan Aditya
Sr 11/12 Health Sciences Human
MacLachlan College, IND

H04 Impact of Colour on Radiant Energy Absorption

Clare Elchuk
Jr 7/8 Eng & Comp Sci
Mother Teresa, HWCD

H05 ATTRACT THAT MAGNET!

Danielle Grebe, Jonathan Grebe
Jr 7/8 Phys & Math Sci
Oakville Christian School, IND

H06 The Effect of Beverages on Teeth

Maria Ghobrial
Jr 7/8 Health Sciences Human
Oakville Christian School, IND

PROJECT LISTING (Continued)

H07 Recharge with Solar-Light for Flight

Nayiri Houldsworth
Jr 7/8 Eng & Comp Sci
Oakville Christian School, IND

H08 Music on the Brain

Sawyer Ferreira
Jr 7/8 Health Sciences Human
Oakville Christian School, IND

H09 Toxic Toothbrushes

Alexander Greyvenstein
Jr 7/8 Life Sciences Non-Human
Oakville Christian School, IND

H10 Seeing A's

Emily Berry
Jr 7/8 Health Sciences Human
Oakville Christian School, IND

H11 This isn't rocket science, or is it?

Nathan Agnew
Jr 7/8 Eng & Comp Sci
Oakville Christian School, IND

H12 Is Your Water Pure?

Blake Correia, Eduard
Brenninkmeijer
Jr 7/8 Phys & Math Sci
Oakville Christian School, IND

H13 Skittles: Taste the Rainbow Ketchup: Taste the Tomato

Georgia Walker, Sandra Vijayan
Jr 7/8 Health Sciences Human
Oakville Christian School, IND

H14 Protecting Our Fine Feathered Friends

Katelyn Kettle
Jr 7/8 Life Sciences Non-Human
Oakville Christian School, IND

H15 The Mystery Of Levitation

Micheal Antifaoff
Jr 7/8 Eng & Comp Sci
Oakville Christian School, IND

H16 Crazy Crystals

Sydney Rent, Brittney Jenkins
Jr 7/8 Phys & Math Sci
Caledonia Centennial PS, GEDSB

H17 Surface Tension Motors

Faris Shewayhat
Jr 7/8 Life Sciences Non-Human
Our Lady of the Assumption, HWCD

J01 Do depth and temperature affect magnet strength?

Huzaifa Muhammad
Jr 7/8 Phys & Math Sci
Al-Falah Islamic School, IND

J02 Genetic Robot for Practical Applications

Ian Jamieson, Nicholas Down
Sr 11/12 Eng & Comp Sci
Assumption College School, BHNCD

J03 Ways to Stop the Impact of a Volcano

Dimitri Knezevic, Josh Hill
Jr 7/8 Earth & Env Sci
Bellmoore, HWDSB

J04 How Will I Feed My Fish

Adam Lopez
Jr 7/8 Eng & Comp Sci
Bellmoore, HWDSB

J05 MIPE: Microprocessor with Integrated Programmable Execution units

Alex Tomala
Int 9/10 Eng & Comp Sci
Cardinal Newman, HWCD

J06 EWW..ALLTHAT GOO! CLEANING UP AN OIL SPILL

Nicole Piersanti, Maia Caruso
Jr 7/8 Phys & Math Sci
Corpus Chirsti, HWCD

J07 Antenna Madness!

Daniel B. Jolic
Jr 7/8 Eng & Comp Sci
Hillfield Strathallan College, IND

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Nicholas Di Loreto
Int 9/10 Phys & Math Sci
Hillfield Strathallan College, IND

J09 Fibonacci's Effect on Commerce

Thomas Habicht
Jr 7/8 Phys & Math Sci
Home Schooling, IND

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Haylee Hill, Andie Bomberly
Jr 7/8 Earth & Env Sci
J. C. Hill Elementary, SNS

J11 The Three Sisters (Corns, Beans, and Squash)

Givonna Guimond
Jr 7/8 Earth & Env Sci
J. C. Hill Elementary, SNS

J12 Dare to Compare Snares

Dustin Hill, Rheno Thomas
Jr 7/8 Eng & Comp Sci
J. C. Hill Elementary, SNS

J13 The Recurve Bow

Neo Martin, Eric Patterson
Jr 7/8 Eng & Comp Sci
J. C. Hill Elementary, SNS

J14 The Atlas

Theo Willows
Jr 7/8 Eng & Comp Sci
John William Boich, HDSB

J15 Macroscopic Particle Simulator in C#

Josh Mitchell
Sr 11/12 Eng & Comp Sci
North Park Collegiate and Vocational School, GEDSB

J16 MARTHA: Medication Automated Reminder Technological Health Assistant

Katie Brent
Int 9/10 Eng & Comp Sci
Notre Dame, HCDSB

J17 Reflect 4 Money

Liam Ferguson, Chris Zagotsis
Jr 7/8 Eng & Comp Sci
Oakville Christian School, IND

J18 It's UnSINKable! Liquefaction

Jack Mogus
Jr 7/8 Eng & Comp Sci
Pope John Paul II, HCDSB

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J19 Groundeffect Aircrafts: Is it a more energy efficient way to travel?

Caroline Mahut
Jr 7/8 Phys & Math Sci
Rolling Meadows Public School, HDSB

J20 Shedding Some Light on Ski Waxing: Do ski waxing methods matter?

Jacob Flaherty, David Flaherty
Jr 7/8 Eng & Comp Sci
Ryerson, HWDSB

J21 Bacteria & radiation

Jonah Robotham
Sr 11/12 Life Sciences Non-Human
Sir John A. Macdonald, HWDSB

J22 Solar Car Runaway

Parsa Norouzian, Luke Rich
Jr 7/8 Eng & Comp Sci
Sir William Osler, HWDSB

J23 Cars That Run On Water

Brendon Cabral, McKayla Upson
Jr 7/8 Eng & Comp Sci
St. Ann (Hamilton), HWCD

J24 Which Colour is Best?

Nolan Gannage, Nicolas Wilson
Jr 7/8 Earth & Env Sci
St. Augustine, HWCD

J25 Solar Ipod Charger

Nathan Donato
Jr 7/8 Eng & Comp Sci
St. Augustine, HWCD

J26 Seeing is believing or is it...

callie clements, kelsey irwin
Jr 7/8 Health Sciences Human
St. Augustine, HWCD

J27 Stop The Spread

Mattew Bilopavlovic
Jr 7/8 Life Sciences Non-Human
St. David, HWCD

J28 Stalactite

Monika Pyzik, Brittney York
Jr 7/8 Phys & Math Sci
St. David, HWCD

J29 Automatic Cereal Dispenser

Matthew Aslett, Ian Berlot-Attwell
Int 9/10 Eng & Comp Sci
St. Ignatius of Loyola, HCDSB

J30 Plug It In

Ryan Hunt
Int 9/10 Eng & Comp Sci
St. Jean de Brebeuf, HWCD

J31 Hidden Hazards of Microwaves

Michael Cubelic
Jr 7/8 Earth & Env Sci
St. Luke, HWCD

J32 Testing The Truth About Global Warming

Steve Ciancone
Jr 7/8 Earth & Env Sci
St. Margaret Mary, HWCD

J33 Does Fear Affect Blood Pressure?

Natasha Grego, Vanessa DiLuca
Jr 7/8 Health Sciences Human
St. Mark, HWCD



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Best Wishes to all BASEF 2013 Participants



Proudly outfitting TEAM BASEF at the
Canada Wide Science Fair and the Intel International Science & Engineering Fair

PROJECT LISTING (Continued)

J34 More Than Meets The Eye

Grace Pereira, Larissa Shular
Jr 7/8 Health Sciences Human
St. Mark, HWCD

J35 Just the Right Light! An Investigation of Using Bright/Dark Illumination to Improve Conspicuity and Effectiveness of Em

Catharine Bowman
Int 9/10 Phys & Math Sci
St. Mary, HWCD

J36 Static Electricity and the VDG Generator

Tatiana Marranca
Jr 7/8 Phys & Math Sci
St. Michael, HCDSB

J37 It All Makes Cents - Teaching Money Skills to Persons with Intellectual Disabilities

Edmund Zamora
Jr 7/8 Eng & Comp Sci
Trinity Christian School, IND

J38 Greasy Situation

Frederick (Dexter) Eisses
Jr 7/8 Eng & Comp Sci
Trinity Christian School, IND

J39 How does action affect your reaction (time)?

Matthew Luxton
Jr 7/8 Phys & Math Sci
W. H. Morden Public School, HDSB

J40 Doodle for your Noodle

Isha Shah
Jr 7/8 Health Sciences Human
W. H. Morden Public School, HDSB

J41 Computer as a Tool for Diagnosis of Common Illnesses at Home

Srinidhi Shaw
Int 9/10 Health Sciences Human
Westdale, HWDSB

J42 Joker's Laughing Gas

Jack Dunlop
Int 9/10 Biotechnology
Hillfield Strathallan College, Ind

K01 Human Digestive System

Nicole Singh, Salma Azmy
Jr 7/8 Health Sciences Human
Palermo Public School, HDSB

K02 Producing Light With Starches and Citric Acids

Audrey McGrath, Natalie Gordon
Jr 7/8 Earth & Env Sci
Regina Mundi, HWCD

K03 Bottled Bugs

Skye Barbato
Jr 7/8 Health Sciences Human
Rolling Meadows Public School, HDSB

K04 Effect of Green Tea on Oral Epithelial Cell Adhesion

Kyuri Kim
Jr 7/8 Health Sciences Human
Rolling Meadows Public School, HDSB

K05 Iodide Content of Salt

Nicholas Simmons Mills
Jr 7/8 Eng & Comp Sci
Rotherglen School (Oakville), IND

K06 Cool Colours

Sarah Bigham, Olivia Jackson
Jr 7/8 Eng & Comp Sci
Rotherglen School (Oakville), IND

K07 City of Hamilton Betters the Water Quality of the Hamilton Harbour through a Remedial Action Plan

Kazi Akther, Ruqiya Bulhan
Sr 11/12 Earth & Env Sci
Sir John A. Macdonald, HWDSB

K08 The susceptibility of contracting illness from common public bacteria through hand sanitizer vs hand soap

Priyanka Dhillon, Jason Ly
Sr 11/12 Health Sciences Human
Sir John A. Macdonald, HWDSB

K09 Superconductors

Jason Vu, Eric Zhong
Sr 11/12 Phys & Math Sci
Sir John A. Macdonald, HWDSB

K10 Expression and Post-Translational Trimerization of MARCO in E.coli

Leonard Rivet
Sr 11/12 Biotechnology
Sir John A. Macdonald, HWDSB

K11 Water Contamination and Biodiversity in Hamilton

Bushra Ghani, Preet Ranu
Sr 11/12 Earth & Env Sci
Sir John A. Macdonald, HWDSB

K12 They Will Run Out - Powering Electric Cars with Renewable Energy

Christian Michelsen
Jr 7/8 Earth & Env Sci
Sir William Osler, HWDSB

K13 Mmm... Coffee!

Chris Denomey
Jr 7/8 Health Sciences Human
Sir William Osler, HWDSB

K14 The Effect of Carbonated Drinks on Teeth Using Eggshells as a Model

Radha Patel, Jennifer Dao
Jr 7/8 Health Sciences Human
Sir William Osler, HWDSB

K15 Are Sense of Smell and Sense of Taste Related?

Shelby Firth
Jr 7/8 Health Sciences Human
Sir William Osler, HWDSB

K16 Burn, Baby, Burn: SPF Levels and Protection

Mackenzie Peirce
Jr 7/8 Health Sciences Human
Sir William Osler, HWDSB

K17 Hydro at Home

Owen Petter
Jr 7/8 Eng & Comp Sci
Sir William Osler, HWDSB

L01 The Effects of Rock vs. Classical Music

Alec Purnell, Ethan Trueman
Jr 7/8 Health Sciences Human
Sir William Osler, HWDSB

PROJECT LISTING (Continued)

L02 Facebook: Friend or Foe?

Morgan Cale, Coral Borer
Jr 7/8 Health Sciences Human
Sir William Osler, HWDSB

L03 The effect of exercise on blood glucose for a type 1 diabetic

Kaitlyn Bell
Jr 7/8 Health Sciences Human
Sir William Osler, HWDSB

L04 Fruit Power

Kyle A. Young, Reid Perusini
Jr 7/8 Eng & Comp Sci
Sir William Osler, HWDSB

L05 Bent on Sugar

Ross Colborne
Jr 7/8 Phys & Math Sci
Sir William Osler, HWDSB

L06 phonograph experiment

stacie perreault
Jr 7/8 Eng & Comp Sci
Sir William Osler, HWDSB

L07 oil slick

Alysha Birdi
Jr 7/8 Earth & Env Sci
St. Agnes, HWCD

L08 Embedded Technology

Madeline da Silva
Jr 7/8 Biotechnology
St. Agnes, HWCD

L09 It's A Small World

Jed Labarentos
Jr 7/8 Health Sciences Human
St. Agnes, HWCD

L10 RED #50: Part of a Dangerous Rainbow

Pierre Malec
Jr 7/8 Health Sciences Human
St. Agnes, HWCD

L11 Can nanobots end cholesterol problems

Rowyn Hayashida, Nathan Harche
Jr 7/8 Health Sciences Human
St. Andrew, HCDSB

L12 Disinfect to Protect

Jakob Walter
Jr 7/8 Life Sciences Non-Human
St. Augustine, HWCD

L13 Global Warming: The Future of Plant Life

Meghan Bird
Jr 7/8 Earth & Env Sci
St. Augustine, HWCD

L14 Musical Memory 2013

Sydney Christiansen, shannon murphy
Jr 7/8 Health Sciences Human
St. Augustine, HWCD

L15 Evading Erosion

Graham Bohm
Jr 7/8 Earth & Env Sci
St. Augustine, HWCD


L16 Disappearing Act

Ethan O'Leary
Jr 7/8 Earth & Env Sci
St. Augustine, HWCD

L17 Pucker Up

Melissa Kiely
Jr 7/8 Health Sciences Human
St. Augustine, HWCD

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PROJECT LISTING (Continued)

M01 Yeast Fermentation

Jackson Crowe
Jr 7/8 Biotechnology
St. Augustine, HWCD

M02 Can Gum Be Good For Grades??

Alexandra Holmes, Rachel Opsteen
Jr 7/8 Health Sciences Human
St. Augustine, HWCD

M03 Lather up!

Mackenzie Gallant, Avery Schmalz
Jr 7/8 Health Sciences Human
St. Augustine, HWCD

M04 Water Reduction

Daniel Kim
Jr 7/8 Earth & Env Sci
St. Augustine, HWCD

M05 buoyancy

Christian Leone, patrick maloney
Jr 7/8 Phys & Math Sci
St. Bernadette, HCDSB

M06 What Canned Beverages Float?

Alex Ulbin, Hunter Collis
Jr 7/8 Life Sciences Non-Human
St. Bernadette, HCDSB

M07 Practice Makes Perfect

Michaela Okumura
Jr 7/8 Health Sciences Human
St. Bernadette, HCDSB

M08 Thinking out of the box

Antonin Petiteville
Jr 7/8 Health Sciences Human
St. Bernadette, HCDSB

M09 Artificial Gravity With Centripetal force

Liam Gauthier, Eric Volkel
Jr 7/8 Phys & Math Sci
St. Bernadette, HCDSB

M10 Concentration and filtration

Nathan Giustizia, Ryan Menne
Jr 7/8 Phys & Math Sci
St. Bernadette, HCDSB

M11 Eyes and Lies

Oforiwaa Badu, Faye Varanesi
Jr 7/8 Health Sciences Human
St. Bernadette, HCDSB

M12 DC Motors

Megan Lesiuta
Jr 7/8 Eng & Comp Sci
St. Bernadette, HCDSB

M13 DNA

Jesha Morgan, Mary Bidwell
Jr 7/8 Health Sciences Human
St. Bernadette, HCDSB

M14 Why is the sky blue

Paige Saunders, Lauren Prentice
Jr 7/8 Earth & Env Sci
St. Bernadette, HCDSB

M15 Making electricity out of food

Nicolas Rodriguez, Cody Peer
Jr 7/8 Eng & Comp Sci
St. Bernadette, HCDSB

M16 Life After Humans

Paige Aldridge
Jr 7/8 Earth & Env Sci
St. Bernadette, HCDSB

M17 hot ice/hot ice bubble

Curtis Douglas, Anthony Roccasalva
Jr 7/8 Earth & Env Sci
St. Bernadette, HCDSB

N01 Fossil fuel faceoff

Davis Macdonald
Jr 7/8 Earth & Env Sci
St. Bernadette, HCDSB

N02 Does highlighting what you read help you remember better?

Lourdes Button
Jr 7/8 Health Sciences Human
St. Bernadette, HCDSB

N03 #lava lamp

Jaidyn Landry, Niko Liberatore
Jr 7/8 Phys & Math Sci
St. Bernadette, HCDSB

N04 Healthy Fruits

Anthony Barbieri
Jr 7/8 Health Sciences Human
St. Daniel, HWCD

N05 Water Power!

Kyle Samson, Lucas Passaretti
Jr 7/8 Earth & Env Sci
St. David, HWCD

N06 The Silent Destruction

Victoria Hopkins
Jr 7/8 Health Sciences Human
St. David, HWCD



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**Best wishes to all
BASEF 2013 student exhibitors.
Congratulations on your scientific investigations!**

PROJECT LISTING (Continued)

N07 Battle of the Drugs

Patricia Helmer, Nicholas Tadros
Jr 7/8 Health Sciences Human
St. David, HWCD

N08 Green Energy

Julian Butty, Jonathan Casella
Jr 7/8 Eng & Comp Sci
St. David, HWCD

N09 Energy Today

Riley Kruchka
Jr 7/8 Earth & Env Sci
St. David, HWCD

N10 WATER WORKS

Daniel Kielbasa
Jr 7/8 Earth & Env Sci
St. David, HWCD

N11 Brain Power

Larissa Maltese
Jr 7/8 Health Sciences Human
St. David, HWCD

N12 Eco- Energy Transfer

Cassandra Middleton
Jr 7/8 Earth & Env Sci
St. David, HWCD

N13 Music To My Brain

Jennifer Nguyen
Jr 7/8 Health Sciences Human
St. David, HWCD

N14 Cold Water Cleaning

Courtney Adourian, Jennah Buan
Jr 7/8 Earth & Env Sci
St. Eugene, HWCD

N15 EAT WITH YOUR EYES

Brian Rieger, Jacob Russell
Jr 7/8 Health Sciences Human
St. Eugene, HWCD

N16 Smiles Shine Brighter With ...

Matthew Mattina, Joel Antolin
Jr 7/8 Health Sciences Human
St. Francis Xavier, HWCD

N17 Mold Oh My

David Kapron, Joseph Rendulic
Jr 7/8 Life Sciences Non-Human
St. Francis Xavier, HWCD

P01 Are Your Choices Colour Coated?

Caitlin Cowan
Jr 7/8 Health Sciences Human
St. Francis Xavier, HWCD

P02 Think Fast: How's Your Reaction Time?

Claudia D'Angelo, Natasha Centurione
Jr 7/8 Health Sciences Human
St. Francis Xavier, HWCD

P03 Look What Pop Does

Joshua Perusin, Matteo Menegazzo
Jr 7/8 Phys & Math Sci
St. Francis Xavier, HWCD

P04 Stretching Elastics

Shannon Wade
Jr 7/8 Phys & Math Sci
St. Francis Xavier, HWCD

P05 THE EFFECTS OF CAPSAICIN FROM SCOTCH BONNET PEPPERS AS A BIOCHEMICAL PESTICIDE AGAINST GRYPHUS ASSIMILIS

JESSICA KNIGHT
Sr 11/12 Biotechnology
St. Jean de Brebeuf, HWCD

P06 Crude Out Of The Blue!

Autumn Bell
Jr 7/8 Earth & Env Sci
St. James the Apostle, HWCD

P07 Think Before You Drink

MATT VALAITIS
Jr 7/8 Health Sciences Human
St. Joachim, HWCD

P08 The Electrolyte Challenge

Cara Aitchison, Brianna Reed
Jr 7/8 Life Sciences Non-Human
St. Joachim, HWCD

P09 S.A.A.D.

Aidyn Bhatia
Jr 7/8 Health Sciences Human
St. Joachim, HWCD

P10 Calefaction Reaction

Annaliese Mori, Paulina Rudziak
Jr 7/8 Phys & Math Sci
St. Joachim, HWCD

P11 Got milk? Got glue!

Camryn Serafini
Jr 7/8 Life Sciences Non-Human
St. Joachim, HWCD

P12 Is It Getting Hot in Here?

Alexandra Kowalczyk, Katie Lavell
Jr 7/8 Earth & Env Sci
St. Joachim, HWCD

P13 Tasty Visions

Mattea Reale, Alexandra Giannattasio
Jr 7/8 Health Sciences Human
St. Joachim, HWCD

P14 I'm Feeling Lucky

Maximilian Smith-Harrison
Jr 7/8 Health Sciences Human
St. Joachim, HWCD

P15 Now you see it, Now you don't!

Kasia Tywonek, Nicole Spadafora
Jr 7/8 Health Sciences Human
St. Joachim, HWCD

P16 What Do You See?

Gabriel Marini, Kaleb Krucker
Jr 7/8 Phys & Math Sci
St. Joachim, HWCD

P17 The Effects of Colour on Memory

Alex Koch
Jr 7/8 Health Sciences Human
St. Joachim, HWCD

Q01 THE ROCKY ROAD

Ashley Bessi
Jr 7/8 Life Sciences Non-Human
St. Joachim, HWCD

Q02 Kinetic Battery

Aidan Chisholm
Jr 7/8 Eng & Comp Sci
St. John the Baptist, HWCD



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Chair of the Board

Michael W. Pautl
Director of Education

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CONGRATULATIONS

to all BASEF 2013 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.**

PROJECT LISTING (Continued)

Q03 Remember When?

Katya Ciupka, Taylor Langille-Tait
Jr 7/8 Health Sciences Human
St. Joseph, HWCD

Q04 To read or not to read

Iva Mutnjakovic, Sioma Fonseca
Jr 7/8 Life Sciences Non-Human
St. Joseph, HWCD

Q05 pH - Potential Harm

Grace Zidanic
Jr 7/8 Health Sciences Human
St. Joseph, HWCD

Q06 Text Effects

Claire Somers
Jr 7/8 Phys & Math Sci
St. Joseph, HWCD

Q07 Fear Factors

miranda carroll, Gwen Herlt
Jr 7/8 Health Sciences Human
St. Joseph, HWCD

Q08 Effect of PH Level on Plant Growth

Ann Joby
Jr 7/8 Life Sciences Non-Human
St. Joseph, HWCD

Q09 A Stressful Story: The Knee!

Jessica DeForest
Jr 7/8 Health Sciences Human
St. Luke, HWCD

Q10 What A Relief

Michael Le
Jr 7/8 Health Sciences Human
St. Luke, HWCD

Q11 CELL PHONE MICROSCOPE

Sophia Castellana
Jr 7/8 Eng & Comp Sci
St. Michael, HWCD

Q12 JMC'S Bottle Radio

John Michael Ciavaglia
Jr 7/8 Eng & Comp Sci
St. Michael, HWCD

Q13 Soap or Sanitizer: Which is the best bacteria killer?

Maya Emerson
Jr 7/8 Life Sciences Non-Human
St. Michael, HWCD

Q14 The Effects of Deicers on Plant Growth

Maya Van de Mosselaer
Jr 7/8 Earth & Env Sci
St. Mildred's - Lightbourn School, IND

Q15 Water, Water, Everywhere, Nor any Drop to Drink. Atmospheric Water Condensers to Provide Pure Drinking Water- Part 3

Calvin Rieder
Int 9/10 Eng & Comp Sci
St. Thomas Aquinas, HCDSB

PROJECT LISTING (Continued)

Q16 Rewarding Results

Olivia Schwarz
Jr 7/8 Health Sciences Human
Trinity Christian School, IND

Q17 Weight Matters

Tabitha Gaynor
Jr 7/8 Phys & Math Sci
Trinity Christian School, IND

R01 Characters Show Character

Sara VanDyk
Jr 7/8 Health Sciences Human
Trinity Christian School, IND

R02 Go Green?

Adrianna Wimmers
Jr 7/8 Life Sciences Non-Human
Trinity Christian School, IND

R03 Watch Your Mouth

Jennifer Hutchings
Jr 7/8 Health Sciences Human
Trinity Christian School, IND

R04 The Changing Shape of Fear

Erica Van Hoffen
Jr 7/8 Health Sciences Human
Trinity Christian School, IND

R05 Bubble Trouble

Alexis Plante
Jr 7/8 Phys & Math Sci
Trinity Christian School, IND

R06 Intellectual Interference

Mycah DeJong
Jr 7/8 Health Sciences Human
Trinity Christian School, IND

R07 collisions

Michael Verduyn
Jr 7/8 Phys & Math Sci
Trinity Christian School, IND

R08 Rattled Reactions

Emma Zwiers
Jr 7/8 Health Sciences Human
Trinity Christian School, IND

R09 When Nothing Goes Right, Go Left

Leila Stevens
Jr 7/8 Health Sciences Human
W. H. Morden Public School, HDSB

R10 Why Trees?

Jacob Clyde, Sean Kurian
Jr 7/8 Earth & Env Sci
W. H. Morden Public School, HDSB

R11 Do Lunar Cycles Affect Human Behavior

Jennifer Kong
Jr 7/8 Health Sciences Human
W. H. Morden Public School, HDSB

R12 Look and listen

Evan Sue-A-Quan, Stefan Janovjak
Jr 7/8 Health Sciences Human
W. H. Morden Public School, HDSB

R13 Correlations between Emotional Intelligence and Inter/Intrapersonal Intelligence

Angel Gao
Jr 7/8 Health Sciences Human
W. H. Morden Public School, HDSB

R14 Family, Friends & Ca\$h

Lucy Huang, Meghan Kirkpatrick
Jr 7/8 Health Sciences Human
W. H. Morden Public School, HDSB

R15 Optimism VS Pessimism

Rose Kim, Mariam Zamani
Jr 7/8 Health Sciences Human
W. H. Morden Public School, HDSB

R16 Insulation: Facts & Myths

Shawn Lee
Jr 7/8 Phys & Math Sci
W. H. Morden Public School, HDSB

R17 Lactose in Dairy

Melissa Li, Bailey Lorenz
Jr 7/8 Health Sciences Human
W. H. Morden Public School, HDSB

S01 Night School

Max Perry
Jr 7/8 Health Sciences Human
W. H. Morden Public School, HDSB

S02 Waste Materials as Filters for Contaminated Water

Ethan Strathdee
Jr 7/8 Earth & Env Sci
W. H. Morden Public School, HDSB

S03 Does an apple a day keep the Doctor away?

Nathan Louie, Iain Headrick
Jr 7/8 Health Sciences Human
W. H. Morden Public School, HDSB

S04 What type of words do babies learn to speak first.

Tarahum Rukkaan Ruhama
Jr 7/8 Health Sciences Human
W. H. Morden Public School, HDSB

S05 Interrelationships of Joints Between The Consumption of Calcium and Arthritis, Osteoarthritis

Raahil Mahetaji
Jr 7/8 Health Sciences Human
W. H. Morden Public School, HDSB

S06 Surviving the Sub-zero for Eternity

Yajur Iyengar
Int 9/10 Life Sciences Non-Human
Westdale, HWDSB

S07 Saving the World -- One Ligand at a Time: Novel Streptococcus pneumoniae Ligands for Macrophage Receptors

Jason Fan
Sr 11/12 Health Sciences Human
Westdale, HWDSB

S08 How Do Probiotic Bacteria Communicate with the Host?

Sarah Flaherty
Sr 11/12 Health Sciences Human
Westdale, HWDSB

S09 CARING FOR THE WINDOWS TO THE BRAIN: Non therapeutic approaches to avoid & treat open-angled glaucoma, the second larges

Moeyyad Qureshi
Int 9/10 Health Sciences Human
Westmount, HWDSB

SPECIAL AWARDS – 2013



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.

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.

Steelmaking Award

Prize: \$100

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

Research & Development Award.

Prize: \$100

Criteria: To a project that best displays investigative research & scientific principles to explore or solve a technical problem

SPECIAL AWARDS (Continued)



Artistically Inspired Display Awards

Prize: Two awards of \$50 each.

Criteria: To the most artistically inspired displays.

Bay Area Restoration Council Award

Prize: \$150

Criteria: Best environmental or life science project that contributes to research, protection, conservation, restoration or awareness in the Bay area.

Bell Technology Award

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

Criteria: Projects regarding communication between people, between machines or between people and machines.

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

Prize: Two awards of \$100 each

Criteria: For projects relating to mining, metallurgy or petroleum.

Canadian Nuclear Society (Golden Horseshoe Branch) Awards

Prize: Two 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 awards of \$100 each.

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

Chemical Institute of Canada, Hamilton Section Award

Prize: Three awards of \$100 each.

Criteria: Deserving projects related to chemistry, chemical engineering, or chemical technology.



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SPECIAL AWARDS (Continued)

Colin O'Flynn Electrical Engineering Award

Prize: One Binary Explorer Board with common creative teaching material, "An Introduction to Digital Logic Hardware Design"

Criteria: An outstanding engineering project at the intermediate or senior level

Conservation Halton Environmental Sciences Award

Prize: Two awards, \$100 each

Criteria: Top science projects that contribute to environmental research, protection, conservation, restoration or awareness done by Halton students.

Dillon Consulting Science/Engineering and Biological Sciences Awards

Prize: Two awards of \$300 each

Criteria: To projects showing excellence in science and/or engineering.

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.

Dr. M. Doyle Award

Prize: A \$250 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.

SPECIAL AWARDS (Continued)



Dr. Laura Blew Social Sciences Award

- Prize: Two awards of \$50 each
Criteria: Best two Social Science based projects.

Dr. Nicola Simmons Award in Cognition Studies

- Prize: \$100
Criteria: An exemplary project in cognition studies.

Dr. Tunks Innovations Award

- Prize: Two awards of \$100 each
Criteria: Most creative or innovative projects.

Electrical Construction Association of Hamilton Award

- Prize: \$250
Criteria: Best and safest use of electricity in a creative manner.

Farncombe Family Digestive Health Research Institute Award

- Prize: Two awards of \$250 each
Criteria: Project that scientifically explores the fields of 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 Academy of Dentistry Award

- Prize: Two awards of \$100 each
Criteria: Projects related to dentistry in general; to one specific area of dentistry; or related to oral hard & soft tissues specifically; to some aspect of the delivery of dentistry to the general (or specific) population; or an aspect related to prevention of dental disease.

Hamilton Association daVinci Award

- Sponsored by the Hamilton Association for the Advancement of Literature, Science & the Arts
Prize: \$300, an honorary membership in the Association, and an invitation to attend meetings
Criteria: The candidate who best combines 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-East Wentworth Rotary Awards

- Prize: 1st \$250, 2nd \$150, 3rd \$100
Criteria: Three projects best displaying high academic achievement that strive to excel in Science and Technology, chosen from schools within the core Hamilton and Regional Communities.

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.

Hidden Science Award

- Prize: \$150 with a library of Nikola Tesla's ideas and discoveries
Criteria: Project that best reflects Nikola Tesla's ideas and discoveries with emphasis on protecting the planet or alternate energies or increasing the efficiency of the human body.

SPECIAL AWARDS (Continued)



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.

Biological 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.

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

Prize: Two awards of \$100 each

Criteria: Best use of electronics in a science or engineering project, any level.

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

Prize: \$200 USD, 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: 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.

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

Ricoh Americans Corporation: Most outstanding project offering the greatest potential for increasing our ability to grow environmentally friendly and socially responsible businesses.

Society for In Vitro Biology: 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.

James A. Winger Award sponsored by Hamilton Amateur Astronomers

Prize: \$200

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

We are proud to be a
supporter of the 2013
Bay Area Science &
Engineering Fair.

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SPECIAL AWARDS (Continued)



John W. Howard Materials Research Award

Prize: \$100

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

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: Free registration to the 2013 LEAP Summer Program (\$650 value)

Criteria: Senior project (grades 9-12) by a female participant that demonstrates creativity and innovation.

McMaster University Department of Chemistry and Chemical Biology Award

Prize: \$200

Criteria: An outstanding senior or intermediate project connected to chemistry or chemical Biology.

McMaster Engineering Society Award

Prize: Two awards of \$200 each

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

Mechanical Contractors Association of Hamilton Award

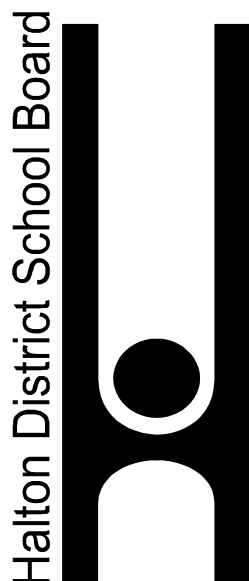
Prize: \$250

Criteria: Best intermediate or senior engineering project.

M.G. DeGroote Institute for Infectious Disease Research Internship Award

Prize: Determined by interview - 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) OR cash equivalent

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



*The Halton District School Board
would like to congratulate
all participating students in the 2013
Bay Area Science and Engineering Fair.
Best wishes for continued success!*

*Rich in Tradition, Progressive in Practice,
Building our Future Together*

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SPECIAL AWARDS (Continued)



Mohawk College School of Engineering Technology Awards

Civil Engineering Award

Prize: \$50

Criteria: Project related to any branch of civil engineering.

Building Sciences Award

Prize: \$50

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

Transportation Engineering Award

Prize: \$50

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

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 or gift certificate

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

Electro-technology Department Engineering Technology Awards

Prize: Two awards of \$50 each

Criteria: \$50 to junior project in engineering studies and \$50 to a deserving 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 awards of \$50 each

Criteria: Deserving projects in categories of mathematics or statistics.

Nelson Steel Award

Prize: Two awards of \$50 each

Criteria: Related to any of the following fields: Steel, Environmental or Chemistry.

The Picobits Creative Technology Award

Prize: One Laptop Computer

Criteria: Best project using computer technology to solve a technical or real-world problem.

Primary Fluid Systems Awards Junior or Intermediate Engineering Awards

Prize: Two awards each of: \$250, \$150, \$100

Criteria: Deserving projects in junior or intermediate Engineering.

Junior or Intermediate Physical Sciences Awards

Prize: Two awards each of: \$125, \$75, \$50

Criteria: Deserving projects in junior or intermediate physical sciences.

Junior or Intermediate Earth & Environmental Sciences Awards

Prize: Two awards 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.

Congratulating all BASEF 2013 participants



Intelligent Strategy Games

Supreme Ruler 2010

Supreme Ruler 2020

Supreme Ruler Cold War

Supreme Ruler 1936

*"detailed and heavily researched, a cross between
computer war games and in-depth geo-political
strategy games"*

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SPECIAL AWARDS (Continued)



Professional Engineers Ontario Hamilton-Burlington Chapter 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: Deserving engineering projects.

Purdue Pharma Canada Award in Health Sciences

Prize: \$50 award (\$25 if the project is completed by two students); to be forwarded to winner after the fair

Criteria: A project in the health sciences area that demonstrates the application of good scientific method.

Royal Botanical Gardens Award

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

Criteria: Outstanding project that addresses a pressing environmental issue and incorporates an artistic discipline.

SPIE Optics & Photonics Science Fair Award

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

to be requested by winners
after the fair

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

Susan Joyce Memorial Award

Prize: A certificate to each
student and \$50 to each
project

Criteria: For top project in each of
the six Merit Award
categories.

Venture Engineering Innovation & Science Award, McMaster University

Prize: Free registration to the
2013 Venture Engineering
Science Camp (\$650 value)

Criteria: One junior project that
demonstrates creativity
and originality.

Science and Culture Award

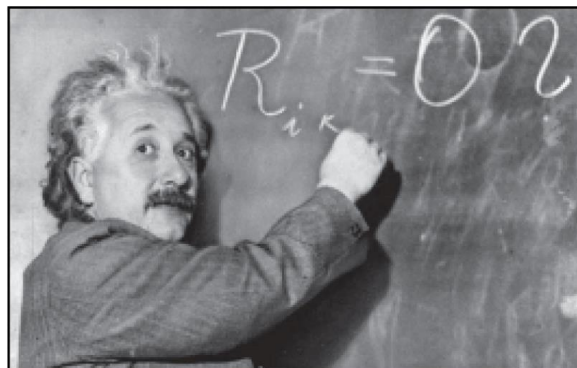
Prize: Two \$100 awards

Criteria: Two projects that
demonstrate a good
understanding of the
scientific method and
that investigates a
culturally based topic



Hamilton-Wentworth Catholic Schools

150+ years of 'Believing, Achieving, Serving'



**"Science without religion is lame; religion
without science is blind."**

~ Albert Einstein

**Congratulations to BASEF on 50+ years
of Science Success!**

**Thank you to all the participants &
volunteers who make it happen.**

Patrick J. Daly, Chairperson of the Board

Patricia Amos, Director of Education

www.hwcdsb.ca

SCHOLARSHIPS



Judged and Awarded by Special Award Donors

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: Projects demonstrating excellence in Science or Engineering research.

University of Ottawa Admission Scholarship

Prize: \$1,000 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

Awarded to all projects earning Gold, Silver or Bronze Merit Medals

Mohawk College and Sheridan College - Tuition Scholarship

Mohawk College and Sheridan College will provide a \$500 scholarship to ALL BASEF 2013 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 either Mohawk College or Sheridan College. If multiple scholarships are accumulated over more than one year, only one of these scholarships may be used.

Best Wishes to all BASEF 2013 Participants



**McMaster University has gained an international reputation for
innovative educational programming**

offered in its six faculties:

- DeGroote School of Business
- Engineering
- Health Sciences
- Humanities
- Science
- Social Sciences

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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.

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

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

over 90% & ranking in top 7.5% of category:	earns Gold medal & cash award
over 80% & next 10% of category:	earns Silver medal & cash award
over 75% & next 12.5% of category:	earns Bronze medal & cash award
over 75% & not in the top 30% of category:	earns Honourable Mention certificate & cash award

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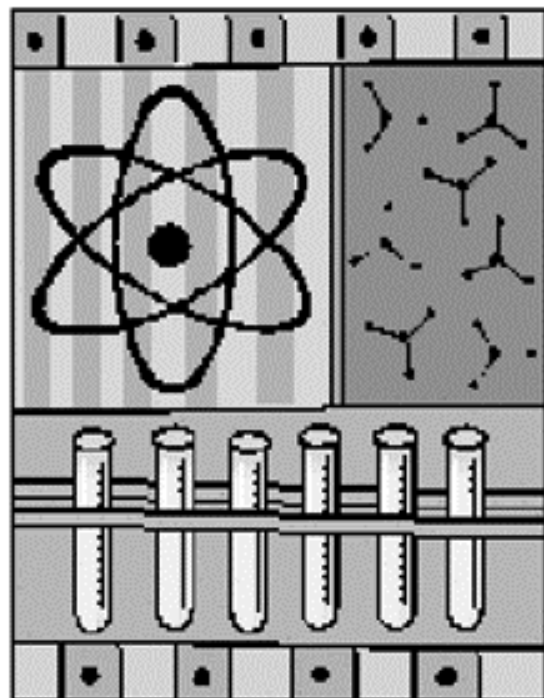


youtube.com/TeamBASEF



twitter.com/basef

**We are proud to sponsor
BASEF and the
2013 Merit Awards!**



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

Thomas A. Edison



Primary Fluid Systems Inc.

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Good luck to all Participants in the 2013
Bay Area and Science Engineering Fair

Proud co-host of the 53rd Annual BASEF

* #1 of Ontario's Large Colleges for Student Satisfaction
and #1 in the Greater Toronto and Hamilton Area for the 2nd year in 2012!

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COLLEGE

GRAND PRIZE AWARDS

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

ARCELOMITTAL 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 winner's schools.



DRS. RANJAN SUR AND MONALISA SUR AWARD

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.



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 the 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 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



KOBO INTERNATIONAL SCIENCE & ENGINEERING FAIR TRIP AWARDS



All-expense-paid advancements to the 2013 Intel International Science & Engineering Fair, to be held in Phoenix, Arizona, USA from May 12 to 17, 2013.

Up to 3 projects will be chosen from excellent exhibits at the secondary school (Intermediate & Senior) level.

Winners will be chosen from those high school entrants who declared they were able to travel into the USA (Canadian citizenship or landed immigrant status, with valid passport in-hand) as part of the BASEF registration process.

Sponsored by



CANADA WIDE SCIENCE FAIR TRIP AWARDS

Advancement to the 2013 Canada Wide Science Fair (all trip expenses paid), to be held in Lethbridge, Alberta, from May 11 to May 18, 2013.



Up to 16 students who have presented excellent projects will be chosen (dependent on funding levels).

Lethbridge 2013

All projects entered in BASEF 2013 are eligible.

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- Halton District School Board
- Hamilton-Halton Construction Association
- Hamilton-Wentworth Catholic District School Board
- Hamilton-Wentworth District School Board
- Hillfield Strathallan College
- McMaster University
- Mohawk College
- Ontario Power Generation - Nanticoke Generating Station
- Union Gas



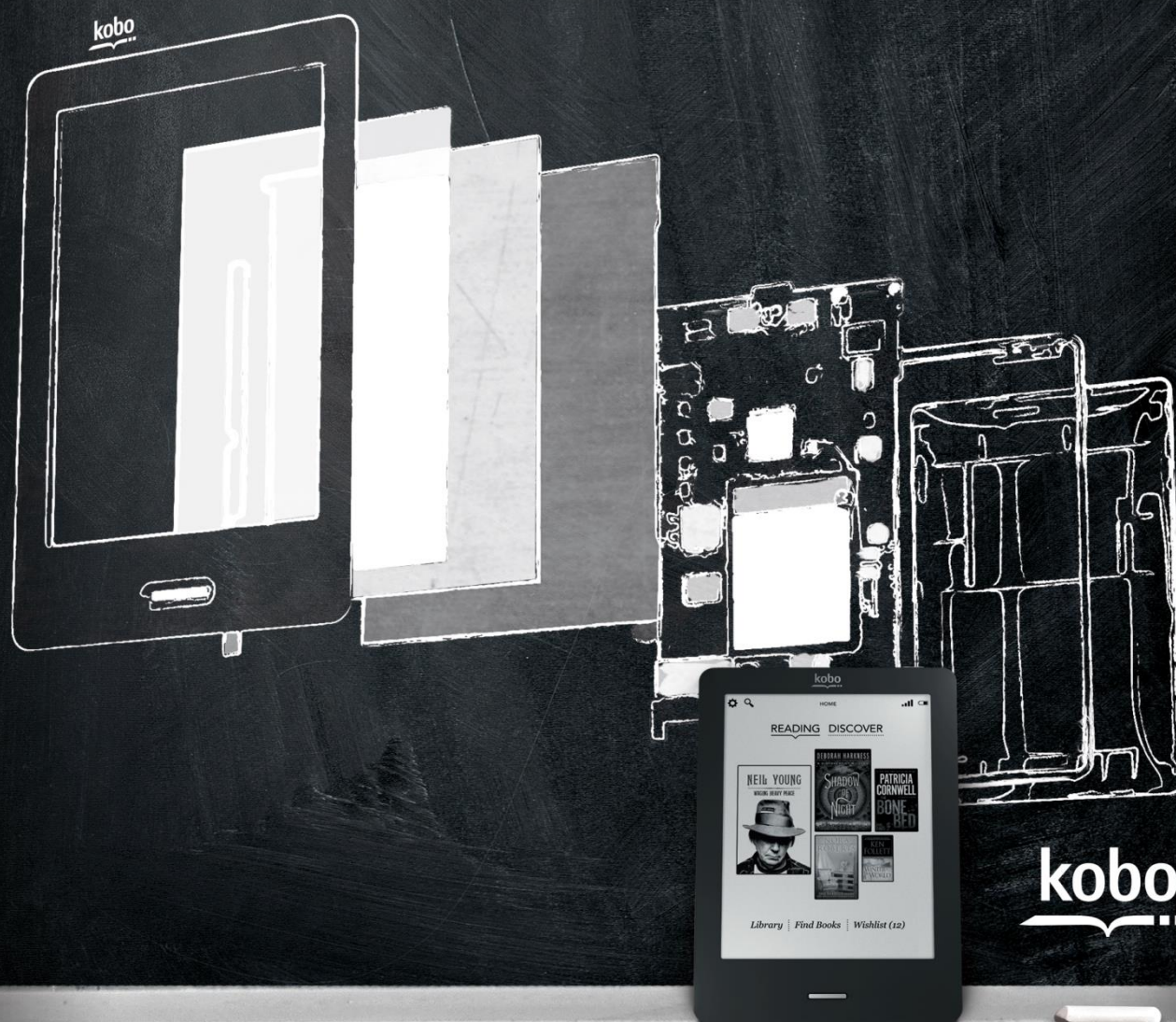
Hillfield Strathallan College
Here Excellence is a Way of Life

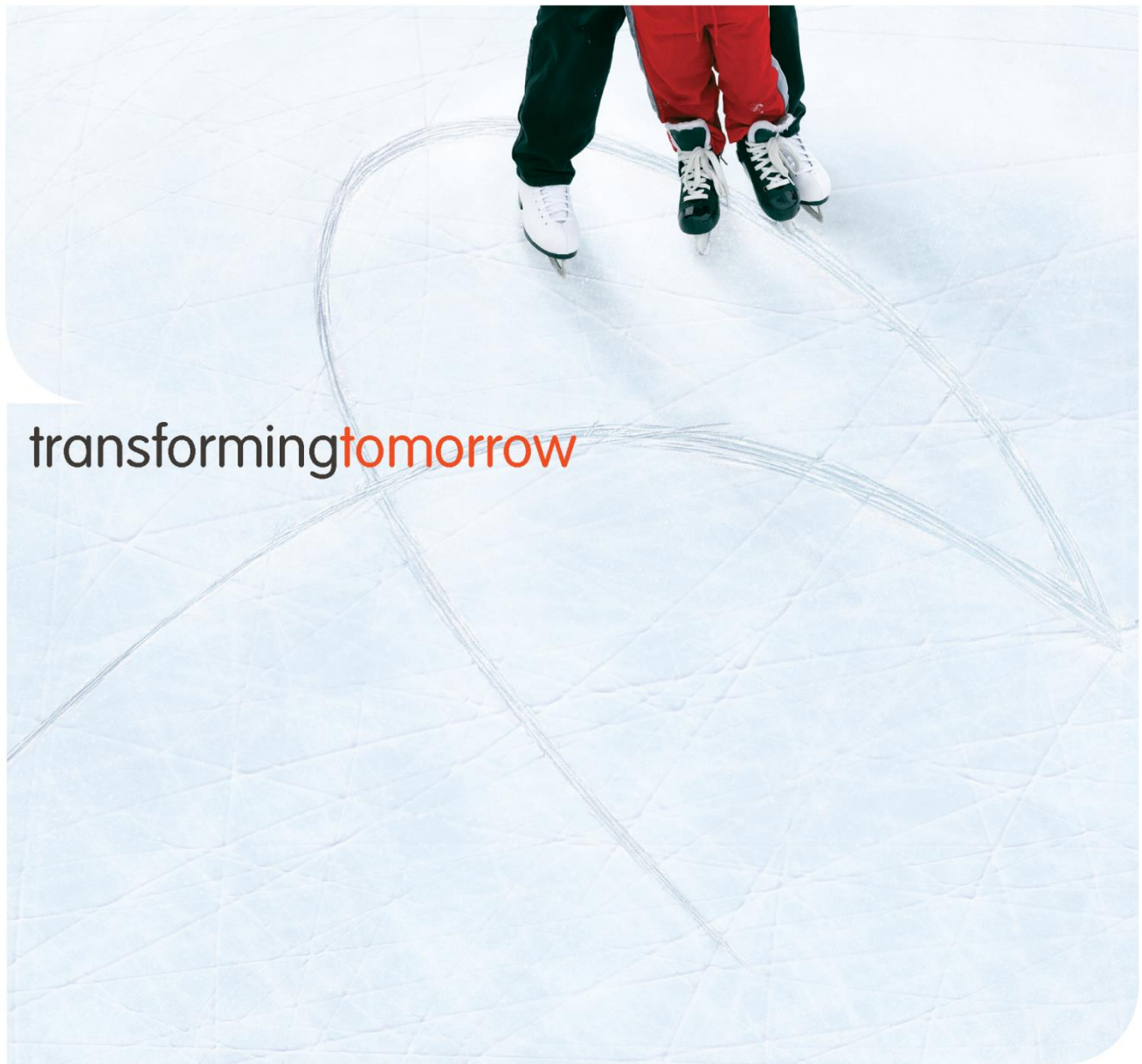


From science fairs to becoming the CEO of Kobo

The inner workings of success often have humble beginnings. All it takes is a spark of imagination paired with the right tools to take an idea to the next level, and to never be afraid to create the impossible. My beginnings at the Bay Area Science and Engineering Fair led me to many accomplishments, including Kobo. I encourage you to go after every opportunity that inspires you and to begin your own story of success.

- Mike Serbinis, CEO of Kobo





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