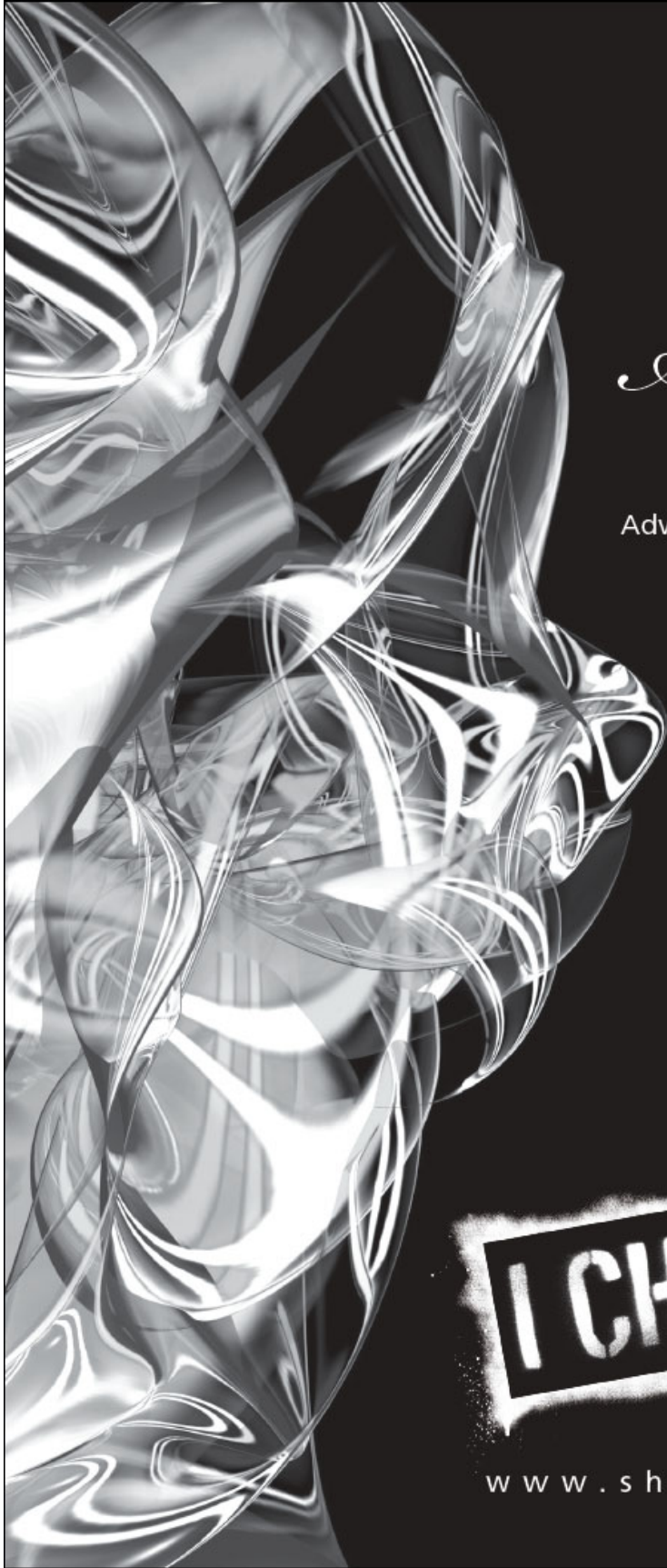


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*Best Wishes to  
All Participants!*

Sheridan Institute of Technology and  
Advanced Learning is pleased to welcome  
you to the **48th Annual Bay Area  
Science and Engineering Fair.**

**I CHOOSE**



[www.sheridaninstitute.ca](http://www.sheridaninstitute.ca)



## A MESSAGE FROM THE BASEF CHAIR

### Ray Kranyak

This is the 48<sup>th</sup> consecutive year of operation for the Bay Area Science and Engineering Fair (BASEF). Through the years the faces and the names may have changed, but the mission remains the same: to encourage young people in science and engineering.

BASEF is a registered charity that is completely driven by volunteers. I would like to acknowledge the tremendous efforts of this year's Organizing Committee members. They have met every month since September 2007 and have spent many more hours working individually on their own tasks. Many will have taken a week of holidays from their own full time jobs for this week of the Fair. No wonder BASEF is Canada's #1 Regional Science Fair. They are all amazing volunteers. Please thank them whenever you get the chance.

A very sincere thank-you to our Honourary Co-Chairs, Joyce Savoline, Member of Provincial Parliament for Burlington and Education Critic, and Hamilton Mayor Fred Eisenberger. They continue to support our cause and promote our students whenever they get the opportunity to do so.

A special thank-you is given to the over 200 professionals who served as this year's Merit and Special Awards Judges. These dedicated individuals devoted a full day of their time to meet, encourage and speak with the student exhibitors about their projects.

Last year in our community, we experienced some changes, Dofasco, a long time BASEF supporter had become part of the ArcelorMittal family of companies. I am proud to say that with the new name, ArcelorMittal Dofasco has returned for the third consecutive year as the BASEF 2008 Title Sponsor. I would also like to thank our one new sponsor and the over 35 returning sponsors who make it possible for BASEF's students to excel in science and engineering. Please support our sponsors wherever possible. Thank you also to our Special Awards donors. This year the total value of prizes, special awards, scholarships and trip awards is expected to top \$120,000.

Every year the host site for BASEF plays a critical role in our success. I must extend a very special thank you to the staff at Sheridan College. It has taken the better part of a year to plan and stage BASEF 2008. Sheridan staff has been part of our organizing committee making every step of the journey easier and for this we are truly grateful.

Last but certainly not least, I thank the day-to-day volunteers, nearly 100 in total, who help us with duties such as project registration, safety checks and chaperoning Activity Day that occur over the four days of the Fair.

Students, (along with your parents, teachers and mentors) please recognize and enjoy the results of your hard work. Meet new friends, share your results and above all, capture the passion that will lead you toward new discoveries that will build a better world of tomorrow. This small planet, Earth, which we call home, is counting on you. I congratulate you all on a job well done and wish you all the best of luck.

**Raymond T. Kranyak, Chairman, BASEF 2008**



**A MESSAGE FROM HONOURARY CO-CHAIR  
Burlington MPP Joyce Savoline**

It is an honour and privilege to once again act as Honourary Co-Chair of the Bay Area Science and Engineering Fair. I understand the value and have supported the Fair for many years and now as a Member of Provincial Parliament and Education Critic, it confirms my belief that government has a role in supporting and encouraging volunteers and organizations who commit to stimulating the creativity, innovation and love of learning in our youth.

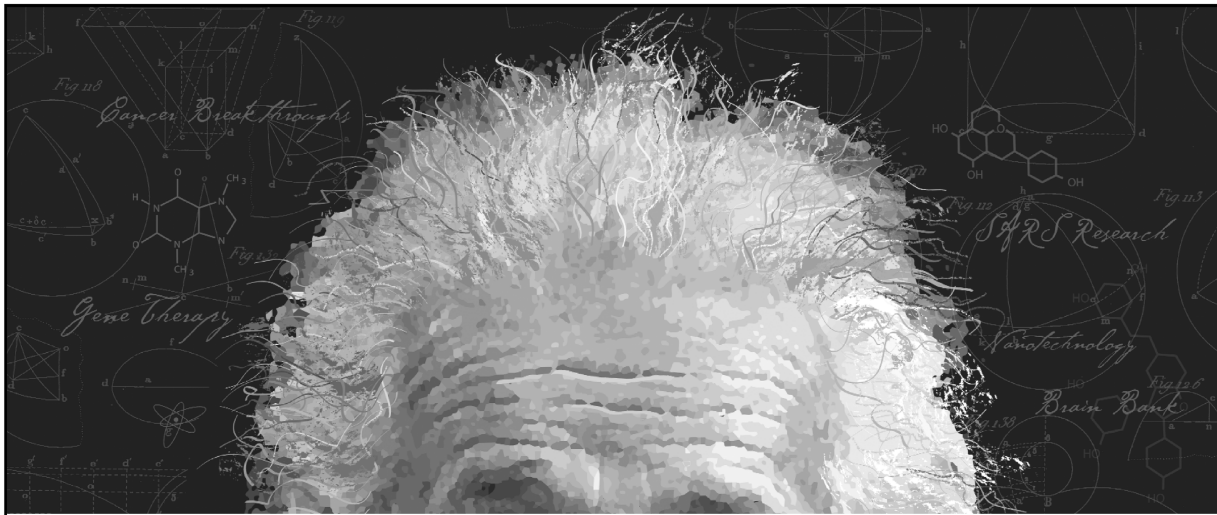
I want to thank and congratulate the volunteers of BASEF for providing this opportunity to showcase our students' skills and talents in science and technology. Students who have entered into the Fair are all winners, and my appreciation goes to the parents and teachers of these young participants for their encouragement and nurturing.

It goes without saying that a program of this magnitude does not happen without the generosity of corporations and individuals in our community who also value the work of this Fair.

Today's youth are tomorrow's leaders.

Sincerely,

**Joyce Savoline**  
MPP (Burlington)



**Bright Minds Come to Hamilton**



McMaster University and the City of Hamilton are working hard to attract and keep some of the world's brightest minds right here in Hamilton. In collaboration with our partner hospitals, we are exploring ways to create a new economic future based on biosciences. Biotechnology and biosciences hold enormous promise for economic and social benefits. By building on our research strengths and leveraging our intellectual, human and capital resources, we will create a globally competitive biotechnology industry in this part of the world. Hamilton and McMaster – partnering to ensure a healthier future for our community.



**Hamilton**

For more information contact: **McMaster University** • 905-525-9140 ext. 27270 • [www.mcmaster.ca](http://www.mcmaster.ca) **City of Hamilton** 905-546-4222 • [www.hamilton.ca](http://www.hamilton.ca)



**A MESSAGE FROM HONOURARY CO-CHAIR  
Hamilton Mayor Fred Eisenberger**



It is with great pleasure that I extend my warmest greetings on behalf of the City of Hamilton and to welcome you to the 48th Annual Bay Area Science and Engineering Fair (BASEF).

It is a privilege for me to continue as Honourary Co-Chair for this exciting and creative educational event.

Our youth represents the future and I want to congratulate the organizers of BASEF for providing these students with the opportunity to showcase their scientific and engineering interests and innovations.

I would also like to acknowledge the dedicated hard work of the many parents, teachers, judges, organizers, volunteers and sponsors who have helped to make BASEF the success that it is.

To everyone involved in this year's science and engineering fair I applaud your commitment and dedication and wish you continued success in the future.

Sincerely,

Fred Eisenberger  
Mayor



## BASEF 2008 Schedule of Events

### Sheridan Institute, Oakville, Ontario

**Wednesday, March 26, 2008**

#### Project Setup

4:00 pm On-site registration, project setup, safety check, ID photos  
8:00 pm On-site registration closes

**Thursday, March 27, 2008**

#### Student Activity Morning / Project Judging Afternoon

8:00 – 8:45 am Students gather in the Student Centre  
9:00 – noon Activities in Student Centre and Lecture Theatre  
12:00 – 12:45 pm Students will eat their packed lunches in the Student Centre.  
**Students will not be permitted to leave the Student Centre.**  
12:45 – 1:00 pm Students arrive at their projects for judging and interviews  
1:00 – 4:00 pm Students must remain at their projects for judging interviews  
4:00 – 4:30 pm Judging completed, goody bags distributed, students dismissed

**Thursday, March 27, 2008**

#### Schedule for Judges

8:00 am Judges arrive in the cafeteria  
8:30 am Judges' welcome and assignment of projects  
9:00 am Judges begin project judging **without** students present  
11:45 am Start of judges' luncheon  
1:00 pm Afternoon judging and interviews with students  
4:00 pm Afternoon judging with students completed  
4:30 pm Judging scores finalized.

**Friday, March 28, 2008**

**The fair is closed to students and the public.**

**Saturday, March 29, 2008**

#### Public Viewing and Awards Ceremony

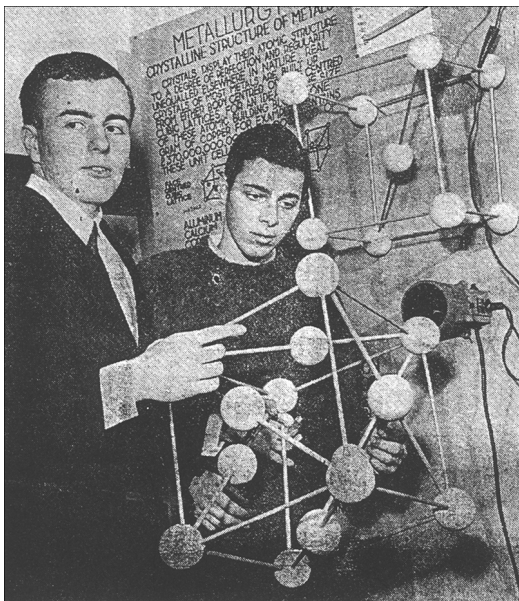
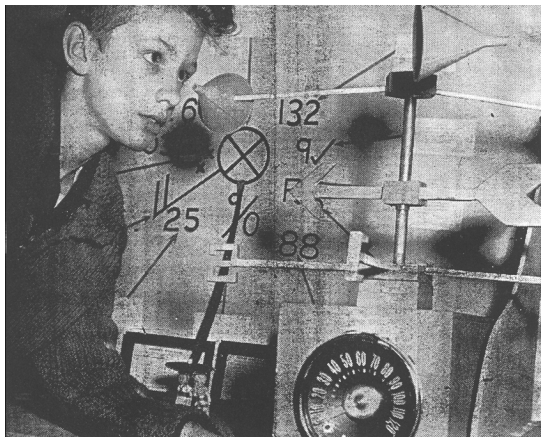
9:00 am Athletic Centre gym open for Public Viewing. All students should be present and at their projects.  
11:30 am VIP Luncheon (by invitation only)  
12:00 noon End of Public Viewing. **Gym will be locked until after Awards Ceremony.**  
12:30 Buses start loading  
12:45 Buses start leaving for Awards Ceremony  
**1:00 pm St. Volodymyr Cultural Centre opens for Awards Ceremony**  
1:30 – 3:30 pm Awards Ceremony  
3:30 pm End of Awards Ceremony. Buses return to Sheridan. Projects may now be removed from the gym.  
4:00 – 5:00 pm Meeting for Trip Award Winners, their parents/guardians and trip chaperones in the Athletic Centre gym. (Note: Winning students and their projects must be available for this meeting.)

# BASEF 2008: 48<sup>th</sup> Consecutive Annual Fair

The Hamilton Science Fair was established in 1960 as a "showplace for the scientific talents of district teenagers". While the name has evolved over the years, BASEF continues to promote project-based science and student research through outreach programs and an annual science fair competition. BASEF is one of the leading and most successful regional science fairs in Canada. BASEF students have won Best in Fair at the national Canada Wide Science Fair for the past two consecutive years.



A teenager's nightmare — a 1904 telephone. One of the exhibits gave a surprise to Nerina Sinelli and Eva McKenna. It showed how the phone works.



Grade 12 Westdale students Douglas Hallett and Brian Laskin, both 16, demonstrate the crystalline structure of metals.

*Hamilton Spectator advertisement: March 24, 1961*

## SCIENCE FAIR

The objective . . . to encourage the development of scientific aptitude in secondary school students throughout Hamilton and district.

All exhibits have been created by a student or group of students, in Grades 9 to 13 from Hamilton and district private and public schools, in the following categories.

- |                 |                               |                   |
|-----------------|-------------------------------|-------------------|
| GENERAL PHYSICS | BOTANY                        | MATHEMATICS       |
| ELECTRONICS     | HEALTH                        | ENGINEERING       |
| NUCLEAR SCIENCE | ZOOLOGY                       | (applied science) |
| CHEMISTRY       | GEOGRAPHY AND<br>PHYSIOGRAPHY | METALLURGY        |

### PANEL OF JUDGES

Dr. Henry Ednison Duckworth, B.A., B.Sc., Ph.D., F.R.S.C., Professor and Chairman Dept. of Physics, McMaster University, has consented to head the panel of judges consisting of . . . Dr. Martin W. Johns; Mr. G. P. Adamson; Mr. S. M. Jones; Mr. Derek Edwards; Mr. Leslie Laking; Dr. Herman Kleerekoper; Dr. Hugo Ewart; Mr. J. Wingfield; Mr. S. M. Young; Dr. N. D. Lane; Dr. W. W. Smeltzer.

### AN EXHIBITION OF SECONDARY SCHOOL STUDENTS' SCIENTIFIC PROJECTS

**THE ARMOURIES**

200 JAMES ST. N.

**TONIGHT**

**6 P.M. TO 10 P.M.**

**TOMORROW**

**9 A.M. TO 9 P.M.**

**BRING YOUR FAMILY AND FRIENDS**

**ADMISSION FREE!**

### ALSO:

Interesting, informative exhibits, displays and live presentations by the following education conscious groups and companies: The Hamilton Police Safety Division, The Hamilton Fire Prevention Bureau, The Bell Telephone Co. of Canada, The Imperial Oil Co. Ltd., Ontario Hydro, St. John Ambulance Assoc. These professional type displays will undoubtedly be of interest to participants and visitors. Plus: "ADVENTURES IN SCIENCE", a half hour film presentation.

**SPONSORED BY THE HAMILTON JUNIOR CHAMBER OF COMMERCE**  
In Association with **THE HAMILTON SPECTATOR**

*The Hamilton Spectator has been a sponsor of the fair from the beginning. BASEF gratefully acknowledges their continued support and permission to use the advertisement from 1961 and photographs of some 1960s fair participants.*

## Interested in an exciting future in Information Systems Security?



### **BACHELOR OF APPLIED INFORMATION SCIENCES** *(Information Systems Security)*

Focusing on the systems security aspects of information science, this degree program offers a strong academic foundation in computer science with aspects of security such as database security, network and ecommerce security and resource protection covered in depth. The program has the added benefit of an 8-month paid internship that gives students hands-on training in the field that enhances their ability to get the job they want.

**Graduates have the skills needed for such varied careers as:**

- Information Systems/Database/Network Security Architects
- Ecommerce Application Developer
- Information Systems Security Consultant
- Public Key Infrastructure Expert

For more information, please visit:  
[www.sheridaninstitute.ca](http://www.sheridaninstitute.ca)

**I CHOOSE**





## A Beginner's Introduction to BASEF

The fair takes place over a period of four days in late March/early April of every year. On line student registration starts in February and closes approximately 3 weeks before the fair. This allows the fair organizers enough time to ensure that registration documents are complete and project safety/ethical guidelines are met. We also want to ensure that the official Fair Program accurately reflects all exhibitor information.

### Fair Schedule:

*Project Set Up/Safety Checks: Wednesday, 4:00 pm - 8:00 pm*

*Judging without students present: Thursday, 9:00 am - noon*

*Student Activity Events: Thursday, 8:30 am - noon\**

*Judging with students present: Thursday, 1:00 pm - 4:00 pm*

*Public Viewing: Saturday, 9:00 am - noon*

*Awards Ceremony: Saturday, 1:30 - 3:30 pm*

*Project Take Down: Saturday, 3:30 pm*

*(After awards ceremony ONLY!)*

**\*Please note: To accomodate concerns regarding transportation and school absences, Student Activity events will be held at Sheridan College on Thursday morning before judging in the afternoon.**

### Levels and Divisions

Students compete for **Merit Awards** within 3 separate grade levels and in one of the six project divisions.

#### Levels (three):

Junior: Grades 7-8

Intermediate: Grades 9-10

Senior: Grades 11-12

#### Divisions (six):

Biotechnology,

Earth and Environmental Sciences,

Engineering & Computing Sciences,

Health Sciences (Human),

Life Sciences (Non Human),

Physical & Mathematical Sciences

*(A flow chart on the BASEF web site is designed to help you determine the division of your project.)*

**Teams:** Students may compete individually or as a two-member maximum team. Team members must be in the same level.

### Merit Awards

**Merit Awards** recognize the tremendous amount of research and effort that has gone into the projects entered. All projects are judged by a minimum of four independent judges. Gold, silver and bronze medals, and honourable mention certificates (along with cash awards) are awarded in **each** division of **each** level based on the following scoring.

**Gold:** over 90% and in top 7.5% of division

**Silver:** over 80% and in next 10% of division

**Bronze:** over 75% and in next 12.5%

**Honourable Mention:** over 75% and not in the top 30% of division.

### Special Awards

Special awards are donated by organizations and groups to recognize deserving projects that deal with topics of interest to the donor. At BASEF 2007, over \$19,000 in cash and scholarships were awarded.

### Grand Prize Trip Awards

**Grand Awards are given to the top projects in the fair, based on merit award scores.** The Grand Trip Awards are all-expenses paid trips to the national and international science fairs. Chaperones from BASEF provide additional mentoring to these students and accompany them on the trips. All students are eligible to win a place on Team BASEF and go on to compete at the Canada Wide Science Fair (CWSF). Only high school students are eligible to win trips to the Intel International Science and Engineering Fair (IISEF), held in the United States.

### Grand Prize Awards

**Best in Fair Pinnacle awards** are presented to the top three projects in the fair, based on Merit award scores. Each winner receives an engraved plaque and a trophy for display at their school.

**Susan Joyce Memorial Awards** are given to the top projects in each of the six categories, Junior level.

**Roy Middleton award** is given to the top Junior level project.

**Herb Gildea Trophy** is awarded to the high school accumulating the most points from the number of entries and merit awards won.

**BASEF Committee Trophy** is awarded to the elementary school accumulating the most points.

### Merit Award Judging Criteria

**Projects are judged out of a total score of 100, broken down into five sections.** The sections are weighted as follows:

Scientific Thought/Creativity: 45%

Project Display: 10%

Project Notebook: 20%

Abstract: 5%

Interview: 20%

**The judging forms and criteria are available on the BASEF website in the Judges section.**

Our Gold medalists (scoring over 90%) enter projects that are well designed from inception to completion. The research and experimentation is complete, the work is well documented in their notebooks, and their displays are an attractive summary of their complete project. They are knowledgeable about their work and are able to enthusiastically explain it to the judges because they practice their presentations and prepare for the interviews.

### Project Resources

The "Science Success!" student and teacher materials are available for download at [www.basef.ca](http://www.basef.ca) and include an extensive reference list. Additional recommended site: [www.sciencebuddies.org](http://www.sciencebuddies.org)





Occupational Health & Safety Services  
Human Resources

**SAFETY AND SECURITY PROCEDURES**  
**Bay Area Science and Engineering Fair**  
**(March 26 - 29, 2008)**

The following emergency procedures and personal safety tips apply to Sheridan’s Trafalgar Campus. Please review and familiarize yourself with them so you know how to respond quickly and appropriately in the event of an emergency.

**FIRE SAFETY**

**In Case of Fire**

1. If the Fire Alarm sounds move quickly and calmly to the nearest exit and **“VACATE THE BUILDING”**.
2. In some building the alarm is a pulsed sound like a loud car alarm and in others it is bells. Be aware that either sound is the Fire Alarm.

**If You Discover a Fire**

1. Leave the fire area immediately assisting with the evacuation of the occupants where applicable. Close the doors to the area behind you.
2. Activate the building fire alarm system using the closest fire alarm pull station as you leave the fire area.
3. Once outside move at least 50 ft. away from the building.
4. Do not return to the building until it is declared safe to do so by the Fire Department.

**PERSONAL SAFETY**

**Emergency Intercoms and Phones**

In addition to regular College telephones there are three types of emergency phones or intercoms for contacting Security directly should you require assistance.

1. **Yellow Emergency phones:** These are located in the hallways throughout the College. Press the button to speak directly to a Security Officer.
2. **Bell Pay Phones:** Can be used to call 911 without charge
3. **Outside Emergency Intercoms:** These are recognizable by a blue light. Press the red button to speak directly to a Security Officer.

**Emergency Contacts**

1. **Police/Fire/Ambulance** – “9-9-1-1” on College Phones or “9-1-1” on Bell Pay Phones
2. **Call Sheridan Security** from the Yellow Emergency Phones or desk phones, or the Outside Emergency Intercoms at “4044”

**Non-Emergency Situations**

1. Main Security Desk-----Dial 4044 on College phones
2. Main Security Desk-----Dial 905-815-4044 on other phones

## FIRE ALARM PROCEDURES FOR PERSONS WITH DISABILITIES

**Note: Persons with Disabilities must have a buddy who is to accompany them during an emergency evacuation.**

### Trafalgar Campus

*At the Trafalgar Campus the A, B and D-wing alarms ring together, the C & E-wing alarms ring together and H, J & K wing alarms ring together. AA (SOCAD), G-wing, Student Centre, Porter Building (Athletic Centre), SCAET and the DayCare Centre are all separate buildings and each has an individual alarm system.*

#### **A-wing:**

- If you are on the 1<sup>st</sup> floor of the A-wing, accompanied by your buddy, go to the nearest exit and leave the building.
- If you are on the 2<sup>nd</sup> floor of the A-wing, accompanied by your buddy, go to the nearest stairwell and wait for the Fire Department to escort you to safety.

#### **AA-wing (SOCAD):**

- AA-wing (SOCAD) is a one floor at ground level building. Accompanied by your buddy go to the nearest exit and leave the building.

#### **B-Wing:**

- If you are on the 1<sup>st</sup> floor of B-wing, accompanied by your buddy, go to the nearest exit and leave the building.
- If you are on the basement level, the 2<sup>nd</sup> or 3<sup>rd</sup> floors of B-wing, accompanied by your buddy, go to the stairwell by the elevator. Have your buddy call Security and inform them of your location. Do not use the elevator. Wait in the stairwell by the elevator for the Fire Department to escort you to safety.

#### **C and E-wing:**

- If you are on the 1<sup>st</sup> floor of the C or E-wing, accompanied by your buddy, go to the nearest exit and leave the building.
- If you are in the C or E wing on the 2<sup>nd</sup> floor, accompanied by your buddy, go to the C to B-wing bridge and into the B-wing. If the B-wing is not in alarm you can stay in the B-wing. If the B-wing is in alarm go to the front entrance and leave the building.

#### **G-wing:**

- If you are on the 2<sup>nd</sup> floor of the G-wing, accompanied by your buddy, proceed to the G to E-wing bridge to the 2<sup>nd</sup> floor of the E-wing. If E-wing is not in alarm you can stay in E-wing. If E-wing is in alarm go to the B-wing via the ramp from the 2<sup>nd</sup> floor of the E-wing that leads to the C to B-wing bridge. You can stay in B-wing if it is not in alarm. If B-wing is in alarm leave the building by the front entrance.
- If you are on the basement level, 1<sup>st</sup>, 3<sup>rd</sup> or 4<sup>th</sup> floors of G-wing wait in the stairwell by the elevator. Do not use the elevator. Have your buddy call Security to inform them of your location. Wait in the stairwell by the elevator for the Fire Department to escort you to safety.

#### **H-Wing**

- If you are on the HB (basement level) of H-wing and the D-wing is not in alarm you can leave the HB area through the double doors leading into the basement of the D-wing (by HB04) and wait there until the alarm in H-wing is over or until the Fire Department says it is safe to return to the H-wing. If D-wing is in alarm as well then accompanied by your buddy stay by the stairwell and have someone notify Security or the Fire Department of your location.
- If you are on the first floor of H-wing you can leave the building through the exit by H119 and go down the ramp and outside to the front of the B-wing.

### **J-Wing**

- If you are on the first floor of the J-wing proceed to the front entrance and leave the building.
- If you are on the second or third floors of the J-wing, accompanied by your buddy, proceed to the stairwell by the elevator and wait for the Fire Department to arrive. Have someone alert Security or the Fire Department of your location.

### **K-wing**

- K-wing is a one-story wing. If the alarm rings proceed to the nearest exit. In the case of the VON clients they will exit the building via the outside patio and wait there until the Fire Department arrives. If necessary they will evacuate the patio via the stairs to the Grounds.

### **SCAET:**

- If you are on the 1<sup>st</sup> floor of SCAET, accompanied by your buddy, go to the nearest exit and leave the building.
- If you are on the 2<sup>nd</sup> floor of SCAET, accompanied by your buddy, go to the 2<sup>nd</sup> floor of C-wing. If C-wing is not in alarm you can stay in C-wing. If C-wing is in alarm go to the C to B-wing bridge into B-wing. If B-wing is not in alarm stay there. If B-wing is in alarm go to the front entrance and exit the building.
- If you are on the 3<sup>rd</sup> or 4<sup>th</sup> floor of SCAET wait with your buddy in the stairwell by the elevator. Do not use the elevator. Have your buddy call Security to inform them of your location. Wait in the stairwell with your buddy for the Fire Department to escort you to safety.

### **Porter Building (Athletics Centre):**

- If you are on the 1<sup>st</sup> floor of the Porter Building, accompanied by your buddy, go to the nearest exit and leave the building.
- If you are on the 2<sup>nd</sup> floor wait in the nearest stairwell for the Fire Department to escort you to safety.

### **Annie Smith Building:**

- If you are on the 1<sup>st</sup> floor of the Annie Smith Building, accompanied by your buddy, go to the nearest exit and leave the building.
- If you are on the 2<sup>nd</sup> floor wait at the top of the stairs for the Fire Department to escort you to safety.

### **Student Centre:**

- If you are on the 1<sup>st</sup> floor of the Student Centre, accompanied by your buddy, go to the nearest exit and leave the building.
- If you are on the 2<sup>nd</sup> floor wait in the stairwell by the elevator. Do not use the elevator. Have your buddy call Security to inform them of your location. Wait in the stairwell for the Fire Department to escort you to safety.

### **Day Care Centre:**

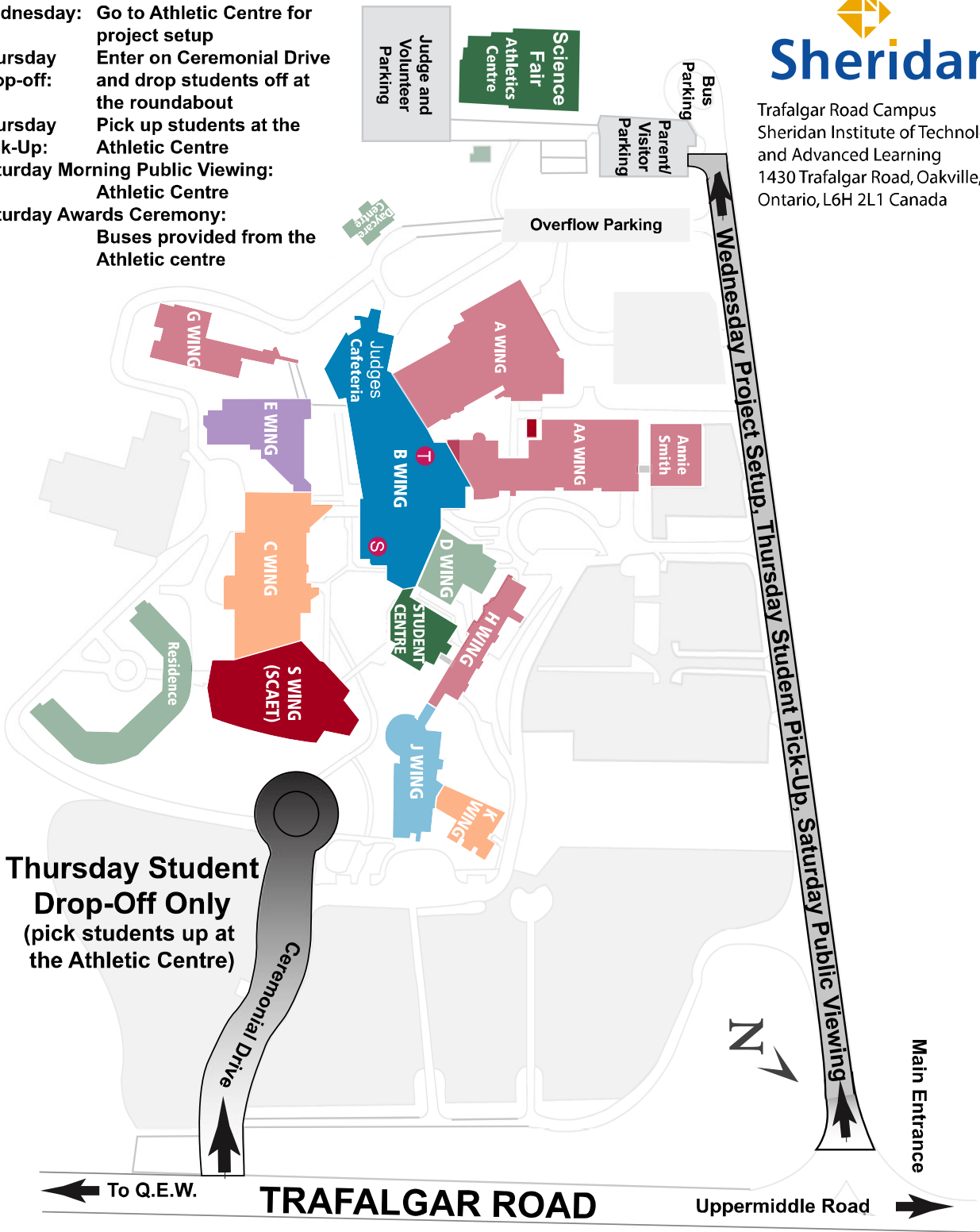
- The Day Care Centre is a one-story ground level building. If the alarm rings you can exit the building through one of the entrances at either end of the building or you can exit into the playground area if it is safe to do so.

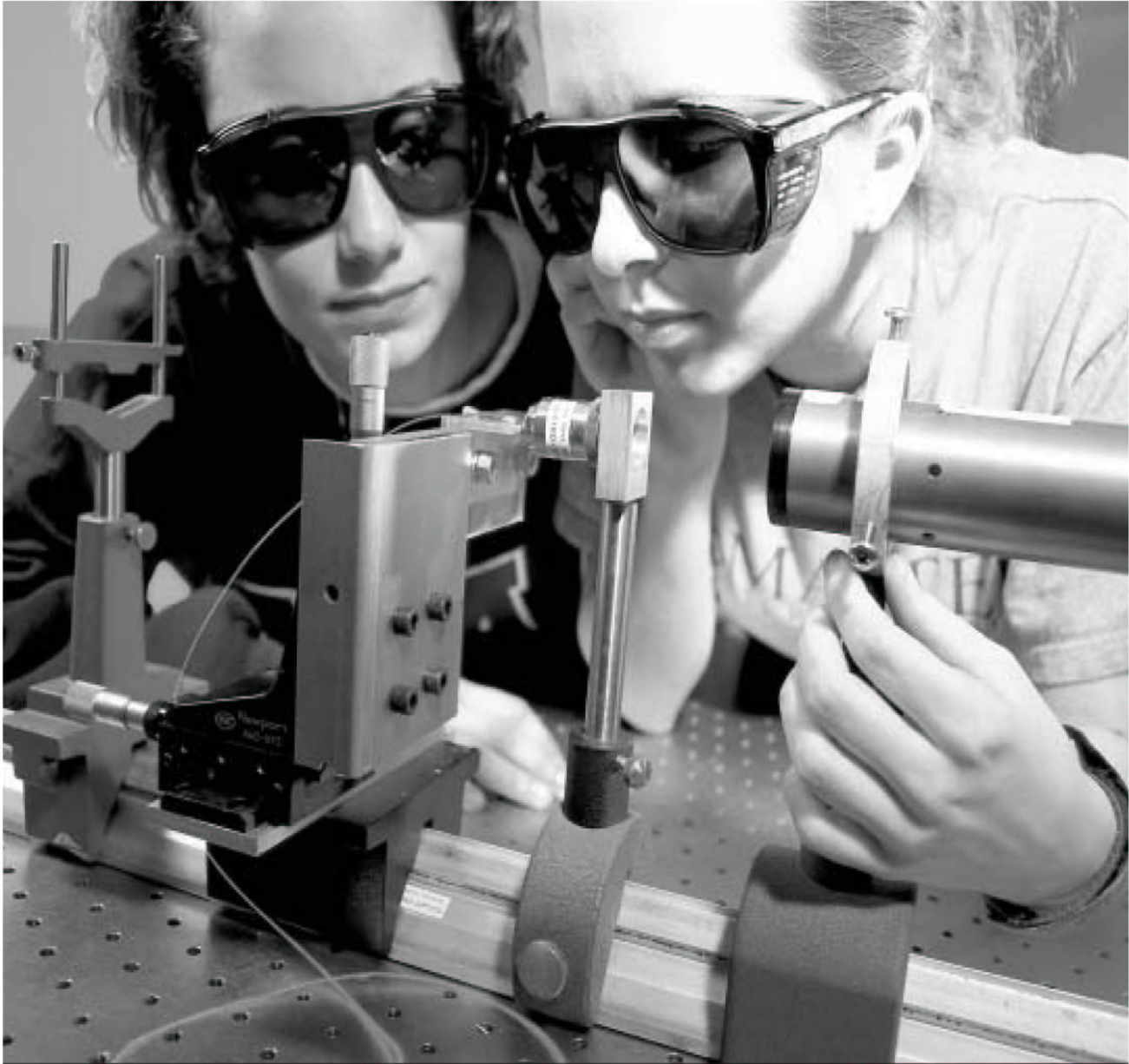
**Drop-Off and Pick-Up Instructions**

- Wednesday:** Go to Athletic Centre for project setup
- Thursday Drop-off:** Enter on Ceremonial Drive and drop students off at the roundabout
- Thursday Pick-Up:** Pick up students at the Athletic Centre
- Saturday Morning Public Viewing:** Athletic Centre
- Saturday Awards Ceremony:** Buses provided from the Athletic centre



Trafalgar Road Campus  
 Sheridan Institute of Technology and Advanced Learning  
 1430 Trafalgar Road, Oakville, Ontario, L6H 2L1 Canada





Inspiring innovation & discovery

**Explore the possibilities at McMaster!**



# ORGANIZING COMMITTEE

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Fred Eisenberger, Mayor, City  
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Nelson Ruiz Blanco

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Eleanor O'Flynn, C.A.

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Nelson Ruiz Blanco, Cathy  
Hamilton, Shannon Clark,  
George Geczy

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Coughlin, Dr. Elizabeth  
O'Brien, Steve Procyszyn,  
Donna Stack-Durward,  
Wuchow Than

## SITE

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Valerie Hughes

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Rocchi, Christine Rowthorn,  
Morris Hucal, Michael  
Laskowski, Domenic  
LaBianca, Wuchow Than,  
Michael Goffredo, Kevin  
Maclsaac, Zenon Holadyk

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Kevin Hunt

## AWARDS AND CEREMONY

Gerard Chiasson, Jim  
Hamilton, Wayne Bowdish,  
Peter Olynyk, Cathy Collins

## VIP RELATIONS

Mary Querques

## SPECIAL AWARDS

Cathy Hamilton, Cathy Collins

## INFORMATION SYSTEMS

Ken Moyle, Gerard Chiasson

## OUTREACH

Wuchow Than

## VOLUNTEER RECRUITING AND SCREENING

Ola Lunyk-Child, Gary Closson,  
Valerie Hughes

## PHOTOGRAPHY AND GRAPHICS

Wayne Bowdish, Jim Hamilton, Al  
Bates, John Novak, Marcel  
Smolinski

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Alinamaria Rodriguez

## COMMITTEE AT LARGE

Barbara Takasaki, Gabriela  
Midence

## TRIP CHAPERONES

IISEF: Ray Kranyak, Cathy  
Collins  
CSWF: Cathy Hamilton, Tom  
Crawford, Steve Procyszyn

## HOST- BASEF 2007

Peggy Patton

## SAFETY

Nelson Ruiz Blanco

## FACILITIES


Dan Bowman

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**Hamilton Wentworth DSB:** Klaas  
Walma, Heather Gardner  
**Six Nations DSB (INAC):** Sabrina  
Saunders

## POST SECONDARY ADVISORS

**Mohawk College:** Cheryl Jensen,  
Peter Olynyk  
**Sheridan:** Michael Arthur  
**McMaster University:** Andy  
Hrymak



**In Memoriam**

**Susan Margaret Tuchtie Joyce**

**A valued member  
of the BASEF Organizing Committee**

**Retired Principal  
Hamilton Wentworth District School Board**

## SPONSORS 2008

### TITLE \$15000 +

ArcelorMittal Dofasco

### DIAMOND \$10,000 +

The Hamilton Spectator  
Primary Fluid Systems  
Sheridan Institute of  
Technology & Advanced Learning

### PLATINUM \$5,000 +

Bell Canada  
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# The BASEF Project

## Bay Area Science and Engineering Fair

### Background

- One of the largest and longest running science fairs in Canada
- For all students in grades 7-12 from Halton, Hamilton, Brant, Haldimand and Norfolk
- BASEF is a registered charity relying entirely on volunteers and sponsors

### Purpose

*To encourage youth in science, engineering and technology by:*

- Organizing and staging an annual fair
- Offering Outreach activities to promote "Project Based Science"
- Promoting BASEF to any and all captive audiences

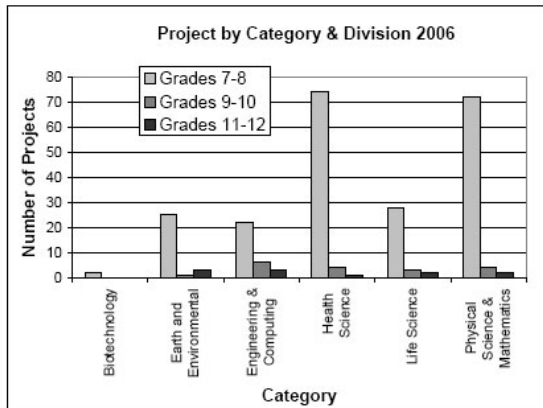
### Hypothesis

- Students gain valuable academic and life skills.
- Students compete for thousands of dollars in cash, scholarships and awards including all expense paid trips to the national and international science fairs.

### Materials

- 1) Dedicated teachers
- 2) Motivated students
- 3) Supportive parents
- 4) Enthusiastic volunteers
- 5) Generous sponsors

### Observations



### Results



**Team BASEF 2007 at CWSF, Truro, NS**



**Team BASEF 2007 at IISEF, Albuquerque, NM**

### Conclusions

#### BASEF 2007

- 394 students from 62 schools with 274 projects
- Over \$125,000 in awards
- 20 BASEF students won Grand Prize Trip Awards

*Our students are going places!*

### Discussion

*All students should be given the opportunity to participate in science fairs. Students learn invaluable academic and life skills through researching, experimenting, displaying and presenting their projects. The judging process and public viewing allow students to practice their "people" skills and gain self confidence and a sense of accomplishment for a job well done.*

**Get in touch with the scientist in you**  
[basef.ca](http://basef.ca)

### Acknowledgements

*BASEF is only made possible through the continuing support of our teachers, students, parents, volunteers and sponsors.*

# ACTIVITY DAY

**Thursday, March 27, 2008**

8:00 am– 8:45 am  
 8:45 am – 9:00 am  
  
 9:00 am - Noon  
 Noon – 12:45 pm

## Student Activity Morning

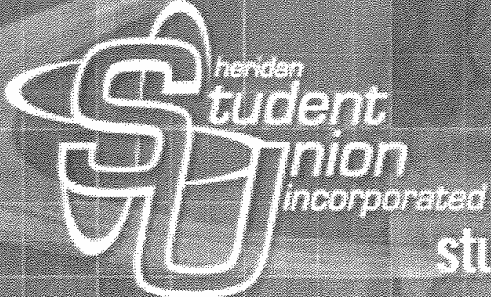
Students gather in the Student Centre  
 Students moved to assigned Activity location  
 (Track assignment will be done at registration)  
 Activity Day Presentations  
 Students must eat their packed lunch in Student Centre  
*Outside viewing of hybrid vehicles will be available just outside the Lecture Hall. Viewing prior to first presentation, during rotation, or at Lunch. This will be dependant on the availability of the vehicles and the outside weather.*

### Activity Day Schedule

Time	Student Centre (Track A)	Lecture Theater (S Wing) (Track B)
9:00	Introductions - Bell Sponsor	Introductions - Bell Sponsor
9:00 - 9:30	Fireball Show - McMaster University	HyMotion - Plug in Hybrids and Battery Technology
9:40 - 10:00	Fireball Show - McMaster University	The Geothermal Energy Sensation - An old story for new times
10:10	Quick Break to Allow Fireball Show Cleanup	The Geothermal Energy Sensation - An old story for new times
10:20 - 10:50	Reg Husbands on "Bellows Expansion Joints"	"How to Obtain a Patent"
10:50	Rotation Time	Rotation Time
11:00 - 11:30	"COO-I CHe-m CaBaReT" - Dr. Randy Dumont of McMaster University.	HyMotion - Plug in Hybrids and Battery Technology
11:30 - 12:00	"COO-I CHe-m CaBaReT" - Dr. Randy Dumont of McMaster University.	MDA Corporation: Robotics Technology Presentation
12:00 - 12:45	Lunch - Cafeteria or Student Centre only	Outside Viewing of Displays from Hymotion - Weather and volunteer resource dependant

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**BASEF thanks the  
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## MERIT AWARD JUDGES

Arnold, Rhodes Sheridan, retired	Feltham, Diana Hamilton Wentworth DSB	Kretz, Colin McMaster – student	Meehan, Nancy Hamilton-Wentworth Occasional Teacher Local
Baxter, Matt	Feswick, Jeff D. Historia Building Restoration Inc	Lantz, Sarah RWDI AIR Inc.	Mejia, Diego Hamilton Police Service
Bedi, Amrinder Kaur Hamilton Wentworth DSB	Franks, Jenn	Lasowski, Fran Sanofi Pasteur	Michalopoulos, Olga Halton District School Board
Billeci, Mena Hamilton Health Sciences	French, Craig Mitel Networks	Lewis, Justin AVAR Environmental Inc.	Michell, Bradley Emco Wheaton Corp.
Boscarino, Cathy Hospital for Sick Kids	Gainham, Chris City Of Hamilton: Water and Wastewater	Li, Angela SNC Lavalin Inc.	Morgan, Kevin Hamilton EMS
Bruin, Jenny McMaster University	Garrett, Jim McMaster University	Lin, Dolly Meng Han McMaster – student	Morin, Shane Xerox
Cahill, Lindsay McMaster University	Gou, Harry ArcelorMittal Dofasco	Logan, Karen Self Employed	Muser, Paul Self employed, SUPIMA HOLDINGS INC.
Closson, Gary Sheridan, retired	Gulak, Benjamin Jeffrey Poss	Lonz, Steve Region of Peel	Niro, Gino EngOL Inc.
Collins, Dianne ArcelorMittal Dofasco	Hartlen, Rebecca	Lopez, Ken Retired	Ormond, Peter Environmental Consultant
Cote, Charles Mississauga	Hiam, John Robert TechMat Consulting	MacEwen, Kenny SNC Lavalin Inc.	Orton, Geoff Hamilton Wentworth DSB
Crane, Maureen ArcelorMittal Dofasco	Howard, David L.H. Schwindt & Company Inc.	Martinez, Leyden	Ouwehand, Anna Halton District School Board
Cuthbert, Heather McMaster University	Howarth, Jillian Halton District School Board	Maxymuik, Peter Primerica	Paquette, Michel L-3 Wescam
de Boer, Cheryl City of Hamilton, Public Works	Johnson, Ross Sandwell Consulting Engineers Ltd	McAnanama, James L-3 Wescam	Parris, David ArcelorMittal Dofasco
Dominy, Cliff Dominy Analytics (self employed)	Johnson, Warren retired, high school teacher	McNair, Eric Hamilton-Wentworth DSB (retired)	Pattison, Susan McMaster University
Effinger, Daniel L-3 Wescam	Kahama, Rebecca Kings Christian Collegiate	McNally, Mike C&M McNally Engineering Corp.	Pettinggill, Tom Sheridan, retired
Ellithorn, Trixie (Karen) Medical Technologist (retired)		McQueen, Rose St Joseph's Hospital	



## **MERIT AWARD JUDGES** continued...

Prieur, Adam  
McMaster – student

Procwat, Ray  
McMaster University

Rashid, Ferid  
William Osler Health  
Centre

Rutherford, Alan  
McMaster University  
Medical Centre

Sanders, Robert  
Retired

Scanga, Vanessa  
University of Toronto

Shanishchara, Ketan  
SNC Lavalin Inc.

Shepard, Beverly  
Retired

Skolnik, Tomislav  
ArcelorMittal Dofasco

Smith, Greg  
McMaster University

Stack-Durward,  
Donna  
HWCD SB

Stefanchuk, Brian  
Mohawk College

Stevens, Donald  
Retired

Stewart, Kelly  
SNC Lavalin Inc.  
Stogianens, Diane  
Global, R&D  
Consulting

Stratford, Graham  
Sheridan, retired

Stubbs, Peter  
Dofasco, retired

Summers, Peter  
McMaster University

Surovtsev, Elena  
Source Technical  
Group Inc.

Swanson, Gord  
Halton District School  
Board

Taggart, Peter  
Retired/Brigadier-  
Gen Air  
Force/College Admin

Teoh, Jo-Anne  
Kevin H. T. Teoh  
Medicine Prof.  
Corporation

Theobald, Kim  
Self Employed

Thompson, Matthew  
Spectrum  
Educational Supplies  
Ltd.

Tod, Jeff  
Rockwell Automation  
Canada

Tropea, Bob  
Retired

Tuttle, Anne Mulligan  
McMaster University

Van Dam, Ashley  
Hamilton EMS

van Leeuwen,  
Jennifer

Walsh, Steven  
City of Hamilton &  
Ministry of Health

Webber, Brandon  
McMaster – student

Wehrle, Paul

Wood, Jane  
ArcelorMittal Dofasco

Wu, Christopher  
Epson Canada

Zander, Otto  
Sheridan



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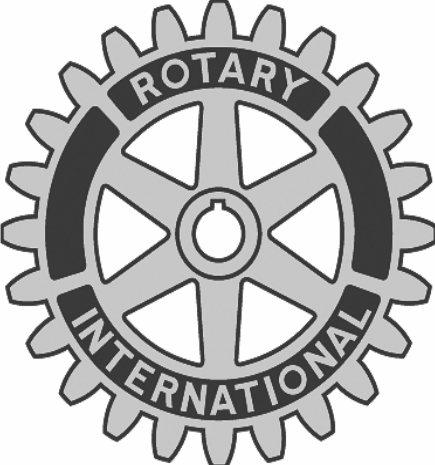
**SPECIAL AWARD JUDGES**

Sarah Anderson  
Michael Arthur  
Hassaan Basit  
Don Barclay  
Nigel Birch  
Derek Bishop  
Chris Blackwood  
Bill Brimley  
Adriaan Buijs  
Andrew Camus  
James Casey  
Peter Child  
Dr. Stephen Chin  
Shannon Clark  
Cathy Collins  
Ashlea Colton  
Tom Crawford  
Zoran Dabic  
Tim Dietrich  
Jessica Durante  
James Ford  
Nicholas Gagliardo  
Edward Gerges  
Laura Gilbank

Michael Gulas  
Cathy Hamilton  
Bert Halliday  
John Hawker  
Raj Jain  
Michael Jefferson  
Klaus Kaiser  
Joe Kurpe  
Kathy Lerette  
Bernard LeBlanc  
Pippa Lock  
Blair MacCuish  
Madeline Martin  
Tom Matthews  
John Mayhew  
Ursula McGinness  
Leslie McKenzie  
Nancy Meehan  
Brian Minaji  
Mike Moore  
Susan Olynyk  
Greg Pipe  
Kristin Pouw  
Ludvik Prevec

Marianne Querques  
Sarodha Rajkumar  
Steve Remilli  
Dan Rodriques  
David Salari  
Joydeep Sengupta  
Kat Simmons  
Nicola Simmons  
Ishwar Singh  
Herb Sinnock  
Barry Smallbone  
Brian Stefanchuk  
Cindy Storr  
Helena Struen  
Tom Sutton  
Robert Tedesco  
Wuchow Than  
David Thurlow  
Ben Van Berkel  
Sandy Walker  
David Wardlaw  
Marek Zigin

**Congratulations and best wishes  
for continued success  
to all BASEF participants!**



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Terbrack, Nathan	K14	Weaver, Nick	L13				



***Congratulations to all BASEF 2008 participants!***

**Bruce W. Riddiough, C.A.**

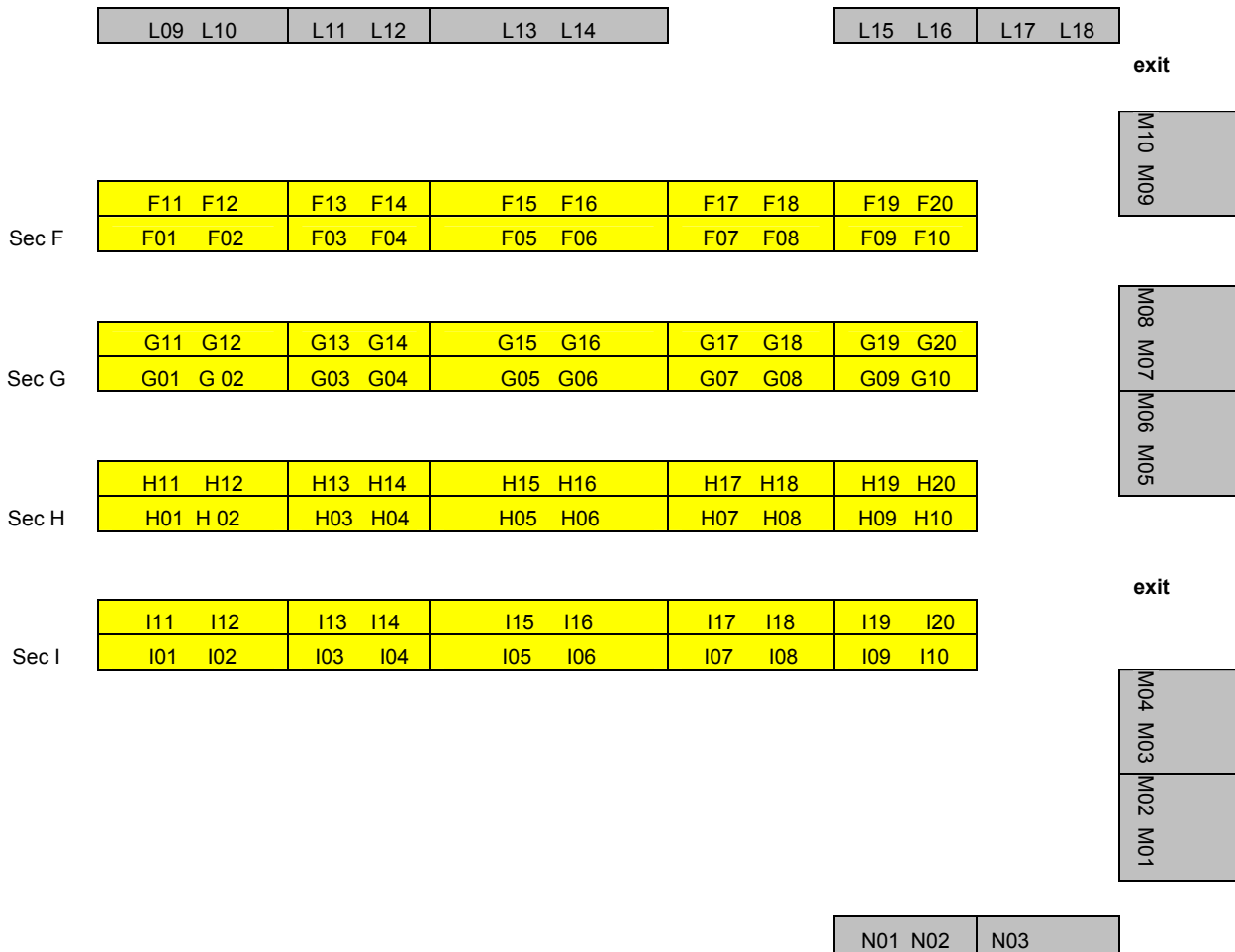
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**BASEF 2008**

	L01 L02	L03 L04	exit	L05 L06	L07 L08	
K14 K13	Sec E	E11 E12	E13 E14	E15 E16	E17 E18	E19 E20
		E01 E02	E03 E04	E05 E06	E07 E08	E09 E10
K12 K11	Sec D	D11 D12	D13 D14	D15 D16	D17 D18	D19 D20
		D01 D02	D03 D04	D05 D06	D07 D08	D09 D10
K10 K09	Sec C	C11 C12	C13 C14	C15 C16	C17 C18	C19 C20
		C01 C02	C03 C04	C05 C06	C07 C08	C09 C10
K08 K07	Sec B	B11 B12	B13 B14	B15 B16	B17 B18	B19 B20
		B01 B02	B03 B04	B05 B06	B07 B08	B09 B10
K06 K05	Sec A	A11 A12	A13 A14	A15 A16	A17 A18	A19 A20
		A01 A02	A03 A04	A05 A06	A07 A08	A09 A10
K04 K03						
K02 K01						

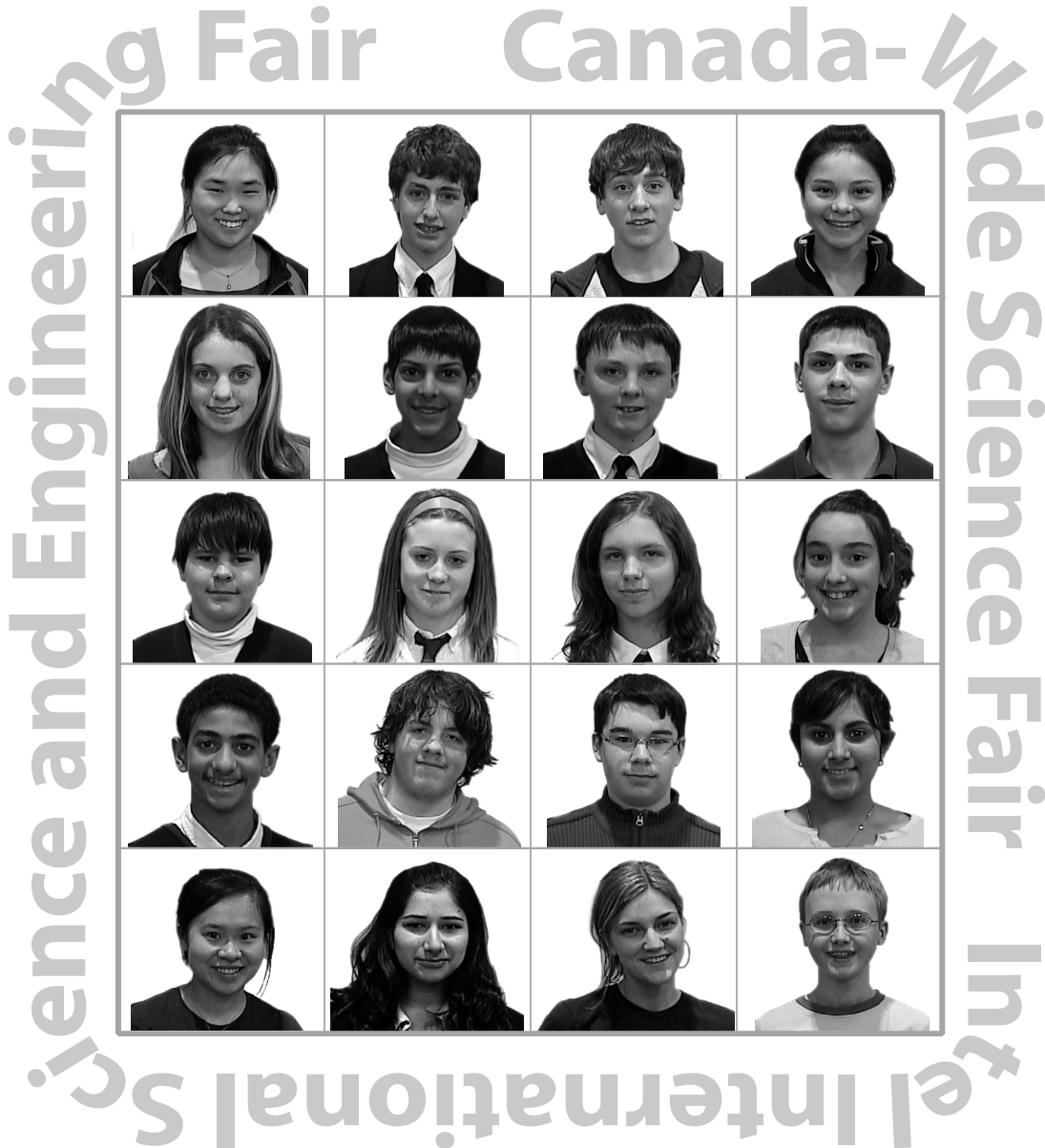
**SHERIDAN**



**Main Entrance**

# BASEF 2007 Trip Award Winners

Thanks to our sponsors  
we're going places!



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# EXHIBITOR LISTING

**A01, Hypocalcemia and Congestive Heart Failure: the effects of hypocalcemia and its subsequent results on the depolarization**

Erum Dost,  
I 9-10, Health Sciences  
Abbey Park High School, HDSB

**A02, What is the strongest geometrical shape?**

Sina Mohammadi,  
J 7-8, Physical Sciences & Math  
Al-Falah Islamic School, Independent

**A03, ELECTROSTATIC WATER GENERATOR**

Sofia Qasim,  
J 7-8, Physical Sciences & Math  
Al-Falah Islamic School, Independent

**A04, The affect of video games on heart rate.**

Shehab Sennah,  
J 7-8, Health Sciences  
Al-Falah Islamic School, Independent

**A05, Does sound help you concentrate?**

Mariam Ahmed,  
J 7-8, Health Sciences  
Al-Falah Islamic School, Independent

**A06, Why do we need soap everytime we wash our hands?**

Bismah Asif,  
J 7-8, Health Sciences  
Al-Falah Islamic School, Independent

**A07, How does temperature effect the speed of dissolving in water.**

Sara Zaidi,  
J 7-8, Life Sciences  
Al-Falah Islamic School, Independent

**A08, Stairway to the Brain**

Nada Ahmed,  
J 7-8, Health Sciences  
Al-Falah Islamic School, Independent

**A09, What is the difference between AC and DC currents?**

Saad Benmessaoud,  
J 7-8, Physical Sciences & Math  
Al-Falah Islamic School, Independent

**A10, The affects of vinegar on plants.**

Raiyan Chowdhury,  
J 7-8, Life Sciences  
Al-Falah Islamic School, Independent

**A11, How to determine the PH level of liquids & solutions using purple cabbage water.**

Benmessaoud Amina,  
J 7-8, Physical Sciences & Math  
Al-Falah Islamic School, Independent

**A12, Microclimate**

Sheza Zaidi,  
J 7-8, Earth and Environmental  
Al-Falah Islamic School, Independent

**A13, Brain's Attorney**

Matthew Chong, Devin McCaskell  
J 7-8, Health Sciences  
Ancaster Meadow, HWDSB

**A14, Rocket Science: What a Drag**

Stephen Hogg,  
J 7-8, Engineering and Computing  
Ancaster Senior, HWDSB



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of your endeavours!

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which will create solutions to tomorrow's challenges.**

**EXHIBITOR LISTING** continued...

**A15, Do Boys Play Differently Than Girls?: A Look at Rock-Paper-Scissors**  
 Emma Kolesar, Julia Shen  
 J 7-8, Health Sciences  
 Ancaster Senior, HWDSB

**A16, The Loudness Limit**  
 Reha Sandill,  
 J 7-8, Health Sciences  
 Ancaster Senior, HWDSB

**A17, Is saltwater the answer to the worlds energy demand?**  
 Crystal Hayes,  
 J 7-8, Earth and Environmental  
 Ancaster Senior, HWDSB

**A18, Brooke's Biodegradable Battery**  
 Brooke Clairmont,  
 J 7-8, Earth and Environmental  
 Ancaster Senior, HWDSB

**A19, Does Zinc Help You Think?**  
 David Walker,  
 J 7-8, Health Sciences  
 Appleby College, Independent

**A20, Electric Sewage**  
 Simon Harris,  
 J 7-8, Earth and Environmental  
 Appleby College, Independent

**B01, Watch What You Drink**  
 Carlo Muser,  
 J 7-8, Health Sciences  
 Appleby College, Independent

**B02, Can Your Backpack Make You Smarter?**  
 Sarah Rich,  
 J 7-8, Health Sciences  
 Appleby College, Independent

**B03, Can You Remember This or This?**  
 Jake Yune,  
 J 7-8, Health Sciences  
 Appleby College, Independent

**B04, H2Ology- The INTENSE Study of Water**  
 Justin Samardzic,  
 J 7-8, Physical Sciences & Math  
 Appleby College, Independent

**B05, Go Fetch!**  
 Olivia Saunders,  
 J 7-8, Life Sciences  
 Appleby College, Independent

**B06, Smooth Moves**  
 Ingrid Campos, Yurgan Kourtney  
 J 7-8, Earth and Environmental  
 Bennetto, HWDSB

**B07, The Pressure of Video Games**  
 Vivian Luu, Amy Luu  
 J 7-8, Health Sciences  
 Bennetto, HWDSB

**B08, Water Vs. Gravity: Which does a Plant Root Prefer?**  
 Kadisha Harvey, Michelle Zhong  
 J 7-8, Earth and Environmental  
 Bennetto, HWDSB

**B09, Colour Mania!**  
 Vanessa Calero, Vivian Nguyen  
 J 7-8, Earth and Environmental  
 Bennetto, HWDSB

**B10, Dissolving Drugs: How Quick Can You Get It In You?**  
 Nicole Horvath, Koomen Mallory  
 J 7-8, Health Sciences  
 Bennetto, HWDSB

**B11, Acid Attack**  
 Esai Bishop, Daniel Son  
 J 7-8, Earth and Environmental  
 Bennetto, HWDSB

**B12, Candy Chromatography**  
 Michal Panna,  
 J 7-8, Physical Sciences & Math  
 Bennetto, HWDSB



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Respond to stakeholder needs in a caring and considerate manner.  
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 Communicate in an open, honest and intelligent manner.  
 Acknowledge the diversity and worth of all individuals and respect their roles, competencies and contributions.

*Innovation... We will:*

Foster an environment that encourages creativity and inspires people to make a difference.  
 Recognize and reward excellence, effort and innovation.  
 Encourage thoughtful experimentation and challenge routine.  
 Adapt best practices in enhancing our mission.

*Accountability... We will:*

Act with integrity in accordance with Board policies.  
 Measure and report our accomplishments to the community.  
 Use our resources wisely, efficiently and effectively.  
 Honour our commitments.

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**EXHIBITOR LISTING** continued...**B13, Gut Feeling II**

Emma Atkinson, Julie Jakji  
J 7-8, Health Sciences  
Blessed Kateri Tekakwitha, HWCDSB

**B14, The Slingshot**

Nicholas Chong,  
J 7-8, Physical Sciences & Math  
Canadian Martyrs', HWCDSB

**B15, Which Ball Rules Them All?**

Nicholas Hill,  
J 7-8, Physical Sciences & Math  
Canadian Martyrs', HWCDSB

**B16, Fantastic 4**

Gabriella Fortino, Claudia Turco  
J 7-8, Health Sciences  
Canadian Martyrs', HWCDSB

**B17, Carton? Please! Give It A Squeeze!**

Sarah Ippolito, Jessica Wright  
J 7-8, Physical Sciences & Math  
Canadian Martyrs', HWCDSB

**B18, Resonating Pendulums**

Autumn Mayes, Hailey Bradshaw-  
Caughie  
J 7-8, Physical Sciences & Math  
Cathy Wever, HWDSB

**B19, Are Vitamin C Levels the same in the same Fruit?**

Tu Alex, Joanna Nguyen  
J 7-8, Physical Sciences & Math  
Cathy Wever, HWDSB

**B20, CO2 Absorption properties of Duckweed**

Bhaag Marway, Abdi Abdumatlub  
J 7-8, Earth and Environmental  
Cathy Wever, HWDSB

**C01, Viscosity**

Rui Sun,  
J 7-8, Physical Sciences & Math  
Dalewood, HWDSB

**C02, Memorosity**

Alina Barnett, Annie Fu  
J 7-8, Health Sciences  
Dalewood, HWDSB

**C03, A Sweet Surprise: Antibacterial Properties of Honey**

Emily Margetts,  
J 7-8, Health Sciences  
Dalewood, HWDSB

**C04, Memorable Music**

Julia Stacey,  
J 7-8, Health Sciences  
Dalewood, HWDSB

**C05, The Cost of a Cup of Coffee**

Nicole Sulewski, Elizabeth Wendel  
J 7-8, Earth and Environmental  
Dalewood, HWDSB

**C06, Dude, You're Stressing Me Out!**

Jason Fan,  
J 7-8, Health Sciences  
Dalewood, HWDSB

**C07, Battery charger**

Austin Morrison,  
J 7-8, Engineering and Computing  
Eastview Public School, HDSB

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**EXHIBITOR LISTING** continued...**C08, Colours On A Human Mood**

Madison Leeson,  
J 7-8, Health Sciences  
Eastview Public School, HDSB

**C09, Rise Up, Rise Up**

Raeanne Dingwall,  
I 9-10, Physical Sciences & Math  
Georgetown District High School, HDSB

**C10, A Comparative Investigation of Aquatic Plants**

Megan Reilly,  
I 9-10, Life Sciences  
Georgetown District High School, HDSB

**C11, Wash away those harsh chemicals**

Samia Khan, Samantha Tan  
J 7-8, Earth and Environmental  
Helen Detwiler, HWDSB

**C12, Toxicity**

William Humphrey, Desiree Fougere  
J 7-8, Earth and Environmental  
Hillcrest, HWDSB

**C13, Pollution Around Us**

Marissa McNally, Mirjeta Dervisholli  
J 7-8, Earth and Environmental  
Hillcrest, HWDSB

**C14, Fish Frenzy**

Jaymi Gelinis, Ashley Coburn  
J 7-8, Life Sciences  
Hillcrest, HWDSB

**C15, Concentrating on Oxygen**

Fatima Bajwa, Olivia Pereira  
J 7-8, Earth and Environmental  
Hillcrest, HWDSB

**C16, Honey I Shrank the (Starch) ^-7!**

Jenna van Leeuwen,  
I 9-10, Biotechnology  
Hillfield Strathallan College, Independent

**C17, Bacteria Battle**

Xaviera Diaz,  
J 7-8, Life Sciences  
Hillfield Strathallan College, Independent

**C18, Music to my Ears?**

Allana Colonné- Robertson, Alexandra Rocca  
J 7-8, Health Sciences  
Hillfield Strathallan College, Independent

**C19, Up, Up and Away**

Meaghan Tremblay,  
J 7-8, Physical Sciences & Math  
Hillfield Strathallan College, Independent

**C20, Not Clean, Not Green**

Madison Dobrovolskis, Hannah Morris-Patterson  
J 7-8, Earth and Environmental  
Hillfield Strathallan College, Independent

**D01, Don't Bug Me!**

Nisha Goel, Julia Falco  
I 9-10, Health Sciences  
Hillfield Strathallan College, Independent

**D02, How Have You Bin?**

Meaghan Philp, Tessa Spicer  
I 9-10, Earth and Environmental  
Hillfield Strathallan College, Independent

**D03, Are We Wasting Our Time?**

Charles-Philippe Lamy, Sherif Ramadan  
I 9-10, Health Sciences  
Hillfield Strathallan College, Independent

**D04, Can Horses Learn To Link Food With Colour?**

Lauren Friedl, Gabrielle Sebaldt  
I 9-10, Life Sciences  
Hillfield Strathallan College, Independent

**D05, NATURALLY BETTER ?**

Samuel Wain-Lowe,  
I 9-10, Earth and Environmental  
Hillfield Strathallan College, Independent

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**EXHIBITOR LISTING** continued...**D06, Does Red Bull Give You Wings?**

Nicholas Chug, Luke Seymour  
J 7-8, Health Sciences  
Hillfield Strathallan College, Independent

**D07, Highlighting: Does it really help your memory?**

Madison Gunn, Alexandra Bayr  
I 9-10, Health Sciences  
Hillfield Strathallan College, Independent

**D08, To Grow Or Not To Grow?**

Leah Tatti,  
J 7-8, Life Sciences  
Holy Name of Jesus, HWCDSB

**D09, Shocking Truth**

Virginia Madsen,  
J 7-8, Physical Sciences & Math  
Holy Name of Jesus, HWCDSB

**D10, Candle Scandal**

Erica Jones, Jazriel Macasling  
J 7-8, Physical Sciences & Math  
Holy Name of Jesus, HWCDSB

**D11, sinkers and floaters**

Kendra Davis, Kahmellah Phinn  
J 7-8, Physical Sciences & Math  
Holy Name of Jesus, HWCDSB

**D12, Health Behaviour Among Adolescents in Hamilton, Ontario**

Mariam Mobasher,  
I 9-10, Health Sciences  
Westdale High School, HWDSB

**D13, DOWN ON YOUR LUX?**

Dominique Krawchenko,  
J 7-8, Health Sciences  
Holy Spirit, HWCDSB

**D14, Return of the Carbon Dioxide Invasion**

Kelsey Fedus,  
J 7-8, Earth and Environmental  
Lisgar, HWDSB

**D15, One at a Time**

Abigail Duerksen, Kenedie Grupstra  
J 7-8, Health Sciences  
Lisgar, HWDSB

**D16, Can You Feel The Squeeze**

Cassandra Francella, Kristin Conciatori  
J 7-8, Health Sciences  
Mother Teresa, HWCDSB

**D17, The Sweetest Thing**

Nicole Yang, Emily Mann  
S 11-12, Earth and Environmental  
North Park Collegiate and Vocational  
School, GEDSB

**D18, Petroleum Snackers: A Biological Solution to Oil Spills**

Michelle Reid, Alexa Small  
S 11-12, Earth and Environmental  
North Park Collegiate and Vocational  
School, GEDSB

**D19, An Unsolved Mystery: The Origin of Life**

Vivian Pang, Ling Iv  
S 11-12, Life Sciences  
North Park Collegiate and Vocational  
School, GEDSB

**D20, The Unearthing of Flavonoids**

Meaghen Rollins, Carly McDonald  
S 11-12, Earth and Environmental  
North Park Collegiate and Vocational  
School, GEDSB

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**EXHIBITOR LISTING** continued...**E01, A Pillbug's Life**

Nikesh Patel,  
S 11-12, Life Sciences  
North Park Collegiate and Vocational  
School, GEDSB

**E02, Making Bacteria Glow with a Firefly Gene**

Meagan O'Donnell, Stephanie Hinton  
S 11-12, Biotechnology  
North Park Collegiate and Vocational  
School, GEDSB

**E03, "Fight The Light" The Effects of Ozone Depletion on Plant Life**

Sara McNamara,  
J 7-8, Earth and Environmental  
Oakville Christian School, Independent

**E04, The Resistance Suit**

Lauren Zyluk,  
J 7-8, Biotechnology  
Oakville Christian School, Independent

**E05, Heart Races**

Mackenzie Vivani,  
J 7-8, Health Sciences  
Oakville Christian School, Independent

**E06, Wind Power In Ontario**

John Ivanco,  
J 7-8, Engineering and Computing  
Oakville Christian School, Independent

**E07, People Power**

Michael Brandolino,  
J 7-8, Engineering and Computing  
Oakville Christian School, Independent

**E08, Does Your Heart Rate Vary on What you drink?**

Melissa Taylor, Jennie Chang  
J 7-8, Health Sciences  
Oakville Christian School, Independent

**E09, Power Out of Thin Air**

Jake Wheaton, Brandon Kettle  
J 7-8, Engineering and Computing  
Oakville Christian School, Independent

**E10, Tommorrow's Water ... Today**

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

**E11, Coca-Cola: Liquid Candy or Liquid Poison???**

Pierce Cosgrove, Jordy Verasamy  
J 7-8, Health Sciences  
Oakville Christian School, Independent

**E12, Artificial Intelligence**

Liam Bigham,  
J 7-8, Engineering and Computing  
Rotherglan School (Oakville),  
Independent

**E13, Light Efficiency**

Amy McKeown,  
J 7-8, Physical Sciences & Math  
Rotherglan School (Oakville),  
Independent

**E14, Anaerobic Threshold**

Alex Maly,  
J 7-8, Health Sciences  
Rotherglan School (Oakville),  
Independent

**E15, Hydrogen fuel cell cars**

Lina Darwish,  
J 7-8, Earth and Environmental  
Rotherglan School (Oakville),  
Independent

**E16, Hydroponics: Growing Plants without Soil**

Alexander Lang,  
J 7-8, Life Sciences  
Rotherglan School (Oakville),  
Independent



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**EXHIBITOR LISTING** continued...**E17, The Athlete's Drink**

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

**E18, Do Taller People Have A Larger Lung Capacity Than Shorter People?**

Alisha Butani,  
J 7-8, Health Sciences  
Rotherglen School (Oakville),  
Independent

**E19, Does Music Effect Memory?**

Devan Brennan,  
J 7-8, Health Sciences  
Rotherglen School (Oakville),  
Independent

**E20, Variables Affecting Memory Recall**

Elizabeth Loughrey,  
J 7-8, Health Sciences  
Rotherglen School (Oakville),  
Independent

**F01, Which Cleaner is Meaner?**

Kristina Milisavljevic, Anđela Janosevic  
J 7-8, Earth and Environmental  
Sir Wilfrid Laurier, HWDSB

**F02, Squeeze Me & You'll C!**

Dhoha Hegazi, Zunaira Tarique  
J 7-8, Physical Sciences & Math  
Sir Wilfrid Laurier, HWDSB

**F03, Quit Buggin'**

Wardah Nasir, Tatjana Medakovic  
J 7-8, Biotechnology  
Sir Wilfrid Laurier, HWDSB

**F04, Clean Up In Aisle Three**

Trey Bryant, Aleksa Japalak  
J 7-8, Earth and Environmental  
Sir Wilfrid Laurier, HWDSB

**F05, Planet or Plastic?**

Joy Liu, Michelle Phonthaphan  
J 7-8, Biotechnology  
Sir Wilfrid Laurier, HWDSB

**F06, 2 + 2 = 5 ?**

Anam Vohra, Sara Hassan  
J 7-8, Earth and Environmental  
Sir Wilfrid Laurier, HWDSB

**F07, Bac Attack!**

Eden Minhas, Edina Mustedanagic  
J 7-8, Life Sciences  
Sir Wilfrid Laurier, HWDSB

**F08, Battle of the Toothpastes**

Salsabela Razaq, Vanessa Gallego  
J 7-8, Physical Sciences & Math  
Sir Wilfrid Laurier, HWDSB

**F09, Cloud Formation**

Alyxa Wease, Brittany Farr  
J 7-8, Earth and Environmental  
Sir William Osler, HWDSB

**F10, Peer Pressure, the Real Issue**

Leah Palme, Monica Lee  
J 7-8, Health Sciences  
Sir William Osler, HWDSB



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# EXHIBITOR LISTING continued...

### F11, Gear Ratios VS. Rotations Per Minute (RPM)

Joshua Bradshaw, James Holmes  
J 7-8, Engineering and Computing  
Sir William Osler, HWDSB

### F12, 12 Kids. 3 Tests. One Major Distraction.

Nicole Hughes, Alison Mitro  
J 7-8, Health Sciences  
Sir William Osler, HWDSB

### F13, The Need For Aspirin?

Robin Whiffing, Heidi Sack  
J 7-8, Life Sciences  
Sir William Osler, HWDSB

### F14, Where does the mold grow the slowest

William McArthur,  
I 9-10, Life Sciences  
Sir William Osler, HWDSB

### F15, Introvert Or Extravert

Claire Harkness, Hayden Phillips  
J 7-8, Health Sciences  
Sir William Osler, HWDSB

### F16, The Potentials of Plants

Sarah Graham, Katie Chong  
J 7-8, Earth and Environmental  
St. Ann (Ancaster), HWCDSB

### F17, Water and Gatorade

Alisa Bozzo, Alexandra Scione  
J 7-8, Health Sciences  
St. Ann (Ancaster), HWCDSB

### F18, Perception of Beauty

Cassandra Chidiac,  
J 7-8, Health Sciences  
St. Ann (Ancaster), HWCDSB

### F19, In one sense, out another

Gabriela Niemczyk, Rebecca Cornale  
J 7-8, Health Sciences  
St. Ann (Ancaster), HWCDSB

### F20, Reaction Time

Carling D'Andrea, Madeleine Thomsen  
J 7-8, Health Sciences  
St. Ann (Ancaster), HWCDSB

### G01, The Browning of Apples

Alison Harper,  
J 7-8, Physical Sciences & Math  
St. Ann (Ancaster), HWCDSB

### G02, Heat Transfer

Angela Stemmler,  
J 7-8, Physical Sciences & Math  
St. Ann (Ancaster), HWCDSB

### G03, Citrus Power

Natasha Bowen, Jerney Barberstock  
J 7-8, Earth and Environmental  
St. Ann (Hamilton), HWCDSB

### G04, Reconnect

Courtney Audet, Stephanie Tran  
J 7-8, Health Sciences  
St. Ann (Hamilton), HWCDSB

### G05, To Grow or Not to Grow

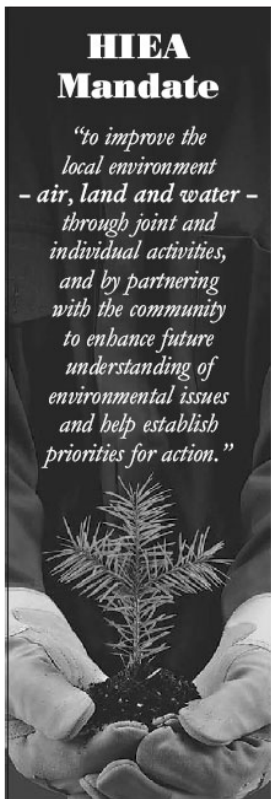
Monica Lutz,  
J 7-8, Earth and Environmental  
St. Augustine, HWCDSB

### G06, Scrub A Little Scrub A Lot?

Gabriela Caterini,  
J 7-8, Physical Sciences & Math  
St. Augustine, HWCDSB

### G07, Making a photovoltaic cell in your kitchen

Hayden Truman,  
J 7-8, Earth and Environmental  
St. Augustine, HWCDSB



## HIEA Mandate

*“to improve the local environment - air, land and water - through joint and individual activities, and by partnering with the community to enhance future understanding of environmental issues and help establish priorities for action.”*

### Who we are....

The Hamilton Industrial Environmental Association (HIEA), is a non-profit association of local private-sector industries. HIEA provides an open forum for community representatives and local associations to discuss environmental concerns. HIEA has a strong history of connecting with local neighbourhood associations and working with the community to fulfill its mandate:

*“to improve the local environment - air; land and water - through joint and individual activities, and by partnering with the community to enhance future understanding of environmental issues and help establish priorities for action.”*

### You're invited to Join Us .....

As a neighbour to industry, your input is integral to HIEA's continued success. We welcome your involvement. For more information about our Community Advisory Panel and other current initiatives, visit [www.hiea.org](http://www.hiea.org) or contact us at 905-561-HIEA(4432) or [info@hiea.org](mailto:info@hiea.org).



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Website: [www.hiea.org](http://www.hiea.org)  
Email: [info@hiea.org](mailto:info@hiea.org)



# EXHIBITOR LISTING continued...

**G08, DOGS BARK FOR BARF**

Paige Kellner,  
J 7-8, Life Sciences  
St. Augustine, HWCDSB

**G09, Colour Deficiency: Boys vs. Girls**

Emily Sullivan, Jamie Dolson  
J 7-8, Health Sciences  
St. Augustine, HWCDSB

**G10, Wide Asleep**

Alyssa Schmidt, Louisa Mayne  
J 7-8, Health Sciences  
St. Augustine, HWCDSB

**G11, Moldy Bread**

Paige Fleming- St.John, Tori Schaible  
J 7-8, Life Sciences  
St. Augustine, HWCDSB

**G12, Can Eye See Or Ear Better?**

Sarah Filice,  
J 7-8, Health Sciences  
St. Augustine, HWCDSB

**G13, What's Up Doc?**

Jessica Hanta,  
J 7-8, Health Sciences  
St. Catherine of Siena, HWCDSB

**G14, Compression vs. Tension**

David Pellizzari,  
J 7-8, Physical Sciences & Math  
St. Clare of Assisi, HWCDSB

**G15, Hydraulic Arm Project- Super Arm**

Julie Walden, Maddie Pace  
J 7-8, Engineering and Computing  
St. Dominic, HCDSB

**G16, Hydraulic arm project - The Power House**

Keaton Gruner, Hugo Cardona  
J 7-8, Engineering and Computing  
St. Dominic, HCDSB

**G17, Hyraulic Arm Project - mongo**

Melissa Coe, Alisha Esteves  
J 7-8, Engineering and Computing  
St. Dominic, HCDSB

**G18, Hydraulic Arm Project:**

**OzzieOsten The Ostrich**  
Natasha Rasi, Valentina Hucik  
J 7-8, Engineering and Computing  
St. Dominic, HCDSB

**G19, Hydraulic Arm- Roller Pig in a blanket T.T.V**

Cole Gardner, Nathan Colina  
J 7-8, Engineering and Computing  
St. Dominic, HCDSB

**G20, Bacterial Growth**

Nicholas Esposto,  
J 7-8, Life Sciences  
St. Joachim, HWCDSB

**H01, Music vs Emotions**

Catie Beckley, Jackie Trink  
J 7-8, Health Sciences  
St. Joachim, HWCDSB

**H02, If Germs Weren't Invisible . . .**

Victoria Piccioni, Marissa Codispodi  
J 7-8, Health Sciences  
St. Joachim, HWCDSB

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## EXHIBITOR LISTING continued...

**H03, Little Miss Sunshine**

Christina Hryc, Erin O'Donnell  
J 7-8, Health Sciences  
St. John the Baptist, HWCDSB

**H04, Practice Pitch**

Callum Goncalves, Evan Morrison  
J 7-8, Engineering and Computing  
St. Luke, HCDSB

**H05, Wall Mounted Can Crusher**

Austin McKennan, Tyler Smrekar  
J 7-8, Engineering and Computing  
St. Luke, HCDSB

**H06, A Remote Control Puppet**

Brancon Yancan,  
J 7-8, Engineering and Computing  
St. Luke, HCDSB

**H07, Can Crusher**

Ivan Jimenez,  
J 7-8, Engineering and Computing  
St. Luke, HCDSB

**H08, Toxic Salt Syndrome**

Rebecca Barnard,  
J 7-8, Biotechnology  
St. Marguerite d'Youville, HWCDSB

**H09, Electrifying Temperatures**

Erica Szymkiewicz,  
J 7-8, Physical Sciences & Math  
St. Mark, HWCDSB

**H10, Ozone Here, Ozone There, Ozone Everywhere!**

Camilla Michalski,  
J 7-8, Earth and Environmental  
St. Mark, HWCDSB

**H11, Plop, Plop, Fizz, Fizz**

Kolic Mikhael, D'Angelo Joseph  
J 7-8, Health Sciences  
St. Mark, HWCDSB

**H12, Methan Mayhem**

Anthony Cicchi,  
J 7-8, Earth and Environmental  
St. Mark, HWCDSB

**H13, What's Eating You?**

Chelsea Kolic,  
J 7-8, Health Sciences  
St. Mark, HWCDSB

**H14, Whistle While You Work**

Luke Deketele, Lucas Petta  
J 7-8, Health Sciences  
St. Paul, HWCDSB

## Congratulations to all Science Fair participants!

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# EXHIBITOR LISTING continued...

**H15, Fatigue Effect**  
Tyler Kostyshyn,  
J 7-8, Health Sciences  
St. Paul, HWCDSB

**H16, Mind The Music**  
Una Di Gallo,  
J 7-8, Health Sciences  
St. Paul, HWCDSB

**H17, Paper vs. Light**  
Rebecca Thiel, Kaitlyn D'Costa  
J 7-8, Physical Sciences & Math  
St. Paul, HWCDSB

**H18, An Idle Threat**  
Tasha Slye,  
J 7-8, Earth and Environmental  
St. Paul, HWCDSB

**H19, Is The Toughest Stain Really A Problem**  
Lucas Re, Lukas Lamanes  
J 7-8, Physical Sciences & Math  
St. Paul, HWCDSB

**H20, Going Geen?**  
Kirsten Bialachowski, Sabrina Smith  
J 7-8, Life Sciences  
St. Paul, HWCDSB

**I01, How Fast Can You Throw ?**  
Nicholas Bruccoleri, Tayler Islami  
J 7-8, Health Sciences  
St. Paul, HWCDSB

**I02, HANG UP AND DRIVE**  
Nicole Cialini, Alana Tedeschi  
J 7-8, Health Sciences  
St. Therese of Lisieux, HWCDSB

**I03, Sweet Relief**  
Francesca Altobelli, Simona Rossi  
J 7-8, Health Sciences  
St. Therese of Lisieux, HWCDSB

**I04, ICE ICE BABY**  
Nicholas Parabem, Rebecca Pongetti  
J 7-8, Health Sciences  
St. Therese of Lisieux, HWCDSB



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**EXHIBITOR LISTING** continued...**I05, CHEW YOUR WAY TO SUCCESS**

Melissa Maida, Desiree Restivo  
J 7-8, Engineering and Computing  
St. Therese of Lisieux, HWCDSB

**I06, solid+liquid = ?**

Emily Doyle, Chelsea Ruggiero  
J 7-8, Physical Sciences & Math  
St. Therese of Lisieux, HWCDSB

**I07, Dare to Smoke ?**

Natalie Sorbara, alexandra Tinebra  
J 7-8, Health Sciences  
St. Therese of Lisieux, HWCDSB

**I08, Lost your marbles ?**

Emma Deakin,  
J 7-8, Physical Sciences & Math  
St. Therese of Lisieux, HWCDSB

**I09, THE PHYSICS OF MARTIAL ARTS**

Kyle Marshall,  
J 7-8, Health Sciences  
St. Therese of Lisieux, HWCDSB

**I10, The Truth Lies At Your Fingertips**

Tajseem Hussain, Israa Saleh  
J 7-8, Health Sciences  
Templemead, HWCDSB

**I11, I'm In Pain! What Do I Take?**

Lavan Emin, Gulan Shakrollah  
J 7-8, Health Sciences  
Templemead, HWCDSB

**I12, Flush...Splish, Splash...Gone?**

Kayla Jarvis, Erin Janssen  
J 7-8, Physical Sciences & Math  
Templemead, HWCDSB

**I13, The Effect of Distractors on Target Detection**

Laura Stevens,  
S 11-12, Health Sciences  
Thomas A. Blakelock High School, HDSB

**I14, Seeing Double**

Matthew Tudball,  
I 9-10, Biotechnology  
Thomas A. Blakelock High School, HDSB

**I15, Locked Out: Can We Design a Hydraulic Lock?**

Tim Droppo, Evan Despond  
J 7-8, Engineering and Computing  
W. H. Morden Public School, HDSB

**I16, Capillary Action and Water Filtration**

Russell Philip,  
J 7-8, Earth and Environmental  
W. H. Morden Public School, HDSB

**I17, You Crack Me Up**

Arundhathi Desai,  
J 7-8, Health Sciences  
W. H. Morden Public School, HDSB

**I18, Sound Waves Under Water**

Marisa Benjamin, Michelle Meleskie  
J 7-8, Physical Sciences & Math  
W. H. Morden Public School, HDSB

**I19, Which is the Better Buffer?**

Emily Farquharson,  
J 7-8, Earth and Environmental  
W. H. Morden Public School, HDSB

**I20, You're Growing On Me**

Emma Harris,  
J 7-8, Life Sciences  
W. H. Morden Public School, HDSB

**K01, Computer ANTimation**

Tobias Williams,  
I 9-10, Engineering and Computing  
Highland Secondary, HWCDSB



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**EXHIBITOR LISTING** continued...

**K02, Something Fishy**  
Hunter MacNeil, Humphrey Dakota  
J 7-8, Life Sciences  
Hillcrest, HWDSB

**K03, A Phantom Culture**  
Dina Hamed, Seema Alnajar  
J 7-8, Earth and Environmental  
Ancaster Meadow, HWDSB

**K04, The Ancient Siege Weapon**  
Brock Lalla, Derrick Baptist  
J 7-8, Physical Sciences & Math  
Lisgar, HWDSB

**K05, Styrofoam Stereo**  
Evan Medeiros, Dominik Lauks  
J 7-8, Engineering and Computing  
St. Mark, HWCDSB

**K06, Anti Gravity**  
Catrina Acocella, Dominique Kresina  
J 7-8, Engineering and Computing  
Regina Mundi, HWCDSB

**K07, Testing the Visibility Within a House of Mirrors Question with a Computer Simulation**  
Ian Sinke,  
I 9-10, Engineering and Computing  
Home Schooling, Independent

**K08, High and Low Pass Frequency Filters**  
Yixiong Lok,  
J 7-8, Engineering and Computing  
Rotherglen School (Oakville),  
Independent

**K09, SKY SAILS The Sail to Save the Environment**  
Mark Burseay,  
J 7-8, Earth and Environmental  
Hillfield Strathallan College, Independent

**K10, Wind Turbine vs. Solar Panel vs. Municipal Electricity**  
Shaan Bhambra,  
J 7-8, Engineering and Computing  
Eastview Public School, HDSB

**K11, A Bright Idea**  
Michelle Sulewski,  
J 7-8, Earth and Environmental  
Dalewood, HWDSB

**K12, Ultra Simple Electric Generator**  
Ashley Chen, Kendra Heney  
J 7-8, Physical Sciences & Math  
St. Luke, HCDSB

**K13, Wireless Morse Code Communicator**  
Colin Merkel, David Bell  
S 11-12, Engineering and Computing  
Abbey Park High School, HDSB

**K14, LRNS: The Chicken Robot**  
Nathan Terbrack,  
I 9-10, Engineering and Computing  
Bishop Ryan High School, HWCDSB

**L01, Robots, Robots Everywhere**  
Tesla Filice,  
J 7-8, Engineering and Computing  
Lisgar, HWDSB



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**EXHIBITOR LISTING** continued...**L02, iSee 3-D**

Brett Piva, Curtis Marcoux  
S 11-12, Engineering and Computing  
Christ the King High School, HCDSB

**L03, Earth, Wind and Water vs. Foundations**

Lucas Cheeseman, Sean Thompson  
J 7-8, Engineering and Computing  
Oakville Christian School, Independent

**L04, How safe is well water?**

Samuel Habicht,  
I 9-10, Earth and Environmental  
Home Schooling, Independent

**L05, Microarray Profiling of Gene Expression in the Normal Aging Brain of Drosophila**

Aaron Hakim,  
S 11-12, Life Sciences  
Appleby College, Independent

**L06, Listen To Your Brain**

David Scott, Navid Malek  
J 7-8, Health Sciences  
Lisgar, HWDSB

**L07, Optimissing Optical Illusions**

Ghislain Mckay, Hamid Nessek  
I 9-10, Engineering and Computing  
Georges-P. Vanier, CSDCSO

**L08, "Antifreeze My Genes!"- The Effect of Antifreeze Proteins on Plant Survival**

Dishan Weeratunga, Sagar Patel  
S 11-12, Biotechnology  
North Park Collegiate and Vocational  
School, GEDSB

**L09, Trip the Light Fantastic**

Eric Dyer,  
J 7-8, Earth and Environmental  
Home Schooling, Independent

**L10, Windmill Operated Waterwell**

Jenny Arnold, Melissa Mandarino  
J 7-8, Engineering and Computing  
St. Luke, HCDSB

**L11, Smart Batteries**

Sarah Medeiros,  
J 7-8, Physical Sciences & Math  
Oakville Christian School, Independent

**L12, What is the best type of cars?**

Abdul Rahman EL-Rabbany,  
J 7-8, Engineering and Computing  
Al-Falah Islamic School, Independent

**L13, Speak Up for Mobility**

Nick Weaver,  
S 11-12, Engineering and Computing  
Highland Secondary, HWDSB

**L14, Hit Me With Your Best Shot!**

Lauren Tabone,  
J 7-8, Physical Sciences & Math  
Holy Name of Mary, HWCDSB

**L15, Solar Powered Street Lights**

Nurefsan Davulcu, Julia Stender  
J 7-8, Earth and Environmental  
Sir William Osler, HWDSB

**L16, There's A PLC in My House!**

Tian Duo Wang,  
J 7-8, Engineering and Computing  
Dalewood, HWDSB

**L17, Magneto Energy**

David Najda, Tyler Soolum  
J 7-8, Engineering and Computing  
Blessed Kateri Tekakwitha, HWCDSB

**L18, Super Suction**

Carly Ross, Matea Sadikovic  
J 7-8, Physical Sciences & Math  
Bennetto, HWDSB

**M01, Perfect Plastic**

Sophia Coulter-English, Gillian Walczak  
I 9-10, Earth and Environmental  
Notre Dame High School, HCDSB

**M02, Sound waves and Music**

Daniel Olejarz, Nicholas Lazzarato  
J 7-8, Physical Sciences & Math  
St. Ann (Ancaster), HWCDSB

**M03, The Toughest Enemy**

Caroline Gobran,  
J 7-8, Health Sciences  
Oakville Christian School, Independent

**M04, Chlorophyll Conundrum**

Camille Beaudoin, Melanie Golbeck  
J 7-8, Earth and Environmental  
Oakville Christian School, Independent

**M05, I have seen the light 2! A model for calculation of treatment time for Photodynamic Therapy**

Romita Sur,  
I 9-10, Health Sciences  
Hillfield Strathallan College, Independent

**M06, Desalted**

Kinzi Trout, Samantha Marshall  
J 7-8, Earth and Environmental  
Lisgar, HWDSB

**M07, Military Armed Reconnaissance Combat Robot**

Joseph Almonte,  
S 11-12, Engineering and Computing  
Bishop Ryan High School, HWCDSB

**M08, How Do Video Games Effect Your Blood Pressure**

Reis Andrew, Foster Corey  
J 7-8, Health Sciences  
St. Mark, HWCDSB

**M09, Gassy, Grassy, Greener Plants**

Lauren Wong,  
J 7-8, Earth and Environmental  
Appleby College, Independent

**M10, Reaching Higher - The Aerodynamics of Rockets (Part Two)**

Jacob Weaver,  
J 7-8, Engineering and Computing  
Dr. John Seaton, HWDSB

**N01, EcOven**

Maggie MacDonald, Abigail Picyk  
J 7-8, Earth and Environmental  
Ancaster Senior, HWDSB

**N02, Quake Proof!**

Christopher Rubletz, Edward Hill  
J 7-8, Engineering and Computing  
Lisgar, HWDSB

**N03, Pykrete and Ice**

Scott Cameron, Stagg Alan  
J 7-8, Physical Sciences & Math  
W. H. Morden Public School, HDSB

## SPECIAL AWARDS

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

### Halton Regional Chairman's Award for Student Excellence

Prize: \$300 and certificates to each of three projects.

Criteria: Deserving projects by Halton students, any category, any level.

### City of Hamilton Mayor's Award

Prize: 1st: \$500, 2nd: \$300, 3rd: \$200

Criteria: Deserving projects by Hamilton students in the Biotechnology division.

### Acquired Brain Injury Awards

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

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

### Ambitious City Toastmasters Leadership and Communications Awards

Prize: \$50 to each of two projects

Criteria: Leadership Award: Project demonstrating outstanding leadership skills in the area of innovative research.

Communications Award: Outstanding clarity in written format and communication during the interview.

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- Summer Company Program – Students can receive up to \$3,000 to start and run their own summer business
- Business Registration Service
- Statistical & Demographic Information
- Exporting Assistance Programs
- Small Business Seminars and Advice
- Advocacy
- On-line Business

**SPECIAL AWARDS** continued...**Artistically Inspired Display Award**

Prize: Two awards of \$50 each

Criteria: To the most artistically inspired display

**Bell Computer and Communications Awards**

Prize: 1st: \$150; 2nd: \$100.

Criteria: For projects regarding communication between people, between machines, or between people and machines.

**Canadian Institute of Mining & Metallurgy Hamilton Branch Awards**

Prize: Two cash prizes of \$100 each.

Criteria: For projects relating to mining and metallurgy.

**Canadian Nuclear Society (Sheridan Park 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: Three awards: \$50, \$35, \$25.

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

**Chemical Institute of Canada, Hamilton Section Award**

Prize: Three cash prizes of \$100 each.

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

**Conservation Halton Environmental Sciences Award**

Prize: \$100 each to two projects

Criteria: Best and second best Environmental Projects done by Halton Student(s)

***Congratulations to all BASEF 2008 participants!***



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## SPECIAL AWARDS continued...

### The DaVinci Awards

Sponsored by the Hamilton Association for the Advancement of Literature, Science & the Arts  
Prize: \$300, honorary membership in the Association and an invitation to attend meetings  
Criteria: The best candidate combination of personal initiative with the use of the scientific method.

### D.E.N.M. Mining & Mineral Processing Awards

Prize: Three cash awards of 1<sup>st</sup> prize \$100, 2<sup>nd</sup> prize \$75, and 3<sup>rd</sup> prize \$50  
Criteria: Outstanding engineering, physical sciences or environmental sciences projects (any level) with a preference to projects relating to Mining and Mineral processing

### ArcelorMittal Dofasco Chemical Testing Award

Prize: \$100  
Criteria: Project that best displays the use of chemical testing and/or chemical principles to solve a technical problem.

### ArcelorMittal Dofasco Commercial Award

Prize: \$100  
Criteria: Project which best displays, the use of commercial and business planning tools in developing a potentially new or improved commercial product

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## **SPECIAL AWARDS** continued...

### **ArcelorMittal Dofasco Engineering & Maintenance Technology Award**

Prize: \$100

Criteria: Deserving project that best displays the use of Engineering & Maintenance Technology principles and design to solve a technical problem.

### **ArcelorMittal Dofasco Environmental & Energy Award**

Prize: \$100

Criteria: Project that best displays the use of physics, chemistry or engineering to explore or solve a technical problem associated with environmental issues.

### **ArcelorMittal Dofasco Hot Mill Award**

Prize: \$100

Criteria: Project that best displays the use of creative principles and design to solve a manufacturing or process problem.

### **ArcelorMittal Dofasco Human Resources Training and Development Award**

Prize: \$100

Criteria: Project that best displays the use of teaching and training techniques in explaining or exploring a technical program.

### **ArcelorMittal Dofasco Information Systems Award**

Prize: \$100

Criteria: Deserving project that uses Information Systems and design to solve a technical problem.

### **ArcelorMittal Dofasco Market Development and Product Applications Award**

Prize: \$100

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

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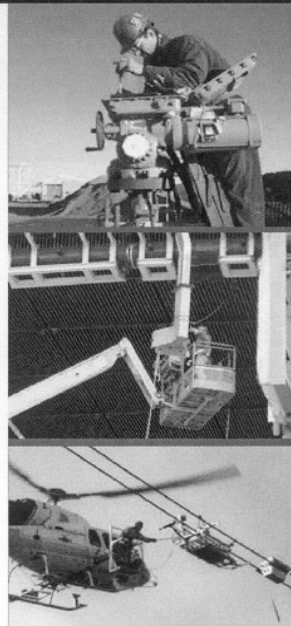
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**SPECIAL AWARDS** continued...**ArcelorMittal Dofasco Medical Department Award**

Prize: \$100

Criteria: Project that best displays the use of scientific principles in exploring or solving a problem related to human health issues.

**ArcelorMittal Dofasco Process Automation Award**

Prize: \$100

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

**ArcelorMittal Dofasco Product Development Business Process Award**

Prize: \$100

Criteria: Project that best displays the use of Product Development principles and design in developing a new consumer product with commercial potential.

**ArcelorMittal Dofasco Quality Systems Award**

Prize: \$100

Criteria: Project that best displays the use of Quality Systems principles and design to solve a technical problem with a Health and Safety Focus.

**ArcelorMittal Dofasco Research and Development Award**

Prize: \$100

Criteria: Project that displays the best use of investigative research and scientific principles to explore or solve a technical problem.

**ArcelorMittal Dofasco Steelmaking Award**

Prize: \$100

Criteria: Project that best displays the use of Engineering and Materials Science principles to solve a technical problem.

**Dr. Colin J.L. Lock Memorial Chemistry Award**

Prize: \$100

Criteria: Project demonstrating the best application of chemistry.

**Dr. Leonard Harris Award in Health Sciences or Environment**

Prize: \$100 to each of two projects

Criteria: Awarded to the most interesting projects which involve an experiment relating to human biology, health or disease.

**Dr. Odette Tunks Awards**

Prize: Two awards of \$100 each

Criteria: Two awards for the most creative or innovative project, any level.

**Electrical Construction Association of Hamilton Award**

Prize: \$250

Criteria: A project displaying the best, safest use of electricity in a creative manner.

**EnviroExpo Special Award sponsored by Via Rail Canada**

Prize: One award of \$100

Criteria: An outstanding project that applies the combined skill and science to address a pressing environmental issue. In addition to traditional science content, the project must incorporate an artistic discipline and fall into one of the seven areas of environmental focus: Renewable Energy, Sustainable Development, Resource Management, Environmental Influences on Health, Culture Society and the Environment, the Greening of Products and Services or Biodiversity. The EnviroExpo Special Award is open to all students, grades 7-12

**SPECIAL AWARDS** continued...

**Gowlings Innovation Award**

Prize: \$250

Criteria: The award will be given in any category for a project that exploits 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 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**

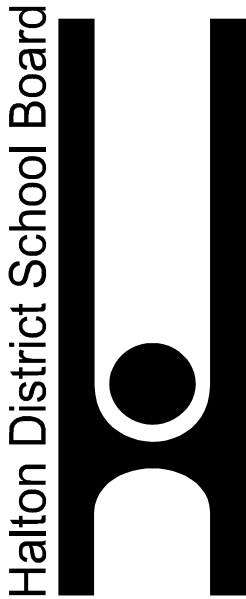
Prize: \$50 and certificate

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

**Helen Crawford Memorial Award**

Prize: \$100

Criteria: A deserving project in Health Sciences, with preference given to projects related to the causes or treatment of cancer



*The Halton District School Board  
would like to congratulate  
all participating students in the 2008  
Bay Area Science and Engineering Fair.  
Best wishes for continued success!*

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## **SPECIAL AWARDS** continued...

### **Hillfield Strathallan College Awards of Excellence**

#### **Design and Engineering**

Prize: One cash award of \$100

Criteria: Senior project that best displays innovation in identifying an ergonomic design problem

#### **Environmental Sciences**

Prize: One cash award of \$100

Criteria: Junior or Intermediate project that best displays innovation in identifying an environmental problem

#### **Health Sciences**

Prize: One cash award of \$100

Criteria: Intermediate project that best displays excellence in sampling design in a health science project

### **Horizon Utilities Corporation Award**

Prize: Three awards of \$100 each

Criteria: Project that best demonstrate the production of electrical energy from "green sources", or new, viable approaches to using electrical energy more efficiently

### **Hydro One Energy Ambassador Award**

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

Criteria: For a project at any level, with outstanding scientific quality and whose primary focus is the distribution, supply management, use or conservation of electrical energy (or alternatively, other forms of energy if suitable projects relating to electrical energy are not available)

### **IEEE Hamilton Section Awards**

Prize: Two prizes of \$100 each

Criteria: Two projects which shows the best use of Electronics in a science or engineering project, any level.

### **Intel Excellence Award for regional science fairs affiliated with the Intel International Science & Engineering Fair**

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

Criteria: The top winner of Computer Science category in Intermediate or Senior potential of the fair.

### **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 - A certificate awarded to the High School project which exhibits Outstanding Ability and Creativity in an Atmospheric Science Exhibit

ASM Materials Education Foundation - A certificate awarded to the High School project which is the Most Outstanding Exhibit in Materials Science

Association for Women Geoscientists - A certificate to a female student (at any level) whose project exemplifies High Standards of Innovativeness and Scientific Excellence in the Geosciences

Herbert Hoover Presidential Library Association - A certificate and medallion to the Outstanding Engineering Project (any level) at the fair.

Intel Excellence in Computer Science - \$200 prize to the High School project which is the top ranked project in the Computer Science category at the fair.

## **SPECIAL AWARDS** continued...

Mu Alpha Theta - A certificate to the High School project Demonstrating the Most Challenging, Original, Thorough and Creative Investigation of a Problem involving Mathematics. It does not have to be entered in the Mathematics category.

Ricoh - A certificate to the project (any level) whose "Principles and Technical Innovations offer the Greatest Potential for Increasing our Ability to Grow Environmentally Friendly and Socially Responsible Businesses".

Society for In Vitro Biology - A certificate awarded to the most Outstanding Grade 11 student exhibiting in the areas of Plant or Animal In Vitro Biology or Tissue Culture.

Yale Science and Engineering Association - A certificate given to the Most Outstanding Grade 11 student exhibiting in the areas of Computer Science, Engineering, Physics or Chemistry.

### **Investigative Science Awards**

Prize: Two awards of \$250 each

Criteria: Two projects showing the best application of creative problem solving, any project, any level.

### **The James A. Winger Award sponsored by Hamilton Amateur Astronomers**

Prize: \$50 award plus an Astronomy book

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

### **John. W. Howard Materials Research Award**

Prize: \$100

Criteria: A project demonstrating innovation in engineering materials, especially concrete.

### **Clean City Liaison Committee/ City of Hamilton Public Works Award**

Prize: \$100

Criteria: The entry that best addresses the effect on the environment of littering, dumping, and defacing property and/or processes and systems to effectively manage the collection and disposal of litter.

### **McMaster University Department of Chemistry Award**

Prize: \$100 plus certificate

Criteria: An outstanding senior or intermediate project connected to chemistry

### **McMaster Engineering Society Award**

Prize: \$250

Criteria: Best junior engineering project.

### **McMaster University Faculties of Science & Engineering Tuition Awards**

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

Criteria: Excellent science or engineering projects.

### **The Venture Science and Engineering Innovation Award, McMaster University**

Prize: Free registration to Venture Engineering Science camp on June 30-July 4<sup>th</sup>, 2008 or August 5<sup>th</sup> – August 8<sup>th</sup>, 2008 and a plaque to the winning project

Criteria: Is presented to one Junior project that demonstrates creativity and originality.

### **Mechanical Contractors Association of Hamilton Award**

Prize: \$250

Criteria: Best intermediate or senior engineering project.



**SPECIAL AWARDS** continued...**Mohawk College School of Engineering Technology Awards****Building & Construction Sciences Awards**

Prize: \$50

Criteria: deserving project related to any branch of civil engineering, any category, any level.

Prize: \$50

Criteria: deserving project related to planning, design, operation of any transportation mode or facility, any category, any level.

Prize: \$50

Criteria: deserving project related to building sciences, building materials, energy conservation in structures, any category, any level.

**Chemical and Environmental Engineering Technology Awards**

Prize: \$100

Criteria: One deserving intermediate or senior project related to applied chemistry.

Prize: \$50

Criteria: One deserving junior project in environmental studies.

**Computer Science & Information Technology - Computer Excellence Award**

Prize: \$50

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

**Electrotechnology Engineering Award**

Prize: Two cash awards of \$50 each

Criteria: One award for \$50 to a deserving junior project in engineering studies. Second award for \$50 to a deserving project in engineering studies



*Congratulations to all of this year's participants!*

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## **SPECIAL AWARDS** continued...

### **Mechanical & Industrial Engineering Technology Awards**

Prize: \$100

Criteria: Outstanding project related to industrial engineering or manufacturing, any level

### **Mathematics Awards**

Prize: \$75 to each of two projects

Criteria: Deserving projects in the mathematics division, or any project from any division demonstrating a thorough understanding of statistics, any level.

### **National Science & Engineering Research Council (NSERC) Awards**

Prize: \$250 to each of two projects.

Criteria: Deserving projects demonstrating innovative and creative research by the student.

### **Nelson Steel Awards**

Prize: \$50 to each of three projects.

Criteria: Outstanding projects related to each of the following fields: Steel, Environmental and Chemistry

### **Nicola Simmons Award in Cognition Studies**

Prize: \$100

Criteria: An exemplary project in cognition studies.

### **Nipissing University Regional Science Fair Award**

Prize: One scholarship award of \$1000

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

### **Ontario Association of Medical Laboratories**

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

Criteria: Outstanding project at any level in disciplines such as biochemistry, chemistry, microbiology, toxicology, and forensic science, and incorporating analytical laboratory techniques or physical methods of analysis, for example a spectrometer or chromatograph.

### **Ontario Ministry of the Environment Award**

Prize: One cash prize of \$100, to be sent after the fair and one award must go to a junior project.

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

### **Primary Fluid Systems Awards**

Junior or Intermediate Engineering Awards

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

Criteria: Deserving projects in junior or intermediate engineering.

Junior or Intermediate Physical Sciences Awards

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

Criteria: Deserving projects in junior or intermediate physical sciences.

Junior or Intermediate Earth & Environmental Awards

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

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

## SPECIAL AWARDS continued...

### Professional Engineers Ontario (Hamilton Chapter) Awards

Prize: 1st: \$150, 2nd: \$125, 3rd: \$75

Criteria: To the top three outstanding Engineering Project Exhibitors at any level.

### Professional Engineers Ontario (Oakville Chapter) Engineering Awards

Prize: Two awards of \$100 each

Criteria: To two deserving engineering projects.

### Royal Botanical Gardens Award

Prize: \$100 gift certificate from RBG shop plus one year RBG family membership

Criteria: Best project in botanical or environmental sciences

### Safety Management Systems Software Award

Prize: \$100 and a plaque

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

### University of Ontario Institute of Technology Innovation Award

Prize: Two Awards of \$100 each, to be sent after the fair and one award must go to a junior project.

Criteria: Outstanding projects demonstrating the most innovative development, adaptation, or use of technology in any subject area.

### University of Ottawa Admission Scholarship

Prize: \$1000 admission scholarship (or two \$500 scholarship 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.

### Zonta Club of Hamilton Awards

Prize: \$300 will be shared by a limited number of projects.

Criteria: Outstanding projects by females, any category, any level.



## 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 BASEF Regional Science Fair. They are the result of an extensive judging process undertaken by up to 150 independent judging volunteers who have come forward from educational institutions, local government organizations, business and industry in our regions. All participants in the Bay Area Science and Engineering Fair are eligible to win Merit Awards.

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

#### **Scoring:**

over 90% and ranking in top 7.5% of category:  
earns **Gold medal** & cash award

over 80% and next 10% of category:  
earns **Silver medal** & cash award

over 75% and next 12.5% of category:  
earns **Bronze medal** & cash award

over 75% and not in the top 30% of category:  
earns **Honourable Mention** certificate & cash award

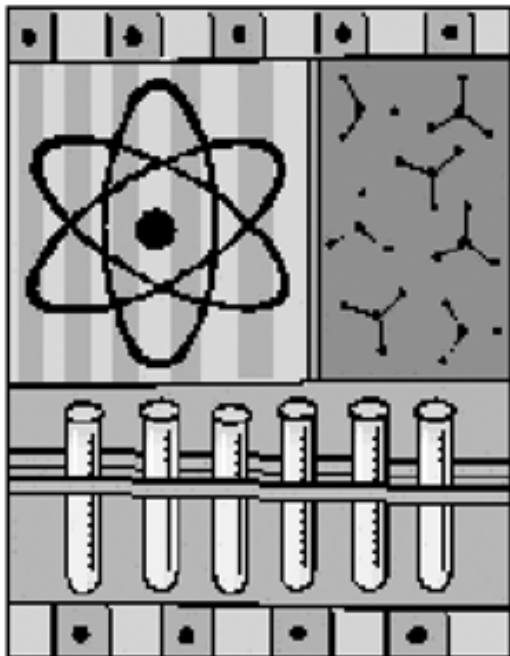
#### **For Junior, Intermediate, Senior levels in:**

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

### **The Mohawk College & Sheridan Institute Tuition Scholarships**

Mohawk College of Applied Arts and Technology & Sheridan Institute of Technology and Advanced Learning will provide \$500 scholarships to ALL BASEF 2008 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 or Sheridan. If multiple scholarships are accumulated over more than one year, only one of these scholarships may be used.

# Proud sponsors of BASEF and the 2008 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.**

Burlington, Ontario  
[www.primaryfluid.com](http://www.primaryfluid.com)



# GRAND PRIZE AWARDS

WINNERS OF GRAND AWARDS HAVE DESIGNED, RESEARCHED AND PRESENTED EXCELLENT PROJECTS.

## ARCELORMITTAL DOFASCO PINNACLE AWARDS

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

## ROY MIDDLETON AWARD

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

## SUSAN JOYCE MEMORIAL AWARDS

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

## HERB GILDEA MEMORIAL TROPHY

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

## BASEF COMMITTEE TROPHY

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

## The Pinnacle Award Trophies



**Best in Fair Trophy**

**Topped by a polar bear, Ursa maritimus.**

**Represents and celebrates our living world.**



**2<sup>nd</sup> Best in Fair Trophy**

**Topped by an Armillary Celestial Sphere, a scientific instrument used by the early astronomers, who often were also the earliest mathematicians.**

**Celebrates innovation, creativity and discovery.**



**3<sup>rd</sup> Best in Fair Trophy**

**Topped by an Amethyst, Ontario's official mineral.**

**Celebrates the Inanimate World and the Greater Universe.**

# GRAND PRIZE TRIP AWARDS

## INTEL INTERNATIONAL SCIENCE & ENGINEERING FAIR TRIP AWARDS

All expense-paid trips to the 2008 Intel International Science & Engineering Fair, to be held in Atlanta, Georgia, USA from May 11 to 16, 2008. Chosen from excellent secondary school (Intermediate & Senior level) projects, up to 4 trips, two singles and a pair project (dependant on funding levels), will be awarded. Winners must be able to travel into the USA (Canadian citizenship or landed immigrant status) and possess or be able to obtain a valid passport.

**Sponsors are**

- McMaster University
- Mohawk College of Applied Arts and Technology
- Sheridan Institute of Technology and Advanced Learning



## CANADA WIDE SCIENCE FAIR TRIP AWARDS

All expense-paid trips to the 2008 Canada Wide Science Fair, to be held in Ottawa, Ontario from May 12 to May 20, 2007. Up to 16 trips (dependant on funding levels) will be awarded for excellent projects. All projects entered in BASEF 2008 are eligible.

**Sponsors are**

- Boehringer Ingelheim
- City of Hamilton, Economic Development
- Comstock Canada Ltd.
- D.E.N.M. Ltd Engineering
- Edward Oldham, P.Eng, Patent and Trademark Agent
- Halton Catholic District School Board
- Halton District School Board
- Halton Region, Business Development Department
- Hamilton Halton Construction Association
- Hamilton Industrial Environmental Association
- Hamilton Wentworth Catholic District School Board
- Hamilton Wentworth District School Board
- Rotary Club of Hamilton
- Sci-Tech Ontario
- Triple Crown Enterprises
- Union Gas



YOUTH SCIENCE  
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JEUNESSE CANADA



## TEAM SCI-TECH ONTARIO

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





# Do I have to be a genius to create a science project?

At Bell, we believe that strokes of genius are important to develop innovative products and services that will improve the world we live in.

As partners in your community, we are committed to supporting the programs that allow our kids to meet their full potential.

Good luck to all the participants of the 2008 Bay Area Science and Engineering Fair!

