



# Bay Area Science and Engineering Fair

# BASEF

# 2004

**SPONSORED BY THE ONTARIO TRILLIUM FOUNDATION**

**Fair Dates: March 31<sup>st</sup> to April 3<sup>rd</sup>, 2004**  
**Sheridan College, Oakville**  
**Project Registration: Starts February 9, 2004**



Calling all students in grades 7 through 12 who live in Hamilton, Halton, Brant or Haldimand-Norfolk! It's time to gear up for the **absolutely free** 2004 Bay Area Science and Engineering Fair, taking place March 31<sup>st</sup> to April 3<sup>rd</sup> 2004 at Sheridan College Institute of Technology and Advanced Learning, in Oakville. Project registration is tentatively scheduled to be online between Feb 9, 2004 and March 1, 2004 on the BASEF website: [basef.mcmaster.ca](http://basef.mcmaster.ca)

## BASEF 2003

2003 was an astonishing year for BASEF, with a participation increase of 60% over BASEF 2002. We welcomed 483 students, from 63 schools who exhibited 327 amazing projects. We were particularly pleased that students from the Grand Erie District School Board, a new addition to our region, chose to participate.

Many students, parents, teachers, volunteers and organizing committee members will remember BASEF 2003 as the year of the late winter storm. While it resulted in the cancellation of the much anticipated Activity Day, more than 1500 people braved the weather and hazardous roads to attend the BASEF 2003 Awards Ceremony. Almost half of the students in attendance were rewarded for their efforts and were recipients of an award. All participants received a "goody" bag that included the official BASEF 2003 tee shirt, pin as well as other items.

## Over \$ 71,000 Awarded at BASEF 2003

The grand total of prizes awarded during the BASEF 2003 Awards Ceremony at McMaster University was an astounding \$ 71,000, shared by almost 190 students!

BASEF is a volunteer driven, registered charitable organization and relies on the generous donations of sponsors to stage the fair, award all expense paid Grand Trip Awards, provide divisional merit awards and work actively in the community to encourage youth in science, engineering and technology.

Special awards are funded by sponsors with an interest in a particular fair category and division such as Junior Engineering. In total, \$ 57,000 was awarded from BASEF general funding and \$14,500 in Special Awards.

Several of our top students received more than \$ 1000 in cash, trips to the National or International Science Fairs, along with scholarships, medals, plaques and trophies. Many of these students won additional awards at the National and International Fairs. Who says Science Fair participation is all work with little reward?



Project Display Area BASEF 2003 – McMaster University

### **Start your Projects!**

The 2004 Fair is open to students registered in grades 7 to 12 in schools within the Hamilton and Halton regions, Brant and Haldimand-Norfolk counties, including independent or private schools. If your school conducts a science fair, you may only advance to BASEF through your school's fair. If your school does not conduct a science fair, you may enter into BASEF directly. We do require however that you still enter as a representative of your school and school board. All registrations from any source are subject to the "maximum number of projects" limits. This "number" will be determined early in the new year.

### **Prizes and Awards**

At our 2003 fair over \$21,000 in cash was presented for Merit and Special awards. The total value of the trip awards to the Canada Wide and International Fairs was nearly \$48,000. In addition, McMaster University awarded four scholarships of \$ 500 each. In 2004, the major prizes will include up to 20 student trips to the Canada Wide Science Fair to be held in Newfoundland and up to 4 student trips to the International Science Fair to be held in Portland, Oregon. The trips are all expenses paid and include adult chaperones.

### **Categories:**

Projects are entered in one of the following categories (currently under revision, see [basef.mcmaster.ca](http://basef.mcmaster.ca) for details in October):

- ◆ Biotechnology
- ◆ Earth and Environmental Sciences
- ◆ Engineering Sciences
- ◆ Life Sciences
- ◆ Physical Sciences
- ◆ Mathematics & Computing Sciences

There is a maximum of two students per project and each school is restricted to a total of number of projects in the junior level, intermediate and senior level. This number will be determined early in the new year. The levels are:

- ◆ Junior (grades 7 & 8)
- ◆ Intermediate (gr. 9 & 10)
- ◆ Senior (gr. 11 to 12)

***All intermediate and senior students must complete a research plan prior to experimentation. For details and the required forms, please see the science fair website: [basef.mcmaster.ca](http://basef.mcmaster.ca)***

Enter early as places are limited. Registration is tentatively scheduled to begin February 9 at noon and end March 1 at noon. Students must be present for afternoon Judging on April 1, 2004.

### **Interesting Facts about Science Fairs:**

Approximately 500,000 young Canadians undertake science and technology projects. More than 25,000 of them participate in nearly 100 Regional Science Fairs such as BASEF across Canada. Approximately 400 of the best in Canada, move on from the Regional level to compete at the annual Canada Wide Science Fair.



*BASEF 2003 3<sup>rd</sup> and 1<sup>st</sup> place Best in Fair Pinnacle Award winners, Anthony Chiarelli and Dayna Walker*

*These grade 8 students not only went on to compete at their 2<sup>nd</sup> CWSF, but also turned their projects into award winning web sites for the 2003 Canada Wide Virtual Science Fair. ([www.virtualsciencefair.com](http://www.virtualsciencefair.com))*

## **BASEF 2004 Schedule**

**Wednesday, March 31, 2004:** Project set up from 4:00 pm – 8:00 pm in the Sheridan College Institute gym

**Thursday, April 1, 2004:** Judging of projects all day. Students must be present for judging only **during the afternoon** from 1:00 pm - 4:00 pm

**Friday, April 2, 2004:** Student Activities Day! Sign up for a variety of free activities including lunch

**Saturday, April 3, 2004:** Projects will be open for public viewing followed by the Awards Ceremony. Students are expected to be present from 10:00 am to noon and from 1:00 pm – 3:30 pm for the ceremony.

## **Project Registration - What's it All About?**

Each year, BASEF asks students who plan to attend our fair, to provide us with a lot of information about themselves, their school, and their project, a month or so before the fair begins. For students, teachers and parents new to the science fair experience, this can be a lot of effort, and sometimes the reason for it all is not clear. We thought it might be helpful to describe what we do with all this information, why it is important for you to be correct and complete in your answers, why we can't "reserve a spot" for your project and why you must bring the project you registered.

### **Enough Room**

The BASEF Regional Science Fair is one of the largest Science Fairs around, and also provides a lot of extra student activities. We need to do a lot of planning and preparing, to ensure we have enough space, enough tables and chairs, enough volunteers, and enough of all the other things needed for a successful fair. So of course, we need to know how many projects and students will be attending! The sooner we know this, the better, but we also want you to be sure you will be there. Over time, we have learned that knowing your details about 4 weeks before the fair, when we close our Registration period, gives us just enough time to do all the things we need to do with this information.

Some of the things we do with this information include:

- confirming all the data with teachers, and obtaining missing data
- assigning each project a location in the gym
- getting every project included in the Program
- assigning everyone to one of their activity choices
- ensuring there will be enough lunch during Activities for

everyone, including special needs and a million other details!!! It's also important to know that there is a limit to the number of projects that we can accept, based on the space available to us at Sheridan College. If more projects are registered than we have room for, we will accept projects based on final registration date, so it's always best to complete your registration sooner rather later!

### **Safety First**

One very important part of our job as fair organizers is to review every project to ensure that it meets all the safety and ethical requirements of science projects done in Canada. We are required to do this by our agreements with the Canada-Wide Science Fair, and the Intel International Science Fair, and because it is our legal obligation to do so. We pay particular attention to projects involving human or animal participants, or hazardous materials or equipment. A lot of the information describing your project is used by us to help you ensure that when you bring your project to the fair, it will be considered safe for viewing by the public, by judges, and by other students, in a busy public location. The rules for this are much tougher than you might be used to at home or in the classroom, so be sure to read the BASEF Rules!

We also are required to ensure that your project meets all the legal or ethical requirements that apply to your type of experiment. This can be quite a challenge if you did not describe your project very well, and means we must take time to contact you again to get more information. It may even mean we cannot accept your project, if we don't know what it is! So please read the BASEF rules carefully, and describe your project fully, including all required forms, so we can assess it!

It's also very important that you bring the project that you Registered! Each year we have a few students who decide to bring a

project to the fair which is not the one they Registered, and we must send them home. We cannot accept projects at the fair, which have not been registered properly, and we simply don't have time to screen projects after the close of Registration (besides, that wouldn't be fair to the other 99% of the students who did follow the rules).

### **Effective Judging**

Of course, the main purpose of the fair is the judging of the projects. It is important to ensure your project is in the correct judging Category, and to provide judges for each project who will understand the work you have done. Again, this means we need to know a lot about your project ahead of time, so we can make the best match possible between the nearly 200 judges who have volunteered, and the more than 300 projects which we expect to register for the science fair! This takes a lot of time to do properly, and is done ahead of time, using the information you provided about your project at Registration, along with the information our judges provide to describe their qualifications and experience. Of course, if you didn't bring the project you Registered, then the judges we assigned to your project may not be able to judge it! Once again, this is a reason why you must bring the project that you Registered! If you bring a different project to the fair, we will be unable to accept it.

We hope this article will help you understand what Project Registration is all about, and why we ask you for so much information ahead of time! If you do have any questions, please don't hesitate to contact us at BASEF (see the "Contacts" section of this Newsletter, or our website). We look forward to seeing you and the project you Registered at the fair!



## **BASEF 2003 Review**

Twenty of the 483 student participants at BASEF 2003 went on to compete in the Canada Wide Science Fair in Calgary Alberta. Four additional high school students earned spots on the prestigious Team Canada and competed at the Intel International Science and Engineering Fair in Cleveland, Ohio.

### **Grand Prize Winners from BASEF 2003:**

#### **1<sup>st</sup> Place Best in Fair Pinnacle**

**Dayna Walker**

*"Torque it Up!"*

St. Augustine, Hamilton

#### **2<sup>nd</sup> Place Best in Fair Pinnacle**

**Colin O'Flynn**

*"Embedded Artificial Intelligence"*

Westdale High, Hamilton

#### **3<sup>rd</sup> Place Best in Fair Pinnacle**

**Anthony Chiarelli**

*"See the Unseen, Hear the Unheard"*

St. Teresa of Avila, Hamilton

#### **Roy Middleton Award**

Dayna Walker

#### **Pfizer Canada Minister's Award of Excellence**

Dayna Walker

#### **BASEF Chairman's Award**

Danica Karl, Taryn Karl

St. Bernadette

### **IISEF Trip Award Winners**

**Kristian Montano, Rikesh Chohan**, Hillfield-Stathallan

**Colin O'Flynn**, Westdale H.S.

**Gord Simmons**, Aldershot H.S.



*BASEF members of Team Canada in Cleveland included Rikesh Chohan, Colin O'Flynn, Kristian Montano and Gordon Simmons.*

### **Canada Wide Trip Award Winners**

**Amanda Ault**, Rotherglen School

**Jordan Bowman**, St. Augustine

**Anthony Chiarelli**, St. Teresa of Avila

**David Cocchiarella**, St. Vincent de Paul

**Sean Curtis**, St. Thomas More

**Sarah Dickin**, Westdale H.S.

**Jonathan Flegg, Christopher Wells**, Appleby College

**Madeleine Martin**, St. John the Baptist

**Patrick Martin**, Bishop Ryan H.S.

**Ryan Perez**, St. Jerome

**Joseph Querques**, St. Joseph

**Marianne Querques**, Christ the King H.S.

**Bo Roberts-Leung**, Appleby College

**Olivia Spadafora**, St. David

**Dayna Walker**, St. Augustine

**Lauren Wallace**, George L. Armstrong

**Emilia Wilk**, Burlington Christian

**Elizabeth Rose von Rosenbach**, Appleby College

**Janeta Zurakowski**, St. Jerome

**Ashley Lamond**, Westview  
1<sup>st</sup> Alternate

#### **BASEF 2003 CWSF/IISEF Interesting Facts**

- 9 Halton students and 15 Hamilton students competed
- 2 sets of siblings exhibiting 4 projects attended CWSF (congratulations to the Querques and Martin families)
- 5 students were alumni of national or international competition (Anthony, Colin, Dayna, Patrick and Sean)
- BASEF 2003 sent its largest ever contingent to CWSF

**To view the complete set of BASEF 2003 results, visit our website at: [basef.mcmaster.ca](http://basef.mcmaster.ca)  
The web site displays all winning projects with a photo of the display, abstract and list of awards.  
The photos are detailed enough to get some great ideas on winning project designs.**

**BASEF Team Member  
Results from CWSF/ISEF**

**ISEF:**

**Colin O'Flynn**

3<sup>rd</sup> place Grand Award and  
\$1000 cash award

**CWSF:**

**Silver Medals: \$ 700 cash and  
\$ 1000 UWO scholarship**

Anthony Chiarelli  
David Cocciarella  
Jordan Bowman

**Bronze: \$ 300 cash and  
\$ 1000 UWO scholarship**

Marianne Querques  
Janeta Zurakowski

**Honourable Mention:**

Sean Curtis  
Sarah Dickin  
Madeleine Martin  
Patrick Martin  
Ryan Perez

**Special Awards:**

Anthony Chiarelli  
\$200 Biomedical Technology

Marianne Querques  
\$200 Peer Canada Innovation

Dayna Walker  
\$ 2000 5NR

Janeta Zurakowski  
\$150 Canadian Psychological  
Association



*BASEF 2003 team waiting to leave for Calgary, very  
early on May 11, 2003!*



*Team BASEF in Calgary after an exciting week  
of judging, tours and social activities.*



The Hamilton Spectator  
in partnership with  
McMaster University will  
again be hosting a series  
of free public lectures.

**The BASEF 2004 Organizing Committee  
gratefully acknowledges the financial support of  
our title sponsor for BASEF 2004**



**THE ONTARIO TRILLIUM FOUNDATION**

All lectures are held in The Hamilton Spectator  
Auditorium from 7:00 pm – 9:00 pm.

**Upcoming Lectures:**

**October 14:** SARS and West Nile Virus

**November 11:** Moving Beyond the Visible  
Universe

**December 9:** The Future of Drinking Water in  
Ontario

To register call 905-525-9140 ext 24934 or  
Email: [sciencecity@mcmaster.ca](mailto:sciencecity@mcmaster.ca)

### **Outreach Activities**

Over 40 on site visits were made to various schools and offices across the Regions of Hamilton-Wentworth and Halton. These included schools from all four local Boards, as well as a number of private schools. Presentations were also made to parent councils, mayors and regional officials, and secondary student councils to name a few. For the first time in our history, presentations were also made to interested staff and students from Brant and Haldimand-Norfolk Counties.

The theme of these visits is to promote Science Fairs and offer assistance to teachers, students and parents in the nuts and bolts of preparing projects for science fairs. The response has been tremendous and an increased number of schools and students benefited from the experience. This was reflected in the large increase in the number of projects at our BASEF 2003.

In addition to visits and group presentations, our Outreach Chair, Wuchow Than responded to numerous emails and phone calls and provided personal assistance and individual support.

Through funding from the Ontario Trillium Foundation,

we are in the process of preparing a package for teachers to better assist them in preparing their students for doing science fair projects. These should be ready for field testing in early 2004.

Mr. Than invites students, teachers and parents to contact him through BASEF for any assistance regarding science fair projects.

### **Volunteers**

Volunteers make BASEF possible. Dozens of people assist to organize, produce and staff the fair.

If you would like to find out about volunteer opportunities, visit our web site or phone and leave a message. A member of the organizing committee will be in touch with you.

### **Parents**

Parents play a huge role in a successful science fair experience. Through your support and encouragement your children are given the opportunity to develop an interest in science and technology. Visit the BASEF website for sources of project ideas and an opportunity to view the display of every winning student from BASEF 2003.

Parents might also find the downloadable (from [basef.mcmaster.ca](http://basef.mcmaster.ca)) Teacher Handbook of some assistance.

### **Honourary Co-Chairs**

BASEF is very pleased and honoured to announce the return of our Honourary Co-Chairs, Regional Chairman of Halton, Joyce Savoline and City of Hamilton Mayor Robert Wade for their 3<sup>rd</sup> consecutive year. Both have worked very hard in support of the student participants and the volunteers, and BASEF is deeply grateful. We would like to take this opportunity to say a special thank you to Mayor Wade who is stepping down as Mayor of Hamilton. It has been an honour and a pleasure to have you as our Honourary Co-Chair and we extend a sincere invitation to the new Mayor of Hamilton to continue in your path as our BASEF Honourary Co-Chair.

#### *The Honourary Co-Chairs of BASEF 2004*



Regional Chairman of Halton **Joyce Savoline**



City of Hamilton Mayor **Robert E. Wade**

## **BASEF Contact Information**

#### **Website:**

**[basef.mcmaster.ca](http://basef.mcmaster.ca)**  
Visit our website for more information on all aspects of BASEF 2004

#### **Paper Mail:**

**Bay Area Science and Engineering Fair**  
c/o McMaster University  
JHE A214  
1280 Main St. West  
Hamilton, Ontario, L8S 4K1

#### **Electronic Mail:**

**[basef@mcmaster.ca](mailto:basef@mcmaster.ca)**  
We will be monitoring our e-mail daily. It's one of the best ways to ask questions and receive prompt replies.

#### **Voicemail:**

**Hamilton:** 905-974-7975 or  
**Oakville:** 905-693-7076  
Please leave a message.