



Bay Area Science and Engineering Fair

Newsletter December 2006



BASEF 47th Annual Fair
March 28 - March 31, 2007
McMaster University

Calling all students in grades 7 through 12 who live in Hamilton, Halton, Brant, Haldimand or Norfolk! It's time to start your projects and prepare to register for the 2007 Bay Area Science and Engineering Fair. Online project registration is tentatively scheduled from February 5 - March 1, 2007.

BASEF 2006 Highlights

Thanks to the generosity of our sponsors, BASEF awarded over \$262,000 in cash, awards, scholarships and prizes at the 46th annual fair. This prize purse was shared by 421 participants from 62 schools displaying 281 amazing projects. Approximately 50% of the projects won at least one award and all participants received a goody bag with a retail value of \$250. More than 250 students attended the all expenses paid activity day event at the Canada Marine Discovery Centre.

The BASEF organizing committee extends our sincere thanks to the 2006 host site Mohawk College, for their assistance and cooperation in staging another successful fair.

Our top 20 students were awarded trips to attend the Canada Wide Science Fair (CWSF) in Saguenay, QC or the Intel International Science and Engineering Fair (IISEF) in Indianapolis, Indiana.

Seven BASEF students participated at IISEF as members of the 19 member Team Canada contingent. At IISEF, BASEF students won cash and prizes in excess of \$10,000. Kayla Cornale won a First Place Award and a special award for her innovative work, "Sounds into Syllables", a music based



CWSF Team BASEF 2006

teaching system for autistic children. Ben Gulak and Alex Molly won a Third Place Award as well as a special award for their project "CSI: Controlled Spherical Intelligence". Anne Marie Child's project "Date Rape Drugs: Can They be Detected?" earned a Fourth Place award and a trip to attend the 21st China Adolescents Science and Technology Innovation Contest. Congratulations to all of our trip award winners for their successes at IISEF and CWSF.



Kayla Cornale
First Place Award IISEF
CWSF 2006 Best in Fair

Kayla travelled from IISEF in Indiana to Quebec to compete at the Canada Wide Science Fair (CWSF) where she won a Gold Medal, top Senior project and overall Best in Fair. Kayla's win follows that of BASEF alumnus Natalie Raso who won CWSF Best in Fair in 2005. Overall, Team BASEF won more than \$34,000 in cash and prizes and were the top regional team at CWSF for the third consecutive year.

Big ideas. Infinite possibilities.

Grand Prize Winners from BASEF 2006

DOFASCO Best in Fair Pinnacle Awards

1st Place

Aaron Hakim
Appleby College

2nd Place

Kayla Cornale
Assumption High School

3rd Place

Jordan Bowman
St. Mary's High School

Roy Middleton Award

Matt Weber, Kylie de Chastelain
Centennial Public School

2006 Pfizer Canada Award of Excellence

Aaron Hakim
Appleby College

BASEF Committee Trophy

St. Augustine

Herb Gildea Memorial Trophy

Hillfield Strathallan

IISEF Trip Award Winners

Chris Foster, Xiong Zhao

North Park Collegiate

Jordan Bowman

St. Mary's High School

Anne Marie Child

Westdale High School

and selected by the Youth Science Foundation to attend IISEF

Kayla Cornale

Assumption High School

Ben Gulak, Alex Molloy

Hillfield Strathallan

IISEF Trip Alternate:

Peter MacCauley

Bishop Tonnos High School

BASEF students won more than \$10,000 in cash and prizes at the Intel International Science and Engineering Fair.

CWSF Trip Award Winners

Aaron Hakim

Appleby College

Kayla Cornale

Assumption High School

Alex Malloy, Ben Gulak

Hillfield Strathallan

Matt Weber, Kylie de Chastelain

Centennial Public School

Alex Harmsen, Irene Harmsen

Centennial Public School

Patricia Raso

St. Jerome

Hannah Prince, Eryn Stewart

Sacred Heart

Madeleine Martin

Bishop Ryan High School

Patrick Bowman

St. Augustine

Andrew Wood

Oakville Christian School

Jennifer Lawlor, Alessandra Gallo

St. Vincent de Paul

CWSF Trip Alternates

Nicole Reid, St. Augustine

Maveric Croucher, St. John the Baptist

Matthew Girgis, Oakville Christian School



CASTIC in Macao

Anne Marie Child's project

"Date Rape Drugs: Can They be Detected?" earned a Fourth Place Award at IISEF and a trip to Macao to attend the 21st China Adolescents Science and Technology Innovation Contest (CASTIC).



BASEF 2006 Best in Fair winner Aaron Hakim advanced to compete at CWSF where he won his second consecutive Gold Medal. Aaron's project explored whether caloric restriction and/or antioxidant supplements such as Thymoquinone and Vitamin E affected aging.

CWSF 2006 Saguenay, Quebec



CWSF Best in Fair Kayla Cornale



Thanks to CWSF chaperone Ken Moyle, there is a large selection of photos and "Notes from the Front" at <http://basef.ca/cwsf/2006/>



Start your projects!



Big ideas. Infinite possibilities.

For many students, the most difficult part of a science fair project is coming up with a topic or question that interests them.

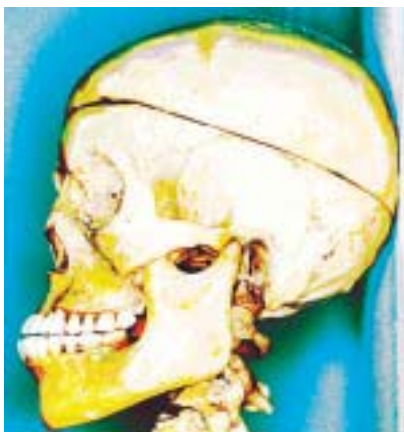
Online assistance is available at one of the best science fair resource sites we've found:

www.sciencebuddies.org

The **"Topic Selection Wizard"** is a tool that will help students focus on an area of science that's best for them. Students will be spending a lot of time on their projects and it is ultimately far more enjoyable and rewarding to be working on an area of science that interests them. More than 200,000 students used the Topic Selection Wizard in 2004 to help them find a project idea.

This site offers a wealth of information on how to do a science project. If you already know the area of science you want to focus on, look at science project ideas and background information in the section:

Project Ideas & Info by Area of Science and Cutting Edge Science Projects



CSI...BASEF 2007?

Science Success Resource Materials for Students and Teachers

The Science Success student and teacher resource materials are available for download from the BASEF website: basef.ca

The student workbook was designed to guide students through the process of a science fair project from inception to completion, both in school and out of school settings with the help of an adult mentor. It is a must read for students and parents new to science fairs, offering practical hints and advice, and a step by step, easy to follow process.

***The Science Success materials are downloadable from:
<http://basef.ca/outreach>***

Parent/Mentor Assistance

For many students, BASEF is the first time they are rewarded for their academic endeavours. Students gain considerable academic and life skills by researching, experimenting, displaying and presenting their projects. Make no mistake, all student participants are rewarded with an enriching experience, not to mention the "goody" bags, worth over \$250 at BASEF 2006.

Many students and parents view science fair projects as a dreaded, compulsory school assignment and have no idea of the available rewards for successful science fair participation. BASEF 2006 awarded over \$262,000 in cash, prizes and scholarships.

Visit the Parent section on our website for helpful hints on supporting student science fair participation.

Additional Resources for Teachers

Educational wall posters are an effective way to invite student interest in science. FREE posters are available through The Wright Center for Innovative Science Education on numerous topics including:

- The Human Genome
- The Science of Change
- Earth Anatomy

The Wright Center at Tufts University is dedicated to the creation and dissemination of novel teaching techniques and resources for teachers.

Visit: http://www.tufts.edu/as/wright_center/svl/posters/posts.html for a preview of available posters and information on ordering a set for your classroom.

BASEF also offers assistance to teachers and students through our Outreach program. To arrange classroom presentations please contact us via email: outreach@basef.ca

Big ideas. Infinite possibilities.

How to avoid post registration stress, project redesign and disappointment: Scientific-Review Documents - What they are and why you need them

Compliance with YSF rules and Scientific Review (SR) documents is critical!

**Do the Paperwork
BEFORE
the Project!**

At BASEF 2006:

- 5 of the 38 registered high school projects were unable to meet SRC forms requirements and withdrew from the competition; 9 high school projects required extensive coaching and assistance after registration to complete SRC requirements

- 86 of the 244 registered junior projects were missing documents and several were ultimately unable to complete the required methodology changes by the start of the fair.

For many years now, BASEF, like all Regional Science Fairs in North America, has required some Scientific-Review (SR) documents as part of Registering a Project for the Science Fair. This always seems like an unneeded and complex requirement to those who are participating for the first time, but it is important to do, and to do correctly. We encourage everyone, students AND their parents and teachers, to read the BASEF Rules online carefully (see <http://basef.ca/2007/students/?page=rules>), and ensure that any and all needed Scientific-Review documents are completed, and included with your Project Registration.

We may not be able to accept your project into the fair without properly completed SR documents.

Project Safety Comes First — AND YOU MUST PROVE IT.

Scientific-Review documents are the paperwork that BASEF uses to decide whether or not your project has been done safely and in accordance to various rules and regulations that govern experimentation. We have a responsibility to ensure all the rules are followed, by everyone, so we must ask you to provide enough information ahead of time to satisfy us that this is true. The accuracy of filling out these documents can mean the difference between entry and rejection in a science fair.

These documents are a method of ensuring that you as the experimenter, any other participants in your experiments, and the judges, volunteers and members of the public who view your experiments, are kept safe, and that you have complied with any Laws, Regulations and Rules that apply.

Before starting experimentation is the time to look through the Scientific-Review documents. The nature of your experiment will show which Scientific-Review documents that you need to fill out. The important thing is to read the documents and find the persons who **must** sign the documents. By finding these people, you will by default get the right person you need to assist you in your experimentation. For example, if you are planning to use chemicals which are considered dangerous and fall in the category of a designated substance, you will have to find a designated substance supervisor to supervise your use of these chemicals. For that person to sign the paper, they are required to **understand the risks**, approve and supervise the use of that chemical.

No Scientific-Review Documents Might Mean Project Rejection:

One of the biggest shortfalls we find in the submission of Scientific-Review documents are that they are not submitted. We encourage all participants to go to the BASEF site prior to experimentation and look up the required Scientific-Review documents, read the Rules and instructions carefully, and fill out the needed portions. Also if it is not clear you can contact BASEF through the web site to get clarifications.

Scientific-Review documents, dates and signatures are an important first step in experimentation.

These documents are in the system to keep you, the fair participant and everyone else involved in your project in any way, safe in the same way as lab scientists are kept safe in the process of experimentation. Do the paperwork, enjoy the experimenting and good luck on your science fair entries this year.

Dates are critical. Some Scientific-Review documents are required to be signed and dated prior to experimentation.

When filling out forms it is really important to read the required signing time. It is important to have the right dates.

If you are experimenting now, there are some documents that already should be in your possession, signed and dated prior to experimentation.

SR compliance is much lower with first time participants. This is almost entirely due to students, teachers and other adult supervisors who do not read the rules!

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, 8:00 am - noon

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

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

Public Viewing: Saturday, 9:30 am - noon

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

**Project Take Down: Saturday, 3:30 pm
(After awards ceremony ONLY!)**

***Please note: To accommodate concerns regarding transportation and school absences, Student Activity events will be held at McMaster University 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 2006, over \$24,000 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.

Pfizer Canada Award of Excellence is given to the top project in the fair that is advancing to CWSF.

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.

Get in touch with the scientist in you.

Make plans to participate in BASEF 2007 today!

BASEF 2006 Financial Highlights

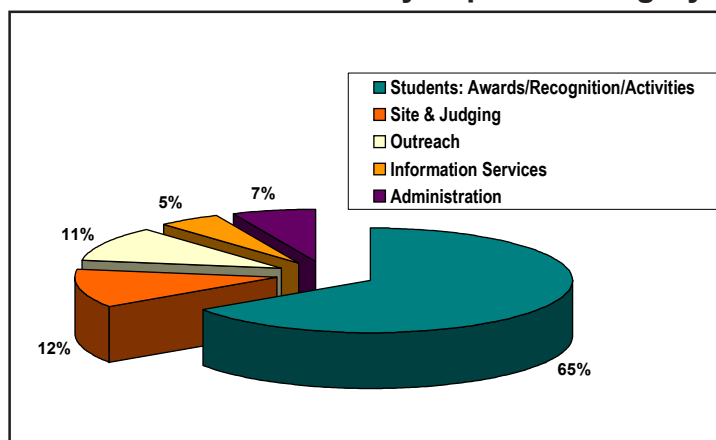
BASEF is a volunteer driven, registered charitable organization and relies entirely on the generous donations of sponsors to stage the fair, award all expense paid Grand Trip Awards, provide divisional merit awards and work actively in the community to promote project based science. We pride ourselves on our prudent spending protocols and are pleased to present a brief overview of our financial status. A complete annual report is available on our web site and review engagement financial statements are available in January of every year.

Statement of Operations - Fund Balance

For the period of September 1, 2005 - August 31, 2006
(unaudited, with comparative amounts for the year ended August 31, 2005)

Revenue	2006	2005
General	\$78,706	\$74,809
Special Awards	12,950	14,425
Ontario Trillium - I.S.	5,350	
Ontario Trillium - Outreach	11,719	
Interest/GST rebate	765	2,001
Total Revenue	109,490	91,235
Total Expenses	109,985	92,644
Excess of Expenses over Revenue	(495)	(1,409)
Fund Balance-Beginning of Year	16,205	17,614
Fund Balance-End of Period	\$15,710	\$16,205

Total Disbursements by Expense Category



Sponsorship

We are always looking for new sponsors to help us sustain our growth and ensure that the opportunities our students deserve are available. Our projected budget for the 2007 fair is approximately \$120,000. Sponsorship is an ideal way to promote your business or personal interests, and more importantly, impact on the lives of our students.

If you know a company, foundation or individual interested in sponsoring our students, please contact us at:

basef.fundraising@basef.ca

Volunteers Needed

Volunteers make BASEF possible. In addition to the dedicated organizing committee, BASEF recruits and screens hundreds of volunteers for the four day fair to ensure that our student participants are provided with an enriching and rewarding experience. We provide training for judges and safety inspectors. Please register on the BASEF website or contact us via voice mail at the telephone numbers at the bottom of this page.

BASEF 2007 Dates to Remember

- **Online Registration**
Monday, February 5, 2007 - Thursday, March 1, 2007
- **Registration Deadline**
Noon, Thursday, March 1, 2007 (NO exceptions)
- **BASEF 2007**
McMaster University, March 28 - March 31, 2007

Get in touch with the scientist in you.

BASEF Contact Information

Paper Mail:

BASEF
c/o McMaster University
1280 Main St. West, DTC-125
Hamilton, Ontario, L8S 4K1

Email:

basef@basef.ca



Visit our website basef.ca for the most current information and project resources.

BASEF is proud to be affiliated with



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Big ideas. Infinite possibilities.