

# **BASEF 2005**

Sheridan Institute of Technology and Advanced Learning, Oakville Campus

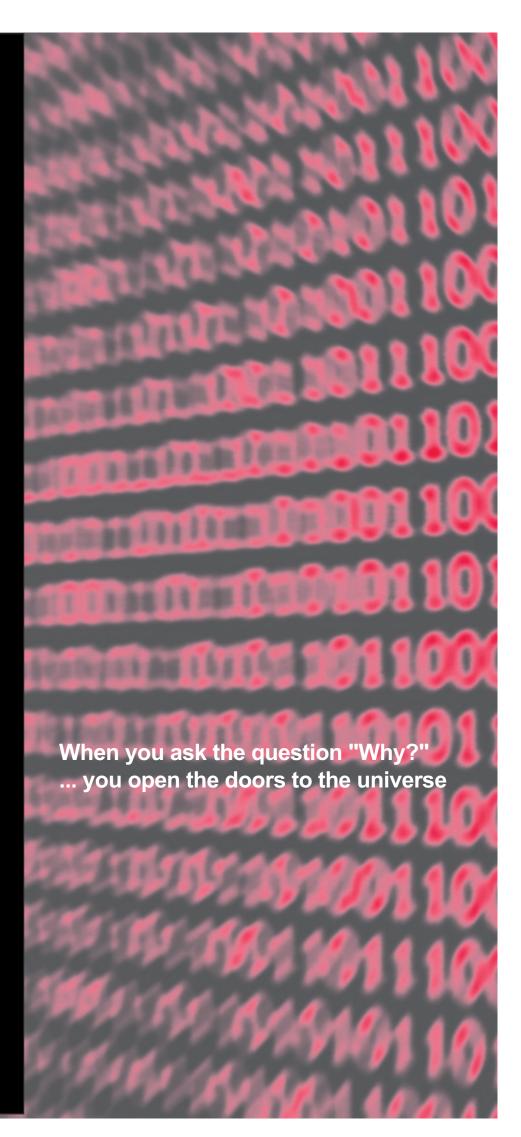
Bay Area Science & Engineering Fair c/o McMaster University, JHE-A214 1280 Main St. W. Hamilton, Ontario L8S 4L7

phone: (905) 974-7975 (Hamilton) (905) 693-7076 (Oakville)

http://basef.mcmaster.ca

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**OFFICIAL PROGRAM** Mohawk College March 31 to April 3, 2004 Science & Engineering Fair Sponsored by: ne Ontario Trillium Foundation **Diamond Sponsors** he Hamilton Spectator Microsoft Canada **Platinum Sponsors** Dofasco **JNE Consulting Manulife Financial McMaster University Mohawk College Primary Fluid Systems** Sheridan College

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The Ontario Trillium Foundation is a proud sponsor of the Bay Area Science and Engineering Fair (BASEF) 2004. We extend our best wishes to all participants.

The Ontario Trillium Foundation builds healthy and vibrant communities throughout Ontario by strengthening volunteerism and investing in community-based initiatives.

We provide funding to eligible charitable and not-for-profit organizations in support of initiatives in the Arts and Culture, Environment, Human and Social Services and Sports and Recreation sectors.

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Ontario

The Ontario Trillium Foundation is an agency of the Ministry of Culture and receives annually \$100 million of government funding generated through Ontario's charity casino initiative.

LA FONDATION
TRILLIUM DE L'ONTARIO

Give me a lever long enough and a fulcrum on which to place it, and I shall move the world.

- Archimedes

Congratulations to all BASEF participants.

Be innovative. Be creative. Make things move.

You are the future. We salute you!



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TECHNOLOGY AT ITS FINEST!

Mohawk College's vision of excellence in technology is clear. We offer the finest in technology education and training.

MOHAWK COLLEGE is pleased to Welcome you to the 44th Annual Bay Area Science and Engineering Fair.

Best wishes to all participants!



www.mohawkcollege.ca



#### A MESSAGE FROM THE BASEF CHAIR

#### Sue Olynyk

Welcome to the 44th Annual Bay Area Science and Engineering Fair! BASEF is open to over 100,000 students in Grades 7-12 in Hamilton, Halton, Brant, Haldimand and Norfolk. BASEF 2004 welcomes over 400 student participants! The mission of BASEF is to promote an interest in science and engineering and to encourage youth to conduct project-based research utilizing the scientific process or the engineering design process.

Teachers, parents and mentors are important allies for us. Thank-you for your encouragement and support. Together they fan the embers of curiosity about science and can result in a burning life-long interest and love for this field of study.

I extend my sincere thanks to our Honourary Co-Chairs, Halton Region Chairman Joyce Savoline who returns for her third year, and Hamilton Mayor Larry Di Ianni, in his first year in this role. We appreciate the interest you have demonstrated in building tomorrow's citizens through this activity and thankyou for your support and involvement.

This year BASEF will see over 225 scientists, engineers, technologists, mathematicians, inventors, entrepreneurs and educators volunteer to judge the exhibitors' projects. These are our Merit and Special Award Judges who take a full day away from their hectic schedules to listen, guide and encourage our students. Thank-you Judges!

We are thrilled to have the Ontario Trillium Foundation as our title sponsor for the third year in a row. I would also like to thank the 14 new sponsors and over 30 returning sponsors who see the value in supporting this extremely worthwhile event for today's youth. I encourage you all to support our sponsors wherever possible. Without them there would be no BASEF.

I would like to extend a very special thanks to all those people at Mohawk College who have helped make it possible to stage BASEF 2004. For many years now, Mohawk has been a strong supporter of this initiative. The friendly faces, the helpful staff and the excellent facilities have made our job of conducting this fair so much easier.

Finally, there have been thousands of volunteer hours in producing BASEF 2004. I owe a great debt of gratitude to all those people who help make it happen. I thank the members of the Organizing Committee, over 25 in all, who have met every month since September and laboured many more hours on their own or in small teams to take care of every detail.

I hope that all exhibitors enjoy the results of their hard work. Over the four days of BASEF you will experience an exciting flurry of activity: meeting new friends, sharing your results with judges, family, the public and a host of dignitaries. Seeing all the effort that has gone into each and every project presented this week, I congratulate you all on a job well done. ...and above all, never be afraid to ask the question, "Why?"

Good luck to you all

Sue Olynyk, P.Eng Chairman, BASEF 2004



#### A MESSAGE FROM HONOURARY CO-CHAIR

#### Joyce Savoline

It is my pleasure to once again, support the work of the Bay Area Science and Engineering Fair (BASEF) in my capacity as Honourary Co-Chair. As an elected official, I believe that government has a commitment to nurture learning in our youth and capitalize on opportunities that support technological education.

Today's youth are tomorrow's leaders and what better place to cultivate a love for learning, ingenuity and design than through a recognized, successful program such as the BASEF!

I offer my congratulations to those students who entered a submission; accolades to both the teachers and parents of participants for encouraging their children and of course, my thanks to the group of dedicated volunteers without whom, this event would not be possible.

Sincerely,

#### Joyce Savoline Regional Chairman

#### Building tomorrow through today's **How Halton Region** supports the next generation of innovators: The Halton Business Plan Competition (students interested in improving their business skills can develop their own business plan and win cash awards!) The Summer Company Program for Youth (up to \$3,000 to start-up and run your own business) **Business Registration** Service Statistical & Demographic Halton Region is committed to supporting and encouraging youth interest in Information science and technology. A well-educated, well-trained and motivated labour force in this community ensures that employers will continue to view Halton Exporting Assistance **Programs** as an attractive place to live, work and do business. Small Business Halton Region Business Development Centre Seminars and Advice 1151 Bronte Road, Oakville, ON L6M 3L1 Advocacy Tel: 905-825-6000 Toll free: 1-866-4HALTON Fax: 905-825-8839 On-line Business www.haltonbusiness.com Directory busdev@region.halton.on.ca



GREETINGS FROM THE OFFICE OF THE MAYOR

#### Larry Di lanni

It is my pleasure, on behalf of the City of Hamilton, to welcome you to the annual Bay Area Science and Engineering Fair (BASEF).

It is a privilege for me to have the opportunity to act as Honourary Co-chair and I take pride in a community that encourages students to strive for excellence in all their endeavours.

I wish to acknowledge the hard work and commitment of the students, the organizers, and the volunteers who have allowed us the chance to witness the achievements of today's youth and tomorrow's innovators who will undoubtedly become the contributors, the innovators of our future.

To our students, you are all winners. Your commitment and dedication to science and engineering is to be commended.

Sincerely,

#### **Larry Di lanni** Mayor



#### **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.



For more information contact: McMaster University • 905-525-9140 ext. 27270 • www.mcmaster.ca City of Hamilton 905-546-4222 • www.hamilton.ca



### **SCHEDULE OF EVENTS**

Mohawk College

WEDNESDAY, MARCH 31	PROJECT SET	TUP
	4:00 p.m.	On-site Registration, Project Setup, Safety Check begins.
	8:00 p.m.	Registration closes.
THURSDAY, APRIL 1	JUDGING DAY	,
	8:00 a.m.	Judges begin arriving at the Gym
	8:30 a.m.	Judges' welcome and assignment of projects
	9:00 a.m.	Begin preliminary judging without students present
	11:45 a.m.	Start of Judges' Luncheon
	1:00 p.m.	Students arrive for afternoon judging and interviews
	4:00 p.m.	Afternoon judging with students complete
	4:30 p.m.	Reporting of all judging scores, and issues resolution,
		complete.
FRIDAY, APRIL 2	ACTIVITY DAY	,
THE THE L		Students arrive at "The Arnie", Student Centre Mohawk
	0.00 a.m.	College
	9:00 a.m.	Leave for morning activities (buses provided to offsite
		activities).
	12:00 noon	Arrive back at "The Arnie", Student Centre for lunch
	1:00 p.m.	Leave for afternoon activities (buses provided to offsite
		activities)
	4:00 p.m.	Arrive back at Mohawk College. Students begin
		departing.
SATURDAY, APRIL 3	PUBLIC VIEWI	NG AND AWARDS CEREMONY
		Mohawk College Gym opens for Public Viewing. All
	roroo amm	students to be present.
	11:45 a.m.	VIP Luncheon (by invitation), Faculty Dining Room
		End of Public viewing. Gym closed until after Awards
		Ceremony.
	1:15 p.m.	McIntyre Theatre opens for Awards Ceremony. The Gym
		remains closed
	•	Start of Awards Ceremony
	3:30 p.m.	End of Awards Ceremony. Projects may now be removed
		from the Display Area of the Gym.
	4:00 p.m.	
		chaperones, delegates, in the Gym. (Note: It is important
		that winning projects be available for this meeting).



### TECHNOLOGY **AT ITS FINEST!**

Mohawk College's vision of excellence in technology is clear. We offer the finest in technology education and training.

# <u>Coming Soon!</u>

Mohawk College is establishing a new, state of the art Industrial/Process Automation Training and Applied Research Centre. The Centre will meet the needs of human resource training manufacturing and process automation industries as they implement Advanced Manufacturing Technologies.

The Centre is being developed in collaboration with industrial partners from the process

> automation sector, and is supported by the Ministry of **Economic Development and** Trade. Offering first class instruction, training and applied research, the

Centre will be able to respond to the emerging training and education needs of industry. Through new programs and partnerships it will support the development of individuals seeking a career within the advanced manufacturing field.

Mohawk College, as the only institution in Ontario to offer an Applied Degree in Process Automation, will continue to be a leader in educational innovation in manufacturing technology. Our graduates will be able to offer the technological skills and knowledge that will contribute to the competitiveness of industrial manufacturers in the fields of design, manufacturing, operation, maintenance and sales of automated systems.



For more information please contact: Cheryl Jensen, Dean, Engineering Technology, Mohawk College 905-575-1212 extension 5069 www.mohawkcollege.ca



(\*) Ontario This project was funded in part by the Strategic Skills Investment Program of the Ministry of Economic Development and Trade.

#### THE "PARENT PAGES" (or How to Survive Science Fair!)

# Congratulations on your wise decision to allow your child to participate in BASEF 2004!

For many students, it is the first time they are rewarded for their academic endeavours. Make no mistake, all student participants are rewarded with an enriching experience and a certificate of participation, not to mention the opportunity to meet and speak with other top students, and the official BASEF 2004 tee-shirt. One parent noted that the students were treated like attendees at a convention.

Many students and parents view science fair projects as a dreaded, compulsory school assignment and have no idea of



the available rewards for successful science fair participants. BASEF 2004 will offer cash, prizes and trip awards totaling over \$70,000: about \$15,000 in Special Awards, about \$8500 in Merit Awards and the Grand Prize Trip Awards to the Canada Wide and International Science Fairs (about \$55,000).

Note: All science fair activities are planned to take place at Mohawk College with the <u>exception</u> of the "Activity Day Tours" on Friday. Most Activity Day tours take place off site, however all transportation for Activity Day will be provided by BASEF.

Any changes or revisions to the plan will be posted on the BASEF website and will be announced at the fair.

Parking and Science Fair Location at Mohawk College: Parking is free for BASEF 2004. You will be required to park in lot P10 at the west end of the Fennell campus building. There will be signs directing you to the Science Fair as you enter the college from the West 5<sup>th</sup> entrance or the Fennell Avenue entrance. A map, directions to the campus and drop off/pick up areas will be posted on the BASEF 2004 website <a href="http://www.mohawkc.on.ca/maps/">http://www.mohawkc.on.ca/maps/</a> for your reference.

#### Day by Day: Parent Responsibilities

Day 1: Project set up for the fair occurs on Wednesday, March 31, 2004 from 4:00 pm – 8:00 at Mohawk College. Your child will visit a registration desk and find out their assigned display area in the gym and receive information about the Friday activities they are enrolled in. After the project is set up, one of our many safety inspectors will ensure that the project meets all safety guidelines. Students cannot leave until they have been safety checked and passed. The registration process and project set up usually takes less than an hour. Be sure that all of the safety rules and regulations regarding project size, display materials and ethical guidelines with respect to human and animal testing have been followed. Complete details are available on the official website: http://basef.mcmaster.ca/2004

Day 2: Judging - Students are required to be at their projects for judging on Thursday, April 1, 2004 from 1:00 pm - 4:00 pm.

Day 3: Activity Day, Friday, April 2, 2004, 8:00 am – 4:00 pm - Students must be dropped off and picked up at "The Arnie", Student Centre at Mohawk College for participation in their assigned activities.

#### THE "PARENT PAGES" (Or How To Survive Science Fair!)

Day 4: Public Viewing and Awards Ceremony - We ask that your children be at their projects for Public Viewing which takes place from 10:00 am - 12:00 pm on Saturday, April 3, 2004. This is followed by the Awards Ceremony from 1:30 pm to 3:30 pm. Grand Prize winners will be required to stay after the ceremony. There will be a break for lunch from 12 noon until 1:15 pm. There will be some food service available in the cafeteria, or you just may want to bring your lunch. Students may not remove their projects until after the Awards Ceremony.

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

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

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

#### Miscellaneous Information:

**Dress code**: We suggest neat and casual, with the emphasis on neat. Information regarding any special clothing requirements (gym clothes etc.) for activity days will be made available at registration.

**Busing from Halton:** If busing is being provided, those students involved will already have been contacted. If there are additional questions, **PLEASE ENQUIRE AT THE REGISTRATION DESK FOR MORE INFORMATION ON HALTON BUSES.** 

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

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

Be sure to visit the BASEF website throughout the year. Newsletters, available for download, are published 3 – 4 times per year and contain articles and pictures about fair participants, resource materials and important information about the next fair.

There is a also a Parent Section on the website, with an article entitled:

"Project Basics for the Bewildered Parent.....help, I'm not a scientist!"

http://basef.mcmaster.ca



#### EMERGENCY SAFETY AND SECURITY PROCEDURES

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

#### **FIRE SAFETY**

Mohawk's Fennell Campus has a two-stage fire alarm. This means the fire alarm sounds INTERMITTENTLY to indicate a **FIRE ALERT** and CONTINUOUSLY for an **EVACUATION**.

#### IN CASE OF FIRE

- 1. If the alarm sounds intermittently, be prepared to "VACATE THE BUILDING".
- 2. If the alarm sounds continuously go quickly and calmly to the nearest exit and "VACATE THE BUILDING".

#### IF YOU DISCOVER A FIRE

- 1. Evacuate persons in immediate danger and leave the area. Close all doors.
- 2. Activate the building fire alarm system using the closest fire alarm pull station and
- 3. evacuate the building using the nearest exit.
- 4. Telephone the Fire Department at 911.

#### 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) <u>Emergency intercoms</u>. These are located in the hallways throughout the College. Press the *round button* to speak directly to a Security Officer.
- 2) <u>Bell pay phones</u>. These phones have an *Emergency* button identified by a yellow label. A sign above the phones identifies your location. Press the <u>Emergency</u> button and give your location to the Security Officer.
- 3) <u>Outside Emergency Intercoms</u>. These are recognizable by a blue light. Press the <u>red</u> button to speak directly to a Security Officer.

#### EMERGENCY DIRECTORY

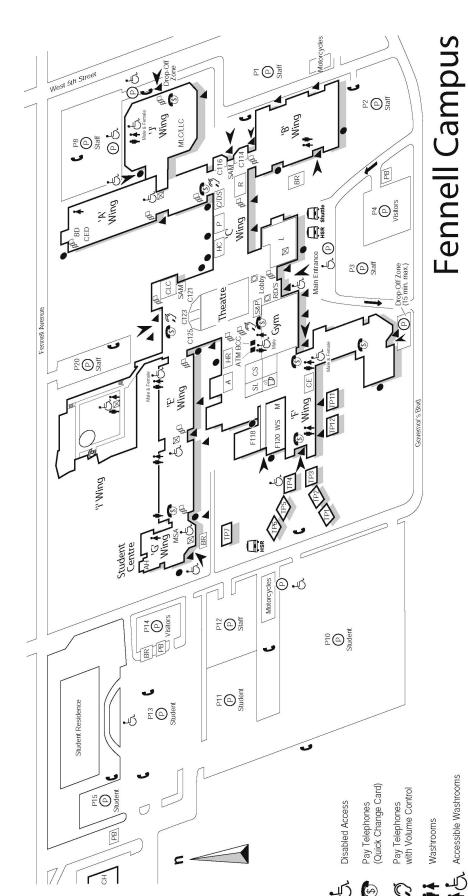
#### **Emergency Situations**

Police/Fire/Ambulance------Dial 9-911 on College Phones or 911 on Bell pay Phones Main Security Desk------Dial 55 on College phones

Main Security Desk------Press the *Emergency* button on Bell pay phones

#### **Non-Emergency Situations**

Main Security Desk------Dial 2003 on College phones
Main Security Desk------Dial 905-575-2316 on other phone



# **MAIN FLOOR**



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(General Parking P10, P11,	Automated Teller Machine	ATM	Hamilton Street Railway	HSR	Math & Literacy Learning Centre	MLC/LLC
P13, P15)	Bell Calling Card Machine	BCC	Health Clinic	유	Security & Parking	S&P
Entrances	Bicycle Rack	BR	Human Resources	H	Student Access Module	SAM
	Business Development	BD	Library	_	Student Life	SL
Emergency Phones	Campus Store (Bookstore)	CS	M.C.A.C.E.S.	Σ	Temporary Portables	TP
)	Community/Economic Development	CED	Mohawk Student Association	MSA	Walk Safe Program	WS
Smoking Area	Computer Learning Centre	CLC	Parking Booth	PB		
	Conference House	CH	President's Office	۵		
Non-Smoking Area						

<u>a</u>

Elevator

# Sheridan Advert

#### ORGANIZING COMMITTEE

#### **HONOURARY CO-CHAIRS**

Chairman Joyce Savoline, Halton Region Mayor Larry Di Ianni, City of Hamilton

#### **CHAIR**

Susan Olynyk

#### **SECRETARY**

Tom Crawford

#### **TREASURER**

Eleanor O'Flynn

#### **RECORDING SECRETARY**

Cathy Hamilton

#### **FUNDRAISING**

Peter Olynyk, Barry Brusey, Sandy Walker, Justin Bonn, Laureen Choi, Matthew Allcock, Mark Mascioli, Cathy Collins, Geoff Pilmoor

#### **JUDGING**

Tom Crawford, Cathy Collins, Mike Jefferson, Ray Kranyak,

#### **SCIENTIFIC REVIEW**

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

#### REGISTRATION

Steve Procyshyn, Morris Hucal, Mary Procyshyn, Christine Rowthorn, Mike Laskowski, Janice Rocchi, Wuchow Than, Jlm Mauro, Michael Goffredo, Rob Lenjosek, Zenon Holadyk, Ray Cemka

#### SITE

Michelle Harkness, Mary Hrycay, Sandy Willett

#### STUDENT ACTIVITIES

Valerie Hughes

#### **AWARDS CEREMONY**

Elsa Orecchio, Jim Hamilton, Wayne Bowdish

#### **VIP RELATIONS**

Susan Joyce

#### **SPECIAL AWARDS**

Eleanor O'Flynn, Cathy Collins

#### INFORMATION SYSTEMS

Ken Moyle, Tom Crawford

#### **MARKETING & PUBLICITY**

Sandy Walker, Peter Olynyk, Wayne Bowdish

#### **OUTREACH**

**Wuchow Than** 

#### **VOLUNTEER RECRUITING**

Joanne Teoh

#### PHOTOGRAPHY AND GRAPHICS

Jim Hamilton, Wayne Bowdish

#### **PROGRAM**

Jenny Shirton, Wayne Bowdish, Sandy Walker

#### **COMMITTEE MEMBERS AT LARGE**

Barry Brusey,

#### SCHOOL BOARD ADVISORS

**Halton Catholic DSB:** Susan Paradiso **Halton DSB:** Ron Ballentine, Rasa Pruden

**Grand Erie DSB:** Herb Taylor

#### **HOST-BASEF 2005**

Michael Arthur, Don Wiles

#### **VOLUNTEERS**

Al Bates Andrea Bazzard Zorika Borkowski Rvan Bowdish Dan Bowman Joseph Braid Diana Brown Jim Casev Rosemary Chiarelli Sally Chopp Vagmi Dholakia Carl Easton Lyra Elliot Trixie Ellithorne Claudette Garcia Frank Goodman Cathy Hamilton Rebecca Hartlen Christine Heagle Julie Henao

Erna Hiltermann-Montano Ruiz Humerto Michael Jefferson **Burl Joseph Eveline Kennedy** Ray Kranyak Mike Landkroon Charlotte Leeds Bonnie Lendrum Sharon Mc Knight Mildred McClairen Karen McDonough Mel McDonough Nancy Meadows Michael R. Milawski Jack Mills Michael Murphy Ahmad Saleh Musa

Theresa O'Halloran Neenu Ohson Barb Owen Joan Parker **Tess Perez** Geoff Pilmoor Dan Prowse Margaret Puchalski Mary Querques Cecile Quesnel Vince Rae Manal Ramadan Peter Salari Gisela Sherman Jenny Shirton Anne Sinclair Jessica Singh Carm Spenar Chris Stearns

Nicole Stearns Rose Stearns Joe Szpak Sarah Tessier Jennifer van Leeuwen Bonnie Vandoorn Carol Walzak Terry Wells Paul Werhle Tammie Weston Anne-Marie Wheaton **Bonnie White** Glen Allan Whitwell Renee Wong Marilyn Young Norman Young Zhang Yuepeng Steve Zerebny



The Halton District School Board would like to congratulate all participating students in the 2004 Bay Area Science and Engineering Fair. Best wishes for continued success!

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

J.W. Singleton Education Centre • 2050 Guelph Line, P.O. Box 5005 • Burlington, Ontario L7R 3Z2 Phone: (905) 335-3663 • (905) 842-3014 • (905) 878-8451 Fax: (905) 335-9802

www.hdsb.ca

#### 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 Hamilton, Halton, Brant, Haldimand and Norfolk
- BASEF is a registered charity and relies entirely on sponsors and volunteers

#### **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.

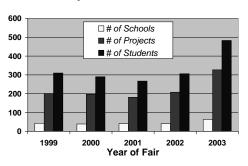
Students compete for thousands of dollars in cash, scholarships and awards, including all expense paid trips to the national and international science fairs.

#### Materials

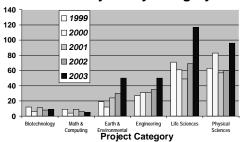
- 1. Dedicated teachers
- 2. Motivated students
- 3. Supportive parents
- Enthusiastic volunteers
- 5. Generous sponsors

#### **Observations**

#### **Participation Growth in BASEF**



#### # of Projects by Category



#### Results



Display Area BASEF 2003



**Grand Trip Award Winners BASEF 2003** 

#### **Conclusions**

- ◆ Student participation increased by 60% in 2003
- ◆ 483 students from 63 schools with 327 amazing projects
- over \$ 71,000 in awards were shared by almost 200 students
- ♦ 24 BASEF students won Grand Trip Awards..... the most ever!!

# Our students are going places!!

#### **Discussion**

We believe 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 components allow students to practice their "people" skills and gain self confidence and a sense of accomplishment for a job well done.

# Get involved! It's your future.

#### **Acknowledgements**

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

#### **BASEF 2004**

#### **SPONSORS**

#### **TITLE**

Ontario Trillium Foundation

#### DIAMOND

**Hamilton Spectator** 

#### **PLATINUM**

Dofasco
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Manulife Financial
McMaster University
Microsoft
Mohawk College
Primary Fluid Systems
Sheridan College

#### **GOLD**

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#### **SILVER**

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Sims Moelich Association

# BASEF Trip Award Winners

Thanks to our sponsors we're going places!



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

#### HOSTS OF ACTIVITY DAY TOURS

- Battlefield House Museum
- Bochsler Studio
- Dofasco Recreation Centre
- Donna's Friends in Fitness
- Dundurn National Historic Site
- The Friends of the Aviary
- Halton Industry Education Council
- The Hamilton Police Station
- The Hamilton Health Sciences Corporation
- Kanata Traditional Village
- McMaster University
  - Department of Chemistry
  - The Department of Psychology
  - Venture Engineering & Science Department

- The Department of Physics and Astronomy
- The Department of Biochemistry
- Department of Mathematics and Statistics
- The McMaster University Medical Centre -Maintenance Department/Electrical
- Mohawk College
  - Chemical Engineering & Environmental Technology Department
  - Computer Studies and Information Technology Department
  - Continuing Education Department
  - Mechanical & Industrial Engineering Technology Department
  - Photography & Visual Arts Department
- Tiffany's Dance Elite



32 YEARS of COMMITMENT to CANADIAN HEALTHCARE 1972-2004





# **JNE Consulting**

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Email: info@jne.ca

www.jne.ca

#### JNE Consulting (U.S.) Inc.

Murray Professional Building 1048 Corporate Lane Export, PA 15632 Tel.: 724 327 4721 Fax: 724 327 4729

#### MERIT AWARD JUDGES

Ai, Linna

Andrews, Robert C. *University of Toronto* 

Anzulovic, Maria McMaster University

Bailey, Edward

Baker, Harry Rowan Williams Davies & Irwin Inc.

Balasubramaniam, Ann Wesley Urban Ministries

Banevicius, Peter JNE Consulting Ltd.

Beck, Robin retired

Billeci, Mena Hamilton Health Sciences

Biro, Elliot Dofasco Inc

Branton, Shawn

Brown, Dr. I. David retired

Brusey, Barry Dofasco Inc

Capuano, Mike Hamilton Health Sciences

Carey, Brian Kraft Canada Inc

Carr, Timothy Brock University

Casey, Jim Dofasco Inc.

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Critchley, Stuart Dofasco Inc.

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Curran, Alexander

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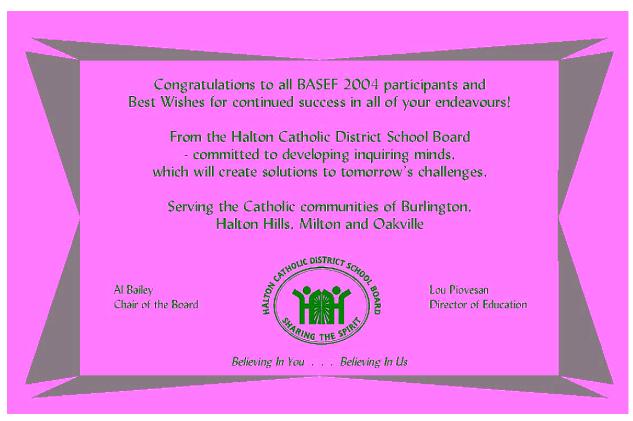
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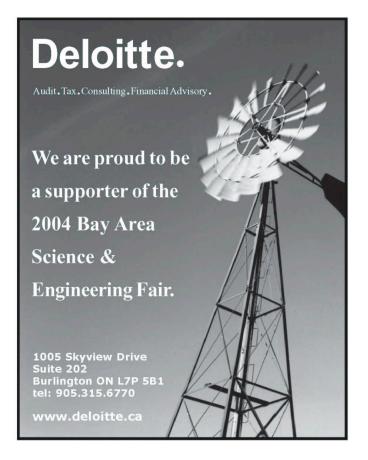
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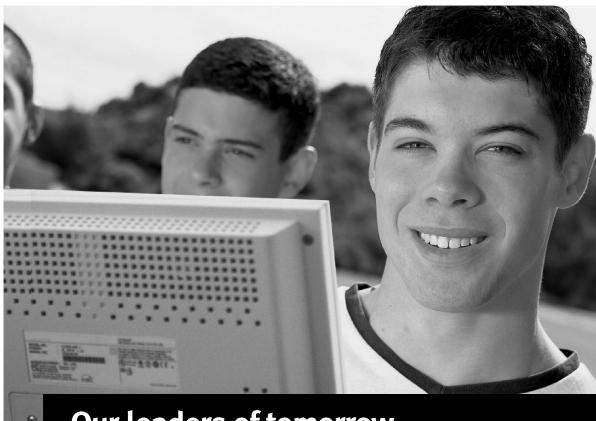
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Curran Egan

J 7-8 Engineering and Computing Rotherglen School, Independent

A02: Time Travel--Fiction or Physics?

Aysha Abdel-Aziz J 7-8 Physical Sciences & Math Rotherglen School, Independent

A03: What Factors Affect Electromagnetic Fields?

Alexander Leung
J 7-8 Physical Sciences & Math
Oakville Christian School, Independent

A04: Raising the Rig

Spencer McTavish

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

A05: Computer Application to Study Human Behaviour

Queenie Leung I 9-10 Engineering and Computing Home School, Independent

A06: Spice of Life

Jeffrey Packer, Julian Filice J 7-8 Life Sciences

Hillfield - Strathallan College, Independent

A07: To create a magnetized track which will elevate a car Ben Gulak. Mark Breinik

I 9-10 Engineering and Computing Hillfield - Strathallan College,

Independent

A08: How light affects a plant

Aaron Vander Lugt J 7-8 Life Sciences Burlington Christian Academy,

Independent

A09: SEOWAAT - Saving Energy One Window At A Time

Grace Siwik

J 7-8 Earth and Environmental Burlington Christian Academy,

Independent

A10: The Effects Of Video Games On

Heart Rate Charlie Tidd

J 7-8 Health Sciences

Burlington Christian Academy,

Independent

A11: Electrolysis of water: Production of Hydrogen

Daniel Thayer J 7-8 Physical Sciences & Math Burlington Christian Academy,

Independent

A12: Souped up with Solar Andrew Avis, Duncan D'Arcy J 7-8 Engineering and Computing

Appleby College, Independent

A13: The Answer My Friend Is Blowin' In The Wind

Thomas Hobson

J 7-8 Engineering and Computing Appleby College, Independent

A14: How Refrigerators Work?

Michael Kerr

J 7-8 Engineering and Computing Appleby College, Independent

A15: Are You Drinking Poison?

Jonathan Harris J 7-8 Life Sciences

Appleby College, Independent

A16: Time to React

Jonathan Flegg J 7-8 Health Sciences Appleby College, Independent

A17: Hot or Not: The Effect of Ambient Temperature on the Energy

**Production of Solar Cells** 

Carly Ching, Laura Welch J 7-8 Physical Sciences & Math

Westview, HWDSB



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#### **EXHIBITOR LISTING** continued...

A18: The Human Heart Rose Liao, Hilary Noad I 9-10 Health Sciences Westdale H.S., HWDSB

A19: Eagle in a Rack: Real-Time Object Tracking in Analog Video Colin O'Flynn

S 11-12 Engineering and Computing Westdale H.S., HWDSB

A20: The Affects of Music on Humanity

Andrew Huxley, David Beatty I 9-10 Health Sciences Westdale H.S., HWDSB

**B07: Catching Your Breath** 

Ginette Moores J 7-8 Health Sciences Rotherglen School, Independent

B08: Turmeric: An Antiseptic? Abha Athale

J 7-8 Health Sciences Rotherglen School, Independent **B09: Recalling Your Memory** 

Amanda Cho J 7-8 Health Sciences Rotherglen School, Independent

B10: Be Sure - Keep Your Water Pure

Jason Prolas J 7-8 Earth and Environmental Rotherglen School, Independent

B11: Sustain, Don't Drain the Moraine

Neil Tangri J 7-8 Earth and Environmental Rotherglen School, Independent

**B12: Stain Busters** 

Alanna Vivani J 7-8 Physical Sciences & Math Oakville Christian School, Independent

B13: Bugs are Us: Which antibiotic is the most effective against mouth bacteria?

Angela Girgis J 7-8 Health Sciences Oakville Christian School, Independent B14: It's not all it's poped up to be.

Todd Morrow J 7-8 Health Sciences Oakville Christian School, Independent

**B15: Cellular Renewal** 

Tairroyn Childs J 7-8 Physical Sciences & Math Oakville Christian School, Independent

B16: The Beat Goes On

Mark Lore
J 7-8 Health Sciences

Oakville Christian School, Independent

B17: The Better Bridge

Chris Zylik

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

**B18: Arctic Harbour** 

Jordan Kozak

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

B19: Size and Time: Is There A Connection

David Collins J 7-8 Health Sciences Oakville Christian School, Independent

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#### EXHIBITOR LISTING continued...

#### B20: Breaking through the brick

Mason Saunders
J 7-8 Engineering and Computing
Oakville Christian School, Independent

#### C07: The Growth Efficiency of Hydroponic Plants Versus Natural Plants

Meagan Hill I 9-10 Biotechnology Hillfield - Strathallan College, Independent

# C08: Centralizing Mass, and It's Effect on the Velocity of a Circular Solid on a Slope

Nathan Jones, Corey Alton I 9-10 Physical Sciences & Math Hillfield - Strathallan College, Independent

#### C09: Kuu Vs. Toko

Khalil Bheriani, Craig Birnie J 7-8 Physical Sciences & Math Hillfield - Strathallan College, Independent

### C10: Is wool a better insulator than other fabrics?

Nicole Poot J 7-8 Physical Sciences & Math Hillfield - Strathallan College, Independent

#### C11: Acid Rain and Dofasco

Madelaine Ressel J 7-8 Earth and Environmental Hillfield - Strathallan College, Independent

#### C12: Raising Obelisks

Khaled Ramadan J 7-8 Engineering and Computing Hillfield - Strathallan College, Independent

#### C13: PICTURE THIS...

Sara Greco, Lindsay Woods J 7-8 Physical Sciences & Math Hillfield - Strathallan College, Independent

#### C14: To determine the effects of common household spices in relation to microbial growth Alexander Molloy, Kiran Reddy I 9-10 Life Sciences

Hillfield - Strathallan College, Independent

### C15: Impact Of Physical Activity On Academic Grades

Ryan Cross J 7-8 Health Sciences Hillfield - Strathallan College, Independent

#### C16: Just Ask Water!

Helen Goreski, Esther Choi J 7-8 Physical Sciences & Math Oakville Christian School, Independent

## C17: The Wonderful World Of Composting

Corey Scarfo J 7-8 Earth and Environmental Oakville Christian School, Independent

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C18: Disinfection Inspection

George Foty J 7-8 Life Sciences Oakville Christian School, Independent

C19: Memory: Short-term Capacity
Miranda Cloudt
J 7-8 Health Sciences

Oakville Christian School, Independent

C20: How Do You Get Middle "C" With Different Strings?

Glenda Tse

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

D01: Can compost replace or supplement commercial fertilizers? Monique Marguerie, Oonagh Scallan I 9-10 Earth and Environmental Hillfield - Strathallan College,

Independent

D02: Shots for Thought

Jeffrey van Leeuwen, Brent Hill J 7-8 Physical Sciences & Math Hillfield - Strathallan College, Independent D03: The Effect of Household
Detergent on the Growth of Plants

Sarah Chauvin, Stephanie Crosty I 9-10 Life Sciences Hillfield - Strathallan College, Independent

D04: Candy Crystals

Samantha Richter J 7-8 Physical Sciences & Math Hillfield - Strathallan College, Independent

D05: The affect of different concentrations of household cleaners on different strands of bacteria

David Turner, Jamil Ladha I 9-10 Life Sciences Hillfield - Strathallan College, Independent

D06: Budgie Seed Charlotte Fazackerley J 7-8 Life Sciences Hillfield - Strathallan College, Independent D07: The Most Effective Hydroponic Growing Medium

Kaylan Ārnodlt-Smith, Erica Otaguro I 9-10 Biotechnology Hillfield - Strathallan College, Independent

D08: Hot Roads

Matthew Pawelke J 7-8 Engineering and Computing Burlington Christian Academy, Independent

D09: Alternative Insulation made from Old Phonebooks

Andrew Nyland J 7-8 Earth and Environmental Burlington Christian Academy, Independent

D10: Do You Get a Rise Out of Your Yeast?

Andrea McQueen J 7-8 Life Sciences Burlington Christian Academy, Independent



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D11: The Physics of Skateboarding Philip Burakoff, Brandon Love J 7-8 Physical Sciences & Math Burlington Christian Academy, Independent

D12: Chocolate: The newest food group

Kyle Martin J 7-8 Health Sciences Burlington Christian Academy, Independent

D13: A Slippery Slope
Nathan Pelech
J 7-8 Earth and Environmental
Appleby College, Independent

D14: Up, Up and Away! Cyrus Aga J 7-8 Physical Sciences & Math Appleby College, Independent

D15: Bottoms Up Athletes Charles Gagnon J 7-8 Health Sciences Appleby College, Independent D16: Proteins and a Vegetarian Diet Yashoda Singh J 7-8 Health Sciences Appleby College, Independent

D17: Get Cracking
Devon Allaby
J 7-8 Physical Sciences & Math
Appleby College, Independent

D18: Resisting the Roll Eric Coomes J 7-8 Physical Sciences & Math Appleby College, Independent

D19: Rusting And Metals Lauren Gurland, Leigh McFadden J 7-8 Physical Sciences & Math Appleby College, Independent

**D20: Tornadoes**Patrick Aubrey
J 7-8 Earth and Environmental
Appleby College, Independent

E01: Preventing Plant's Pain From Acid Rain Maggie Szabo, Cameron Brown J 7-8 Earth and Environmental

Dundas District, HWDSB

E02: Why Use Mercury? Sam Lawrence, Rita Pikkert J 7-8 Physical Sciences & Math Ryerson, HWDSB

E03: Crest vs. Colgate Amber Hillis, Lucie White J 7-8 Physical Sciences & Math Ryerson, HWDSB

E04: Pump the Heart Don't Fall Apart Vojislav Mitrovic, Sarmad Shaikh J 7-8 Health Sciences Sir Wilfrid Laurier, HWDSB

E05: Motion and Inertia Lauren Sutherland, Linda Sutherland J 7-8 Physical Sciences & Math Sir Wilfrid Laurier, HWDSB

E06: The Whitening Challenge Myriah Turner J 7-8 Physical Sciences & Math Sir Wilfrid Laurier, HWDSB

E07: Germs, I'll Knock You Out!
Jelena Ilic, Angela Kanlic
J 7-8 Life Sciences
Sir Wilfrid Laurier, HWDSB

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E08: Deadly Disinfectants Lana Kovacevic, Olja Zubic J 7-8 Life Sciences Sir Wilfrid Laurier, HWDSB

**E09: Water and its Components**Marleigh White, Diana Kanlic
J 7-8 Physical Sciences & Math
Sir Wilfrid Laurier, HWDSB

E10: Music Affecting Plant growth Kimberly Lee J 7-8 Life Sciences Sir Wilfrid Laurier, HWDSB

E11: Toothpaste vs. Teeth Stains Anja Zelenovic, Sujood Razaq J 7-8 Physical Sciences & Math Sir Wilfrid Laurier, HWDSB

E12: How Different Surroundings Affect the Growth of Ivy Plants Jennifer Singh, Rachel Kotska J 7-8 Life Sciences Templemead, HWDSB

E13: Flush Away Those Symptoms Emilia Wilk I 9-10 Health Sciences Waterdown H.S., HWDSB E14: The Effect of Subconscious Manipulation

Simran Ohson, Emmett Fraser I 9-10 Health Sciences Westdale H.S., HWDSB

E15: Fat Chance Sonja Maurin J 7-8 Health Sciences Westview, HWDSB

E16: Audio vs. Visual Memorization Russell Fung, Alexandra Mayhew J 7-8 Health Sciences Westview, HWDSB

E17: Colour vs Taste Alec Weis J 7-8 Health Sciences Appleby College, Independent

E18: Tempering Steel
Evan Simpson-Hull
J 7-8 Physical Sciences & Math
Appleby College, Independent

E19: Make haste with taste, lest time you waste Kieffer Moxness J 7-8 Health Sciences Appleby College, Independent E20: The Raw Egg Mystery Aaron Hakim J 7-8 Health Sciences Appleby College, Independent

**F01: Purifying Water With Shells** Rianka Singh J 7-8 Earth and Environmental Dundas District, HWDSB

F02: Salt's Fault Lisa Freidland, Deelan Patel J 7-8 Earth and Environmental Dundas District, HWDSB

F03: Wind Power Nick Weaver J 7-8 Engineering and Computing Dr. John Seaton, HWDSB

F04: What Makes Mould Mould? Diana Jia J 7-8 Life Sciences Dalewood, HWDSB

F05: Suck It Out! Emily Arndt, Keisha Quinn J 7-8 Biotechnology Dalewood, HWDSB



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F06: Mummifying a Chicken Jasmine Dong, Julia Kochuk J 7-8 Life Sciences Dalewood, HWDSB

F07: Save Energy, Save the Earth Anne Marie Child J 7-8 Earth and Environmental Dalewood, HWDSB

F08: How fast can I get some Pi? Gautam Kamath, Daniel Lultschik J 7-8 Physical Sciences & Math Dalewood, HWDSB

F09: Sock Search Bronwyn Barlow Cash, Alethea Rockwell J 7-8 Physical Sciences & Math Dalewood, HWDSB

F10: Crystal Shapes Greenlay Benjamin J 7-8 Physical Sciences & Math Dalewood, HWDSB

F11: Forget Me Not Ishani Dayananda J 7-8 Health Sciences Dalewood, HWDSB

F12: Corrosion-Free Driving Lingfei Liu J 7-8 Engineering and Computing Dalewood, HWDSB

F13: Zap It!
Chenwei Ji, Michael Kovacevic
J 7-8 Physical Sciences & Math
Dalewood. HWDSB

F14: The Davis Effect
Eleanor Knowles, Ryan Barwin
J 7-8 Health Sciences
Dalewood, HWDSB

F15: White or Safe Merryn Maynard, Sarah Eastwood J 7-8 Physical Sciences & Math Dalewood, HWDSB

F16: Combined Cleaning: Which Works Best? Sharin Huda, Nabila Choudhury J 7-8 Physical Sciences & Math Bennetto, HWDSB F17: Dishes Done Better Mateen Masoomy J 7-8 Physical Sciences & Math Bennetto, HWDSB

F18: Pass Completion or Interception II - Pump It Up! David Cocchiarella I 9-10 Health Sciences St.Thomas More H.S., HWCDSB

F19: The Toils of Coils Sean Curtis I 9-10 Engineering and Computing St.Thomas More H.S., HWCDSB F20: Got Milk? Chris Marco J 7-8 Physical Sciences & Math St. Thomas, HWCDSB

G01: Watts up with Torque! Dayna Walker I 9-10 Engineering and Computing St. Mary's H.S., HWCDSB

G02: Particulate "matters", or does it?: The effects of population increase on air quality
Jordan Bowman
I 9-10 Earth and Environmental
St. Mary's H.S., HWCDSB



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G03: The Effects of Size Differentials in Visual Stimuli on Short and Long Term Memory - Expanded

Kaitlynne-Rae Landry I 9-10 Health Sciences St. Mary's H.S., HWCDSB

G04: Can You Remember This? Brittany Gurman, Alexandra Hul J 7-8 Health Sciences St. Paul. HWCDSB

G05: Let the sun shine in! Martin Chmielecki, Gregory De Tina J 7-8 Physical Sciences & Math St. Paul, HWCDSB

G06: Remember That...?
Ashley Jambrosich, Erica Brown
J 7-8 Health Sciences
St. Paul, HWCDSB

**G07: Why Warmups?**Jennifer Iacobucci, Olivia Jackson J 7-8 Health Sciences St. Paul, HWCDSB

Vs. Girls

Anna Chrisanthopoulos, Tayler Doyle J 7-8 Health Sciences St. Paul, HWCDSB

G09: Soft as a marshmallow? Melissa Bauce J 7-8 Health Sciences St. Teresa of Avila, HWCDSB

G10: Energizer vs. Duracell, Which one Really Keeps On Going Ryan King

J 7-8 Physical Sciences & Math St. Teresa of Avila, HWCDSB

G11: Ozone Helpful Or Harmful? Angela Chiarelli J 7-8 Earth and Environmental St. Teresa of Avila, HWCDSB

G12: How Fat Is It? Rachel Finucane, Lauren Arruda J 7-8 Physical Sciences & Math St. Teresa of Avila, HWCDSB

G13: Free As The Wind Alexandra Banevicius

J 7-8 Earth and Environmental St. Teresa of Avila, HWCDSB

G14: Meltdown Melissa Goddard J 7-8 Physical Sciences & Math St. Teresa of Avila, HWCDSB

G15: I've Got my Eye on You Helena Foulds J 7-8 Health Sciences St. Teresa of Avila, HWCDSB

G16: Nothing To Sneeze At Greg Marco, Evan Albert J 7-8 Life Sciences St. Thomas, HWCDSB

G17: Eat The Wrap Katie Gair, Nichole Mckay J 7-8 Earth and Environmental St. Thomas, HWCDSB

G18: For Better or For Thirst Rebecca Flynn J 7-8 Physical Sciences & Math St. Thomas, HWCDSB G19: Fruit Energy Justine Chiasson

G08: Hand Eye Coordination Boys



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J 7-8 Physical Sciences & Math St. Thomas, HWCDSB

**G20: Coke vs. Milk on Teeth** Brock Novak, Ben Alexander J 7-8 Life Sciences St. Thomas, HWCDSB

H01: The Power Of Salt Estefan Mejia J 7-8 Physical Sciences & Math St. Mark, HWCDSB

H02: To sleep or not to Sleep? Justin Balsor, Marcel Galli J 7-8 Health Sciences St. Mark, HWCDSB

H03: Fascinating Forensics Courtney Dionne J 7-8 Physical Sciences & Math St. Mark, HWCDSB

## H04: Is Your Money Going Down the Drain?

Margaret Kaczanowski J 7-8 Physical Sciences & Math St. Mark, HWCDSB **H05: If the Earth was Square...** Natalie Michalski J 7-8 Earth and Environmental St. Mark, HWCDSB

H06: What Paint Holds Up Erik Bilobrk J 7-8 Physical Sciences & Math St. Mark, HWCDSB

H07: Deicers! Melt Ice or Corrode Metal

Brant Bilobrk J 7-8 Physical Sciences & Math St. Mark, HWCDSB

H08: Mysteries of the Mind Kathleen Dickson J 7-8 Health Sciences St. Mark, HWCDSB

H09: Enzymes In Action Chiara Genovese J 7-8 Life Sciences St. Margaret Mary, HWCDSB

H10: MEMORIZING GRAPHICS
David Potter
J 7-8 Health Sciences
St. John the Baptist, HWCDSB
H11: Mathematical Inclination and
Recreation

Margaret Martin J 7-8 Health Sciences St. John the Baptist, HWCDSB

H12: Coke Mmm... Bad Taylor Oliver, Roula Giore J 7-8 Health Sciences St. John the Baptist, HWCDSB

H13: Organic vs. Synthetic Lindsay Mills-Lundrigan, Jane-Frances MacDonald J 7-8 Earth and Environmental St. John the Baptist, HWCDSB

H14: No Stain, That's A Gain Eric Cornell, Patrick Keating J 7-8 Physical Sciences & Math St. John the Baptist, HWCDSB

H15: Just A Breath Away Olivia Virag J 7-8 Health Sciences St. John the Baptist, HWCDSB

H16: What Are Your Energy Pigs? Julia Kay J 7-8 Earth and Environmental St. John the Baptist, HWCDSB H17: Substance Freeze Andrew Folino, James Ballarano



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J 7-8 Physical Sciences & Math St. John the Baptist, HWCDSB

H19: How Slow Can You Go? Adam Hart, Ryan Squigna J 7-8 Physical Sciences & Math St. Joachim, HWCDSB

H20: Shake N' Quake Jordan Pietroniro, Jessica Carducci J 7-8 Engineering and Computing St. Joachim, HWCDSB

101: Melting Ice Ashleigh-Anne Gureckas J 7-8 Physical Sciences & Math St. Joachim, HWCDSB

102: I've Got Gas! Justin Rich J 7-8 Earth and Environmental St. Joachim, HWCDSB

103: Electrolytes Or Non-Electrolytes? Michael Chesla, Patrick Reilly J 7-8 Physical Sciences & Math St. Joachim, HWCDSB 104: Harmful or Helpful Lindsay Sobiera

J 7-8 Physical Sciences & Math St. Joachim, HWCDSB

105: Which Whitens Best? Carly O'Neill, Tamara Kaiah J 7-8 Physical Sciences & Math St. Joachim, HWCDSB

sink? Samantha Cavallin J 7-8 Physical Sciences & Math St. Joachim, HWCDSB

106: Buoyancy Will it float or Will it

107: Look What's Poping! Dunne Jacklyn J 7-8 Physical Sciences & Math St. Joachim, HWCDSB

108: Do You C What I C? Rachel Mason J 7-8 Physical Sciences & Math St. Jerome, HWCDSB

109: Sand and Soil Matthew Davis J 7-8 Life Sciences St. Jerome, HWCDSB I10: Banishing Bacteria Savannah Baronette

J 7-8 Life Sciences St. Jerome, HWCDSB

111: The Hot Hand Victor Raso J 7-8 Health Sciences St. Jerome, HWCDSB

112: Don't Stick with Non-Stick Robert Perez J 7-8 Physical Sciences & Math St. Jerome, HWCDSB

113: Trusses **Bradley Dunn** J 7-8 Engineering and Computing St. Jerome, HWCDSB

114: If you can't run you've, got to Andrea Urquhart, Lidia Palfi J 7-8 Health Sciences St. Jerome, HWCDSB

115: Can Food Affect Athletic Ability? Tamara Learning, Zoe Anderson J 7-8 Health Sciences St. Jerome, HWCDSB **I16: Freezing Points Of Water** 

Elizabeth Burns

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J 7-8 Earth and Environmental St. Jerome, HWCDSB

I17: Like Dissolves Like
David Martynowicz, George Aushana
J 7-8 Physical Sciences & Math
St. Jerome, HWCDSB

I18: Apple Deterioration
Marina Mancini, Meghan D'Angelo
J 7-8 Life Sciences
St. Jerome, HWCDSB

I19: The pH Factor
Diana Hanna
J 7-8 Physical Sciences & Math
St. Jerome, HWCDSB

**I20:** What's the Point?
David Martinac, Stefan Pogoda
J 7-8 Health Sciences
St. James the Apostle, HWCDSB

J01: Smoke Chambers Chelsea Paquette, Carmela Fuca J 7-8 Life Sciences St. Agnes, HWCDSB Joe Sardo J 7-8 Physical Sciences & Math St. Agnes, HWCDSB

J03: Zap! Daniel Vastano J 7-8 Physical Sciences & Math St. Agnes, HWCDSB

J04: Brilliant Sparkle Jenna Wild J 7-8 Physical Sciences & Math St. Augustine, HWCDSB

J05: Zany Xylems! Chelsea White J 7-8 Life Sciences St. Augustine, HWCDSB

J06: To Preserve and Serve Sarah Macaluso, Rebecca Kearon J 7-8 Life Sciences St. Augustine, HWCDSB

J07: Tremendous Trebuchets
Patrick Langille, Justin Bontje
J 7-8 Engineering and Computing
St. Augustine, HWCDSB

J08: Super Beans Marina Han J 7-8 Life Sciences St. Augustine, HWCDSB

J09: Aww...Don't Cry! Rachel Welsh, Alysha Socha J 7-8 Physical Sciences & Math St. Augustine, HWCDSB

J10: The Beat Goes On Cassie Sauer, Vanessa Bonomo J 7-8 Health Sciences St. Bernadette, HWCDSB

J11: Fly! Airplane Fly! Wes Gerrie J 7-8 Physical Sciences & Math St. Bernadette, HWCDSB

J12: Sound laser mania
Alexis Butty
J 7-8 Engineering and Computing
St. Bernadette, HWCDSB

J13: Science or Science Fiction? Torianne Ipema J 7-8 Health Sciences St. Bernadette, HWCDSB

## Congratulations and good luck to all participants in the 2004 Bay Area Science and Engineering Fair!



## Stoney Creek Optimist Club

J14: Balancing Beams
Diane Sivakumaran
J 7-8 Physical Sciences & Math

St. Bernadette, HWCDSB

J15: Expense vs. Environment Taryn Karl, Jennifer Vaughan J 7-8 Health Sciences St. Bernadette, HWCDSB

J16: Right On, or Left Out? Lindsay Abbott J 7-8 Health Sciences St. Bernadette, HWCDSB

J17: Water Clarification Cierra Butty, Amanda Kramer J 7-8 Earth and Environmental St. Bernadette, HWCDSB

J18: Memory in all its Glory Cathy Gainham J 7-8 Health Sciences St. Cecilia, HWCDSB

J19: Breath of Death Alexandria Marriott, Chantalle Gallant J 7-8 Health Sciences St. James the Apostle, HWCDSB J20: Environmentally Friendly Products

Nella Paris, Cindy Baldin J 7-8 Earth and Environmental St. James the Apostle, HWCDSB

**K01: Energy Conservation & You** Amanda Rispoli, Brittany Horodecki J 7-8 Physical Sciences & Math St. Agnes, HWCDSB

K02: Water Pollution What's the Solution?

Nicholas Vastano, Shawn Krzykala J 7-8 Earth and Environmental St. Agnes, HWCDSB

K03: I have gas Ryan Duguay J 7-8 Physical Sciences & Math St. Agnes, HWCDSB

**K04: Corrosion Explosion**Mack Stewart, Stephen Di Luca
J 7-8 Physical Sciences & Math
St. Agnes, HWCDSB

K05: Ker-Plunk Ken Weston J 7-8 Physical Sciences & Math St. Agnes, HWCDSB K06: To "C" Or Not To "C"
Pauline Nichol
J 7-8 Physical Sciences & Math
St. Agnes, HWCDSB

**K07: Betcha Can't Eat Just One!** Julia Brucculieri J 7-8 Physical Sciences & Math St. Agnes, HWCDSB

K08: H2O How Clear Are We On How Clean It Is?

Nick Petrina, Aaron Petrina J 7-8 Earth and Environmental St. Agnes, HWCDSB

**K09: Don't be alarmed**Brittany Power, Catherine Ferroni
J 7-8 Physical Sciences & Math
St. Agnes, HWCDSB

K10: The effects of second hand smoke Caroline Ssemanda, Julie D'Ortenzio

J 7-8 Health Sciences
Our Lady of Lourdes, HWCDSB

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K12: Hydro-Electricity
Jo-laura Mackin, Amberlea Dewar

J 7-8 Engineering and Computing
Our Lady of Lourdes, HWCDSB

K13: Density

Rachael Viveiros J 7-8 Physical Sciences & Math Our Lady of Lourdes, HWCDSB

K14: The Electrical Stimulation Of Plant Growth

Katherine Hale, Ashley Muller J 7-8 Life Sciences Our Lady of Lourdes, HWCDSB

K15: Foods Genetically Modified

Ashley Kucik, Claudia Chan J 7-8 Health Sciences Our Lady of Lourdes, HWCDSB

K16: Coloured Sugar Crystals

Shilir Gorgees

J 7-8 Physical Sciences & Math Our Lady of Lourdes, HWCDSB K17: Eiffel Tower

Daniel Kuziora

J 7-8 Engineering and Computing Our Lady of Lourdes, HWCDSB

K18: Light bulb and eye vision

Santa Rabi

J 7-8 Health Sciences

Our Lady of Lourdes, HWCDSB

K19: Friction

Elizabeth Giangregorio J 7-8 Physical Sciences & Math Our Lady of Lourdes, HWCDSB

L01: Differences in Reflexes

Elisa Sorbara, Kathleen Dewar J 7-8 Health Sciences Templemead, HWDSB

L02: Battle of the Sexes!

Alex Consoli, Preston Thompson J 7-8 Health Sciences Ryerson, HWDSB

L03: Automated Solar Greenhouse for Southern Ontario

Andrew Jackman, Andrew Bello I 9-10 Engineering and Computing Parkside H.S., HWDSB L04: The Effects of Different Types of Light on Bean Plants

Lucy Vorobej, Sarah Barton J 7-8 Life Sciences Dundas District, HWDSB

L05: Solar cell science

Lucas Chaston, Craig Treen J 7-8 Physical Sciences & Math Dundas District, HWDSB

L06: Astrophysics for All

Brian Le

J 7-8 Earth and Environmental Dalewood, HWDSB

L07: Don't get caught Dirty Handed

Emma Currie, Monica Vanderzanden J 7-8 Health Sciences Dalewood, HWDSB

L08: The Truth, the Whole Truth and Nothing But the Truth

Cody Aitken, Emily Lamond J 7-8 Health Sciences Dalewood, HWDSB



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Respect Innovation Accountability

## Respect... We will:

Respond to stakeholder needs in a caring and considerate manner. Ensure a safe, welcoming environment that nurtures achievement. Communicate in an open, honest and intelligent manner.

Acknowledge the diversity and worth of all individuals and respect their roles, competencies and contributions.

movation... 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.





L09: Gut Reactions: A Histological Investigation of the Effect of Helicobacter Pylori in the Development of Gastric Cancer Natalie Raso I 9-10 Health Sciences St.Thomas More H.S., HWCDSB

### L10: Invisible Cryptography - A Medical Application

Anthony Chiarelli I 9-10 Engineering and Computing St.Thomas More H.S., HWCDSB

## L11: Filling III? Phase II: The toxicity of Dental Amalgam Fillings

Ryan Perez I 9-10 Physical Sciences & Math St.Thomas More H.S., HWCDSB

## L12: Energy in the Air Jordan Witt

J 7-8 Physical Sciences & Math St. Thomas, HWCDSB

#### L13: GERMS R' US!

Michelle Browne J 7-8 Health Sciences St. Teresa of Avila, HWCDSB

## L14: Growing Salt Crystals

Colin Sill J 7-8 Physical Sciences & Math St. Joachim, HWCDSB

#### L15: Skin Cells

Ellen Switenky, Lisa D'Ippoilto J 7-8 Health Sciences St. Jerome, HWCDSB

#### L16: Rubber Band Heat Engine

Hillary Giles, Lisa Costantini J 7-8 Engineering and Computing St. Cecilia, HWCDSB

## L17: Fighting Fertilizers Chemical vs. Organic

Terry Fader J 7-8 Earth and Environmental Notre Dame, BHNCDSB

#### L17: Gliding Around

Nicholas Ivanecky J 7-8 Engineering and Computing St. Bernadette, HWCDSB

### L18: Sailing

Aaron Pede J 7-8 Physical Sciences & Math St. Augustine, HWCDSB

#### L19: Now You See it, Now you Don't

Aaron Giles J 7-8 Health Sciences St. Augustine, HWCDSB

#### L20: Computer Power

Alex Romanowski, Daniel Van Amelsvoort J 7-8 Engineering and Computing St. Augustine, HWCDSB

#### M01: SARS

Veronica Nguyen J 7-8 Health Sciences St. Ann (Hamilton), HWCDSB

#### M02: Cookin' it up!

Victoria Leng-Marini, Alanna Spinelli J 7-8 Physical Sciences & Math Immaculate Heart of Mary, HWCDSB

## M03: Environmentally Safe Hydrocarbon Transporter

Colin Reinholt
J 7-8 Engineering and Computing
Eastview, HDSB

#### M04: Ozone fights mold

Devin Mcdonald J 7-8 Life Sciences Eastview, HDSB

## M05: Electrostatic loudspeaker vs conventional

Jason Magela S 11-12 Physical Sciences & Math Aldershot Elementary, HDSB

## M06: Why Smell When You Can Hide It!!!!!

Kristina Kuffel, Maria Okroukh J 7-8 Health Sciences St. Joseph (Halton Hills), HCDSB

#### M07: Seeing is Believing: An Application of a Geographical Information System

Nicolas Querques, John Spehar J 7-8 Engineering and Computing St. Joseph (Halton Hills), HCDSB

### M08: Hot or Not! Paul Falkowski

J 7-8 Health Sciences St. Andrew, HCDSB

#### M09: Math-U-Lator v2.0

Matt Carmichael, Kevin Langlois J 7-8 Engineering and Computing Sacred Heart of Jesus, HCDSB

#### M10: Gas from Garbage Part 2

Andrew Darby J 7-8 Biotechnology Sacred Heart of Jesus, HCDSB

#### M11: The Effects of Human Medication on Lepidium Sativum and Raphanus Sativus

Marianne Querques S 11-12 Health Sciences Christ the King Secondary School, HCDSB

## M12: Corrosion Control: Spanning the Test of Time

Joseph Querques I 9-10 Engineering and Computing Christ the King, HCDSB

#### N01: Shed Some Light

Deven Duncombe I 9-10 Engineering and Computing Assumption H.S., HCDSB

#### N02: Windows to their World

Kayla Cornale I 9-10 Health Sciences Assumption H.S., HCDSB

#### N03: HydroFlow

Simon Baker J 7-8 Earth and Environmental Dunnville Central, GEDSB

#### N04: Innocent Victims

Lauren Mills J 7-8 Health Sciences Immaculate Heart of Mary, HWCDSB

#### N05: N.D.T. Magnets At Work

Devin Yakowyschuk J 7-8 Physical Sciences & Math Immaculate Heart of Mary, HWCDSB

N06: What's Shakin'?

Laura Casimirri, Denise Ionico J 7-8 Earth and Environmental Immaculate Heart of Mary, HWCDSB

N07: Beam There, Done That!

Peter MacCauley J 7-8 Physical Sciences & Math Holy Spirit, HWCDSB

N08: Titration of Dissolved Oxygen

Irene Rebalka

J 7-8 Earth and Environmental Holy Spirit, HWCDSB

N09: Evaporation Consequences

Augustine Krawchenko J 7-8 Earth and Environmental Holy Spirit, HWCDSB

N10: That Cracks Me Up

Tommy Hoang, Steve Toms J 7-8 Engineering and Computing Holy Name of Jesus, HWCDSB

N11: Ice Be Gone

Anthony Zoccoli

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

N12: Somehow... Make Me Grow

Brenda Camey, Sandi Ferreira J 7-8 Life Sciences Holy Name of Jesus, HWCDSB

N13: Toss Up

Kevin Walton

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

N14: Toothpick Power

Chiove Monaco, Whitney Zielonka J 7-8 Physical Sciences & Math Holy Name of Jesus, HWCDSB

N15: The Battle of the Stains

Sabrina Paulino, Andrea Mejia J 7-8 Physical Sciences & Math Holy Name of Jesus, HWCDSB

N16: Colour Confusion

Ricky Domingues J 7-8 Health Sciences Holy Name of Jesus, HWCDSB



## P05: how medications affect the human body

Ciara Logar J 7-8 Health Sciences St. Bernadette, HCDSB

P06: Sparky the Hydraulic Arm

Emily Gatza, Rachel Sousa J 7-8 Engineering and Computing St. Dominic, HCDSB

P07: Hydraulic Arm

David Burns, Adrien Staples J 7-8 Engineering and Computing St. Dominic, HCDSB

## P08: Food Colour and Taste; Food Colour and Health

Genevieve Ryan, Amanda Nelles J 7-8 Health Sciences St. Joseph (Halton Hills), HCDSB

P09: The Longevity of Milk Varieties

Emma Borkowski, Samantha Fowler J 7-8 Life Sciences St. Joseph (Halton Hills), HCDSB P10: Mould Killers

Michael Brown, Megan Rudisi J 7-8 Life Sciences St. Joseph (Halton Hills), HCDSB

P11: Eye See What's Not There

Joanna Kaleniecka, Laura Cormier J 7-8 Health Sciences St. Matthew, HCDSB

P12: The Tooth Behind It All

Katarina Bassan, Amanda Paul J 7-8 Health Sciences St. Matthew, HCDSB

P13: More Than a Jolt From a Bolt

Heather McQueen I 9-10 Earth and Environmental Aldershot H.S., HDSB

P14: Problems with the Blueprints of Our Body

Natalie Fox J 7-8 Health Sciences Eastview, HDSB

## P15: The effects and remediation of a copper polluted ecosystem

Patrick Martin I 9-10 Earth and Environmental Bishop Ryan H.S., HWCDSB

#### P16: Waste Washers : An Investigation of the Removal of E. coli K12 from Water within a Constructed Wetland Model Madeleine Martin

I 9-10 Earth and Environmental Bishop Ryan H.S., HWCDSB

#### P17: Burning Rubber

Andrew Black, Carson Tarbutt J 7-8 Engineering and Computing Holy Name of Jesus, HWCDSB

#### P18: Suck it up

Sara Moffatt, Ashley Zajackowski J 7-8 Life Sciences Holy Name of Jesus, HWCDSB

#### P19: Plant Refreshments

Jacob Downey J 7-8 Life Sciences Holy Name of Jesus, HWCDSB

#### P20: Worth Its Weight

Chris Echlin

J 7-8 Earth and Environmental Holy Name of Jesus, HWCDSB

#### Q05: Colour Confusion

Jess Bigda, Marisa Meleca J 7-8 Health Sciences St. Bernadette, HCDSB

#### Q06: Found At Your Fingertips

Melany Gaetani, Shannon Griffin J 7-8 Health Sciences St. Bernadette, HCDSB

#### Q07: Does the nose know?

Steph Bujna, Lauren Tracey J 7-8 Health Sciences St. Bernadette, HCDSB

#### Q08: Quick Caffeine!

Stef Cuberovic, Danie Lewis J 7-8 Health Sciences St. Bernadette, HCDSB

Q09: Gel, Paste, Strips or Baking

## Soda: What makes your teeth whiter?

Monica Maher J 7-8 Physical Sciences & Math St. Bernadette, HCDSB

#### Q10: Most waterproof sun block...

Paulina Maher J 7-8 Physical Sciences & Math St. Bernadette, HCDSB

#### Q11: Bubble Gum Smarts

Nicole Morrison, Michelle Tracey J 7-8 Health Sciences St. Bernadette, HCDSB

#### Q12: Sugar Bombs

Meghan Palozzi J 7-8 Health Sciences St. Andrew, HCDSB

#### Q13: Beautiful Bountiful Bananas

Andrew Quinn J 7-8 Biotechnology Sacred Heart of Jesus, HCDSB

## Q14: A Grade Seven Girl's Attitude Towards Body Image

Katie Housley J 7-8 Health Sciences Sacred Heart of Jesus, HCDSB

#### Q15: Time for Thyme

Sacha Forstner
J 7-8 Life Sciences
Sacred Heart of Jesus, HCDSB

## Q16: The Catapult Duel- Force Vs. Distance

Brandon Chaffay, Andrew Derayeh J 7-8 Physical Sciences & Math Sacred Heart of Jesus, HCDSB

#### Q17: The Rust of Iron

Taylor Pastusiak J 7-8 Physical Sciences & Math Sacred Heart of Jesus, HCDSB

## Q18: The Genius of the Sinister Hand

Kevin Correia, Leanne Bekeris S 11-12 Health Sciences Bishop P.F. Reding H.S., HCDSB

#### Q19: Pulse Pumping Action

Matthew Maich J 7-8 Health Sciences Notre Dame, BHNCDSB

## Q20: Environmentally Friendly Ice Removal

Daniel Szoke J 7-8 Physical Sciences & Math Notre Dame, BHNCDSB



### 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 category.

#### **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: \$25 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.

#### **Artistically Inspired Display Award**

Prize: \$200.

Criteria: The most creative display.

#### **Bell Canada Computer and Communications Awards**

Prize: 1st: \$1,000; 2nd: \$500.

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

people and machines; any level.

#### **Canadian Finishing Systems Award**

Prize: \$250

Criteria: Best project in the Earth & Environmental Sciences category, any level.



Union Gas congratulates all entrants in the 2004 Bay Area Science and Engineering Fair



uniongas



#### Canadian Institute of Mining & Metallurgy Hamilton Branch Award

Prize: 1st: \$100, 2nd: \$50, 3rd: \$25.

Criteria: For projects relating to mining and metallurgy regardless of level.

#### 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, energy or climate sciences.

#### **Cancer Assistance Programme Awards**

Prize: Three awards: \$50, \$35, \$25.

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

#### Chemical Institute of Canada, Hamilton Section, Awards

Prize: Three cash prizes of \$100 each.

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

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

Prize: \$75

Criteria: Project demonstrating the best application of chemistry.

#### The DaVinci Awards

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

Prize: \$200, honourary membership in the Association and an invitation to attend meetings

Criteria: The best demonstration of the use of the scientific method.

#### **Dofasco By-Products Utilization Award**

Prize:\$100

Criteria: Project that best displays the conservation and recycling of materials, so as to minimize their impact on the environment and society.

#### **Dofasco Chemical Testing Award**

Prize: \$100

Critieria: Project that best displays the use of chemical testing and/or chemical principles to solve a technical problem.

#### **Dofasco Environmental 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.

#### **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.

#### **Dofasco Creativity and Innovation Community of Practice Award**

Sponsored by the members of the Dofasco Creativity and Innovation Group

Prize: \$100

Criteria: Project which best displays the use of creativity and innovation in solving or exploring either a technical or social problem.

#### **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.

#### **Dofasco Market Development and Product Application Award**

Prize: \$100

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

#### **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.

#### **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.

#### **Dofasco Steelmaking Award**

Prize: \$100

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

technical problem.

#### **Dofasco Technology Awards**

Prize: \$100

Criteria: Deserving project that best displays the use of Engineering & Maintenance Technology principles

and design to solve a technical problem.

Prize: \$100

Criteria: Deserving project that best displays the use of Process Automation pricnciples and design to

solve a technical problem.

Prize: \$100

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

#### **Dofasco Zyplex Material Science Award**

Prize: \$100

Criteria: Deserving project that best displays the use of materials in creating new structural compositions or

in solving a materials science problem.

#### Dr. M. Dovle Award

Prize: A trophy for the winner's school; a plague and \$150 to the winner.

Criteria: Best biology project.

#### Eastman Kodak Company Photography Award

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

Prize: A Kodak Digital 35mm One Time Use camera for each of the winner and the sponsoring

teacher.

Criteria: Project best demonstrating the best use of photographic or digital image processing to gather data, solve a problem, or clearly explain the essence of a science project.

#### The Electrical Construction Association of Hamilton Award

Prize: \$150

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

## **Congratulations on your** accomplishments!

At Pioneer Hi-Bred, we believe in the value of education, knowledge and innovation. Here's to the great opportunities that lie ahead for all of us.



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The **International Society** for Pharmaceutical **Engineering** 

## Best wishes to all BASEF 2004 participants

8000 Décarie Boulevard

3rd floor

Montréal, Ouébec

**H4P 2S4** 

Tel: 514-735-5651 ext 2297

Fax: 514-737-7988

#### **Hamilton Amateur Astronomers Award**

Prize: Book plus a one year membership in the Hamilton Amateur Astronomers

Criteria: Project that best demonstrates an understanding of a topic related to astronomy.

#### Hamilton Utilities Corporation / Hamilton Community Energy - powerWiseTM Award

Prize: One award of \$300

Criteria: The project that best demonstrates the production of electrical energy from 'green sources' OR the project that demonstrates a new, viable approach to using electrical energy more efficiently.

#### **Hamilton Wentworth Occasional Teacher Local**

#### **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.

#### **Environment and Education Award**

Prize: \$50 and certificate

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

#### **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.

#### **IEEE Hamilton Section Award**

Prize: \$10: Best use of electronics in a science or engineering project, any level.

#### Intel Excellence Awards

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

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

Criteria: The top Computer Science project and the top Environmental Science project; intermediate and senior projects only

#### 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

ASM International Foundation: outstanding exhibit in materials science.

American Meteorological Association: Best meteorological exhibit.

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

International Society for Optical Engineering: Best project in the area of optical science and engineering. MU Alpha Theta: Best project demonstrating the most challenging, thorough and creative investigation of a problem involving modern mathematics. The project does not have to be entered in the Mathematics category.

<u>NACE International</u>: Best exhibit in Environmental Science or Engineering, demonstrating awareness of the importance of controlling and preventing corrosion.

<u>Yale Science & Engineering</u>: Most outstanding grade 11 student exhibiting in the areas of Computer Science, Engineering, Physics, or Chemistry.

#### **Investigative Science Award**

Prize: \$100

Criteria: The project that best demonstrates problem solving, any category, any level

#### McMaster University Department of Chemistry Award

Prize: \$100 plus certificate

Criteria: An outstanding senior or intermediate project in the area of chemistry

#### **McMaster Engineering Society Award**

Prize: \$250

Criteria: Best junior engineering project.

## BASEF 2004

## SPECIAL AWARDS continued...

#### **McMaster Nuclear Reactor Award**

Prize: \$250

Criteria: For a deserving project relating to radiation sciences.

#### 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 Mechanical Contractors Association of Hamilton Award

Prize: \$250

Criteria: Best intermediate or senior engineering project.

#### **Mohawk College Faculty 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.

### **Electro Technology Awards**

Prize: \$50 for each of 2 projects

Criteria: Deserving junior projects in engineering 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.

## "Best Wishes and Congratulations to all the BASEF Students"

#### from

## **Triple Crown Enterprises Ltd.**

170 Shaw Street Hamilton Ont L8L 3P7

Phone: 905-540-1630 Fax: 905-540-1612

Email: tce@tceont.com

TCE

Best wishes and good luck to all the students participating in the 2004 Bay Area Science & Engineering Fair.

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

Prize: \$50

Criteria: One deserving project related to any branch of industrial engineering or manufacturing; can include Quality Systems and Instrumentation, any level.

Prize: \$50

Criteria: One deserving project related to hydraulics or pneumatics; can include Quality Systems and Instrumentation, any level.

Prize: \$50

Criteria: One deserving project related to metal casting; can include Quality Systems and Instrumentation, any level.

#### **Mohawk College 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: \$200 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: \$75

Criteria: An exemplary project in cognition.

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

Prize: \$170

Criteria: Best medical laboratory science project.





#### **Primary Fluids Systems Awards**

#### **Primary Fluids Systems Engineering Awards**

Prize: \$250, \$150, \$100

Criteria: Deserving projects in junior engineering.

Prize: \$250, \$150, \$100

Criteria: Deserving projects in intermediate engineering. Primary Fluids Systems Physical Sciences Awards

Prize: \$125, \$75, \$50

Criteria: Deserving projects in junior physical sciences.

Prize: \$125, \$75, \$50

Criteria: Deserving projects in intermediate physical sciences. **Primary Fluids Systems Earth & Environmental Awards** 

Prize: \$125, \$75, \$50

Criteria: Deserving projects in junior earth & environment.

Prize: \$125, \$75, \$50

Criteria: Deserving projects in intermediate earth & environment.

#### **Professional Engineers of Ontario (Hamilton Local Chapter) Awards**

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

Criteria: For top projects using the application of engineering skills, any level.

#### **Professional Engineers of Ontario (Oakville Chapter)**

Prize: \$50 to each of two projects Criteria: Deserving engineering projects.

#### **Procor Awards**

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

Criteria: Excellent engineering projects.

#### Ramanujan Mathematics Awards

Prize: \$100 each for up to three projects.

Criteria: Projects demonstrating a strong mathematical base.

#### **Royal Botanical Gardens Award**

Prize: \$100 gift certificate for the RBG shop and a one year family membership to the RBG.

Criteria: Best project in botanical or environmental sciences.

#### Safety Management Systems Software Award

Prize: \$100 and a plaque

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

#### **Scientific American Subscription Awards**

Prize: Five 12-month subscriptions.

Criteria: Deserving projects.

#### **Science Teachers Association of Ontario Awards**

Prize: \$75 to each of two projects.

Criteria: Projects demonstrating the best use of the scientific method; junior level.

#### The Tinnerman Palnut Canada Corporation Award

Prize: \$250

Criteria: For the best engineering 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

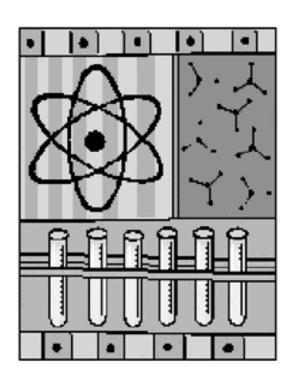
#### For Junior, Intermediate, Senior levels in:

- 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 2004 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.

# Proud to support the Bay Area Science and Engineering Fair



"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

### **GRAND PRIZE AWARDS**

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

#### **BEST-IN-FAIR 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.

#### 2004 PFIZER CANADA MINISTER'S AWARD OF EXCELLENCE

The top project from BASEF 2004 that is advancing to CWSF, will earn the 2004 Pfizer Canada Minister's Award of Excellence. The winning project will receive a cash award, a Gold Medal and a Certificate from Ontario's Minister of Enterprise, Opportunity and Opportunity. The winner's school will receive an Award of Excellence plaque to keep.





#### HERB GILDEA MEMORIAL TROPHY

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

#### **BASEF COMMITTEE TROPHY**

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

### **GRAND PRIZE TRIP AWARDS**

#### INTEL INTERNATIONAL SCIENCE & ENGINEERING FAIR TRIP AWARDS

All-expense-paid trips to the 2004 Intel International Science & Engineering Fair, to be held in Portland, Oregon, USA from May 9-15, 2004. 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.

#### Sponsors are

- Dofasco
- Manulife Financial
- Mohawk College
- Sheridan Institute of Technology



#### CANADA WIDE SCIENCE FAIR TRIP AWARDS

All expense-paid trips to the 2004 Canada Wide Science Fair, to be held St. John's Newfoundland from May 15-23, 2004. Up to 20 trips (dependant on funding levels) will be awarded for excellent projects. All projects entered in BASEF 2004 are eligible.

#### Sponsors are

- Manulife Financial
- Comstock Canada Ltd.
- CRS Robotics
- Community Awareness Emergency Response
- Edward Oldham, P.Eng, Patent and Trademark Agent
- Halton District School Board
- Halton Catholic District School Board
- Halton Region, Business Development
- City of Hamilton, Economic Development
- Hamilton Wentworth Catholic District School Board
- Hatch
- Sanofi-Synthelabo Canada Inc
- Sci-Tech Ontario
- Stoney Creek Optimists
- Triple Crown Enterprises
- Union Gas

#### **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". Sci-Tech Ontario will provide each student's school a pennant-style banner appropriate for wall-hanging. Each Ontario CWSF trip-winner will receive a team jacket emblazoned with an embroidered 2004 Team Sci-Tech Ontario logo.



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SCI-TECH

