BASEF

Big Ideas.
Infinite Possibilities.

BASEF 2023

Sponsored By: Primary Fluid Systems Inc.

63rd Annual Bay Area Science & Engineering Fair

Official Program

Diamond Sponsors
ArcelorMittal Dofasco
Mohawk College

Platinum Sponsors
Alectra Utilities
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Revision: v2.4 (Mar. 27/23)

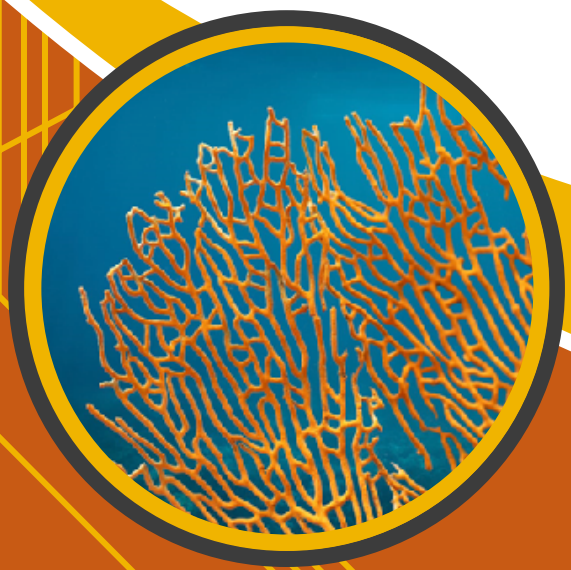


Table of Contents

Table of Contents 1
BASEF Values 2
Chairs' Message 4
Organizing Committee 6
BASEF 2023 Schedule of Events 7
Map of Mohawk College 8
Information for Parents 9
- BASEF 2023 Quick Facts 9
- Parent Responsibilities: Day-by-Day 9

Connect with Us! 11
BASEF 2023 Sponsors & Charitable Donors 12
- General Funding Sponsors 12
- Charitable Donors 13

BASEF 2023 Awards 14
- ArcelorMittal Dofasco Merit Awards 14
- Grand Awards 14
- Grand Prize Trip Awards 16
- Special Awards 17
- Scholarships 27
- BASEF Inspiration Awards 28

BASEF 2023 Merit Award Judges 29
BASEF 2023 Volunteers 32
List of Student Exhibitors 33
- Project Floor Layout 33
- Junior Level 34
- Intermediate Level 48
- Senior Level 51

Teachers' Awards 56
- BASEF 2023 Champion Teacher Award 56
- The Dianne Beveridge Grant 57
- BASEF Infinite Possibilities Teacher Grant 58

Emergency Procedures 59

BASEF Values

Land Acknowledgement

The Bay Area Science & Engineering Fair (BASEF) acknowledges its presence on the traditional territories of the Mississauga and Haudenosaunee nations, and within the lands protected by the "Dish with One Spoon" wampum agreement.

The catchment area of BASEF is home to many Indigenous people from across Turtle Island. We respect the longstanding relationships with local Indigenous communities, the Mississaugas of the Credit First Nation and the Six Nations of the Grand River. BASEF recognizes that we must do more to learn about the rich history of this land so that we can better understand our roles as residents, neighbours, partners and caretakers. For more information, visit www.native-land.ca.

Our Mission

BASEF inspires young people to positively impact the world through science, technology, engineering and mathematics. BASEF provides opportunities for students to showcase their innovations and discoveries.

Our Vision

There is engaged participation by all eligible students. Completing a STEM (Science, Technology, Engineering & Mathematics) project is a means to fulfill Ministry curriculum in elementary and secondary schools. Students realize that through STEM literacy, they can make a positive difference in the world. Scientific innovations and discoveries will be considered exciting, and students will make time for science fair projects because they will have opportunities and develop 21st Century Competencies.

Welcome to the 2023 Bay Area Science and Engineering Fair.

Congratulations to all of the students who have worked hard to be part of this year's Bay Area Science and Engineering Fair. This is one of Canada's largest and longest running science and engineering fairs. Many students who've competed in this fair have gone on to win national and international competitions and are now doing amazing things in their lives and careers.

I also want to commend the sponsors, judges, volunteers, parents and teachers who make BASEF such a resounding success and showcase for remarkable young talent. Your support and mentorship means the world to these young people. You encourage them to dream bigger, aim higher and exceed all expectations.

Mohawk College is committed to providing students with an excellent education and a great college experience. We are proud to support the Bay Area Science and Engineering Fair.

Congratulations again to all of the students participating in this year's fair. You represent your schools well, and you should be very proud of what you've accomplished.

Best wishes and good luck!

Ron J. McKerlie
President & CEO,
Mohawk College

mohawk
COLLEGE

Chairs' Message

Dana Bee and David Reed, your co-chairs for BASEF 2023 would like to welcome you to the 63rd Bay Area Science and Engineering Fair! This is our first year returning to an in-person event after the pandemic forced us to go virtual for three fairs and we could not be happier!

Thank you to everyone who supported our time virtually. I'm sure like us, all of you have gained some valuable skills that can transfer to present day.

Congratulations to the 301 students, representing 238 projects competing this year. These numbers have substantially increased from last year's virtual fair when we had 204 students representing 161 projects. We hope to return to our pre-pandemic levels soon.

BASEF is thrilled so many students have come together to share their love of science to present and showcase their fair projects. We would like to acknowledge many of this year's participants who have not attended an in-person fair before and we wish you all the best with this new experience.

We would also like to recognize the support of teachers, parents and mentors who have and continue to guide students throughout their science journey, thank you!

This year, BASEF is proud to welcome our returning Title Sponsor:

Primary Fluid Systems Inc.

Primary Fluid Systems Inc. recognizes the importance of encouraging young people to pursue training and careers in STEM related activities.

Our two Diamond Level sponsors are key to the success of this year's Fair:

ArcelorMittal Dofasco

Mohawk College

We are grateful for the essential support from over 96 charitable donors, corporate and community sponsors, and donors of special awards that make BASEF possible.

BASEF is a volunteer-driven registered charity. We acknowledge with many thanks, the extraordinary efforts of the Organizing Committee members, 25 in total, who have dedicated countless hours toward making BASEF 2023 a success.

And last but not least, students, we want to thank YOU! Thank you for choosing a topic that ignited your inner scientist, mathematician or engineer. You had a question, and you explored the answers. We know it was difficult and a lot of hard work, but you persisted and showed resiliency to complete your project and showcase it at BASEF. Hopefully this will help build invaluable skills and habits that will undeniably lead you down the road to success in life.

On behalf of the Organizing Committee, we extend a special thank you to Mohawk College and its staff and students, who have generously supported and/or hosted BASEF since 1975. We hope to return to Mohawk College again, one day. The location for the 2024 fair has not yet been determined, so please watch for updates on our social media platforms.

Until next year's fair,

Co-Chairs Dana Bee and David Reed

Dana Bee

David Reed

"*Impossible only means that you haven't found the solution yet."*
– *Anonymous*

BASEF is committed to following the advice of scientists and medical experts. Given the effects of the ongoing COVID-19 pandemic, BASEF requires that all participants, volunteers, and guests wear a suitable face mask in our indoor venues. If you forget to bring one with you, we will have some available at the entrance Thank you for cooperation!

Organizing Committee

Co-Chairs
Dana Bee, David Reed

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

Legal Secretary
Renato De Tina

Registrar
George Geczy

Judge-In-Chief
Donna Stack-Durward
Assistant: Dan Bowman

Scientific Review Committee
Donna Stack-Durward (Judge-In-Chief), Dana Bee (Co-Chair), Dan Bowman, George Geczy, Katie Brent

Special Awards Committee
Renato De Tina & Eleanor O'Flynn (Leads), Sue Olynyk

Fundraising Committee
Sue Olynyk (Chair), Renato De Tina, Paul Lakin, Mike McNally

Outreach & Bursaries
Mark Mindorff (Lead), Ryan LaRue, Ingrid Scully

Marketing & Publicity
Marc Trotta, Wayne Bowdish, Ryan LaRue

Photography & Graphics
Wayne Bowdish (Lead), Ryan LaRue

Digital Program
Ryan LaRue (Lead), Wayne Bowdish, Eleanor O'Flynn, Sue Olynyk

Information Systems
Gerard Chiasson, George Geczy

Awards Ceremony
Gerard Chiasson (Lead); Cathy Hayman & Chris Blackwood (Emcees); Erik Bercik, George Geczy

Alumni Project
Denise Brennan-Rieder, Krish Joshi

Canada-Wide Science Fair (CWSF) Delegates
Dan Bowman (Lead), George Geczy, Caroline Mahut, Donna Stack-Durward

International Science & Engineering Fair (ISEF) Delegates
Dana Bee, David Reed

Volunteer Coordinators
Caroline Mahut & Victoria Lee (Leads); Dana Bee

Safety Inspections
Mark Simpson

Student Advisors
Maria Chzhen, Jeffrey Klinck, Isabella Lopes

Members-At-Large
Katie Brent, Anika Gupta, Neha Gupta, Caroline Huang, Varsha Jayasankar, Sabrina Mogus, Jay Subramanian

Educator Advisors

BHNCDSB:	Jasmine Vorkaic
GEDSB:	Jason Hall
HCDSB:	Matt Kovacs
HDSB:	Ingrid Scully
HWCDSB:	Evelin Niemiec
HWDSB:	*Vacancy*
Mohawk College:	Dana Jacobs Chalene Begin
Oakville Christian School:	Beth Wilson
Six Nations:	*Vacancy*

School Boards:

BHNCDSB	*Brant Haldimand Norfolk Catholic District School Board*
GEDSB	*Grand Erie District School Board*
HCDSB	*Halton Catholic District School Board*
HDSB	*Halton District School Board*
HWCDSB	*Hamilton-Wentworth Catholic District School Board*
HWDSB	*Hamilton-Wentworth District School Board*

Please reach out (chair@basef.ca) if you would like to become an ***educator advisor*** *or* ***help us to organize*** *BASEF 2024!*

BASEF 2023 Schedule of Events

Thursday, March 23rd: On-Site Project Setup & Safety Check

4:00–8:00 pm	Registration, set-up and safety checks. Note: valuables left in the gym overnight are left at the student's own risk!	Gym

Friday, March 24th: Project Judging

12:30–12:45 pm	Students arrive at Mohawk College for project judging. Note: it is the responsibility of the student to arrange their own transportation to and from Mohawk College; students are not permitted to arrive before 12:30 on the day of judging.	Gym
1:00–4:00 pm	Judging interviews for BASEF students. BASEF participants must remain at their projects during judging.	Gym
4:00 pm	Students are dismissed and must arrange their own transportation home.	Gym

Saturday, March 25th: Public Viewing

9:00 am–Noon	Public viewing. Projects are to remain in place until end of the viewing.	Gym
Noon–12:15 pm	Project take-down. All projects must be removed by 12:15 pm.	Gym

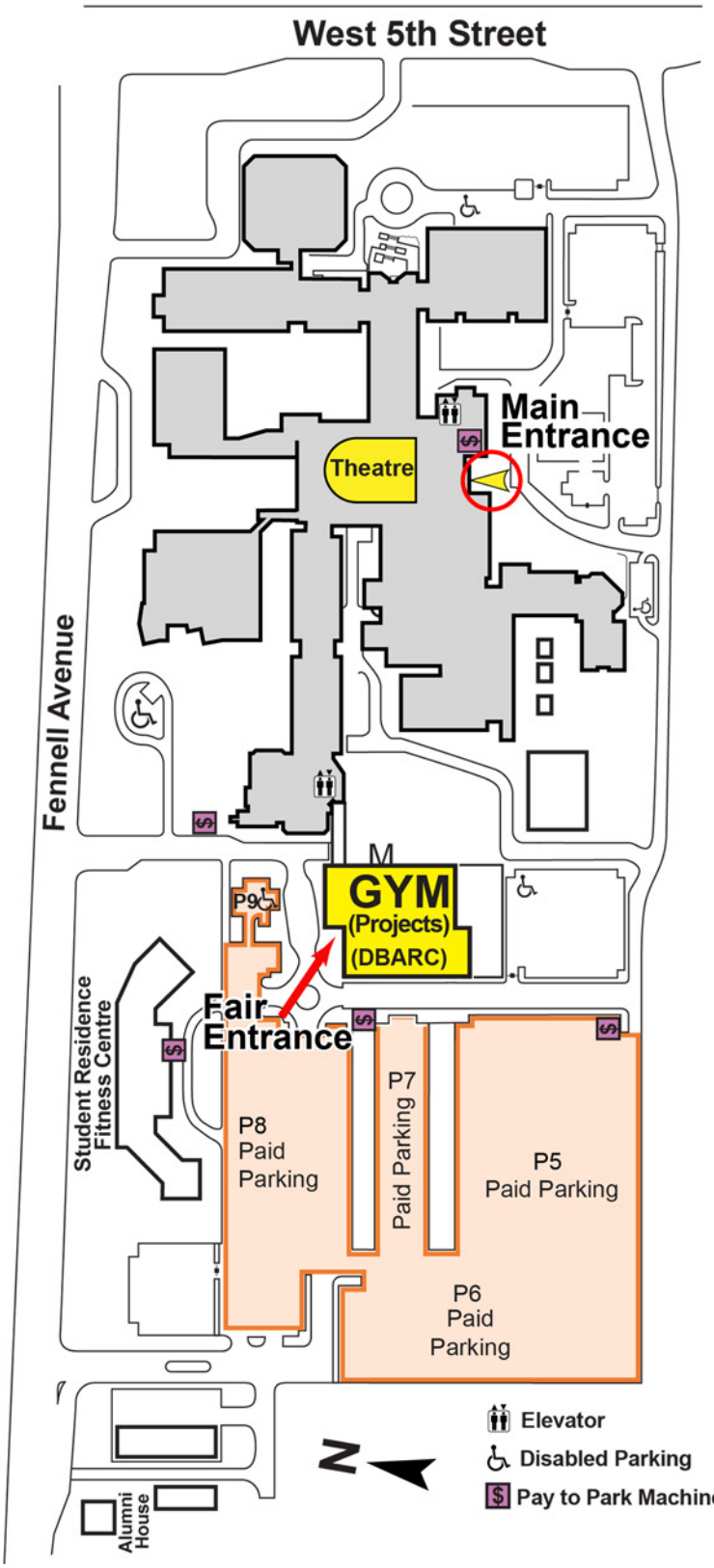
Tuesday, March 28th: Awards Ceremony

6:00 pm	Seating opens for the Awards Ceremony	Theatre
7:00–9:30 pm	Awards Ceremony	Theatre
9:30–10:30 pm	Meeting with chaperones for trip winners and their parents	Theatre

BASEF 2023 is held at Mohawk College Fennell Campus (see the map on the next page).

Gym: David Braley Athletic Centre (DBARC)
Theatre: McIntyre Performing Arts Centre

Mohawk College Fennell Campus



Thursday March 23

Project setup in the Gym
4:00 pm to 8:00 pm

Student **drop off** at lot (P7)
Enter **Gym** via **Fair Entrance**
(1 hour complimentary parking between 4:00pm and 8:00pm in lot (P7) only)

Friday March 24

Student Dropoff: 12:30-12:45 at **Gym**
Project judging: 1:00pm - 4:00pm in **Gym**
Parents:
Student pick up complimentary parking 4:00pm to 5:00pm in lot (P7) only

Saturday March 25

Public viewing in the Gym
9:00 am to 12:00 pm
Project takedown:
12:00 noon to 12:15

You must pay for parking at **Pay To Park** [$] machines.
Park in lots **P5, P6, P7** or **P8**

Tuesday March 28

Awards Ceremony in the Theatre
7:00 pm to 9:30 pm
Doors open at 6:00 pm

You must pay for parking at **Pay To Park** [$] machines.
Park in lots **P5, P6, P7** or **P8**

Information for Parents

Congratulations on your decision to support your child's participation in BASEF! All BASEF student participants are rewarded with an enriching experience. Along with receiving a certificate of achievement, students gain the opportunity to meet likeminded individuals: BASEF judges, community stakeholders, other top students, and people working in the STEM field. In addition, BASEF gives cash prizes, awards and scholarships. Our top winners earn the chance to participate in an expense-paid trip to either the national (CWSF) or international science fair (ISEF). Be sure to visit the BASEF website (www.basef.ca) throughout the year and subscribe to our social media (see below). You will find project pictures and abstracts from last year's fair, resource materials, updates from our BASEF winners as they compete at the national/international levels, and important information about the next Fair.

BASEF 2023 Quick Facts

- **Location of All Events:** Mohawk College (135 Fennell Ave W, Hamilton, ON). See the campus map, included on the previous page of this program. Please remember that the Fair takes place while regular college classes are running. Therefore as visitors, we must minimize disruption to college activities. This almost mean that resources such as parking spaces and support personnel are limited. Please respect Mohawk's rules and staff. Parking considerations are highlighted below (🅿).
- **Project Exhibition:** Projects will be set up in the David Braley Athletic and Recreation Centre (DBARC) Gym.
- **Awards Ceremony:** The Awards Ceremony will be in the McIntyre Performing Arts Centre.
- **Mask Mandate:** Please note that BASEF 2023 is requiring that all participants, volunteers, and guests wear suitable facemasks in all indoor venues, including during project judging, viewing, and at the Awards Ceremony. Please ensure that you and your student(s) wear a mask while indoors, both in the Gym/Theatre. If you forget to bring a face mask with you, we have some available.
- **Dress Code:** We suggest neat and casual, with the emphasis on "neat".
- **Food Allergies and Medical Issues:** We ask that you remind the BASEF volunteers at the Registration of any food allergies or special medical issues that pertain to your children. BASEF should be considered a public facility with regards to food allergies.
- **Revisions and Changes to the Program:** Any changes or revisions to this year's Fair will be posted on the BASEF website, added to this official program, and announced at the Fair. The latest version of this program can be downloaded from our website at www.basef.ca/program2023.

Parent Responsibilities: Day-by-Day

- **Day 1: Registration & Setup.** Thursday, March 23rd, 2023 @ 4:00–8:00 pm
  - Project setup is only on March 23rd, 2023 from 4:00–8:00 p.m. at Mohawk College DBARC Gym. The entire process typically takes less than an hour.
  - 🅿 Parking in Lot P7 is free for up to one hour. Park, then carry your child's project into the Gym.
  - Your child will visit a registration desk and find out their assigned display area.
  - After the project is set up, one of our safety inspectors will ensure that the project meets all safety guidelines. Students cannot leave until their project has passed their safety check.
  - Projects not set up by 8:00 pm will be deemed as "no shows" and will not be judged.

▶ **Day 2: Student Arrival.** Friday, March 24th, 2023 @ 12:30–12:45 pm

- For folks who been involved with BASEF in the past, please note that there will not be a Friday Activity Morning during BASEF 2023.
- Students must arrive between 12:30 and 12:45 pm and proceed directly to their projects. As requested specifically by Mohawk College, please do not drop your students off earlier than 12:30 pm as they cannot wander the campus unsupervised.
- Students must arrange their own transportation to and from the event.
- 🅿 Parking in Lot P7 is free from 12:00–1:00 pm to allow for student drop-off.
- Students should eat their lunch prior to arrival at the Fair. There are no cafeteria facilities available and they will not be allowed to buy food from any of the College vendors.

▶ **Day 2: Afternoon Judging.** Friday, March 24th, 2023 @ 1:00–4:00 pm

- Students must be at their projects for judging between 1:00–4:00 pm. Judging starts promptly at 1:00 pm, so students should be at their projects early to get comfortable.
- Typically, each student will be interviewed by three or more judges.
- Teachers and parents are not permitted on the gym floor during judging.

▶ **Day 2: Post-Judging Period.** Evening of Friday, March 24th, 2023, beyond 4:00 pm

- Please make transportation arrangements for your children to leave campus promptly at the end of the afternoon judging (4 pm).
- 🅿 Parking in Lot P7 is free from 4:00–5:00 pm to allow for student pickup. Do not wait along the roadway at the DBARC gym entrance: this is a fire route!
- The Fair is not open to students or the public during the evening of March 24th.

▶ **Day 3: Public Viewing.** Saturday, March 25th, 2023, 9:00 am–noon

- We ask that your children be at their projects in the Gym for Public Viewing from 9:00 am–noon.
- We strongly recommend that you attend the Public Viewing with your student. Better yet: invite your family and friends, too! It will give you an opportunity to view all of the great projects on display and to see your own student giving presentations for visitors.
- 🅿 Visitor parking at Mohawk College for the duration of Public Viewing is by payment only. However, parents are given 1-hour grace periods in Lot P7 from 8:30–9:30 am and 11:45 am–12:45 pm to allow for student drop-off/pickup.
- Projects may not be removed until the end of the Public Viewing. You must arrange to take down your project between 12:00–12:15. After this time, projects will be removed and discarded by the volunteer staff.

▶ **Awards Ceremony.** Tuesday, March 28th, 2023 @ 7:00–9:30 pm

- The Awards Ceremony is the culmination of the Fair and where the hard work of the students is recognized. It will begin at 7:00 pm, sharp.
- It is recommended to come early as seating is limited. Doors will open at 6:00 p.m.
- Students will be asked to sit near the front of the Theatre to facilitate the distribution of awards.
- 🅿 Evening parking for the Awards Ceremony is a flat rate of $6 from 5:00 pm to 3:00 am.
- Our Trip Award Winners and a parent are required to attend an information meeting immediately after the Awards Ceremony (approximately one hour).

Connect with Us!

Website:	www.basef.ca
Facebook:	www.facebook.com/TeamBASEF/
Twitter:	www.twitter.com/BASEF (@basef)
Instagram:	www.instagram.com/BASEF (@basef)
YouTube:	www.youtube.com/user/TeamBASEF
LinkedIn:	www.linkedin.com/company/bay-area-science-and-engineering-fair/
Pinterest:	www.pinterest.ca/basef
Flickr:	www.flickr.com/photos/team-basef
Blog:	www.basef.ca/blog/
Gear Store:	http://basef-shop.creator-spring.com

SHOP BASEF

Check out our NEW gear store for a great selection of BASEF-branded merch! It makes a great gift for the science- or engineering-lover in your family!

>>> basef-shop.creator-spring.com <<<

BASEF 2023 Sponsors & Charitable Donors

General Funding Sponsors

Title ($25,000+)

Primary Fluid Systems Inc.

Diamond ($10,000+)

ArcelorMittal Dofasco

Mohawk College

Platinum ($5,000+)

Alectra Utilities

McMaster University

The Hamilton Spectator

Gold ($2,500+)

AYVA Educational Solutions

D.E.N.M. Engineering

Silver ($1,000+)

Bay Area Health Trust

Burlington Hydro

Halton Catholic District School Board

Halton District School Board

Hamilton-Wentworth Catholic District School Board

Hamilton-Wentworth District School Board

Hillfield Strathallan College

Ontario Power Generation

Taylor Leibow Accountants & Advisors

Bronze ($500+)

CareGo Tek

Hamilton Amateur Astronomers

Hamilton Chamber of Commerce

Hamilton Police Retirees' Association

Lanhack Consultants Inc.

Mantecon Partners

NewAE Technology Inc.

Society of Tribologists & Lubrication Engineers-Hamilton Chapter

Synapse Life Science Consortium

WalterFedy

Friends ($250+)

Electrical Construction Association of Hamilton

Talkit.ca

Charitable Donors

Banting & Best Level ($1,000+)

Mike McNally

Bondar Level ($500+)

Marvin Cohen

Steve & Cathy Hayman

Paul & Pam Lakin

Janet McNaught

Peter & Sue Olynyk

Polanyi Level ($200+)

Helen Barton

Dana Bee

Dan & Debbie Bowman

Steven Brent & Family

John & Eleanor O'Flynn

Dr. Nicola Simmons

McGill Level ($50+)

Jim Casey

Linda Millar

Notes: Those donating in-kind services help us provide an exceptional experience for BASEF participants. Key donations included: printing, newspaper advertising, accounting, and web hosting. In addition to those listed above, BASEF also has donors who wish to remain anonymous.

"I wanted to take this time to recognize all the organizations and individuals that support BASEF. This year your cash and in-kind general funding donations allowed us to continue to provide this event to as many of this region's youth as we have. We are so thankful that over 40 sponsoring organizations and charitable donors have found BASEF a cause worthy of their support. We hope that we will continue to meet your charitable giving objectives. We are one of Canada's biggest and best regional science fairs and this is, in no small part, because of your support. Thank you for helping us to build scientifically literate and technologically competent citizens of the future. We'll all be better of because of it. I'm always willing to talk to more people about possible financial support for the fair. I have been involved in the Organizing Committee of BASEF for the past 24 years. Most recently I have chaired the Fundraising effort. My name is Susan Olynyk and I can be contacted at fundraising@basef.ca."

- Sue Olynyk, P.Eng., Fundraising Chair

BASEF 2023 Awards

ArcelorMittal Dofasco Merit Awards

Merit Awards recognize the tremendous amount of thought and effort that has gone into the projects entered in the Bay Area Science and Engineering Fair. They are the result of an extensive judging process undertaken by over 150 independent judging volunteers who have come forward from educational institutions, local government organizations, businesses, and industries in our regions. All participants in the Bay Area Science and Engineering Fair are eligible to win Merit Awards. The Awards are given to deserving projects at Junior (7/8), Intermediate (9/10), and Senior (11/12) levels in:

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

Scoring for Merit Awards proceeds as follows:

- A score ≥ 90% or higher earns a Gold Medal and a cash award
- A score ≥ 80% (but less than 90%) earns a Silver Medal and a cash award
- A score ≥ 75% (but less than 80%) earns a Bronze Medal and a cash award

Grand Awards

Primary Fluid Systems 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 sent to the winners' schools.

Best-in-Fair: $1,000

2nd Best-in-Fair: $800

3rd Best-in-Fair: $500

Drs. Ranjan Sur and Monalisa Sur Award

- The best Intermediate (9/10) or Senior (11/12) project at the fair. The winning student's school receives a plaque.

Roy Middleton Memorial Award

- The best Junior (7/8) project at the fair. The winning student's school receives a plaque.

BASEF Committee Trophy

- This trophy is awarded to the elementary school accumulating the most points. Points are earned from the number projects entered from the Junior (7/8) level of each school and the projects earning Gold, Silver, and Bronze Merit Awards.

Herb Gildea Memorial Trophy

- This trophy is awarded to the secondary school accumulating the most points. Points are earned from the number of projects entered from the Intermediate and Senior levels of each school and those projects earning Gold, Silver, and Bronze Merit Awards.

Grand Prize Trip Awards

2023 Regeneron International Science and Engineering Fair (ISEF)

- Up to five projects (depending on funding level) will be chosen from excellent exhibits at the secondary school level (Intermediate & Senior) to advance to ISEF, which will be held from May 13th–19th, 2023. Eligible winners of ISEF trip awards will receive an expense-paid trip to Dallas, Texas to present their projects amongst some of the brightest young minds from around the world.

Sponsored By:

Canada-Wide Science Fair (CWSF)

- Up to 17 students (depending on funding level) will be chosen from excellent exhibits to advance to CWSF, which will be held May 14th–19th, 2023. All projects at BASEF 2022 are eligible to advance to CWSF. Winners of CWSF trip awards will receive an expense-paid trip to Edmonton, Alberta to present their projects.

Sponsored By:

Special Awards

"Special awards are donated by community organizations, businesses and individuals who wish to encourage scientific thought, research, and experimentation in their specific area of interest. We wanted to take this opportunity to thank the many Special Award donors and judges for their contribution to the success of BASEF. Their generosity, both donation of awards and gift of time, has contributed to the success of the fair. There are 166 special awards, totalling $26,250 in cash and $14,500 in academic scholarships, available for the students participating in BASEF 2023 sponsored by Primary Fluid Systems Inc. Thanks to the support of our Special Award donors, students from grades 7 through 12 will realize the benefits of pursuing science, technology, engineering, and mathematics as a future career path and will be inspired to change the world for the better."

- Special Awards Coordinators

Renato De Tina

Eleanor O'Flynn

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

Special Awards	Judges
ArcelorMittal Dofasco Awards	
Central Trades & Services Department Award	*Clayton MacNeil*
Prize: $100	
Criteria: A project that best displays the use of scientific principles in applying technology for the betterment of people or machines.	
Chemical Testing Award	*Vlad Ahapov*
Prize: $100	
Criteria: A project that best uses chemical testing and/or chemical principles to solve a technical problem.	
Commercial Department Award	*Luca Finelli*
Prize: $100	
Criteria: A project that best uses commercial and business planning tools in developing a potentially new or improved commercial product.	

Special Awards	Judges
ArcelorMittal Dofasco Awards (Continued)	
Engineering Award Prize: $100 Criteria: A project that best uses engineering & maintenance technology principles and design to solve a technical problem.	*Cody Fram*
Environment Award Prize: $100 Criteria: A project that best uses physics, chemistry, or engineering to explore or solve a technical problem associated with environmental issues.	*Scott Anderson* *Bella Pastore*
Global R&D Hamilton Award for Outstanding Research Prize: $100 Criteria: A project that best uses investigative research & scientific principles to explore or solve a technical problem.	*Claire Bourque*
Global R&D Hamilton Award for Technology Application Prize: $100 Criteria: A project that best uses the innovative application of materials, products, processes or design principles.	*Serge Oshana*
Hot Mill Award Prize: $100 Criteria: A project that best uses creative principles and design to solve a manufacturing or process problem.	*Steven Meharg*
Human Resources Training & Development Award Prize: $100 Criteria: A project that best uses teaching and training techniques in explaining or exploring a technical problem.	*Ilka Beukes* *Kimberly Chan-Fee*
Information Systems Award Prize: $100 Criteria: A project that best uses information systems and design to solve a technical problem.	*Jonah Szajman*
Ironmaking Award Prize: $100 Criteria: A project that best uses the use of metallurgical or material science principles to solve a technical problem.	*Jarod Bishop-Dove*
Material Handling & Logistics Department Award Prize: $100 Criteria: A project that best displays the use of scientific principles in exploring or solving a problem related to material conveyance, transportation or logistics.	*Scott Baylis*
Medical Department Award Prize: $100 Criteria: A project that best uses scientific principles in exploring or solving a problem related to human health issues.	*Rhys Hayes*
Pickling and Cold Rolling Award Prize: $100 Criteria: A project that best displays the use of chemical or mechanical properties to explore or solve a technical problem.	*Hammad Ashfaq* *Jagadeesh Maddukuri*

Special Awards	Judges
ArcelorMittal Dofasco Awards (Continued)	
Process Automation Award Prize: $100 Criteria: A project best uses process automation principles and design to solve a technical problem.	*Evan Reaume* *Pedro Tondo*
Product Development Business Process Award Prize: $100 Criteria: A project that best uses product development principles and design in developing a new consumer product with commercial potential.	*Sunil Patel*
Quality Systems Award Prize: $100 Criteria: A project that best uses quality systems principles and design to solve a technical problem.	*Shannon Clark*
Steelmaking Award Prize: $100 Criteria: A project that best uses engineering and materials science principles to solve a technical problem.	
ArcelorMittal Dofasco Smarter Steels for People and Planet Award Prize: $1,000 Criteria: A project displaying rigorous scientific or engineering methods that investigates steelmaking processes or steel products.	
Artistically Inspired Display Awards Prize: Two awards of $50 each Criteria: To the most artistically inspired display.	*Cathy Hayman*
Association for Iron & Steel Technology Northern Chapter Awards Prize: Two awards of $100 each Criteria: For outstanding projects related to one of the following fields: metallurgy, materials science, chemical, electrical, mechanical, industrial, environmental, civil and computer engineering.	*Shannon Clark*
Bay Area Health Trust Scholarship/Paul Lakin Health Sciences Award *See "Scholarships"*	*Cathy Hayman*
Canadian Institute of Mining, Metallurgy and Petroleum (Hamilton Branch) Awards Prize: Two awards of $100 each Criteria: Outstanding projects relating to mining, metallurgy and petroleum, any level.	*Shannon Clark*
Canadian Meteorological and Oceanographic Society Awards Prize: 1st $100 2nd $50 Each winner receives a one-year free CMOS Membership. Criteria: Best projects in meteorological and/or oceanographic sciences (weather, air quality, climate, climate changes and/or the oceans).	*Dominique Brunet*

Special Awards	Judges
Canadian Nuclear Society (Golden Horseshoe Branch) Awards Prize: Two awards of $125 each for intermediate or senior projects and two awards of $75 each for junior projects. Criteria: Projects relating to nuclear science and engineering, energy research, or climate sciences.	*Peter J. Kriemadis* *Stephen Marshall*
Chairs' Award Prize: $100 Criteria: A project that exhibits good scientific, engineering or mathematical thought.	*BASEF*
Chemical Institute of Canada – Hamilton Section Awards Prize: Three awards of $100 each Criteria: Projects relating to chemistry, chemical engineering, or chemical technology.	*Don Barclay* *Tom Sutton* *Dragan Vuckovic*
Conservation Halton Awards Prize: Two awards of $100 each Criteria: Projects that contribute to environmental research, protection, conservation, restoration or awareness by Halton students.	*Christine Bowen* *Carolyn Zanchetta*
Dillon Consulting Limited ***Science and Engineering Award*** Prize: $250 Criteria: Project showing excellence in science and/or engineering. ***Biological Sciences Award*** Prize: $250 Criteria: Project showing excellence in biological sciences.	*Aryn Cain* *Caitlin Vandermeer*
Dr. Colin J.L. Lock Memorial Chemistry Award Prize: $100 Criteria: A project demonstrating the best application of chemistry.	*BASEF*
Dr. Laura Blew Social Sciences Awards Prize: Two awards of $100 each Criteria: Best two social science based projects.	*BASEF*
Dr. M. Doyle Biology Award Prize: $250, a plaque, and a trophy for the winner's school Criteria: Best biology project.	*BASEF*
Dr. Nicola Simmons Award in Cognition Studies Prize: $100 Criteria: An exemplary project in cognition studies.	*BASEF*

Special Awards	Judges
Doris Casey and Gwen Nicolls Disability Solutions Awards Prize: Two awards of $100 each Criteria: Most innovative and creative technical solutions focused on assisting individuals to overcome or compensate for physical or cognitive disabilities.	*Jim Casey* *Al Nicolls*
Electrical Construction Association of Hamilton Awards Prize: Two awards of $250 each Criteria: Projects displaying the best and safest use of electricity in the most creative manner.	*Joe Kurpe*
Environmental Inspiration Award Prize: $250 Criteria: The best environmental project that addresses an environmental problem in an inspirational or innovative way.	*Angela Ceccato*
Farncombe Family Digestive Health Research Awards Prize: Two awards of $250 each and a grand award of $750, which includes a one-hour interview with one of Farncombe's researchers to discuss further education and career opportunities. Criteria: Projects that explore digestive health, related diseases or general family nutrition through experimentation or in-depth literature.	*Alberto Caminero* *Amber Hann* *Liam Rondeau* *Mark Wulczynski*
Firestone Institute for Respiratory Health Award Prize: $250 and a tour of the research labs at the Firestone Institute. Criteria: For the best senior project on lung health, air pollution, allergy or respiratory infections.	*Victoria Bryczka* *Cathy Cao* *Mackenzie Thorpe*
Gowling WLG Innovation Awards ***Grand Winner*** Prize: $300 and a complimentary consultation with a patent or trademark agent at the Gowling WLG Hamilton office. Criteria: Best project demonstrating potentially patentable subject matter. ***Runner Up*** Prize: $200 Criteria: An excellent project demonstrating potentially patentable subject matter. ***Honourable Mention*** Prize: Certificate Criteria: An excellent project demonstrating potentially patentable subject matter.	*Derek Sheppard*

Special Awards	Judges
Hamilton Academy of Dentistry Awards Prize: 1st $250 2nd $150 3rd $100 Criteria: Intermediate or senior projects related to dentistry in general; to one specific area of dentistry; or related to oral hard & soft tissues specifically; to some aspect of the delivery of dentistry to the general (or specific) population; or an aspect related to prevention of dental disease. Also, any aspect of Personal Protective Equipment related to dentistry.	*Frank Stechey*
Hamilton Association for the Advancement of Science, Literature & Art da Vinci Award Prize: $250 Criteria: Project that best combines personal initiative and creativity with a sound, demonstrated understanding of the scientific method.	*Peter Banting* *Tony Petric* *Herb Schellhorn*
Hamilton Chamber of Commerce Innovation Awards Prize: 1st $250 2nd $150 3rd $100 Criteria: The most deserving projects by students from Hamilton with potential commercial applications focused on improving our local environment, communities or quality of life.	*Paul Hawkins*
Hamilton Wentworth Occasional Teacher Awards ***Environment and Education Award*** Prize: $50 Criteria: Junior project that most effectively educates others about an environmental issue. ***Healthy Lifestyles Award*** Prize: $50 Criteria: Junior project that most effectively educates others regarding the role of nutrition and/or exercise in maintaining a healthy lifestyle. ***Presentation and Aesthetics Award*** Prize: $50 Criteria: Junior project that demonstrates a high level of visual appeal, creativity, and overall quality of presentation.	*BASEF*
Harrison Family Chemistry Award Prize: $100 Criteria: For a project that has significant chemistry content.	*Paul Harrison* *Alanna Wade*
Hillfield Strathallan College Awards of Excellence ***Life Sciences Award*** Prize: $100 Criteria: Junior project that best displays excellence in life sciences.	*BASEF*

Special Awards	Judges

Hillfield Strathallan College Awards of Excellence (Continued)

Scientific Process Award
Prize: $100
Criteria: Intermediate project that best demonstrates an understanding of the scientific process.

Innovation Award
Prize: $100
Criteria: Senior project that best displays innovation related to any science or engineering.

Indigenous Peoples of Canada Scientific Study Awards — *David Reed*
Prize: 1st $140 2nd $80 3rd $80
Criteria: Projects demonstrating the application of established scientific methods to topics relevant to the culture, heritage or issues of the Indigenous peoples of Canada.

IEEE (Institute of Electrical and Electronic Engineers) Hamilton Section Awards — *Alicia Anton, Eric Harrison, Mina Naguib*
Prize: Two awards of $100 each
Criteria: Best use of electronics in a science or engineering project.

International Science & Engineering Affiliated Fair Awards — *Dana Bee, Neha Gupta, Dheiksha Jayasankar, Sabrina Mogus*
Prize: Certificates
Criteria: Deserving intermediate or senior projects related to topics of interest to the following organizations:

American Psychological Association
For a project showing outstanding research in psychological science in the category of behavioural and social sciences or any category related to psychology.

National Geographic That's Geography – Cultivating Empathy for the Earth Award
Additional award: US$100
For an outstanding project that focuses on issues of oceans, land, wildlife, human history & cultures and human ingenuity; brings geographic concepts and skills to life in new, non-traditional ways; targets underrepresented communities; has potential for scale and brings innovation to the space and place.

Ricoh USA, Inc.
For an outstanding project that addresses issues of environmental responsibility and sustainable development.

Society for In Vitro Biology
For an outstanding Grade 11 project exhibiting in the areas of plant or animal in vitro biology or tissue culture.

U.S. Agency for International Development (USAID)
For an exceptional project that has the potential to make an impact on addressing international development challenges. Prize includes a Social Network Media Kit.

Special Awards	Judges
International Science & Engineering Affiliated Fair Awards (Continued) ***Yale Science & Engineering Association*** For an outstanding Grade 11 project in computer science, engineering, physics or chemistry.	
James A. Winger Award sponsored by the Hamilton Amateur Astronomers Prize: Two awards of $100 each plus a one-year family membership in the HAA and an opportunity to present their project to the HAA membership; one award for Grade 7 to 9 and one for Grade 10 to 12. Criteria: Best projects demonstrating an understanding of a topic related to astronomy, physics, light pollution abatement, or space travel.	*Mario Carr* *Jo Ann Salci* *Chris Strejch*
John W. Howard Materials Research Award Prize: $100 Criteria: A project demonstrating innovation in engineering materials, especially concrete.	*BASEF*
Laurentian Chapter of SETAC Award Prize: Two awards of $100 each Criteria: Best projects and presentations on a topic related to environmental toxicology, chemistry, pollution, contamination, remediation or environmental protection.	*Tyler Black* *Sarah Gewurtz* *Shanza Jamshed* *Abithiny Selvarajah*
Mahut-Brent Award for Young People in Science and Engineering Prize: $100, certificate and a giant microbe Criteria: An outstanding project by a young person in science that demonstrates an excellent application of scientific thought and creativity towards a subject matter that the participant is passionate about.	*Caroline Mahut*
McMaster University Awards	
Department of Chemistry and Chemical Biology Award Prize: $100 Criteria: An outstanding senior or intermediate project connected to chemistry or chemical biology.	*Gillian Goward* *Mimi Han* *Anjilee Manhas*
Department of Chemical Engineering Award Prize: $250 Criteria: An outstanding intermediate or senior project demonstrating aspects of chemical engineering, particularly in the fields of biomaterials, polymer science, process systems design, or water and energy systems.	*Ian Gough* *Nathan Mullins*
McMaster University Faculty of Engineering Entrance Awards *See "Scholarships"*	*Emily Waldron*
School of Geography and Earth Sciences Awards ***Earth and Environmental Sciences Award*** Prize: $100 Criteria: Outstanding project in earth science or environmental science.	*Luc Bernier* *Shelby Grohn* *Alexis Polidoro*

Special Awards	Judges

McMaster University Awards (Continued)

Geography Award
Prize: $100
Criteria: Outstanding project in geography or social science.

Venture Academy — *Emily Waldron*
Prize: Free registration for one week of summer camp for two senior projects.
Criteria: Deserving projects by students in Grade 11 or 12.

Michael G. DeGroote Institute for Infectious Disease Research Awards — *Maya George, Megan Zangara*
Prize: Two awards of $50 each and a grand prize of $100, which includes a one-hour interview with a senior person at IIDR for the grand prize winner and their families.
Criteria: Excellent senior projects in infectious disease, drug discovery or human health.

Mechanical Contractors Association of Hamilton Niagara Award — *Bill Patterson*
Prize: $250
Criteria: Best engineering project at the intermediate or senior level.

Mohawk College Awards

Building & Construction Sciences Awards — *Rebecca Beatty, Matthew Shelley*

Building Sciences Award
Prize: $50
Criteria: Project related to building sciences, building materials, or energy conservation in structures.

Civil Engineering Award
Prize: $50
Criteria: Project related to the field of civil engineering.

Transportation Engineering Award
Prize: $50
Criteria: Project related to planning, design, or operation of any transportation mode or facility.

Computer Science & Information Technology Excellence Awards — *Brian Minaji*
Prize: Three awards of $50 each
Criteria: Projects that demonstrate a thorough understanding of computer application and design in today's world.

Electrical Engineering Technology Awards — *Richard Ma, Brian Stefanchuk*

Computer Engineering Technology Award
Prize: $50
Criteria: A deserving project in computer engineering technology.

Electrical Engineering Award
Prize: $50
Criteria: A deserving project in electrical engineering studies.

Special Awards	Judges
Mohawk College Awards (Continued) ***Energy Systems Award*** Prize: $50 Criteria: A deserving project in energy systems. **Mathematics Awards** Prize: Two awards of $50 each, one at the Junior and one at the Senior level. Criteria: Deserving projects in the category of mathematics or statistics.	*Cameron Redsell-Montgomerie; Frosina Stojanovska-Pocuca; Kathryn Vrhovnik*
Nelson Steel Awards Prize: Two awards of $150 each Criteria: Outstanding junior projects related to two of the following fields: steel, environmental or chemistry.	*Sophia Blaschke*
New Health Scientist Award Prize: $50 Criteria: A worthy junior project showing good potential for improving the health of our community.	*BASEF*
Nikola Tesla Innovation Awards Prize: Gold $125 Silver $75 Bronze $50 Criteria: Projects that best display the most innovative application of the body of knowledge associated with Nikola Tesla's work, and/or acknowledgement in the display of Nikola Tesla's contribution by way of his work and inventions.	*Colin Campbell* *Majda Djordjevic* *Vic Djurdjevic*
Ola Lunyk-Child Memorial Health Awards Prize: 1st $250 2nd $150 3rd $100 Criteria: Excellent projects related to any aspect of nursing, nursing research or other medically related fields.	*Pete Child*
Procor Engineering Awards Prize: Junior $50, Intermediate $100, Senior $150 Criteria: Excellent engineering projects.	*Eziaku Nri* *Ivona Szczerbowicz*
Professional Engineers Ontario – Oakville Chapter Awards Prize: Three awards of $200 each Criteria: Deserving engineering projects – one at each level.	*Richard Hui* *Kevin (Wei Jian) Shi*
The Research Institute of St. Joe's Hamilton, Health Research Awards Prize: Two awards of $100 at the intermediate level, and two awards of $50 at the junior level Criteria: Outstanding projects that use strong scientific principles in exploring or solving a problem related to human health issues and communicate the results of their project through an effective visual display.	*Gabriella DiSanto, Zofia Sosnowski, Adam Weerdenber*

Special Awards	Judges
Rotary Club of Hamilton Stoney Creek Awards Prize: 1st $250 2nd $150 3rd $100 Criteria: Best three projects from schools situated in the Hamilton core, Stoney Creek, or by Indigenous students displaying high academic achievement and striving to excel in science and technology.	*BASEF*
Royal Botanical Gardens Award Prize: $100 gift certificate from the RBG shop plus a 1-year RBG family membership Criteria: Best project in plant or environmental sciences.	*BASEF*
Sanofi Biogenius Canada Award Prize: $100 Criteria: For an outstanding project related to biotechnology, the use of biological systems to produce goods or services, or life sciences.	*BASEF*
Society of Tribologists & Lubrication Engineers – Hamilton Chapter Prize: Two awards of $250 each Criteria: Projects that utilize the principles of tribology, (friction, wear and lubrication), to solve a technical problem.	*Richard Schrama*
Talkit.ca Computer Engineering Awards Prize: 1st $100 2nd $50 Criteria: For outstanding projects using computer electronics or software.	*BASEF*
Water Environment Association of Ontario Award Prize: $100 Criteria: For a project focused on innovative ideas for preserving and/or enhancing Ontario's water environment.	*Dean Iamarino* *Amr Melligy*

Scholarships

Bay Area Health Trust Scholarship/Paul Lakin Life Sciences Award

Prize: One $1,500 scholarship, to be redeemed upon acceptance and registration in any Canadian undergraduate program. (Pair projects will split the award).

Criteria: An outstanding senior project in the Life Sciences category demonstrating scientific excellence.

Hillfield Strathallan College Entrance Scholarship Award

Prize: One $5,000 entrance scholarship toward tuition fees, to be redeemed upon acceptance as a full-time senior school student entering Hillfield Strathallan College in any of grades 9 to 11 for the 2023–2024 academic year. (Will be awarded to both students in a pair project—maximum $10,000 value).

Criteria: The best project demonstrating excellence in scientific learning with joy and purpose.

McMaster University Faculty of Engineering Entrance Awards

Prize: $7,000 in tuition awards, to be redeemed upon acceptance of admission to the Faculty of Engineering. Apportionment of the funds to student(s) is at the discretion of the Faculty of Engineering.

Criteria: Projects demonstrating excellence in Science, Technology, Engineering or Math.

Mohawk College and Sheridan College – Award of Excellence Tuition Scholarships

Prize: Mohawk College and Sheridan College will provide a $1,000 entrance award. The scholarship may be used toward first year tuition upon the recipient's acceptance and registration in any full-time program at either Mohawk College or Sheridan College. If multiple scholarships are accumulated over more than one year, only one of these scholarships may be used.

Criteria: All students earning BASEF 2023 Merit Award Medals (Gold, Silver, Bronze) will win this scholarship.

University of Ottawa Entrance Scholarship

Prize: One $1,000 entrance scholarship applied to tuition fees upon registration in an undergraduate program in the Faculties of Engineering, Science, or Health Sciences at the University of Ottawa. In the case of a pair project, each student will receive a $1,000 admission scholarship if they register in appropriate undergraduate programs at the University of Ottawa.

Criteria: The most deserving Senior project.

BASEF Inspiration Awards

The "BASEF Inspiration Awards" generate interest and encourage participation in the Fair for both teachers and students.

BASEF Inspiration Student Awards:

- Awarded based on merit judging marks to top projects that win $250 or less in other prizes and have not previously won a BASEF 500 or a BASEF Inspiration Award. A minimum of ten awards of $500 each will be given.

BASEF Inspiration Teacher Awards:

- Awarded for teachers of schools which are new* to BASEF. The teacher must have two or more projects displayed and judged at the Fair. The award is to be used in the classroom at the winning teacher's discretion. The cheque will be sent to the teacher after the BASEF Award ceremony. Up to a maximum of nine awards of $500 (each) will be given.
  **Schools that have not had projects in BASEF for at least 5 years*

BASEF 2023 Merit Award Judges

"We were back to an in-person fair after 3 years of online judging.

Everyone associated with BASEF was excited to be able to talk to the student participants about their projects. We learned a lot from online judging, we continued the practice of holding Zoom training sessions for merit judges.

Merit judging is critical to the success of BASEF, this year I was happy to welcome returning and new judges to evaluate the project of hundreds of students. BASEF Merit Judges included university faculty and scientists, industrial engineers and scientists, representatives of private research centers and agencies, medical researchers, and senior graduate students. This diversity of backgrounds provided valuable perspectives when evaluating the projects. Each project was judged independently according to the BASEF judging form. After submitting their marks, the judges were invited to provide feedback on the projects.

Judges said they were happy to be able to once again, discuss with the students their work.

A sincere thank you to each merit judge and category chair for sharing their scientific expertise and supporting all BASEF student participants. Once again, I am impressed by the commitment of these volunteers.

I congratulate all the finalists for their outstanding projects, dedication to science fairs and enthusiasm. You are all winners!"

- Donna Stack-Durward, Judge-In-Chief

Akparah, Chi Chi	*ERCO Worldwide*
Arežina, Ana	*McMaster University*
Aylward, Andrea	*Dana Canada Inc.*
Balaban, Mariana	*Norfolk County*
Batey, Penelope	*Halton District School Board*
Batra, Hitanshu	*Mohawk College*
Belmannu, Harekrishna	*L3Harris Wescam*
Birch, Nigel	*Alta Technology*
Bochenski, Boguslaw	*Hydro One Networks Inc.*
Bowman, Dan	*Retired*
Chaykowski, Jayson	*McMaster University*
Clarke, Kyle	*Mohawk College*
Cleary, Shane	*McMaster University*
Coderre, Gregory	*Hamilton Police Support Services*
Cowbrough, Braeden	*McMaster University*
Craig, Matthew	*McMaster University*
Critchley, Stuart	*Retired (Dofasco & Hatch)*
Cupido, Cynthia	*McMaster University & Hamilton Health Sciences*
Delaney, Erin	*HWDSB*
Dimonaco, Nicholas	*McMaster University*
Durward, Deanne	*Ramboll Consulting*

Durward, Mark	*Law Society of Ontario*
Dyer, Benjamin	*McMaster University*
⚠ **ElChaar, Nancy**	*McMaster University*
Eng, Mikaela	*McMaster University*
Fisher, David	*PDE Inc. / LearnForge*
Forbes, James	*Retired*
⚠ **Forrest, Fraser**	*n/a*
Freger, Shay	*McMaster University*
Frigotto, Rodrigo	*Alectra Utilities*
🔖 ⚠ **Garrett, Jim**	*Retired*
Ghaffari, Ayda	*HWDSB*
Gillis, Patty	*Environment and Climate Change Canada*
Govender, Heather	*Green Venture*
Graham, Helen	*Retired (Environmental Chemistry)*
⚠ **Hache, Matthew**	*Pax8*
Harris, Laura	*HWDSB (Balaclava School)*
Harrison, Eric	*Retired (Enbala, Zenon, Environment Canada)*
Hazelton, Linda	*n/a*
Hill, Terry	*Retired (Hamilton Police Service)*
Hol, Adrienne	*Avenue Physiotherapy*
Hucal, Lesia	*Hamilton Catholic District School Board*
Hul, Lukasz	*L3Harris Wescam*
Jennings, Peter	*Inventor*
Jeung, Gordon	*Ontario Power Generation*
Jilek, Jana	*Retired (Mohawk College)*
Jing, Anne	*University of Toronto; NVIDIA*
Johnson, Ross	*Retired (Sandwell Consulting Engineers Ltd.)*
Johnson, Warren	*Retired (High school science head)*
Johnson, Stephen	*ThermoFisher Scientific*
🔖 **Jonasson, Peter**	*McMaster University*
⚠ **Jurriaans, Marijke**	*Greater Hamilton Health Network*
Killip, Shannon	*McMaster University*
Lawlor, Daniel	*City of Hamilton*
⚠ **Lewis, Justin**	*AVAR Environmental*
Lwin, Ye	*Independent*
MacDougall, Phillip	*McMaster University*
Mahut, Caroline	*Advanced Materials and Propulsion Research and Engineering Inc.*
Malig, Monika	*Quadra Chemicals Ltd.*
⚠ **Maris, Cornel**	*Wescam Inc.*
Martin, Paul	*Retired*
Mastrolonardo, Arianna	*Western University*
Mattina Salvo, Linda	*Hamilton Health Sciences*
🔖 ⚠ **McNally, Mike**	*Retired*
Medeiros, Sarah	*PhD Candidate*
Melligy, Amr	*Wolseley Canada*
Merlos, Erick S.	*City of Hamilton*
Minaji, Brian	*Mohawk College*
⚠ **Mindorff, Mark**	*Retired*
Mobedi, Amin	*University of Toronto*
Narreto, Mary	*L3Harris Wescam*
Pagunsan, Pamela	*Hamilton Health Sciences*
Papuckowski, Simon	*L3Harris Wescam*
Perez Rodriguez, Yuniel	*Alectra Utilities*
Perono, Genevieve	*McMaster University*
Piwin, Adrian	*Mysys Limited*
Popovic, Mike	*P2Insight Inc.*
Putman, Scott	*IT Force*
Rachwalski, Kenneth	*McMaster University*
⚠ **Rebalka, Irena**	*McMaster University*
Redsell-Montgomerie, Cameron	*Mohawk College*
Romanek, Virginia	*McMaster University*
🔖 **Ruiz Blanco, Nelson**	*Independent*

Rylko, Richard	*Retired (Microbiologist)*
Saenz de Miera, Mirnaly	*CanmetMATERIALS*
Safranyos, Sharon	*BeiGene Canada*
Sangueza, Julia	*Brock University*
⚠ **Schaefer, Janet**	*Office Administration*
Seneviratne, Salintha	*Mohawk College*
Sengupta, Joydeep	*ArcelorMittal Dofasco*
Sheils, Glenn	*Fairsquare Group Realty*
🔖 **Shepard, Beverly**	*Retired (McMaster University)*
Shepard, Ben	*Self-Employed*
Shu, Kevin	*Swap Robotics*
⚠ **Simpson, Mark**	*Retired (VP of Engineering and Operations)*
Singh, Kanwaldeep	*McMaster University*
Song, Michelle	*McMaster University*
Starr, David	*ArcelorMittal Dofasco*
Stefanchuk, Brian	*Mohawk College*
Tarjan, Michael	*Retired (Dofasco Engineering)*
Themeles, Tom	*3MotionAI*
Tieu, Paul	*McMaster University*
Tu, Megan	*McMaster University*
Tuinema, Brian	*Germiphene Corporation*
Ustrzycki, Tyler	*Tesla & Brock University*
Van Berkel, Ben	*Retired Consulting Engineer*
van Riemsdijk, Isadora	*ArcelorMittal Dofasco*
Velikonja, Claire	*McMaster University*
Vidican, David	*McMaster University*
⚠ **Vidican, Razvan**	*Candu Energy Inc.*
Wagg, Terry	*Semi-Retired (McMaster University)*
Walsh, Steven	*City of Hamilton – Public Health*
Wang, Lu	*Retired*
🔖 **Wehrle, Paul**	*Retired*
Wilson, Wesley	*John G. Cooke & Associates Ltd.*
Wolfsgruber, Richard	*Metrolinx*
Wolfsgruber, Steve	*Alithya*
Wood, Jane	*Retired (ArcelorMittal Dofasco)*
Wood, David	*FCA Canada – Etobicoke Casting Plant*
Woolsey, Shantal	*Mohawk College*
Wulczynski, Mark	*McMaster University*
⚠ **Young, Norman**	*Retired*
Zielinski, Jana	*Milton District High School*

⚠ *Indicates a merit judge who also serves as a safety inspector. Please contact our lead safety inspector at safety@basef.ca if you would like to serve as a safety inspector in the future.*

🔖 *Indicates a category chair. Please contact our judge-in-chief at judging@basef.ca if you would like to serve as a category chair in the future.*

BASEF 2023 Volunteers

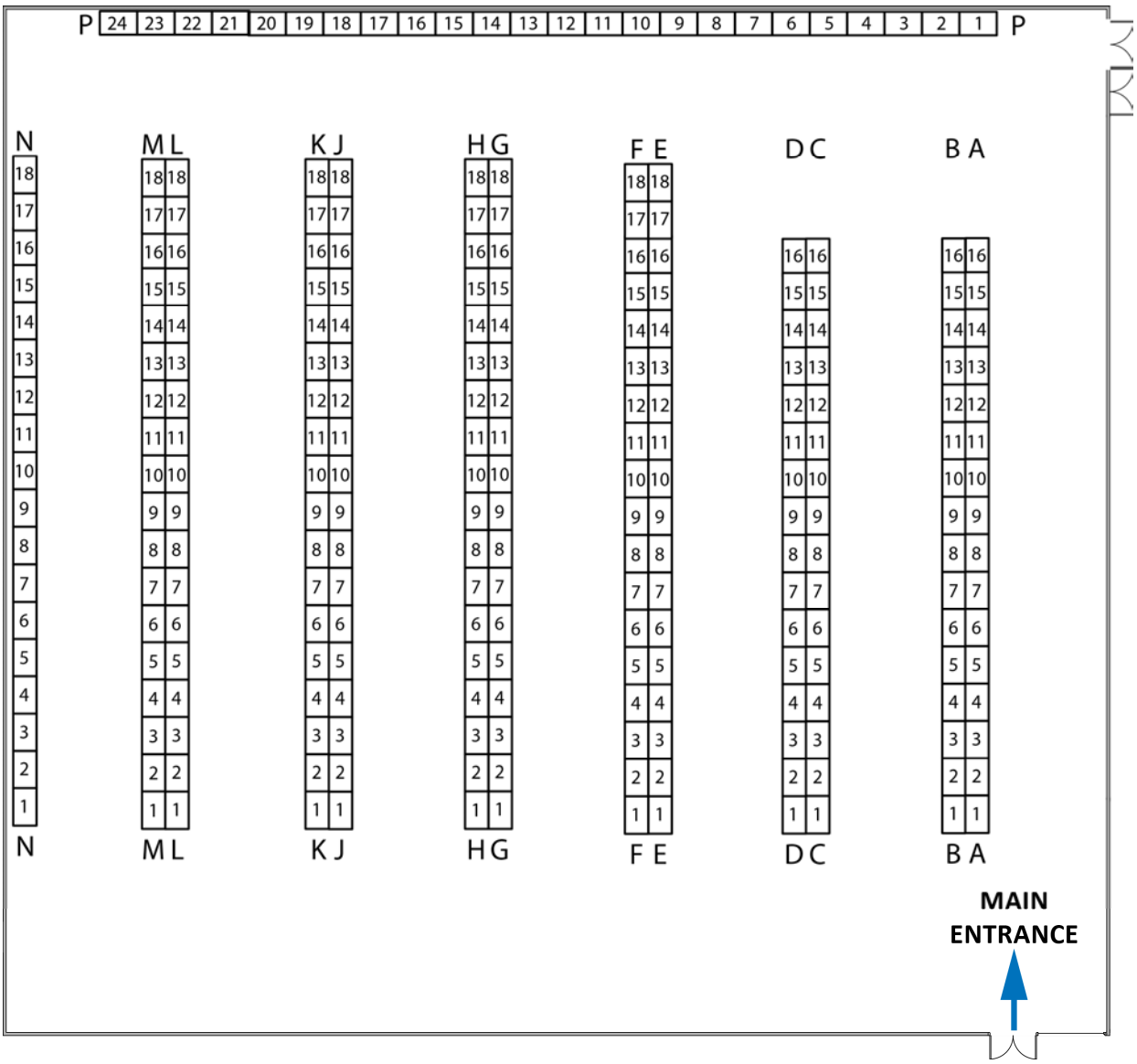
We would like to thank all of our volunteers who helped to make BASEF 2023 possible! Please contact volunteers@basef.ca if you would like to serve as a BASEF volunteer in the future.

- 📷 Bates, Alan
- Bates Mackinnon, Jordan
- Bryczka, Victoria
- 📷 Buchanan, Bernard
- 📷 Bowdish, Ryan
- Ceniza, Gia Angela
- Chan Carusone, Soo
- Chen, Zhihao
- Emami Fard, Nahal
- Enns, Terri
- Furneaux, Chad
- Hayhurst, Trevor
- Hayman, Cathy
- Huang, Caroline
- ⚠ Jeyanthan, Vidthiya
- Joch, Michèle
- Kops, Rita
- Le, Cindy
- Little, Noah
- Mercado, Liam
- 📷 Novak, John
- Nunez, Camilo
- Pacifici, Vince
- Quynh, Cathy
- Rahmat Odejayi, Oluremi
- Rayner, Rebecca
- Ridhima, Ridhima
- Sloane, Brenda
- Speicher, David
- Sun, Catherine
- Symons-Webb, Joshua
- Taboada, Naomi
- Tan, Paihua
- Yacoob, Tahreen
- Zhao, Yiru

⚠ *Indicates a safety inspector* 📷 *Indicates a member of the photography team*

List of Student Exhibitors

Project Floor Layout



Junior Level

JUNIOR PROJECTS (7/8)					
Name	**Project Title**	**Project Number**	**Division**	**School**	**Board**
Aadina, Syeda	How Solar Panels Work	J05	Phys & Math Sci	Cathy Wever	HWDSB
Aggarwal, Prassan	Interstellar Future	J12	Eng & Comp Sci	Centennial Public School	HDSB
Ahmed, Samir	How do Genetics affect Drug Response?	D03	Health Sci Human	Dr. David R Williams	HDSB
Al Hariri, Rafeef	What is the best way to remove an oil spill from marsh ecosystem	L08	Earth & Env Sci	Highview	HWDSB
Alfano, Michaella	Chocolate Mix!!!	G18	Phys & Math Sci	Ascension Elementary School	HCDSB
Allarakhia, Imran	Social Robots in the Classroom: Detection and Active Support for Student Emotions	P09	Eng & Comp Sci	W. H. Morden Public School	HDSB
Almond, Samantha	What time of day are birds most active?	A04	Life Sci Non-Human	Charles R. Beaudoin Public School	HDSB
Alnajjar, Danah	Re-think Your Energy Drink	C15	Health Sci Human	Hawthorne Village Public School	HDSB
Alsaadi, Zena	Impact of different types of video games on human heart rates of varying age groups.	C01	Health Sci Human	Al-Falah Islamic School	IND
Amaladoss, Anna	Artificial Intelligence – The Future is now	F18	Health Sci Human	Trinity Christian School	IND
Aswin, Aashka	How does social media affect you?	E04	Health Sci Human	Dr. David R Williams	HDSB
Awobokun, Fope	Sip-Sip Hooray	H12	Phys & Math Sci	Oakville Christian School	IND
Badar-Hussain, Umama	Nuclear reactions in human bodies	E09	Health Sci Human	Dr. David R Williams	HDSB
Baeis, Zeina	Does Child-Proof Mean Child-Resistant?: An experiment on human behavior	J13	Eng & Comp Sci	Dr. David R Williams	HDSB
Ballard, Conner	Testing Adhesives Limits and Strengths	L05	Eng & Comp Sci	Charles R. Beaudoin Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Beecroft, Grayson	PSAG (Piezoelectric Semi-Automatic Generator)	K12	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Benschop, Liana	Trick of an Eye	E18	Health Sci Human	Trinity Christian School	IND
Blonde, Vivian	Water Purification	M02	Earth & Env Sci	Charles R. Beaudoin Public School	HDSB
Bodner, Joshua	Using a Subsonic Wind Tunnel to Measure an F1 Car's Downforce	N13	Eng & Comp Sci	W. H. Morden Public School	HDSB
Boivin, Anisa	Smart Mold	B12	Life Sci Non-Human	St. Augustine	HWCDSB
Boverhof, Maddy	Big, Yellow or Small, Packaging Leads it all	E12	Health Sci Human	Trinity Christian School	IND
Bowles, Joshua	The Door Detach	L07	Eng & Comp Sci	John William Boich Public School	HDSB
Brett, Felicity	Can Cats Remember Bird Sounds?	A05	Life Sci Non-Human	Oakville Christian School	IND
Budz, Evan	ePills—Set it and Forget it!	N17	Eng & Comp Sci	Charles R. Beaudoin Public School	HDSB
Burns, Molly	Rose petal experiment	G09	Phys & Math Sci	Ancaster Meadow	HWDSB
Burt, Peyton	Focus Forte	C13	Health Sci Human	Trinity Christian School	IND
Cai, Alan	Household Waste Sorter	P07	Eng & Comp Sci	Dr. David R Williams	HDSB
Cameron, Colin	ePills—Set it and Forget it!	N17	Eng & Comp Sci	Charles R. Beaudoin Public School	HDSB
Chabot, William	What Generates Electricity Best	J03	Phys & Math Sci	Highview	HWDSB
Chakraborty, Yash	How useful is AI if we were improving the flow of Traffic?	P13	Eng & Comp Sci	Hawthorne Village Public School	HDSB
Chan Carusone, Senna	The Future of Plastic	F15	Biotech	Charles R. Beaudoin Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Chang, Fannia	Does Child-Proof Mean Child-Resistant?: An experiment on human behavior	J13	Eng & Comp Sci	Dr. David R Williams	HDSB
Chaturvedi, Tvisha	How does social media affect you?	E04	Health Sci Human	Dr. David R Williams	HDSB
Chaudry, Aden	Better Brain, Better Tomorrow	K08	Eng & Comp Sci	John William Boich Public School	HDSB
Chawla, Karthik	Imagine – Generating Green hydrogen for the world	P14	Eng & Comp Sci	W. H. Morden Public School	HDSB
Chen, Dana	Building and Studying the Mechanics of a Chicken Incubator	K15	Eng & Comp Sci	Our Lady of Victory Elementary School	HCDSB
Chhinzer, Jeena	Baffling Bacteria	A03	Life Sci Non-Human	Dr. David R Williams	HDSB
Chohan, Aryan	The Guiding Headphones	K11	Eng & Comp Sci	John William Boich Public School	HDSB
Chong Ping, Kye	Does Personality Affect Memory	E14	Health Sci Human	John William Boich Public School	HDSB
Cliff, Severin	Spherification	L01	Eng & Comp Sci	St. Lawrence	HWCDSB
Correa, Adeline	The cleanest cleaning method	A15	Life Sci Non-Human	Charles R. Beaudoin Public School	HDSB
Cushing, Evan	Life is a Highway	M15	Eng & Comp Sci	St. Augustine	HWCDSB
Dawson, Jamee	How Does Temperature Affect Viscosity?	G16	Phys & Math Sci	Highview	HWDSB
DeHaan, Jamin	Lost My Appleteite	A12	Life Sci Non-Human	Trinity Christian School	IND
Dellosa, Ciara	Building and Studying the Mechanics of a Chicken Incubator	K15	Eng & Comp Sci	Our Lady of Victory Elementary School	HCDSB
Deng, Anson	Effect of Baseball Bat Material on Distance of Hit Ball	G15	Phys & Math Sci	Ancaster Meadow	HWDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Dewar, Zahara	How Smart is Your Cat?	B15	Life Sci Non-Human	Oakville Christian School	IND
DiCaro, Noah	A study of the decomposition of leaves	M04	Earth & Env Sci	Our Lady of Victory Elementary School	HCDSB
Dobbie, Annabelle	Rather Grow Or Have A Coffee To Go?	C12	Health Sci Human	St. Luke	HWCDSB
Dong, Heather	The use of miniaturized monoclonal antibodies to treat small cell lung cancer	F03	Biotech	W. H. Morden Public School	HDSB
Doyle, Deaglan	The Slidey Door	P18	Eng & Comp Sci	Lee Academy	IND
Durowoju, Hannah	Spherification of different liquids	H18	Phys & Math Sci	Our Lady of Victory Elementary School	HCDSB
Easo, Alex	Light It Up – Exploring Renewable and Non-Renewable Fuels	F13	Biotech	Balaclava	HWDSB
Efthimiadis, Anthony	Development of an AI Convolutional Neural Network for Diagnostic Screening of Basal Cell Carcinoma	L16	Eng & Comp Sci	W. H. Morden Public School	HDSB
Ekeng, Michael	Newton's Cradle Study	G06	Phys & Math Sci	Emily Carr Public School	HDSB
Ellahi, Faraasha	What is the connection between Personality and Memory?	D10	Health Sci Human	Dr. David R Williams	HDSB
Faber, Andrea	Bring Back the Memories	D05	Health Sci Human	Trinity Christian School	IND
Faheem, Mohamad-Ammar	Battery voltage endurance test.	H03	Phys & Math Sci	Hawthorne Village Public School	HDSB
Feltham, Jacob	Life is a Highway	M15	Eng & Comp Sci	St. Augustine	HWCDSB
Fernandes, Aaliyah	Positivity at School	C16	Health Sci Human	Oakville Christian School	IND
Fraser, James	What's electro-right	P24	Health Sci Human	St. Augustine	HWCDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Frydman, Bruno	Pyrexia Detecting Glasses	J16	Eng & Comp Sci	John William Boich Public School	HDSB
Gardanis, Yioti	How strong can a car really be?	M06	Eng & Comp Sci	Hawthorne Village Public School	HDSB
Getty, Olivia	La Creme De La Creme	F04	Biotech	Oakville Christian School	IND
Gilchrist, Lisa	Does hair type/colour affect static electricity?	H04	Phys & Math Sci	Highview	HWDSB
Gong, Janine	Statocytes in Space	A09	Life Sci Non-Human	W. H. Morden Public School	HDSB
Gouthro, Katelyn	How Does Temperature Affect Viscosity?	G16	Phys & Math Sci	Highview	HWDSB
Greco, Gray	No Name, No Shame	D09	Health Sci Human	Oakville Christian School	IND
Hageman, Eli	The Power of Gas	G02	Phys & Math Sci	Trinity Christian School	IND
Hanna, Mia	Newton's Cradle Study	G06	Phys & Math Sci	Emily Carr Public School	HDSB
Hart, Nicholas	Impact of Fertilizers: Organic vs Chemical	A14	Life Sci Non-Human	Charles R. Beaudoin Public School	HDSB
Hassan, Adam	How do Genetics affect Drug Response?	D03	Health Sci Human	Dr. David R Williams	HDSB
Hassan, Mujtaba	Real life zombies	C04	Health Sci Human	Hawthorne Village Public School	HDSB
He, Ted	An Innovative Paper Straw	K02	Eng & Comp Sci	Charles R. Beaudoin Public School	HDSB
Hill, Rebecca	How different school subjects affect students stress levels	E16	Health Sci Human	Dr. David R Williams	HDSB
Horn, Ethan	Braille In A Box Puzzle	K13	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Huang, Michelle	Disco Bot	M16	Eng & Comp Sci	Cathy Wever	HWDSB
Hutton, Kaitlyn	What removes sharpie the best?	H16	Phys & Math Sci	Highview	HWDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Ilesanmi, Oluwasemilore	What is the best way to remove an oil spill from marsh ecosystem	L08	Earth & Env Sci	Highview	HWDSB
Imran, Mubashir	Marker experiment	H14	Phys & Math Sci	Hawthorne Village Public School	HDSB
Ion, Jeffrey	Think Fast!	P22	Health Sci Human	Trinity Christian School	IND
Ipwanshek, Gabbi	Household Waste Sorter	P07	Eng & Comp Sci	Dr. David R Williams	HDSB
Issa, Khairy	How can a wind powered car go faster than the wind?	H08	Phys & Math Sci	Dr. David R Williams	HDSB
Jagt, Dylan	Converting a Go Kart to Electric	K14	Eng & Comp Sci	Oakville Christian School	IND
Johnson, Malcolm	Can you power a light with a sugar beet?	M13	Eng & Comp Sci	Tiger Jeet Singh Public School	HDSB
Johnson, William	Gerbil Power	M10	Eng & Comp Sci	Guy B. Brown	HWDSB
Jones, Kaleb	Magnetic Power	H09	Phys & Math Sci	Trinity Christian School	IND
Jordan, Julian	Super Solar Cells	J10	Eng & Comp Sci	Cathy Wever	HWDSB
Jovicevic, Teodora	pH Of Water	G10	Earth & Env Sci	Ancaster Meadow	HWDSB
Kamstra, Jameson	What Makes It Taste?	E06	Health Sci Human	Trinity Christian School	IND
Keenan, Rachael	Sports Ignite App	L14	Eng & Comp Sci	John William Boich Public School	HDSB
Kelder, James	Ex-Squeeze Me?!	D01	Health Sci Human	Oakville Christian School	IND
Khan, Ayaana	Nuclear reactions in human bodies	E09	Health Sci Human	Dr. David R Williams	HDSB
Khan, Nehan	Optimal Materials for a Wind Turbine	P08	Eng & Comp Sci	Dr. David R Williams	HDSB
Khan, Wardah	The effects of pH levels of various liquids on plant growth	B01	Life Sci Non-Human	Al-Falah Islamic School	IND
Kharboutly, AbdulHafiz	Pill Pal	L10	Eng & Comp Sci	W. H. Morden Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Kim, Wookyum (Jason)	Go With the Flow	C05	Health Sci Human	Trinity Christian School	IND
Kolla, Bhavitha	Nuclear Fusion – The Long-Term Solution to Our Massive Energy Demand	M03	Earth & Env Sci	W. H. Morden Public School	HDSB
Kolodenko, Nika	The reality of holograms	L17	Eng & Comp Sci	Munn's Public School	HDSB
Kostukova, Sophia	Cameras	L18	Eng & Comp Sci	Tiger Jeet Singh Public School	HDSB
Krakowska, Kasia	Rather Grow Or Have A Coffee To Go?	C12	Health Sci Human	St. Luke	HWCDSB
Kudale, Arnnav	How can a wind powered car go faster than the wind?	H08	Phys & Math Sci	Dr. David R Williams	HDSB
Latif, Eesa	Investigating the Effectiveness of Insulation	J04	Phys & Math Sci	Al-Falah Islamic School	IND
Lavigne, Thomas	Real life zombies	C04	Health Sci Human	Hawthorne Village Public School	HDSB
LeBlanc, Jacob	Sustainability Metrics For Consumer Products Using Open Source Data, Python and QR Code Technology	P11	Eng & Comp Sci	Pilgrim Wood Public School	HDSB
LeBlanc, Jordan	Transferring Pollen Using a Mechanical Bee	P06	Eng & Comp Sci	St. Matthew Elementary School	HCDSB
Lee, Hyunah	Bath Bomb Science	G08	Phys & Math Sci	Ancaster Meadow	HWDSB
Lee, Justin	Emotion's Effect On Your Play In Chess	E08	Health Sci Human	W. H. Morden Public School	HDSB
Levin, Ace	Memory Transmitter	F14	Biotech	John William Boich Public School	HDSB
Li, Yuewen	CRISPR: Ensuring a Memorable Future	F12	Biotech	W. H. Morden Public School	HDSB
Lin, Daniel	How different school subjects affect students stress levels	E16	Health Sci Human	Dr. David R Williams	HDSB
Linde, Chase	Brands of Batteries	G13	Phys & Math Sci	Trinity Christian School	IND
Liou, Raiden	The Effects of Blue Light on the Human Body	D06	Health Sci Human	Dr. David R Williams	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Loo, Allison	Bath Bomb Science	G08	Phys & Math Sci	Ancaster Meadow	HWDSB
Lu, Daniel	Virtual Schooling Impacts on Adolescents' Mental Health Using the Instrumental Approach of PHQ-A	C14	Health Sci Human	W. H. Morden Public School	HDSB
Luciani, Augustus	A Lesson From The Stars	G05	Phys & Math Sci	St. Augustine	HWCDSB
Luo, Bonnie	A Surprising Benefit of Remote Learning	E03	Health Sci Human	Munn's Public School	HDSB
Mabroukeh, Basel	Classical Conditioning	A01	Life Sci Non-Human	John William Boich Public School	HDSB
MacDonald, Samantha	Rain or Snow Which is More Acidic	B14	Earth & Env Sci	St. Augustine	HWCDSB
Mack, Clara	Enticing Icing	D15	Health Sci Human	Trinity Christian School	IND
Mah, Zachary	Which Line is Aligned?	C03	Health Sci Human	Trinity Christian School	IND
Mai, Ethan	Wireless Energy Transfer Using a Tesla Coil	G03	Phys & Math Sci	Cathy Wever	HWDSB
Malhotra, Ishita	What is the best types of lens and light to start a fire using the least amount of energy?	J06	Phys & Math Sci	Charles R. Beaudoin Public School	HDSB
Malik, Muhammad	How Can We Make Aircraft More Environment Friendly?	M07	Eng & Comp Sci	Dr. David R Williams	HDSB
Malseed, Alexa	Got Mold? Which Bread Molds Fastest?	A07	Life Sci Non-Human	Charles R. Beaudoin Public School	HDSB
Mansour, Daniel	What Substance Removes Rust The Best	H06	Phys & Math Sci	Al-Falah Islamic School	IND
Martin, Joanna	The Clean Air Project	N07	Earth & Env Sci	St. John Elementary School (Burlington)	HCDSB
Hurtado-Watson, Thiago Mathias	Bee-hind the problems of bees and their decline	M05	Earth & Env Sci	École secondaire Georges-P.-Vanier	CSV

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Matthews, Spencer	Does Personality Affect Memory	E14	Health Sci Human	John William Boich Public School	HDSB
Mbuagbaw, Lana	Fasten Your Greenbelt	N03	Earth & Env Sci	St. Augustine	HWCDSB
McKenzie, Rachel	What time of day are birds most active?	A04	Life Sci Non-Human	Charles R. Beaudoin Public School	HDSB
McKerracher, Gavin	PSAG (Piezoelectric Semi-Automatic Generator)	K12	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Mehfil, Fiza	Exploring Mercury Remediation Options for Grassy Narrows	K18	Earth & Env Sci	Sam Sherratt Public School	HDSB
Memme, Rocco	Erosion Incoming	K05	Earth & Env Sci	Charles R. Beaudoin Public School	HDSB
Mojib, Fatima	What is the connection between Personality and Memory?	D10	Health Sci Human	Dr. David R Williams	HDSB
Montemayor, Brianna	The 3 B's	B08	Life Sci Non-Human	St George-German Public School	GEDSB
Mousa, Rayan	How do fingers move and what is the role of skin?	J17	Eng & Comp Sci	Al-Falah Islamic School	IND
Mungo, Sophie	La Creme De La Creme	F04	Biotech	Oakville Christian School	IND
Nachiappan, Varsha	Colourful Stains (Commercial vs Organic)	H05	Phys & Math Sci	Hawthorne Village Public School	HDSB
Naidu, Mithru Narayan	Can you get Parkinson's Disease from a family member that has/had Alzheimer's Disease?	D12	Health Sci Human	W. H. Morden Public School	HDSB
Ndibmun, Hanniel	Electrophoresis and Chromatography	H10	Phys & Math Sci	Cathy Wever	HWDSB
Nijjar, Redina	Disco Bot	M16	Eng & Comp Sci	Cathy Wever	HWDSB
Njike, Maelys	Testing the 'Five Second Rule'	B07	Life Sci Non-Human	Our Lady of Victory Elementary School	HCDSB
Noor, Farhan	Wireless Energy Transfer Using a Tesla Coil	G03	Phys & Math Sci	Cathy Wever	HWDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Odesola, Fikayo	Taste vs Sight	D02	Health Sci Human	Trinity Christian School	IND
Ojei-David, Mitchell	The Different Aspect of Careers	D04	Health Sci Human	Oakville Christian School	IND
Okanla, Yomade	A Study of Radio Waves and Walkie Talkies	L04	Eng & Comp Sci	Our Lady of Victory Elementary School	HCDSB
Okpala, Chiazom	Music & Memory	D14	Health Sci Human	Oakville Christian School	IND
Oloruntoba, Darasimi	Sweeten The Peel	H13	Phys & Math Sci	Oakville Christian School	IND
Olumide, Ladi	ALLI - The Automated Language Learning Implement	K07	Eng & Comp Sci	Our Lady of Victory Elementary School	HCDSB
Paquette, Mady	Does Blue Light Affect Your Sleep?	E05	Health Sci Human	John William Boich Public School	HDSB
Parachin, Maya	THE FRYTASTIC FRY FIT	G07	Phys & Math Sci	Oakville Christian School	IND
Patnaik, Shreyas	Decoding a Solution to Global Food Waste	P03	Biotech	W. H. Morden Public School	HDSB
Paule, Avery	Wat'er You Drinking?	G04	Phys & Math Sci	St. Augustine	HWCDSB
Paulos, Justin	Effect of Baseball Bat Material on Distance of Hit Ball	G15	Phys & Math Sci	Ancaster Meadow	HWDSB
Peart, Evelyn	Remediation of oil spills on land	L02	Earth & Env Sci	Tiger Jeet Singh Public School	HDSB
Plante, Rowan	Diy tv station	N12	Phys & Math Sci	Charles R. Beaudoin Public School	HDSB
Pooler, Sophie	Does hair type/colour affect static electricity?	H04	Phys & Math Sci	Highview	HWDSB
Powell, Luke	Recyclo-Warn	K01	Eng & Comp Sci	Charles R. Beaudoin Public School	HDSB
Prabaharan, Viren	Sports Ignite App	L14	Eng & Comp Sci	John William Boich Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Puri, Laila	A SHOCK TO YOUR SYSTEM: A novel treatment for Type 1 Diabetes	D16	Health Sci Human	W. H. Morden Public School	HDSB
Puri, Maeve	Fasten Your Greenbelt	N03	Earth & Env Sci	St. Augustine	HWCDSB
Qazi, Emaad	Marker experiment	H14	Phys & Math Sci	Hawthorne Village Public School	HDSB
Qureshi, Ana	Which Stays Fresh Longer: Non Organic or Organic Fruits?	B05	Life Sci Non-Human	Al-Falah Islamic School	IND
Roach, Alyssa	Does Blue Light Affect Your Sleep?	E05	Health Sci Human	John William Boich Public School	HDSB
Rome, Leah	Dividing Desalination	M09	Eng & Comp Sci	John William Boich Public School	HDSB
Romero Duarte, Paula	Chocolate Mix!!!	G18	Phys & Math Sci	Ascension Elementary School	HCDSB
Ruban, Raiden	A study of Radars	H07	Eng & Comp Sci	Our Lady of Victory Elementary School	HCDSB
Rupchand, Gwyneth	How lettuce will grow under 3 different light sources.	B04	Life Sci Non-Human	Ascension Elementary School	HCDSB
Saadeldin, Tala	How does a plant transport water from its own root system to the rest of its body?	A11	Life Sci Non-Human	Al-Falah Islamic School	IND
Sagarwala, Hania	The Effects of Heating Temperature on Voltage	H17	Phys & Math Sci	Al-Falah Islamic School	IND
Sattar, Hafsah	What Melts Ice the Fastest?	G01	Phys & Math Sci	Al-Falah Islamic School	IND
Sayani, Maryam	How Does Age Affect the Ability to Detect Salt?	C02	Health Sci Human	Al-Falah Islamic School	IND
Scheben, Rowan	Rise Up!	J07	Phys & Math Sci	St. Augustine	HWCDSB
Schweinberger, Sophie	Battle of the Disinfectants	B06	Life Sci Non-Human	Trinity Christian School	IND
Seet, Leah	Statocytes in Space	A09	Life Sci Non-Human	W. H. Morden Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Seoh, Thomas	Virtual Schooling Impacts on Adolescents' Mental Health Using the Instrumental Approach of PHQ-A	C14	Health Sci Human	W. H. Morden Public School	HDSB
Settimi, Luke	The Five Second Rule	B13	Life Sci Non-Human	St. Augustine	HWCDSB
Shah, Serena	Have you ever wondered how fears and memories are created?	E07	Health Sci Human	Dr. David R Williams	HDSB
Shahid, Momin	Can you power a light with a sugar beet?	M13	Eng & Comp Sci	Tiger Jeet Singh Public School	HDSB
Sharma, Abhay	Optimal Materials for a Wind Turbine	P08	Eng & Comp Sci	Dr. David R Williams	HDSB
Sharma, Avaya	Sniff, Sniff, Sniff ... What smells do dogs' noses like?	A02	Life Sci Non-Human	Oakville Christian School	IND
Shirani, Shada	A SHOCK TO YOUR SYSTEM: A novel treatment for Type 1 Diabetes	D16	Health Sci Human	W. H. Morden Public School	HDSB
Sienna, Isaiah	Taking Flight - The Evolutionary Origin of Feathered Flight	B03	Life Sci Non-Human	St. Augustine	HWCDSB
Singh, Abhishikta	Super Solar Cells	J10	Eng & Comp Sci	Cathy Wever	HWDSB
Singh, Agam	Battery voltage endurance test.	H03	Phys & Math Sci	Hawthorne Village Public School	HDSB
Smith, Capri	Seeing Sound	P04	Phys & Math Sci	St. Augustine	HWCDSB
Soe, Eh Ku Ku	How Solar Panels Work	J05	Phys & Math Sci	Cathy Wever	HWDSB
Sotto, Riona	Testing the 'Five Second Rule'	B07	Life Sci Non-Human	Our Lady of Victory Elementary School	HCDSB
Sowdagar, Hiba	Invasive Species	L06	Earth & Env Sci	Ancaster Meadow	HWDSB
Spurrell, Brooke	Dividing Desalination	M09	Eng & Comp Sci	John William Boich Public School	HDSB
Sridhar, Varsha	The use of miniaturized monoclonal antibodies to treat small cell lung cancer	F03	Biotech	W. H. Morden Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Srivastava, Daksh	A Digital Interpreter to translate between English and Ukrainian	P12	Eng & Comp Sci	Pilgrim Wood Public School	HDSB
Storsley, Liam	Virtual Reality's Impact on Learning Outcomes	E11	Health Sci Human	Oakville Christian School	IND
Strong, Camryn	What removes sharpie the best?	H16	Phys & Math Sci	Highview	HWDSB
Swanson, Chloe	Spherification	L01	Eng & Comp Sci	St. Lawrence	HWCDSB
Tan, Siqi	CRISPR: Ensuring a Memorable Future	F12	Biotech	W. H. Morden Public School	HDSB
Tayal, Jaylan	Water Powered Boat	L15	Eng & Comp Sci	John William Boich Public School	HDSB
Tripathi, Eva	Major Makeover: Reprogramming Cell Identity	F09	Biotech	Tiger Jeet Singh Public School	HDSB
Veljkovic, Filip	SODIS in Canada: A 'Cool' Way to Disinfect Water	N05	Earth & Env Sci	Charles R. Beaudoin Public School	HDSB
Vu, Jayden	A study of radars	H07	Phys & Math Sci	Our Lady of Victory Elementary School	HCDSB
Wang, Pinnong	The Science Behind Color (Chromatophores and Chromatography)	A06	Life Sci Non-Human	Oakville Christian School	IND
Warmington, Matthew	What Generates Electricity Best	J03	Phys & Math Sci	Highview	HWDSB
Waseem, Zoha	Which Cone Cell Type Takes the Longest To Recover From Afterimages?	D13	Health Sci Human	Al-Falah Islamic School	IND
Waseem, Zoya	Does Multitasking Affect Studying Accuracy?	C09	Health Sci Human	Al-Falah Islamic School	IND
Willers, Toby	The Door Detach	L07	Eng & Comp Sci	John William Boich Public School	HDSB
Wilson, Grace	Say Watt?!	A13	Life Sci Non-Human	Oakville Christian School	IND
Winterfield, Madeleine	Rain or Snow Which is More Acidic	B14	Earth & Env Sci	St. Augustine	HWCDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Wood, Caleigh	Indoor Methods For Growing Herbs	B16	Life Sci Non-Human	Munn's Public School	HDSB
Woolsy, Hayden	Smart Mold	B12	Life Sci Non-Human	St. Augustine	HWCDSB
Wu, Spencer	Better Brain, Better Tomorrow	K08	Eng & Comp Sci	John William Boich Public School	HDSB
Xiao, Andrew	The Guiding Headphones	K11	Eng & Comp Sci	John William Boich Public School	HDSB
Yamsani, Akshara	Optimal Ambient Conditions for ASD Spectrum Concentration	D08	Health Sci Human	Dr. David R Williams	HDSB
Yu, Jianyu	Nuclear Fusion - The Long-Term Solution to Our Massive Energy Demand	M03	Earth & Env Sci	W. H. Morden Public School	HDSB
Zuo, Peony	Sepsis: Searching for a Cure	F08	Biotech	W. H. Morden Public School	HDSB

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We have taken every effort to ensure that the information presented in this digital program is accurate. If you are aware of an error or omission, please let us know by contacting our Digital Program Lead at Ryan.LaRue@basef.ca.

Intermediate Level

INTERMEDIATE PROJECTS (9/10)					
Name	**Project Title**	**Project Number**	**Division**	**School**	**Board**
Balakumar, Subakrish	Sustainably Saving our Special Salmon	P16	Earth & Env Sci	Aldershot High School	HDSB
Barbera, Katie	Determining the Water Diffusion Coefficient of Various Bioplastics: A Molecular Dynamics Study	H01	Phys & Math Sci	Cathedral High School	HWCDSB
Bass, Ali	Explosive Electrolysis	H15	Phys & Math Sci	Westmount Secondary School	HWDSB
Feng, Aileen	Investigating the Effect of Gene Therapy on Type 1 Diabetes and its Potential as a Future Treatment	F10	Biotech	Oakville Trafalgar High School	HDSB
Feng, Melin	Investigating the Effect of Gene Therapy on Type 1 Diabetes and its Potential as a Future Treatment	F10	Biotech	Oakville Trafalgar High School	HDSB
Jarabana, Srihith	Xenotransplantation: The Viability of Using Decellularized Pig Tissues for Human Function	F07	Biotech	Abbey Park High School	HDSB
Jim, Yuba	Cell Phone Sectrophotometer	G11	Phys & Math Sci	Bishop Ryan Secondary School	HWCDSB
Kefel, Ali	An Analysis of Path Planning Algorithms like D* for more Efficient and Optimal Missions	J11	Eng & Comp Sci	Westdale Secondary School	HWDSB
LeBlanc, Maya	Nitrous Oxide Reduction in an Industrial Wet Scrubber Utilizing NosZ Reductase and *P. denitrificans*	P15	Earth & Env Sci	Abbey Park High School	HDSB
Lopes, Isabella	Expansion of the Cosmos	G14	Phys & Math Sci	Bishop Ryan Secondary School	HWCDSB
Marsh, Claire	Wearable Early Stroke Detection Device Using Electroencephalography	D07	Health Sci Human	M. M. Robinson High School	HDSB
Mathews, Joel	Explosive Electrolysis	H15	Phys & Math Sci	Westmount Secondary School	HWDSB

INTERMEDIATE PROJECTS (9/10)

Name	Project Title	Project Number	Division	School	Board
Mitchell, Kiera	Refining DNA Extraction for Potential Bioplastic Use	F05	Biotech	Delhi District Secondary School	GEDSB
Nagasaki, Kibo	Deterioration of Democracy in the 21st Century	H02	Phys & Math Sci	Mentor College	IND
Pacifici, Nicholas	The COVID Cardiac Connection: A Novel Pre-participation Screening Tool	E13	Health Sci Human	St. Mary Secondary School	HWCDSB
Parmar, Anisha	Solar Dehyrator and Dryer	N18	Eng & Comp Sci	Westmount Secondary School	HWDSB
Ponnambalam, Kadhir	Electrotaxis Of The Tardigrade Species *Hypsibius*. sp	P01	Life Sci Non-Human	Hillfield Strathallan College	IND
Rathod, Anish	A Deep Learning (Multi-Layer Perceptron) Soil Hydration, pH, TDS, and Turbidity Tracking Device	P05	Eng & Comp Sci	Burlington Central High School	HDSB
Salim, Ayaan	Sustainably Saving our Special Salmon	P16	Earth & Env Sci	Aldershot High School	HDSB
Salimi, Rida	How Clean is the Water Around Us?	N02	Earth & Env Sci	Garth Webb Secondary School	HDSB
Saravanan, Rakshan	Smartphone usage among teenagers and their sleep quality	D11	Health Sci Human	Ancaster High	HWDSB
Szymala, Weronika	Cell Phone Sectrophotometer	G11	Phys & Math Sci	Bishop Ryan Secondary School	HWCDSB
Vashishtha, Vihaan	Polymer Enzymatic Degradation - Big Break or Fad?	F06	Biotech	White Oaks Secondary School	HDSB
Wahban, Alia	Replacing Natural Gas with hydrogen Fuel to Power Ontario (Phase 1)	N06	Earth & Env Sci	Hillfield Strathallan College	IND
Wang, Brenton	Experiencing Chinese Ink Painting through VR Technology	K17	Eng & Comp Sci	Oakville Trafalgar High School	HDSB
Wang, Season	Correlations Between Sleep Patterns, the Glymphatic System, and Giftedness in Children	E10	Health Sci Human	Oakville Trafalgar High School	HDSB

INTERMEDIATE PROJECTS (9/10)					
Name	Project Title	Project Number	Division	School	Board
Xing, Angel	Parachutes: Does size matter?	G17	Phys & Math Sci	Ancaster Meadow	HWDSB
Xu, Sophia	Correlations Between Sleep Patterns, the Glymphatic System, and Giftedness in Children	E10	Health Sci Human	Oakville Trafalgar High School	HDSB
Xu, William	A Remote Charging Device With Speed of Light Charging Capabilities	K16	Eng & Comp Sci	Dundas Valley Secondary School	HWDSB
Yin, Brian	Student Engagement Rewards System	P02	Health Sci Human	Iroquois Ridge High School	HDSB

Senior Level

SENIOR PROJECTS (11/12)					
Name	Project Title	Project Number	Division	School	Board
Bae, Jason	ADHD Treatment: Finding the Effectiveness of Fine Motor Learning on Attention Levels	P10	Eng & Comp Sci	King's Christian Collegiate	IND
Bae, Sam	Creating bioplastic that has the most effective adsorption on atmospheric aerosol particles	F02	Phys & Math Sci	King's Christian Collegiate	IND
Bashir, Isra	Sugar High! - Integrating glucose and ketone testing in a novel design to improve prevention of DKA	C07	Health Sci Human	Westdale Secondary School	HWDSB
Chzhen, Maria	Comparison of regression algorithms for multivariable drought analysis	K09	Eng & Comp Sci	Westdale Secondary School	HWDSB
Deng, Kevin	Attention: A Comparison Between Visual and Auditory Stimuli Under Highly Externally Valid Conditions	P19	Health Sci Human	Oakville Trafalgar High School	HDSB

SENIOR PROJECTS (11/12)					
Name	Project Title	Project Number	Division	School	Board
Diaz-Ruiz, Emilia	Oasis: The portable seawater desalinator	L03	Eng & Comp Sci	Westdale Secondary School	HWDSB
Gendy, Marly	The Impact of the Shortage of Children's Painkillers in Canada	E01	Health Sci Human	King's Christian Collegiate	IND
Grewall, Navnoor	Home Sweet Home - Honeybee Habitat	K10	Eng & Comp Sci	Milton District High School	HDSB
Hu, Alina	Antibacterial Effectiveness of Various Household Antiseptics in an Aquatic Environment	A08	Life Sci Non-Human	King's Christian Collegiate	IND
Igbokwe, Jazeel	Silver Nanoparticle Coated Kitchen Sponges	J02	Phys & Math Sci	King's Christian Collegiate	IND
Jonkman, Clara	Health Properties of Kombucha	G12	Phys & Math Sci	Westdale Secondary School	HWDSB
Konduru, Shruthi	Alleviating inhibitors to motor ability through Syntaphilian abolition via Stem Cells	F16	Biotech	White Oaks Secondary School	HDSB
Kozlowski, William	Effect of Vitamin D3 on Sleep Quality	C11	Health Sci Human	Oakville Trafalgar High School	HDSB
Kozyra, Gladys	Oasis: The portable seawater desalinator	L03	Eng & Comp Sci	Westdale Secondary School	HWDSB
Li, Emma	Alleviating inhibitors to motor ability through Syntaphilian abolition via Stem Cells	F16	Biotech	White Oaks Secondary School	HDSB
Li, Ziang	Inverse Cooking Model 2	M08	Eng & Comp Sci	Ridley College	IND
Li, Zixuan	Bionic Squid-inspired Robot Facilitating Underwater Monitorization and Preservation of Coral Reefs	M12	Eng & Comp Sci	Ridley College	IND
Lin, Peiyong	Epilepsy Detection by Head Pose Estimation	J18	Eng & Comp Sci	Oakville Trafalgar High School	HDSB

SENIOR PROJECTS (11/12)					
Name	Project Title	Project Number	Division	School	Board
Maini, Aahaan	Circulate: Designing an Algorithmic Blood Distribution System to Tackle the Indian Blood Shortage	M17	Eng & Comp Sci	Oakville Trafalgar High School	HDSB
Makkar, Akshin	Optimizing Dye-Sensitized Solar Cell's (DSSC's) by Concentration Variation	J14	Eng & Comp Sci	King's Christian Collegiate	IND
Manivasagam, Keerthna	Is Solar Solar Energy More Efficient?	F01	Phys & Math Sci	Milton District High School	HDSB
Monter, Lucas	A Novel EEG Pillowcase for Sleep Apnea Syndrome Diagnosis: An Investigation of a Virtual Prototype	L11	Eng & Comp Sci	Corpus Christi Secondary School	HCDSB
Ngo, Hong	The Effects of Acidic Contamination of Freshwater on Mung Bean Germination	N01	Earth & Env Sci	Westdale Secondary School	HWDSB
Odejayi, Abdulrahman	Housing price prediction	P20	Eng & Comp Sci	North Park Collegiate and Vocational School	GEDSB
Phillips, Caitlin	ASL Digital Interpreter	K03	Eng & Comp Sci	North Park Collegiate and Vocational School	GEDSB
Rajkumar, Sahith	Fighting Free Radicals: Comparing the Antioxidant Effects of Vitamins	B02	Life Sci Non-Human	Hillfield Strathallan College	IND
Sanni, Misimi	Emerging Prosthetics	P17	Eng & Comp Sci	Appleby College	IND
Saturnino, Anthony	Pothole Patrol: An Innovative Robotic Solution for Road Maintenance Using Sustainable Materials	P23	Eng & Comp Sci	Bishop Ryan Secondary School	HWCDSB
Shirani, Kusha	Reversing aging one gene at a time!	B09	Life Sci Non-Human	Abbey Park High School	HDSB
Soni, Ruhan	Using Hydrogen to decarbonize Steel Production	M01	Earth & Env Sci	Hillfield Strathallan College	IND

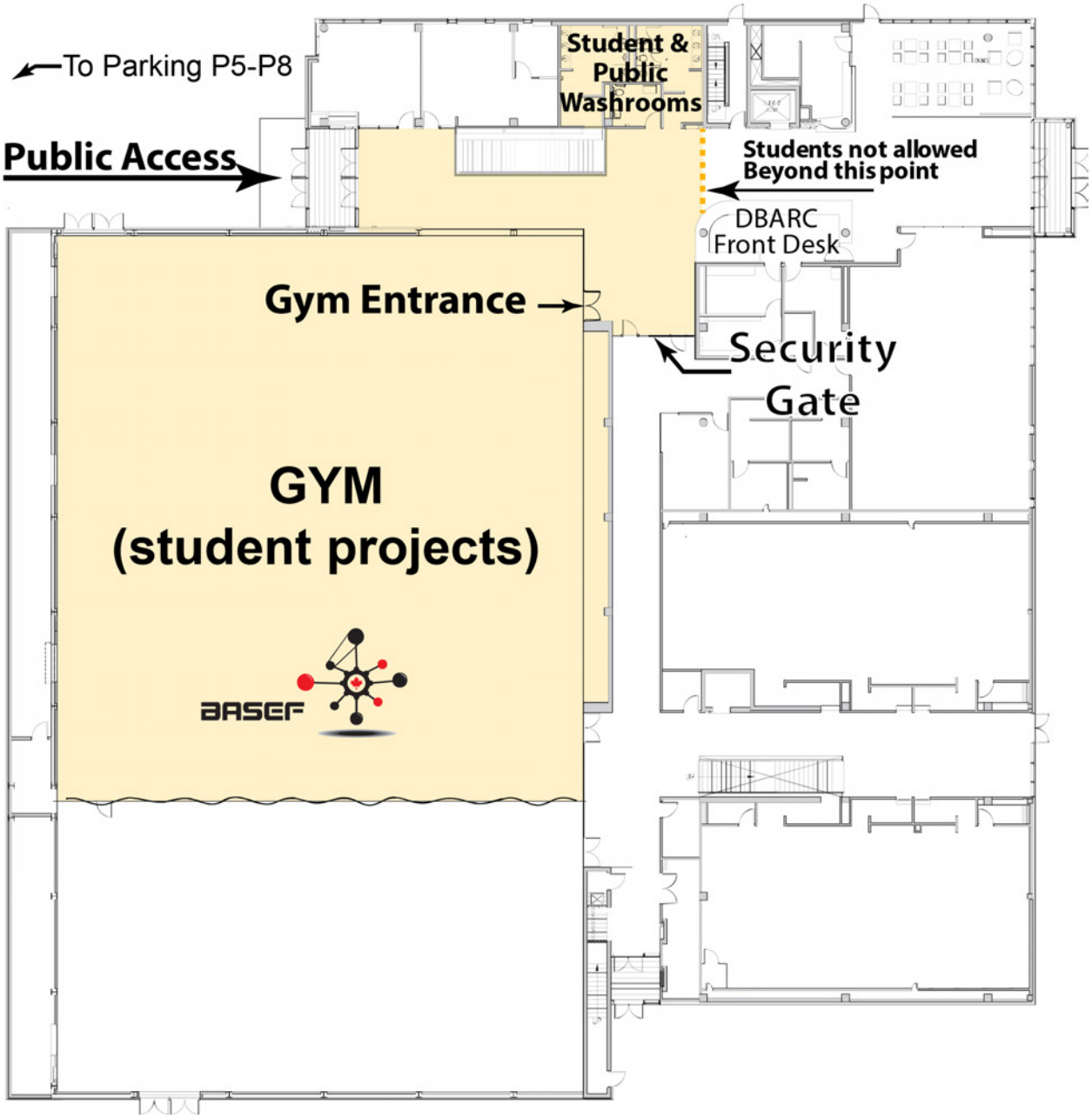
SENIOR PROJECTS (11/12)					
Name	**Project Title**	**Project Number**	**Division**	**School**	**Board**
Tuli, Rohan	Using YOLO Object Detection To Allow Self-Driving Cars to See	K04	Eng & Comp Sci	Oakville Trafalgar High School	HDSB
Wu, Eva	Power Saver	M18	Eng & Comp Sci	Hillfield Strathallan College	IND
Yan, Allen	Future in Spinal Cord Injury Treatments: a Review and Demonstration of Current Experiments	J01	Health Sci Human	Oakville Trafalgar High School	HDSB
Zhao, Emily	Future in Spinal Cord Injury Treatments: a Review and Demonstration of Current Experiments	J01	Health Sci Human	Oakville Trafalgar High School	HDSB
Zhong, Kelly	Do genes impact the ability to learn a new skill?	C10	Health Sci Human	Westmount Secondary School	HWDSB

School Boards Represented:

CSV	*Conseil scolaire Viamonde*
GEDSB	*Grand Erie District School Board*
HCDSB	*Halton Catholic District School Board*
HDSB	*Halton District School Board*
HWCDSB	*Hamilton-Wentworth Catholic District School Board*
HWDSB	*Hamilton-Wentworth District School Board*
IND	*Independent*

The David Braley Athletic and Recreation Centre
(DBARC)
BASEF Student Boundaries
Friday, March 24, 12:30 - 4 pm

Students are expected to stay at their projects during lunch and the afternoon judging period.
Mohawk College and BASEF ask that all students stay within the highlighted areas.



Teachers' Awards

BASEF 2023 Champion Teacher Award

The Champion Teacher Award recognizes science teachers who display a remarkable ability to empower and excite student interest in science and who actively promote the Bay Area Science & Engineering Fair. The winner(s) is/are selected by a panel of BASEF organizing committee members from among those nominated on-line by their peers, students and their parents. The Award includes induction into the BASEF Champion Teacher Hall of Fame, a plaque, and $500 each for use in the classroom of the winning teacher.

For the 2023 fair, we would like to recognize one teacher who demonstrates a passion towards fostering a love for science in her students and for encouraging them to develop critical thinking skills. Congratulations to this year's recipient, Chantal Drolet!

Chantal Drolet – Munn's Public School (Halton District School Board)

The nominator writes: "I am honored to nominate my science teacher for the BASEF Champion Teacher Recognition Award. She has been an exceptional educator who has gone above and beyond to inspire her students. Her passion for science is contagious and has ignited a love for the subject in many of her students. Her teaching methods are innovative, and she consistently finds ways to make complex topics easier to her students. Her commitment to her students' success is unparalleled, and she invests significant time and effort to ensure that each student reaches their potential. My science teacher has created a classroom environment that is inclusive, welcoming, and fosters learning. I have no doubt that her contributions to education deserve recognition, and she would be a deserving recipient of this award."

New This Year!

The Dianne Beveridge Grant

2023 Terms of Reference

AYVA Educational Solutions will award a **product credit for PASCO equipment in the amount of $2,500.00** (twenty-five hundred) Canadian dollars to **one Science, Technology, Engineering and/or Math teacher**, providing all of the following guidelines are met:

1. The Ontario Certified Teacher teaches any science, technology, engineering and/or math curriculum in grades 7-12.
2. The teacher is from a publicly funded school board in the BASEF catchment area.
3. The teacher has advanced student projects to participate in BASEF 2023 or commits to advancing student projects into BASEF 2024.
4. The teacher has filled out an application indicating how the funds for the PASCO equipment will be used in their classroom.
5. Applications must be submitted by Friday, April 28th at midnight.

AYVA Educational Solutions Ltd.

7-233 Speers Road
Oakville, Ontario Canada L6K 0J5

Toll-Free: 1-877-967-2726

www.ayva.ca

AYVA Educational Solutions Ltd was launched in 2008 as the new Canadian distributor for PASCO Scientific. PASCO has long been viewed as the leading manufacturer of physics teaching apparatus and they have expanded their offering to include technology-based solutions for all sciences and engineering.

PASCO is the leading manufacturer of high-quality physics apparatus for teaching laboratories. They also offer the latest STEM solutions with a broad range of affordable dataloggers and sensors for all sciences.

BASEF Infinite Possibilities Teacher Grant

The BASEF Infinite Possibilities Teacher Grant was created in 2021 to assist teachers who wished to provide enhanced science and technology opportunities for their students inside or outside of the classroom. The grants were open to any Grade 4-12 Science or Technology Teacher from a publicly funded school board in the BASEF catchment. Grants of $1,000 were awarded to teachers to be used towards experiences, events, materials and/or resources to support experiential science and technology learning activities (e.g. purchasing curriculum materials, purchasing student science project materials, arranging student field trips, etc.). The teachers who received these grants pledged to facilitate their students to participate in BASEF 2023 and/or a school or classroom event.

BASEF would like to congratulate the following teachers for their successful BASEF Infinite Possibilities Teacher Grant applications!

Rabia Ballan	HCDSB
Ashley Buligan	HWDSB
Elizabeth Carvalho	GEDSB
Caitlin Cunningham	HWCDSB
Jacqueline Da Ros	HCDSB
Jamie Greenway	HWDSB
Katherine Gregoris	HWSDSB
Itty Gupta	HDSB
Franklin Hagar	HDSB
James Hood	GEDSB
Natasha Jones	HCDSB
Khulood Agha Khan	HDSB
Anna Maria Lalli	HDSB
Karen Montgomery	HDSB
Chantal Nano	HCDSB
David Page	BHNCDSB
David Paone	HWCDSB
Christine Peesker	HDSB
Olivia Pellegrino	HCDSB
Luke Persaud	HDSB
Eric Romero-Sierra	HWDSB
Mark Sergi	HWCDSB
Jacqueline Small	HDSB
Lindsay Tarbutt	HCDSB
Anna Tschirhart	HCDSB
Sheri Veibl	HCDSB
Jana Zielinski	HDSB

More information regarding the "BASEF Infinite Possibilities Teacher Grant" can be found on the BASEF website at www.basef.ca/teacher-classroom-grants/. Deadlines for the next round of grants will also be indicated there.

School Boards Represented:

BHNCDSB	*Brant Haldimand Norfolk Catholic District School Board*
GEDSB	*Grand Erie District School Board*
HCDSB	*Halton Catholic District School Board*
HDSB	*Halton District School Board*
HWCDSB	*Hamilton-Wentworth Catholic District School Board*
HWDSB	*Hamilton-Wentworth District School Board*

Emergency Procedures

Please familiarize yourself with the following emergency procedures at Mohawk College:

Emergency Situations:

Main Security Desk	Dial 55 on College phones or press the Emergency button on Bell pay phones, or press the button on the intercom
Police/Fire/Ambulance	Dial 9-911 on College phone or 911 on Bell pay phones

Non-Emergency Situations:

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

Emergency Evacuation:
(Reference Procedure ERP 805)

Upon Discovery of Fire:

- Leave fire area immediately and close doors behind you
- Pull the nearest fire alarm
- Evacuate the building via the nearest exit
- Call Security at 55, or call 9-911 on college phones or 911 on Bell pay phones

Upon Activation of the Fire Alarm:

- Go to the nearest exit and leave the building
- Close doors behind you

Note:

- Do not use elevators or chair lifts
- Use an alternative exit if you encounter smoke
- If a person with a disability cannot be evacuated, assist them to a fire rated room such as an office or classroom that is away from smoke or fire, as close as possible to an exit. Preference should be given to rooms with two exits and a telephone or intercom.
- Notify Security and/or the Fire Department of their specific location.
- Do not re-enter the building until authorized by the Fire Department, Security, Staff or Fire Wardens

Emergency Lockdown:
(Reference Procedure ERP 809)

Threat Inside the Building:
Upon hearing the voice message advising lockdown:

- Exit all common and open areas (including Library and cafeteria):
  - Disperse... do not congregate in open areas
  - Exit the building or go to a room or area where you feel safe to enter
- If exit is not possible:
  - Enter or stay in a room or area where you feel safe
  - Close and secure doors if possible
  - Turn out lights
  - Cover windows and/or stay away from windows
  - Silence cell phones/use text messaging only
  - Stay alert, quiet and out of sight
  - Disregard fire alarm signal unless in immediate danger
  - Do not exit until "All Clear" signal is heard

End of Lockdown:

- A recorded announcement of an "all clear" signal will be given to indicate the end of lockdown. Emergency Officials or College Security will conduct a door-to-door confirmation of this announcement.

Threat Outside the Building:
Hold and secure:

- The threat is outside and everyone remains inside the building.
- Notification will be communicated by a voice message.

For more detailed information, please visit: https://www.mohawkcollege.ca/about-mohawk/security-and-emergency-management/emergency-procedures