BASEF
Big Ideas.
Infinite Possibilities.

BASEF 2024

Sponsored By: Primary Fluid Systems Inc.

64th Annual Bay Area Science & Engineering Fair

Official Program

Diamond Sponsor
ArcelorMittal Dofasco

Platinum Sponsors
Alectra Utilities
McMaster University
Mohawk College

v2.0 | Apr. 14/24

Table of Contents

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.

Anti-Discrimination Policy
BASEF prohibits and condemns discrimination of any type against students, judges, volunteers, and visitors, including on the basis of race, colour, national or ethnic origin, religion, sex—including sexual orientation and gender identity/expression—genetic information, age, (dis)ability, or any other characteristic that is protected under the Canadian Charter of Rights and Freedoms.

Message from Hillfield Strathallan College

Welcome to the 2024 Bay Area Science and Engineering Fair hosted at Hillfield Strathallan College and congratulations on being selected to participate in this incredible science and engineering fair. We are truly honoured to have such an exceptional group of students showcasing their innovations on our campus.

Over the years, HSC has seen its own students participate in the annual fair and, like BASEF, we too have a mission to inspire students to follow their passions and participate in deep learning experiences that challenge them.

Now in its 64th year, BASEF brings together roughly 400 participants every year from across the region with several of them going on to compete at the Canada Wide Science Fair and the International Science and Engineering Fair. None of this would be possible without the amazing support from sponsors, judges, volunteers, parents, and teachers. Thank you for investing your time and efforts every year to make BASEF such an incredible platform for student ingenuity and innovation.

It is incredibly exciting to be this year's host and we wish everyone the best of luck with their projects. You've already achieved so much by being here and I have no doubt that you will continue to make your school proud with your future accomplishments.

Best of luck and full STEAM ahead!

Marc Ayotte
Head of College,
Hillfield Strathallan College

Chairs' Message

Welcome to the Bay Area Science and Engineering Fair!

Dana Bee and David Reed, your co-chairs this year, would like to extend their warmest greetings to all participants, judges, teachers, mentors, and guests joining us for our 64th year!

BASEF is more than just a showcase of projects: it is a testament to the power of curiosity and the dedication of individuals striving to make a difference in the world. Here, ideas flourish, collaborations ignite, and dreams take flight.

As we gather to celebrate innovation, creativity, and the pursuit of knowledge, we know that each student has embarked on a journey of personal discovery that can also inspire future generations of young scientists and engineers.

We invite you to explore the 281 projects being presented and engage in thought-provoking discussions with all 372 students taking part in the fair this year.

We are very thankful for the essential support from charitable donors, corporate and community sponsors, and special awards donors that make BASEF possible during these challenging financial times.

We are proud to welcome back 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.

We would also like to welcome back our long-time sponsor at the Diamond Level:

ArcelorMittal Dofasco

Finally, we extend our appreciation to BASEF's new host, Hillfield Strathallan College (HSC), which we are sure will provide an incredible venue for our students. It has been a pleasure working with HSC and we look forward to continuing our new partnership going forward.

As BASEF is a 100% volunteer-driven registered charity, we thank the extraordinary efforts of the thirty Organizing Committee members, who have dedicated countless hours toward making BASEF 2024 a success. Thank you!

Together, let us celebrate the infinite possibilities of science and engineering, and pave the way for a brighter, more innovative future.

Once again, welcome to the Bay Area Science and Engineering Fair!

Organizing Committee

Co-Chairs
Dana Bee, David Reed

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

Recording Secretary
Mike & Terra Klinck

Registrar
George Geczy

Judge-In-Chief
Donna Stack-Durward;
Assistants: Dan Bowman, Ryan LaRue, Jane Wood

Scientific Review Committee
Dan Bowman, Katie Brent, George Geczy, Ryan LaRue, Marc Trotta;
Ex-Officio: Donna Stack-Durward & Dana Bee

Special Awards Committee
Helen Efthimiadis (Lead), Eleanor O'Flynn

Fundraising Committee
Sue Olynyk (Chair), Paul Lakin, Claire Velikonja

Marketing & Publicity
Wayne Bowdish, Maya Clapperton, George Geczy, Chris Kuttenkeuler, Ryan LaRue, Mark Trotta

Photography & Graphics
Wayne Bowdish (Lead), Ryan LaRue

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

Information Systems
George Geczy (Lead), Gerard Chiasson

Safety Inspections
Mark Simpson

Awards Ceremony
Gerard Chiasson (Lead); Dan Bowman, George Geczy, Ryan LaRue, Sue Olynyk; Cathy Hayman & Chris Blackwood (Emcees)

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); Chris Kuttenkeuler

Activity Morning Coordinator
Vince Pacifici

Student Advisors
Isabella Lopes, Nico Pacifici

Members-At-Large
Isra Bashir, Katie Brent, Anika Gupta, Neha Gupta, Mike McNally, Janice Pang

Host Venue Liaisons

Hillfield Strathallan College:	Celeste Settle
Mohawk College:	Alec Harmer
	Dana Jacobs

School Board Liaisons

BHNCDSB:	*Vacancy*
GEDSB:	*Vacancy*
HCDSB:	Matt Kovacs
HDSB:	Ingrid Scully
HWCDSB:	Marc Trotta
HWDSB:	*Vacancy*
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 join our team!

BASEF 2024 Schedule of Events

BASEF 2024 is being held at *Hillfield Strathallan College* ("**HSC"**) and *Mohawk College's McIntyre Performing Arts Centre* ("**McIntyre Theatre")** Fennell Campus. See the maps on the next pages.

Thursday, March 21st: On-Site Registration, 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!	**HSC**

Friday, March 22nd: Activity Morning & Project Judging

10:00–10:20 am	Students arrive at HSC and are seated in the theatre for Activity Morning. Note: it is the responsibility of the student to arrange their own transportation to and from the venue.	**HSC**
10:45 am–12:15 pm	Activity Morning will feature presentations from: • *The Hamilton Amateur Astronomers,* represented by John Gauvreau • *McMaster University Department of Chemistry & Chemical Biology,* represented by Gillian Goward, Paul Harrison, and Heather Zalisko.	
12:15–1:00 pm	Students eat lunch at their projects.	
1:00–4:00 pm	Judging interviews for BASEF students. BASEF participants must remain at their projects during judging.	
4:00 pm	Students are dismissed and must arrange their own transportation home.	

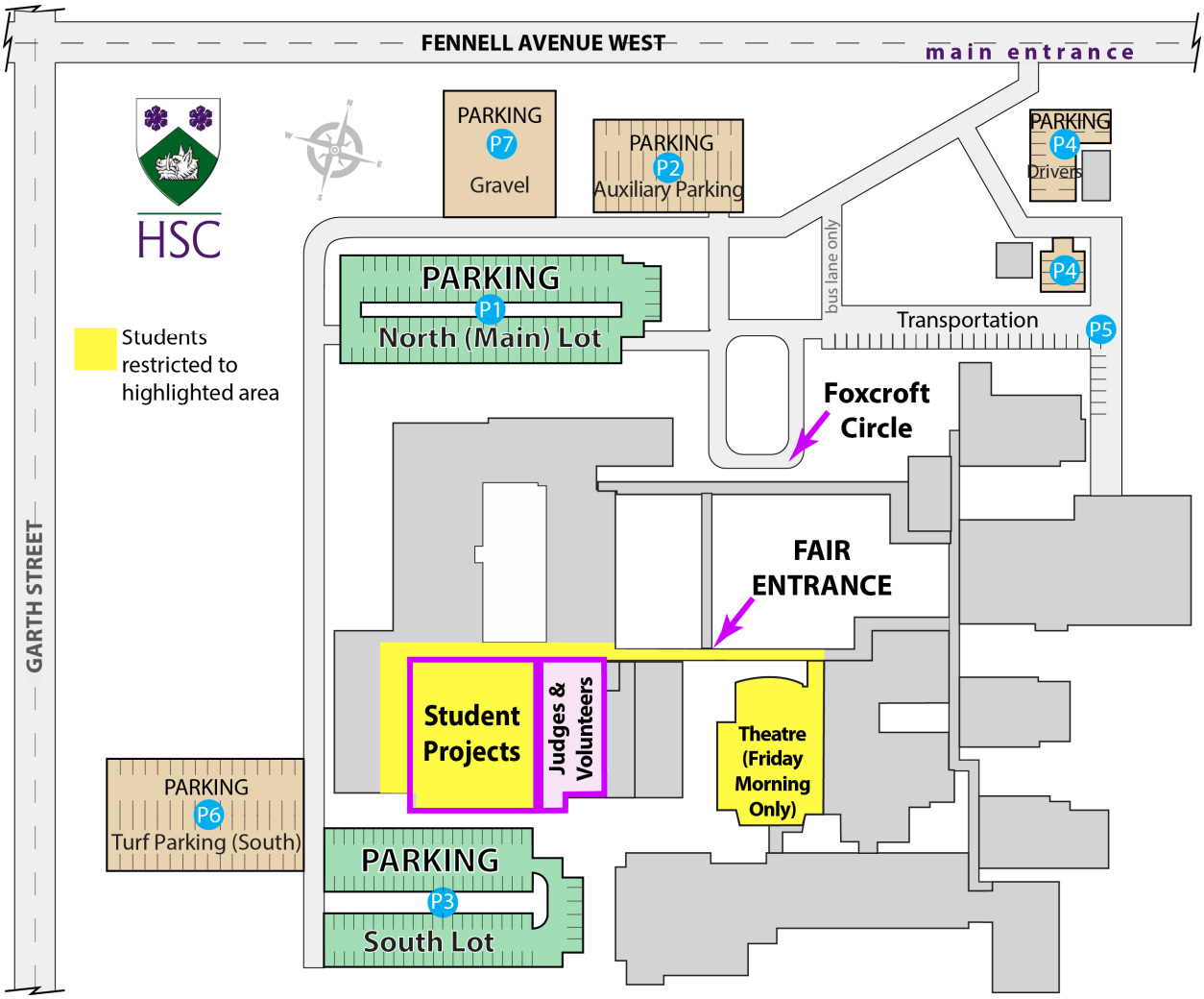
Saturday, March 23rd: Public Viewing

9:00 am–12:00 pm	Students are asked to be at their projects until the end of the viewing. *The Hamilton Amateur Astronomers*, represented by Sue MacLachlan, Jo Anne Salci, and Denise White, will have a booth and offer demonstrations of a telescope (weather-permitting).	**HSC**
12:00–12:15 pm	Project take-down. All projects must be removed by 12:15 pm.	

Tuesday, March 26th: Awards Ceremony @ Mohawk College

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

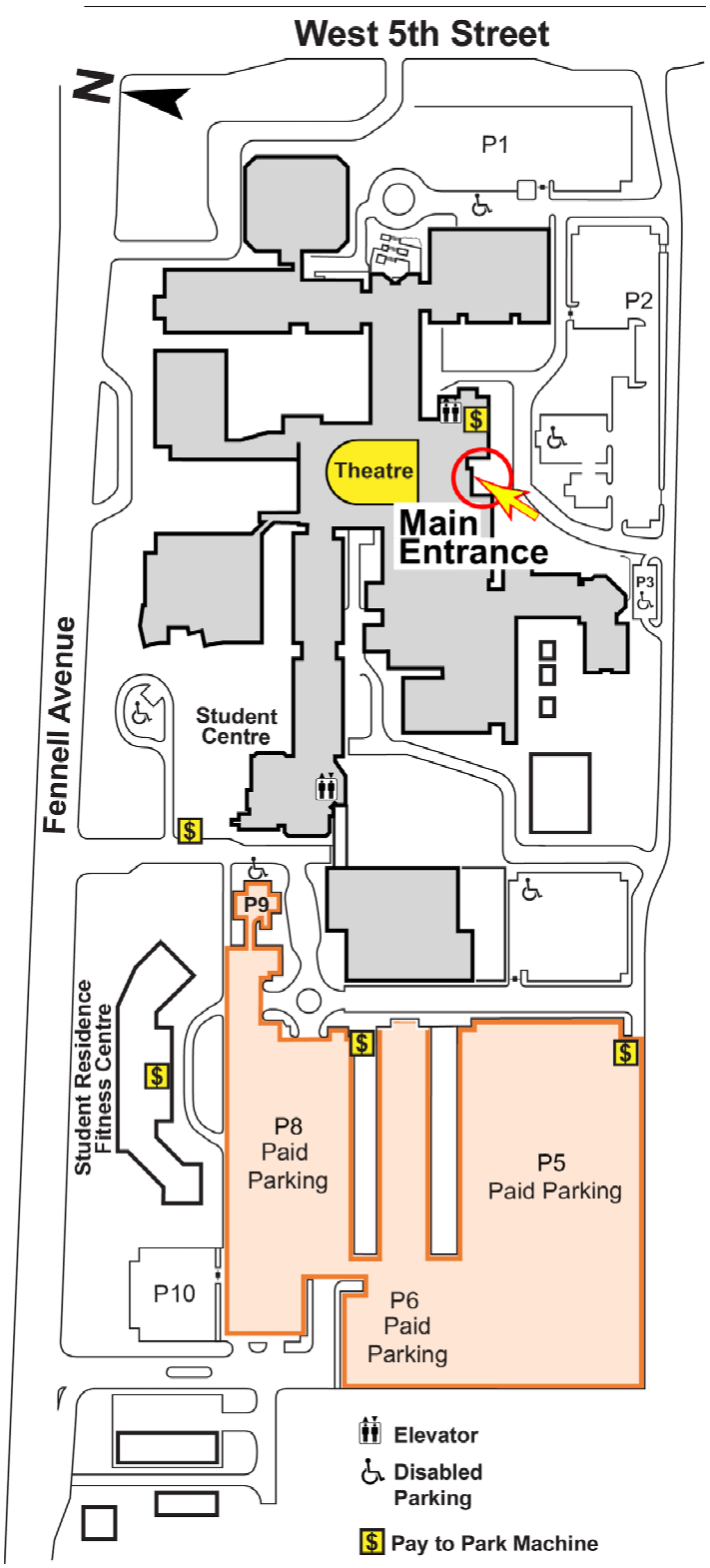
Map: Hillfield Strathallan College



This digital program will be periodically updated over the course of the Fair to reflect the most up-to-date information. The most recent version of the program can be downloaded from our website at www.basef.ca/program2024.

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.

Map: Mohawk College



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 like-minded 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 2024 Quick Facts

- **Location of Events:** Projects will be set up in the *Hillfield Strathallan College* (HSC) Athletic Complex King and Siggi Gyms located at 299 Fennell Ave W, Hamilton. **This is new for 2024!** The Awards Ceremony will be held in the McIntyre Performing Arts Centre at *Mohawk College*, located at 135 Fennell Ave W, Hamilton. 🅿 Parking considerations are highlighted below.
- **No Mask Mandate:** At the time of writing, BASEF 2024 will not mandate the use of a face mask at the Fair. In the spirit of being considerate towards others, we ask that you stay home if you are ill and wear a face mask if you have been ill recently. Attendees may choose to wear a face mask pursuant to other personal circumstances, as well.
- **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 desk 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/program2024.

Parent Responsibilities: Day-by-Day

- **Day 1: Registration & Setup.** Thursday, March 21st, 2024 @ 4:00–8:00 pm

- Project setup is only on March 21st, 2024 from 4:00–8:00 p.m. at the *Hillfield Strathallan College* (HSC) Athletic Complex. The entire process typically takes less than an hour.
- 🅿 Parents are encouraged to park in the North Lot (see map on pg. 8). If this lot is full, the South Lot is also available. Parking at HSC is free of charge. From there, you and your student(s) will carry their project into the HSC Athletic Complex. Volunteers and signage will help to guide you.
- 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 for Activity Morning. Friday, March 22nd, 2024 @ 10:00–10:20 am

- Parents must arrange transportation for student(s) to and from HSC. Activity Morning will start at 10:30 so we recommend that students arrive and are settled before that time. Please do not drop students off before 10:00 am as BASEF/HSC cannot facilitate the appropriate supervision.
- 🅿 You may use the "Foxcroft Circle" (see map on pg. 8) as a temporary drop-off zone. Note that parking inside the Circle is not permitted as it is a fire route.
- Volunteers and signage will guide arriving students to the HSC auditorium for an exciting morning of activities featuring the Hamilton Amateur Astronomers and the McMaster University Department of Chemistry & Chemical Biology.
- Following Activity Morning, students will have time to eat their lunches from 12:15 to 1:00 pm at their projects in the HSC Athletic Complex. There are no food vendors available onsite, so students must bring lunch with them. Note that utensils/ microwaves/etc. also will not be available.

▶ Day 2: Afternoon Judging. Friday, March 22nd, 2024 @ 1:00–4:00 pm

- Judging starts at 1:00 pm, sharp. Usually, students will be interviewed by at least three judges.
- Teachers and parents are not permitted on the gym floor during judging. Students may not receive any form of coaching from parents/teachers/etc. during this judging period.

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

- After the judging period has finished at 4pm, students will be dismissed in an orderly fashion. Please make transportation arrangements for your student(s) to leave HSC promptly.
- 🅿 As before, parents can park in the HSC North Lot to pick up their students. Parking is not permitted in the Foxcroft Circle, but it can be used as a temporary pick-up zone (see map on pg. 8).
- The Fair is not open to students or the public during the evening of March 24th.

▶ Day 3: Public Viewing. Saturday, March 23rd, 2024, 9:00 am–12:00 pm

- Your student(s) should be at their projects in the HSC Athletic Complex for the Public Viewing period.
- We strongly recommend that you also attend the Public Viewing with your student(s). 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.
- Tours of HSC will be offered for anyone who is interested. Weather-permitting, the Hamilton Amateur Astronomers will offer free demonstrations of the use of a telescope!
- 🅿 Parking is free for everyone, and both the HSC North and South Lots should be used.
- 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 pm. After this time, projects will be removed and discarded by the volunteer staff.

▶ Awards Ceremony. Tuesday, March 24th, 2024 @ 7:00–9:30 pm

- The Awards Ceremony is the culmination of the Fair where we recognize the hard work of students. It will be held in the McIntyre Theatre at *Mohawk College* at 7:00 pm, sharp.
- 🅿 Paid evening parking at available at *Mohawk College* for the Awards Ceremony. Please pre-pay at one of the parking pay stations located in and around the Campus parking lots (see map on pg. 9).
- It is recommended to come early as seating is limited. Doors will open at 6:30 p.m.
- Students will be asked to sit near the front of the Theatre to facilitate the distribution of awards.
- Our Trip Award Winners and a parent are required to attend an information meeting immediately after the Awards Ceremony (approximately one hour).

BASEF 2024 Sponsors & Charitable Donors

General Funding Sponsors

Title ($25,000+)

Primary Fluid Systems Inc.

Diamond ($10,000+)

ArcelorMittal Dofasco

Platinum ($5,000+)

Alectra Utilities	McMaster University	Mohawk College

Gold ($2,500+)

D.E.N.M. Engineering	Hillfield Strathallan College

Silver ($1,000+)

Bay Area Health Trust	Burlington Hydro	Canadian Linen & Uniform Service
Halton Catholic District School Board	Halton District School Board	Hamilton-Wentworth Catholic District School Board
Hamilton-Wentworth District School Board	Ontario Power Generation	Taylor Leibow Accountants & Advisors

Bronze ($500+)

CareGo Tek	Hamilton Police Retirees' Association	Mysys Ltd.
NewAE Technology Inc.	Rotary Club of Hamilton AM	Society of Tribologists & Lubrication Engineers-Hamilton Chapter
Synapse Life Science Consortium		WalterFedy

Friends ($250+)

Electrical Contractors Association of Niagara Hamilton	Rotary Club of Ancaster AM	Talkit.ca

Charitable Donors

Banting & Best Level ($1,000+)

Peter Child

Bondar Level ($500+)

Steve & Cathy Hayman

Mantecon Partners

Peter & Sue Olynyk

Polanyi Level ($200+)

Dan & Debbie Bowman

Nick & Helen Efthimiadis

John & Eleanor O'Flynn

Renato & Enza De Tina

Paul & Pam Lakin

Dr. Nicola Simmons

McGill Level ($50+)

Linda Millar

Notes: Those donating in-kind services help us provide an exceptional experience for BASEF participants. Key donations can include: facility space, accounting, and teamwear. In addition to those listed above, BASEF also has donors who wish to remain anonymous.

"Many thanks to all the organizations and individuals that have supported BASEF this year! Their 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. It is very much appreciated.

Is your place of business built on science, applied science, mathematical or engineering foundations? Are you interested in improving youth capabilities in personal self-confidence, presentation, and communication skills? BASEF ignites sparks of interest in youth that leads them to become the future ready workforce of tomorrow.

I'm always willing to talk to more people about possible financial support for the fair. You or your company can support BASEF through direct charitable donations of cash, donations of securities through "Canada Helps", workplace giving through "Benevity", or in-kind donations of items like meeting spaces, printing, storage facilities, and airline tickets. My name is Susan Olynyk and I can be contacted at fundraising@basef.ca."

- Sue Olynyk, P.Eng., Fundraising Chair

BASEF 2024 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.

Interested in joining our team?

BASEF is always looking for new recruits to volunteer on our organizing committee! Our members have a wide range of backgrounds and skillsets which we need to run our annual fair: scientists, engineers, accountants, financial professionals, businesspeople, educators, and so on. If you would like to be a part of our dynamic team for BASEF 2025, please reach out to chair@basef.ca.

Grand Prize Trip Awards

2024 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 11th–17th, 2024. Eligible winners of ISEF trip awards will receive an expense-paid trip to the Fair in Los Angeles, California to present their projects amongst some of the brightest young minds from around the world.

Sponsored By:

2024 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 25th–June 1st, 2024. All projects at BASEF 2024 are eligible to advance to CWSF. Winners of CWSF trip awards will receive an expense-paid trip to Ottawa, Ontario to present their projects.

Sponsored By:

Special Awards

"Our sincere appreciation to the many community organizations, businesses, and individuals for the ongoing support and contributions in the success of BASEF 2024. Special Award donors and judges are extraordinary groups and individuals that have committed their generous awards and time to encouraging scientific thought and research in their specific area of interest and have been paramount to the success of our event.

This year, we are pleased to announce a total of 158 special awards, amounting to $24,600 in cash and $14,500 in academic scholarships. Your donations have played a crucial role in achieving this milestone, further solidifying BASEF's position as a platform that promotes excellence in scientific exploration.

BASEF 2024 sponsored by Primary Fluid Systems Inc. supports students in Grades 7 through 12 to explore and pursue careers in STEM. Your support inspires the next generation of professionals to make great future strides and contributions to these fields."

- Helen Efthimiadis, Special Awards Coordinator

Special Awards are given by organizations and groups to recognize deserving projects that deal with topics of interest to the donor. These organizations and groups are encouraged to provide their own judges for their awards. These judges are indicated to the right of the award listings. In cases where no external judges are recommended, BASEF is happy to provide its own judges for those awards. We appreciate the generosity of our Special Awards donors and judges!

Special Awards	Judges
ArcelorMittal Dofasco Awards	Lead: *Shannon Clark* *Clayton MacNeil*
Central Trades & Services Department Award 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 Prize: $100 Criteria: A project that best uses chemical testing and/or chemical principles to solve a technical problem.	*Kristen Bloom*
Commercial Department Award Prize: $100 Criteria: A project that best uses commercial and business planning tools in developing a potentially new or improved commercial product.	*Shannon Clark*
Engineering Award Prize: $100 Criteria: A project that best uses engineering & maintenance technology principles and design to solve a technical problem.	*Justin Clappison*

Special Awards	Judges
ArcelorMittal Dofasco Awards, Continued…	
Environment Award	*Scott Anderson*
Prize: $100	*Shawna Lemire*
Criteria: A project that best uses physics, chemistry, or engineering to explore or solve a technical problem associated with environmental issues.	
Global R&D Hamilton Award for Outstanding Research	*Nicole Perna*
Prize: $100	
Criteria: A project that best uses investigative research & scientific principles to explore or solve a technical problem.	
Global R&D Hamilton Award for Technology Application	*Mayank Upadhyay*
Prize: $100	
Criteria: A project that best uses the innovative application of materials, products, processes or design principles.	
Hot Mill Award	*Chantel Ullyett*
Prize: $100	
Criteria: A project that best uses creative principles and design to solve a manufacturing or process problem.	
Human Resources Training & Development Award	*Victoria Smith*
Prize: $100	*Chris Willis*
Criteria: A project that best uses teaching and training techniques in explaining or exploring a technical problem.	
Information Systems Award	*Karthik*
Prize: $100	*Balasubramanian;*
Criteria: A project that best uses information systems and design to solve a technical problem.	*Jonas Szajman*
Ironmaking Award	*Husain Tapia*
Prize: $100	
Criteria: A project that best uses the use of metallurgical or material science principles to solve a technical problem.	
Material Handling & Logistics Department Award	*Aaron Dearman*
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.	
Medical Department Award	*Frances Thompson*
Prize: $100	
Criteria: A project that best uses scientific principles in exploring or solving a problem related to human health issues.	
Pickling and Cold Rolling Award	*Hammad Ashfaq*
Prize: $100	
Criteria: A project that best displays the use of chemical or mechanical properties to explore or solve a technical problem.	
Process Automation Award	*Pedro Tondo*
Prize: $100	
Criteria: A project best uses process automation principles and design to solve a technical problem.	

Special Awards	Judges
ArcelorMittal Dofasco Awards, Continued…	
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.	*Tyson Auger*
Quality Systems Award Prize: $100 Criteria: A project that best uses quality systems principles and design to solve a technical problem.	*Jaime Jewer*
Steelmaking Award Prize: $100 Criteria: A project that best uses engineering and materials science principles to solve a technical problem.	*Analinda Sanchez Morone; Michael Kempe*
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: 1st $250 2nd $150 3rd $100 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*
BASEF Inspiration Student Awards: Prize: $500 awards Criteria: Awarded based on merit judging marks to top projects that win $250 or less in other prizes and have not previously won a BASEF Inspiration Award.	*BASEF*
BASEF Inspiration Teacher Awards: Prize: $500 awards Criteria: Awarded to 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. **Schools without BASEF projects for at least 5 years*	*BASEF*
Bay Area Health Trust Scholarship/Paul Lakin Health Sciences Award *See "Scholarships"*	*Paul Lakin*
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*

Special Awards	Judges
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).	*Steven Jacobs*
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* *Razia Nushrat*
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*
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.	*Nathan Field* *Francesca Grisani* *Jenna Wild*
Doris Casey and Gwen Nicolls Disability Solutions Awards Prizes: 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*
Dr. Colin J.L. Lock Memorial Chemistry Award Prize: $100 Criteria: A project involving chemistry, especially crystals.	*Shannon Buck* *Gillian Goward* *Anjilee Manhas* *Wesley Sanchez* *Abeera Sivarajah*
Dr. Laura Blew Social Sciences Awards Prize: Two awards of $100 each Criteria: Projects that best demonstrate understanding of the scientific process as it applies to social sciences issues.	*Jim Casey* *Al Nicolls*
Dr. M. Doyle Biology Award Prize: $250, a plaque, and a trophy for the winner's school Criteria: Best biology project.	*BASEF*

Special Awards	Judges
Dr. Nicola Simmons Award in Cognition Studies Prize: $100 Criteria: An exemplary project in cognition studies (animals or humans).	*Renato De Tina*
Electrical Contractors Association of Niagara 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.	*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.	*Ryan Singer* *Mackenzie Thorpe* *Tran Zhou*
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 Prizes: 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* *Bruce Farrand* *Herb Schellhorn*
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.	*Jim Casey*
Harrison Family Chemistry Award Prize: $100 Criteria: For a project that has significant chemistry content.	*Gillian Goward*
Hillfield Strathallan College Awards of Excellence ***Life Sciences Award*** Prize: $100 Criteria: Junior project that best displays excellence in life sciences. ***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.	*Peter Child*

Special Awards	Judges
IEEE (Institute of Electrical and Electronic Engineers) Hamilton Section Awards Prize: Two awards of $100 each Criteria: Best use of electronics in a science or engineering project.	*Boguslaw Bochenski* *Eduardo Gomez-Hennig*
Indigenous Peoples of Canada Scientific Study Awards 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.	*David Reed*
International Science & Engineering Affiliated Fair Awards Prize: Certificates and/or Medallions 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. ***Ricoh USA, Inc. Award*** For an outstanding project that addresses issues of environmental responsibility and sustainable development. ***Society for In Vitro Biology Award*** 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. ***Yale Science & Engineering Association Award*** For an outstanding Grade 11 project in computer science, engineering, physics or chemistry.	*Isra Bashir* *Dana Bee* *Anika Gupta* *Neha Gupta*
James A. Winger Award sponsored by the Hamilton Amateur Astronomers Prizes: Two awards of $200 each; 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.	*Sue MacLachlan* *Jo Ann Salci* *Chris Strejch*
John W. Howard Materials Research Award Prize: $100 Criteria: A project demonstrating innovation in engineering materials, especially concrete.	*Renato de Tina*

Special Awards	Judges
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.	*Laiba Jamshed* *Victoria Restivo* *Celina Ruan* *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.	*Shannon Buck* *Gillian Goward* *Anjilee Manhas* *Wesley Sanchez* *Abeera Sivarajah*
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.	*Ana Arežina* *Ryan LaRue* *Yuvrajsinh Solanki*
McMaster University Faculty of Engineering Entrance Awards *See "Scholarships"*	*Emily Waldron*
MGD Institute for Infectious Disease Research Awards Prizes: Three awards: one of $50, one of $100 and a grand prize of $250, 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.	*Maya George* *Kenneth Rachwalski*
School of Earth, Environment and Society Awards ***Earth and Environmental Sciences Award*** Prize: $100 Criteria: Outstanding project in earth science or environmental science. ***Geography Award*** Prize: $100 Criteria: Outstanding project in geography or social science.	*Luc Bernier*
Venture Academy Prize: Free registration for one week of summer camp for two projects. Criteria: Deserving intermediate/senior projects	*Sophie Lark* *Zoe Michalos* *Emily Waldron*

Special Awards	Judges
Mechanical Contractors Association of Hamilton Niagara Award Prize: $250 Criteria: Best engineering project at the intermediate or senior level.	*Bill Patterson*
Mohawk College Awards	
Building & Construction Sciences Awards	*Nathaniel Adie* *Tyler Sowden*
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 Prize: Three awards of $50 each Criteria: Projects that demonstrate a thorough understanding of computer application and design in today's world.	*John Holloway*
Electrical Engineering Technology Awards	*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.	
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.	*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*

Special Awards	Judges
New Health Scientist Award Prize: $50 Criteria: A worthy junior project showing good potential for improving the health of our community.	*Jim Casey*
Nikola Tesla Innovation Awards Prize: Gold $100 Silver $50 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.	*BASEF* *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.	*Peter Child*
Procor Engineering Awards Prize: Junior $50 Intermediate $100 Senior $150 Criteria: Excellent engineering projects.	*Eron Gumabon* *Ivona Szczerbowicz*
The Research Institute of St. Joe's Hamilton, Health Research Awards Prizes: Two awards of $100 at the intermediate level 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.	*Laura Garrick* *Alana Penny* *Adam Weerdenburg*
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.	*Jim Casey* *Mike Dunne* *James McDonnell*
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.	*Angela Ceccato*
Sanofi Biogenius Canada Award Prize: $100 and a certificate Criteria: For an outstanding project related to biotechnology, the use of biological systems to produce goods or services, or life sciences.	*Braedon Cowbrough*
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*

Special Awards	Judges
Talkit.ca Computer Engineering Awards Prize: 1st $100 2nd $50 Criteria: For outstanding projects using computer electronics or software.	*George Geczy*
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 into any undergraduate program at a Canadian post-secondary college or university. 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 2024-2025 academic year. Will be awarded to both students in a pair project – maximum $10,000 value.

Criteria: A deserving project demonstrating excellence in scientific learning.

McMaster University Faculty of Engineering Entrance Awards

Prize: Seven $1,000 tuition awards, to be redeemed upon acceptance of admission to the Faculty of Engineering. Pair projects will split the award.

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 2024 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 2024 Merit Award Judges

"Merit judging is critical to the success of BASEF. Merit Judges include university faculty and scientists, industrial engineers and scientists, representatives of private research centers and agencies, medical researchers, and senior graduate and undergraduate university students as well as many retired professionals. This diversity of backgrounds provided valuable perspectives when evaluating the projects.

A new Merit Judging form was introduced in 2024. It consists of three criteria: Scientific Thought (45%), Scientific Communication (50%) and Student Engagement (5%). When judging scientific thought, our judges look for the design, analysis, and interpretation of the work presented. Scientific communication includes the formal report, abstract, logbook or journal, interview, and display. Judges note the participants motivation, enthusiasm and overall understanding of the topic chosen when marking student engagement. Each project is judged independently by a maximum of four judges. Merit judges are always invited to provide feedback on the projects.

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

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.

MERIT JUDGES 2024

Adli, Taranah	*McMaster University*
Ahmed, Maisha	*The Hamilton Midwives*
Akparah, Chinomnso (Chi Chi)	*Bartek Ingredients*
Akparah, Eziuche	*National Bank of Canada*
Andraous, Yara	*RBC*
Arežina, Ana	*Veolia*

MERIT JUDGES 2024

	Auld, Rosemarie	*Retired*
	Balaban, Mariana	*Norfolk County*
🔍	**Barbera, Lidia**	*McMaster University*
🔍	**Bashir, Isra**	*McMaster University*
🔍 🔖	**Birch, Nigel**	*Alta Technology Ltd*
	Bochenski, Boguslaw	*Hydro One Networks Inc.*
	Botham, Jay	*McMaster University*
	Bowman, Dan	*Retired; City of Hamilton Police*
	Burchett, Rebecca	*McMaster University*
	Cheung, Tsz Wing	*McMaster University*
🔍 🔖	**Child, Peter**	*Retired*
	Chzhen, Maria	*University of Toronto*
	Clapperton, Maya	*University of Western Ontario*
	Cowbrough, Braeden	*McMaster University*
	Cupido, Cynthia	*McMaster University*
	Czebe, Andy	*L3Harris Wescam*
	De Tina, Renato	*Retired; ArcelorMittal Dofasco*
	Dhaliwal, Sandra	*DS Dental/Desired Smiles*
	Dimonico, Nicholas	*McMaster University*
	Dyer, Benjamin	*McMaster University*
	Easo, Suzanne	*Hoffmann-La Roche Limited*
	ElChaar, Nancy	*McMaster University*
	Fisher, David	*Leanforge/Self-Employed*
🔍	**Forbes, James**	*Retired*
🔍	**Forrest, Fraser**	*Retired; Stern Laboratories Inc.*
	Freger, Shay	*McMaster University*
	French, Craig	*Octal Engineering*
	Frigotto, Rodrigo	*Alectra Utilities*
	Ghaffari, Ayda	*Hamilton-Wentworth District School Board*
	Greenberg, Sharonna	*Professor at McMaster University*
🔍	**Guyatt, Jessica**	*Mohawk College*
🔖	**Harrison, Eric**	*Retired*
	Hazelden, Linda	*Semi-Retired; Archdiocese of Toronto Catholic Charities*

MERIT JUDGES 2024

	Hilal, Arwa	*University of Toronto*
🔍 🔖	**Hill, Terry**	*Retired City of Hamilton Police*
	Hol, Adrienne	*Avenue Physiotherapy*
	Holloway, John	*Mohawk College*
	Holt, Howard	*Retired; ArcelorMittal Dofasco*
	Howcroft, Kat	*McMaster University*
	Jamshed, Laiba	*McMaster University*
	Jathar, Amit	*OpenText*
🔍	**Jeung, Gordon**	*Ontario Power Generation*
	Johnson, Ross	*Retired; Sandwell Consulting Engineers Ltd.*
	Johnson, Warren	*Retired*
🔖	**Johnson, Stephen**	*Thermo Fisher Scientific*
	Jolie, Keith	*Consultant and Administrative Professional*
🔍	**Jurriaans, Marijke**	*Greater Hamilton Health Network*
	Keller, Martin	*Conservation Halton*
	Khullar, Rishabh	*Thomson Reuters*
	Kim, Kate Kyuri	*University of Toronto*
	Klinck, Henry	*University of Toronto*
	Kunwar, Ashim	*McMaster University*
	Kuszczak, Zach	*Hydrogeologist at Palmer*
	Kuttenkeuler, Peter	*Gemba Associates Inc*
	Lamb-Gervais, Sheilah	*Retired; Family Physician*
	LaRue, Ryan	*Sessional Faculty at McMaster University*
	LaRue, Peter	*L3Harris*
🔍 🔖	**Lawlor, Daniel**	*City of Hamilton*
	Lawson, Dave	*Niagara College*
	Lee, Victoria	*McMaster University*
	Lewis, Justin	*AVAR Environmental Inc.*
	Lyon, Rachel	*McMaster University*
🔖	**MacAulay, Miranda**	*Meera Jacob Optometry Corporation*
	Mahut, Caroline	*AMPERe*
	Mahut, Andy	*Retired; Stelco Inc.*
	Malig, Monika	*Quadra Chemicals Inc*

MERIT JUDGES 2024

	McNally, Mike	*Retired*
	Melhem, Sarah	*City of Hamilton*
	Mercik, Aleks	*PV Labs*
	Merlos, Erick S.	*City of Hamilton*
	Morin, Shane	*Retired*
	Nalyanya, Keith	*McMaster University*
	Niro, Gino	*EngOL Inc*
	Papuckoski, Simon	*L3Harris Technologies*
	Pepler, Meghan	*McMaster University*
	Perez Rodriguez, Yuniel	*Alectra Utilities Corporation*
	Perono, Genevieve	*McMaster University*
	Prevec, Madeline	*University of Toronto*
	Rachwalski, Kenneth	*McMaster University*
	Reale, Steve	*WalterFedy*
	Redding, Laurene	*BeiGene*
	Romanek, Virginia	*McMaster University*
	Roy-White, Haylie	*Hamilton-Wentworth District School Board*
	Ruan, Celina	*McMaster University*
	Ruiz Blanco, Nelson	*Independent*
	Saenz de Miera, Mirnaly	*CanmetMATERIALS*
	Safranyos, Sharon	*BeiGene Canada*
	Sangueza, Julia	*Brock University*
	Saturnino, Joseph	*McMaster University*
	Schaefer, Janet	*Homemaker*
	Schoenhardt, Mary Anne	*Birds Canada*
	Seneviratne, Salintha	*Mohawk College*
	Seto, Vanessa	*Hillfield Strathallan College*
	Seto, David	*UTEX Scientific Instruments Inc.*
	Sharma, Leah	*McMaster University*
	Sheel, Gaurav	*Bruce Power*
	Shepard, Ben	*Self-Employed*
	Shepard, Beverly	*Retired; Laboratory Biochemist*
	Simpson, Mark	*Retired; Electrical Engineer*

MERIT JUDGES 2024

	Song, Michelle	*McMaster University*
	Stefanchuk, Brian	*Mohawk College*
	Steffler, Matt	*Habitat for Humanity*
	Stewart, Mark	*McMaster Innovation Park*
	Themeles, Tom	*Conestoga College, Armelo Engineering*
	Toth, Janice	*Retired; Credit Valley Hospital & Abbott Diagnostics*
	Tozer, David	*M.T.R. Services Corp.*
	Tuinema, Brian	*Germiphene Corporation*
	Tuinema, Billie	*Hamilton Health Sciences*
	Turna, Shantel	*Exploration Geologist*
	Vanderzwet , Lory	*Retired; Mohawk College Engineering Technology*
	Vidican, David	*McMaster University*
	Vidican, Mihaela	*Banking Industries, Financial Advisor, Mortgage Specialist*
	Walsh, Steven	*City of Hamilton Public Health Services*
	Wehrle, Paul	*Retired*
	Wilson, Anne-Marie	*Retired; Hamilton-Wentworth District School Board*
	Wilson, Wes	*John G. Cooke & Associates Ltd.*
	Wolfsgruber, Richard	*Retired*
	Wolfsgruber, Steve	*Alithya*
	Wood, Jane	*Retired; ArcelorMittal Dofasco*
	Wong, Kelly	*McMaster University*
	Wulczynski, Mark	*McMaster University*
	Young, Bruce	*St Joseph's Healthcare Hamilton*
	Young, Norman	*Retired; Wentworth Board of Education*
	Yueh, Jeffrey	*McMaster University*
	Zhao, Kevin	*McMaster University*

BASEF 2024 Volunteers

We would like to thank all of our volunteers who help to make BASEF 2024 possible! Please contact volunteers@basef.ca if you would like to serve as a BASEF volunteer in the future.

Indicates a safety inspector | *Indicates a member of the photography team*

Agullana, Nicole Jessly
Al-Beer, Jumana
Asis, Ellen
Bates, Al
Bowdish, Ryan
Buchanan, Bernard
Chhetri, Sital Baruwal
Clapperton, Maya
Hayhurst, Trevor
Hayman, Cathy
Hayman, Steve
Keller-Olaman, Sue
Konrad-Ho, Lauren
Klinck, Michael
Kops, Rita
Novak, John
Sider, Abigail
Toth, Janice
Verma, Arjun
Wong, Kelly
Wood, Jane
Woods, Selma
Zhuang, Blake

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/

List of Student Exhibitors

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*
IND	*Independent*

Indicates an award winner. See "BASEF 2024 Award Winners" for a full list of winning students & projects.

Junior Level

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Abou-Assaleh, Emmalina	The Power and Potential of Electromagnetic Radiation	K06	Eng & Comp Sci	W. H. Morden Public School	HDSB
Abra, Greydon	Let It Rain	L05	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Abu dagga, Obaida	Homemade Tesla Coil	G03	Phys & Math Sci	Ancaster Meadow	HWDSB
Abunayyan, Sarah	The Mind Of A Killer	B15	Health Sciences Human	Dr. David R Williams	HDSB
Akwiwu, Zina	Are Fingerprint Patterns Inherited?	E01	Health Sciences Human	St. Thomas the Apostle (Waterdown)	HWCDSB
Alagukumaran, Diya	BEEP BEEP! Emphasizing on insulin pump malfunctions.	K03	Health Sciences Human	Munn's Public School	HDSB
Alden, Calla	Canine Intelligence	A11	Life Sciences Non-Human	Ancaster Meadow	HWDSB
Alhussein, Halima	Popping Boba	H19	Phys & Math Sci	Cathy Wever	HWDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Al-Khafaji, Mariam	The Mind Of A Killer	B15	Health Sciences Human	Dr. David R Williams	HDSB
Allarakhia, Imran	LiquiViz: Adaptive AI for 3D Object Detection and Semantic Segmentation in Vision Impairment Devices	P18	Eng & Comp Sci	W. H. Morden Public School	HDSB
Alper, Ege	Smart Strike Badminton Buddy	K11	Eng & Comp Sci	John William Boich Public School	HDSB
Aly, Youssef	Reaction Time	B04	Health Sciences Human	Highview	HWDSB
Amankrah, Miles	Mold Removers	A15	Biotech	Charles R. Beaudoin Public School	HDSB
Amer, Eshal	Power of the Pancreas	B09	Health Sciences Human	Hawthorne Village Public School	HDSB
Anand, Ananya	Can I create a device to help in vision assist for dogs?	K02	Eng & Comp Sci	Hawthorne Village Public School	HDSB
Anhara, Asma	Einstein's theory of gravity	G14	Phys & Math Sci	Ancaster Meadow	HWDSB
Arora, Rishibha	Geothermal Energy Powered Street Light	M07	Eng & Comp Sci	John William Boich Public School	HDSB
Arun, Mrittika	Home Remedy App for Common Illnesses - Cure All @ Home	K19	Health Sciences Human	John William Boich Public School	HDSB
Ashoorion, Bardia	Anti stress bracelet	D03	Health Sciences Human	John William Boich Public School	HDSB
Ashraf, Maahnoor	Shake it Up!: Investigating the Accuracy of a Simple Seismograph	N13	Eng & Comp Sci	Al-Falah Islamic School	IND
Asif, Aleeza	OCD: A Personal Analysis	B05	Health Sciences Human	Tiger Jeet Singh Public School	HDSB
Ataya, Issa	Klebsiella: Molecular Characterization & Discovering A Cure	E17	Biotech	W. H. Morden Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Awobokun, Fope	Inflation: The Silent Pickpocket	B18	Health Sciences Human	Oakville Christian School	IND
Babem, Timi	Pancreas Problems	B19	Biotech	St. Martin of Tours	HWCDSB
Badarala, Lohitaksh	Evaluating machine learning models for classifying stars into the MK system using photometric data.	J06	Eng & Comp Sci	Bruce Trail Public School	HDSB
Ballard, Conner	Waste to Wonder	G13	Phys & Math Sci	Charles R. Beaudoin Public School	HDSB
Bamigbola, Teni	Electro-Heavy or Electro-Light?	H20	Phys & Math Sci	Oakville Christian School	IND
Banerjee, Nina	The E.A.B (Epilepsy Alert Bracelet)	J02	Health Sciences Human	John William Boich Public School	HDSB
Banks, Charli	Criminal Minds	C18	Health Sciences Human	Rolling Meadows Public School	HDSB
Barghouth, Samira	Popping Boba	H19	Phys & Math Sci	Cathy Wever	HWDSB
Barlow, Patrick	What Happens To Marshmallows in Different Liquids	A12	Phys & Math Sci	Highview	HWDSB
Beecroft, Grayson	Affordable Emergency Housing	H01	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Belwalkar, Smira	The E.A.B (Epilepsy Alert Bracelet)	J02	Health Sciences Human	John William Boich Public School	HDSB
Berger, Emily	Mall Bacteria	A10	Life Sciences Non-Human	Charles R. Beaudoin Public School	HDSB
Betty, Hailey	Bio Breakdown	L04	Biotech	Cathy Wever	HWDSB
Bharj, Harnarain	Coat Rack Heater	J01	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Bhatti, Sofia	Sticky Knowledge	C19	Health Sciences Human	Al-Falah Islamic School	IND

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Bliek, William	What Happens To Marshmallows in Different Liquids	A12	Phys & Math Sci	Highview	HWDSB
Bognar, Avery	Sweet Tooth	C10	Health Sciences Human	Highview	HWDSB
Boverhof, Maddy	The Road to Recovery: Hamstring vs. Quadricep Graft for ACL Reconstruction in Children	C12	Health Sciences Human	Trinity Christian School	IND
Bowles, Joshua	Heated Traffic Light Module	N17	Eng & Comp Sci	John William Boich Public School	HDSB
Brar, Ganeev	Aqualux - the 'Sweeter' Solution to Traffic Lights	K18	Eng & Comp Sci	Charles R. Beaudoin Public School	HDSB
Budgell, Jake	Snow Away	M11	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Budram, Aven	Recycling Robot Parts	J03	Eng & Comp Sci	Hawthorne Village Public School	HDSB
Budz, Evan	Virtual Lifeguard: A Novel AI Approach to Drowning Prevention	N23	Eng & Comp Sci	Charles R. Beaudoin Public School	HDSB
Burgess, Charlotte	Which toothpaste works best?	D18	Phys & Math Sci	W. H. Morden Public School	HDSB
Burns, Molly	X-inactive Marks The Spot For Tortoiseshell Cats	A13	Life Sciences Non-Human	Ancaster Meadow	HWDSB
Cani, Vlera	Which toothpaste works best?	D18	Phys & Math Sci	W. H. Morden Public School	HDSB
Castelli, Clare	Germs at School	A06	Life Sciences Non-Human	St. Augustine	HWCDSB
Castelli, Simon	Germs at School	A06	Life Sciences Non-Human	St. Augustine	HWCDSB
Chartrand, Arya	Sweet Tooth	C10	Health Sciences Human	Highview	HWDSB
Chaudhry, Umar	A SPARK ON THE OTHER SIDE: Which material conducts heat transfer the quickest?	F05	Phys & Math Sci	Al-Falah Islamic School	IND

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Chawla, Karthik	PROJECT DRONE: Disaster Recovery, Outreach for Natural Emergencies	N15	Eng & Comp Sci	W. H. Morden Public School	HDSB
Chen, Karis	Screens before Sleep	C11	Health Sciences Human	Dr. David R Williams	HDSB
Chen, Nina	Geothermal Energy Powered Street Light	M07	Eng & Comp Sci	John William Boich Public School	HDSB
Connor, Nathan	Making a Cost Effective Laser Engraver	H06	Eng & Comp Sci	Oakville Christian School	IND
Cook, Hanna	Most Effective Mouthwash	E16	Biotech	Ancaster Meadow	HWDSB
Crawley, Liam	Pancreas Problems	B19	Biotech	St. Martin of Tours	HWCDSB
Dagg, Sophie	Beauty Blender Bacteria	A17	Life Sciences Non-Human	Charles R. Beaudoin Public School	HDSB
Danda, Sahil	From Poop to Gas: Making Biogas and Cleaning it with Water	N08	Biotech	W. H. Morden Public School	HDSB
De Souza, Arya	Back to the Water - Creating 3D Printed Prosthetics for Painted Turtles	A05	Eng & Comp Sci	W. H. Morden Public School	HDSB
Dear, Leah	Quick Scribe	P04	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Dekker, Evan	Modern Secure Communications - libkeychain	L03	Eng & Comp Sci	Charles R. Beaudoin Public School	HDSB
Di Nicola, Gabriel	Water Is Not Enough; Maintaining Electrolyte Balance During Illness	C14	Phys & Math Sci	Our Lady of Peace	HWCDSB
Dirani, Lana	Einstein's theory of gravity	G14	Phys & Math Sci	Ancaster Meadow	HWDSB
Dong, Heather	Convolutional Neural Networks: Radiologists of the Future	J19	Health Sciences Human	W. H. Morden Public School	HDSB
Duncan, Emma	Beauty Blender Bacteria	A17	Life Sciences Non-Human	Charles R. Beaudoin Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Durowoju, Hannah	Using artificial intelligence to improve observation in child and adolescent mental units	P14	Eng & Comp Sci	Our Lady of Victory Elementary School	HCDSB
Dwarka, Eliana	Sugar Rush	E06	Biotech	John William Boich Public School	HDSB
Elder, Ruby	Diy eco friendly lip oil	F18	Phys & Math Sci	Ancaster Meadow	HWDSB
Esho, Fifi	Decay on Display: The Sweet Truth About Sugary Drinks And Your Teeth	N06	Health Sciences Human	Dr. David R Williams	HDSB
Evers, Ella	Detect and Protect	M17	Earth & Env Sci	Rolling Meadows Public School	HDSB
Faisal, Abiha	Caffeine Buzz and Sugar Rush: Exploring the Night's Hush	D11	Health Sciences Human	Rattlesnake Point Public School	HDSB
Fan, Parker	The Gaming Effect	N04	Health Sciences Human	Oakville Christian School	IND
Farhan, Anaum	Alumify	L15	Earth & Env Sci	Rattlesnake Point Public School	HDSB
Fayyaz, Alishba	Alumify	L15	Earth & Env Sci	Rattlesnake Point Public School	HDSB
Fedsin, Justin	Can I convert static electricity to current electricity	H05	Phys & Math Sci	Highview	HWDSB
Fernandes, Aaliyah	Sweet as Sugar	F17	Phys & Math Sci	Oakville Christian School	IND
Formela, Lily	Sugar Rush	E06	Biotech	John William Boich Public School	HDSB
Forrest, Emma	SSS - The Street Smart Safety App	K17	Eng & Comp Sci	Balaclava	HWDSB
Gardanis, Panayioti	Can We Use Robots and Machines to Help Blind People	J20	Eng & Comp Sci	Hawthorne Village Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Gharbia, Aya	The Wi-Fi dilemma: Who Is Blocking My Signal? The effect of different building materials on Wi-Fi	G17	Phys & Math Sci	Al-Falah Islamic School	IND
Gheva, Sarah	How much soap do you really need to get the oil off of your hands?	G20	Phys & Math Sci	Rolling Meadows Public School	HDSB
Gilchrist, Jameson	MOTIV8-2-HYDR8: H2O FITNESS MOTIV8R	L02	Eng & Comp Sci	St. Elizabeth Seton Elementary School	HCDSB
Gomber, Aarunya	Seeker Bot	H03	Eng & Comp Sci	W. H. Morden Public School	HDSB
Granka, Graclyn	Let It Rain	L05	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Halim, Joshua	Reach for the Stars	N11	Phys & Math Sci	Oakville Christian School	IND
Harrington, Neil	Can I convert static electricity to current electricity	H05	Phys & Math Sci	Highview	HWDSB
Hart, Nicholas	How Organic is Too Organic???	E04	Biotech	Charles R. Beaudoin Public School	HDSB
He, Ted	Urban Wind Energy	M05	Eng & Comp Sci	Charles R. Beaudoin Public School	HDSB
Hill, Alivia	Alien Plants	M06	Earth & Env Sci	St. Clare of Assisi	HWCDSB
Horn, Ethan	E-Clip	M03	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Huang, Michelle	Solar Desalination Versus Other Filtration Methods	L10	Phys & Math Sci	Cathy Wever	HWDSB
Huang, Tiffany	Solar Desalination Versus Other Filtration Methods	L10	Phys & Math Sci	Cathy Wever	HWDSB
Hume, Lucy	Alien Plants	M06	Earth & Env Sci	St. Clare of Assisi	HWCDSB
Humphreys, Elliot	GET A GRIP	F06	Phys & Math Sci	Oakville Christian School	IND

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Imran, Myra	Love At First Sight	C04	Health Sciences Human	Ancaster Meadow	HWDSB
Jagt, Dylan	Making a Cost Effective Laser Engraver	H06	Eng & Comp Sci	Oakville Christian School	IND
Jain, Tiara	AquaWise	M10	Eng & Comp Sci	John William Boich Public School	HDSB
Javidi, Glareen	Optimal Watering Patterns for Sunflower Development	A14	Life Sciences Non-Human	Munn's Public School	HDSB
John, Sophie	The Effects Of Social Media On Kids	C13	Health Sciences Human	Ancaster Meadow	HWDSB
Johnson, Malcolm	Chewing the 5-Second rule	C16	Phys & Math Sci	Tiger Jeet Singh Public School	HDSB
Jones, Abigale	Monitoring Glucose Levels	C05	Health Sciences Human	Hawthorne Village Public School	HDSB
Jones, Darius	MOTIV8-2-HYDR8: H2O FITNESS MOTIV8R	L02	Eng & Comp Sci	St. Elizabeth Seton Elementary School	HCDSB
Joseph, Julia	Opticlip	H17	Eng & Comp Sci	Our Lady of the Assumption	HWCDSB
Kahvaie-Zad, Nikki	The Science Behind Lucid Dreams	D09	Health Sciences Human	Munn's Public School	HDSB
Kakan, Suvi	The Effects of Artificial Light on Marine Life	A01	Earth & Env Sci	Munn's Public School	HDSB
Kaliga, Varnika	DNA-myte Party	N02	Life Sciences Non-Human	Sunningdale Public School	HDSB
Kang, Jace	Where should we Terraform?	M16	Earth & Env Sci	Hawthorne Village Public School	HDSB
Kar, Vivaan	The Alginate Advantage	F20	Biotech	W. H. Morden Public School	HDSB
Kaur, Ashmeet	Run For The Greater Good	K13	Eng & Comp Sci	John William Boich Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Khan, Rameen	Answers to Aid Anopsia	K04	Eng & Comp Sci	Rattlesnake Point Public School	HDSB
Khan, Shayaan	Field Goal! The Science Behind A Perfect Football Kick	M01	Phys & Math Sci	Frank Panabaker South	HWDSB
Khan, Wardah	Battle of the Stomach: Antacids vs Acid	D08	Biotech	Al-Falah Islamic School	IND
Kim, Nayune	The Double-Slit Experiment	G15	Phys & Math Sci	Charles R. Beaudoin Public School	HDSB
Kinsella, Anabella	EZ Dispenser	K07	Eng & Comp Sci	St. Bernadette	HWCDSB
Kinzl, Palmer	Brilliant Bicycle Dynamo	L17	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Kiran, Yuti	Hospital Wait Time App	C07	Health Sciences Human	John William Boich Public School	HDSB
Kolodenko, Nika	Turmeric and how it affects you.	E08	Biotech	Munn's Public School	HDSB
Kulasic, Zaid	Evaluation the Effectiveness of Insulation Materials	F07	Phys & Math Sci	Al-Falah Islamic School	IND
Lai, Brandon	Electrifying Objects	F03	Phys & Math Sci	Oakville Christian School	IND
LeBlanc, Jordan	A Novel System for Objective Clinical Assessment of Cold and Influenza Using Infrared Image Analysis	N24	Health Sciences Human	St. Matthew Elementary School	HCDSB
Lee, Simon	Harmony in Glass: Building a Bioactive Terrarium	N01	Earth & Env Sci	Our Lady of Victory Elementary School	HCDSB
Li, Yuewen	Improving PDAC Prognosis: Novel Approach Utilising CRISPR-Mediated Gene Knockout for TME Disruption	E05	Biotech	W. H. Morden Public School	HDSB
Liaghati, Lily	Busier Bees: Increasing Productivity in Bees	A04	Eng & Comp Sci	Munn's Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Liu, Katelynn	The Double-Slit Experiment	G15	Phys & Math Sci	Charles R. Beaudoin Public School	HDSB
Lotfi, Andrew	Green Clean	E09	Biotech	Oakville Christian School	IND
MacLean, Myla	Criminal Minds	C18	Health Sciences Human	Rolling Meadows Public School	HDSB
Maftoon, Armita	Physical models of patient heart valves for planning surgery	D04	Health Sciences Human	Frank Panabaker South	HWDSB
Maftoon, Vianna	Physical models of patient heart valves for planning surgery	D04	Health Sciences Human	Frank Panabaker South	HWDSB
Manoj, Advik	MacroDiet	D10	Health Sciences Human	Oodenawi Public School	HDSB
Mansour, Tia	Diy eco friendly lip oil	F18	Phys & Math Sci	Ancaster Meadow	HWDSB
Marrazzo, Lauren	Sweet Science: Exploring the World of Diabetes	B12	Health Sciences Human	St. Clare of Assisi	HWCDSB
Maru, Shiv	Revolutionising Healthcare: One Atom at a Time	D07	Health Sciences Human	Dr. David R Williams	HDSB
Matloubiaghdam, Agrin	To Vegan or Not to Vegan: Are we killing the planet?	M04	Earth & Env Sci	Dr. David R Williams	HDSB
Mawji, Ayaan	Smart Strike Badminton Buddy	K11	Eng & Comp Sci	John William Boich Public School	HDSB
McElheron, Julianna	What Chemicals Cause Aggressive Behaviour	D06	Health Sciences Human	Charles R. Beaudoin Public School	HDSB
McKerracher, Gavin	EPIC (Escapement Piezoelectric Impact Converter)	K01	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Mejia Perfiliev, Sofia	Mall Bacteria	A10	Life Sciences Non-Human	Charles R. Beaudoin Public School	HDSB
Memme, Rocco	Mold Removers	A15	Biotech	Charles R. Beaudoin Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Merchant, Sahana	The Power and Potential of Electromagnetic Radiation	K06	Eng & Comp Sci	W. H. Morden Public School	HDSB
Mills-Hyde, Jahvon	How does a self-charging electric plane use wind power to help us and the world?	H14	Eng & Comp Sci	Highview	HWDSB
Mithun, Joshua	EZ Dispenser	K07	Eng & Comp Sci	St. Bernadette	HWCDSB
Montemayor, Brianna	Prop Magic (creating the room where it happened)	P09	Eng & Comp Sci	St George-German Public School	GEDSB
Morales, Alena	Older than Osmosis	B16	Health Sciences Human	Rolling Meadows Public School	HDSB
Mousa, Rayan	Don't Get Rusty!	G10	Phys & Math Sci	Al-Falah Islamic School	IND
Mrmak, Mila	RED VELVET CAKE: BAKING WITH AND WITHOUT RED FOOD COLOURING	G16	Phys & Math Sci	Ancaster Meadow	HWDSB
Munoz-Johnson, Vivien	CAN MY CAT STILL HEAR?	B20	Life Sciences Non-Human	Highview	HWDSB
Muthukumarana, Dithira	CO2 Free Ethanol Powered Cars?	L13	Eng & Comp Sci	St. Matthew	HWCDSB
Muthy, Arav	Where should we Terraform?	M16	Earth & Env Sci	Hawthorne Village Public School	HDSB
Myska, Sam	Snow Away	M11	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Nabi, Safirun	HotWheels and Aerodynamix	G08	Phys & Math Sci	Highview	HWDSB
Naidu, Mithru	LiquiViz: Adaptive AI for 3D Object Detection and Semantic Segmentation in Vision Impairment Devices	P18	Eng & Comp Sci	W. H. Morden Public School	HDSB
Nair, Arshia	Fire that Fat! : Impact of Aerobic vs Anaerobic Exercise on Visceral Fat in Adolescents	B02	Health Sciences Human	Tiger Jeet Singh Public School	HDSB
Nastase, Sami	Refuge from Radars	H10	Eng & Comp Sci	W. H. Morden Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Ndibmun, Hanniel	Electrophoresis and Chromatography: Real Life Applications	G04	Phys & Math Sci	Cathy Wever	HWDSB
Nhan, Aivy	Constructing a Rotating Solar Panel + How It Works	H04	Eng & Comp Sci	Ancaster Meadow	HWDSB
Nicholls, Julia	Turmeric and how it affects you.	E08	Biotech	Munn's Public School	HDSB
Okanla, Yomade	Bioplastics Unwrapped: Investigating the Properties of Bioplastics	E13	Biotech	Our Lady of Victory Elementary School	HCDSB
Okpala, Chiazom	Intervention for ADHD (no meds included)	C20	Health Sciences Human	Oakville Christian School	IND
O'Leary, Liam	Aqualux - the 'Sweeter' Solution to Traffic Lights	K18	Eng & Comp Sci	Charles R. Beaudoin Public School	HDSB
Olumide, Fola	Harmony in Glass: Building a Bioactive Terrarium	N01	Earth & Env Sci	Our Lady of Victory Elementary School	HCDSB
Olumide, Ladi	Bioplastics Unwrapped: Investigating the Properties of Bioplastics	E13	Biotech	Our Lady of Victory Elementary School	HCDSB
Ongking, Carlo	How Does the Size & Shape of a Baseball Park Affect Batting Averages?	G09	Phys & Math Sci	MacLachlan College	IND
Orphanos, Rachael	Destructive Digestion: Foreign Objects in our Pets Digestive Tract	A20	Life Sciences Non-Human	Hawthorne Village Public School	HDSB
Pan, Isabella	Revolutionising Healthcare: One Atom at a Time	D07	Health Sciences Human	Dr. David R Williams	HDSB
Papade, Avani	Weathering Space Without Protection	D13	Health Sciences Human	Dr. David R Williams	HDSB
Parachin, Maya	The Frytastic Fry Fit	K16	Eng & Comp Sci	Oakville Christian School	IND
Paranthaman, Vaisannya	Automated Waste Sorting System	J05	Eng & Comp Sci	Rattlesnake Point Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Parsons, Emaya	W.E. Hydrate	K12	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Patel, Arohee	Guitar Strum Test	G18	Phys & Math Sci	W. H. Morden Public School	HDSB
Patel, Nevin	Green Clean	E09	Biotech	Oakville Christian School	IND
Paul, Shayaan	Brilliant Bicycle Dynamo	L17	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Peart, Evelyn	AI Use In Determining Material Of Litter In Nature	J10	Eng & Comp Sci	Tiger Jeet Singh Public School	HDSB
Piccoli, Luca	Water Is Not Enough; Maintaining Electrolyte Balance During Illness	C14	Phys & Math Sci	Our Lady of Peace	HWCDSB
Pietryszyn, Cohen	Magnetic Levitation	G12	Phys & Math Sci	Rolling Meadows Public School	HDSB
Polyanska, Maria	Extending range of VHF/UHF transceivers by improving antenna efficiency for emergency communications	H15	Eng & Comp Sci	Forest Trail Public School	HDSB
Ponnambalam, Karthik	Investigating the use of a gelatin gel to prevent the breakage of fragile items	N09	Phys & Math Sci	Hillfield Strathallan College	IND
Prias, Mariana	Can humans distinguish AI-generated images from real photos?	K09	Health Sciences Human	Highview	HWDSB
Prokipczuk, Katherine	Light Pollution	M14	Earth & Env Sci	Ancaster Meadow	HWDSB
Puri, Waris	Auto Hydrator	J08	Eng & Comp Sci	Rattlesnake Point Public School	HDSB
Qazi, Daniyal	From Pixels to Predictions: A Deep Learning Method to Detect Pneumonia in Chest X-Ray Images	P08	Health Sciences Human	W. H. Morden Public School	HDSB
Qazi, Zayn	From Pixels to Predictions: A Deep Learning Method to Detect Pneumonia in Chest X-Ray Images	P08	Health Sciences Human	W. H. Morden Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Qureshi, Ana	Dazzling in the Distance: How Does Light Intensity Change With Distance?	N12	Phys & Math Sci	Al-Falah Islamic School	IND
Race, Elias	Reaction Time	B04	Health Sciences Human	Highview	HWDSB
Rao, Musa	The Helping Arm	J07	Eng & Comp Sci	John William Boich Public School	HDSB
Rao, Rahul	The Alginate Advantage	F20	Biotech	W. H. Morden Public School	HDSB
Ravulapati, Naga Shruthika	Carbon Farms - A Futuristic Solution to A Current Problem	L06	Earth & Env Sci	Hawthorne Village Public School	HDSB
Rechan, Anika C	DNA-myte Party	N02	Life Sciences Non-Human	Sunningdale Public School	HDSB
Reddiar, Megha	Lobotomy V.S. Concussions	C09	Health Sciences Human	Hawthorne Village Public School	HDSB
Reise, Miles	The Dehumidity Tent	C06	Eng & Comp Sci	John William Boich Public School	HDSB
Roche-Tereskewitz, Addison	Animals VS Mental Health	E03	Health Sciences Human	Rolling Meadows Public School	HDSB
Rosien, Sophia	AquaTag	H07	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Saad Eldin, Mahmoud	Flu Fighters 101	D19	Health Sciences Human	Al-Falah Islamic School	IND
Saadeldin, Tala	The Mighty Battle: Blood Clots Vs. Anticoagulants	D01	Health Sciences Human	Al-Falah Islamic School	IND
Saeed, Ahmed	Homemade Tesla Coil	G03	Phys & Math Sci	Ancaster Meadow	HWDSB
Saenz-Rincon, Silvana	MedScanPro	D17	Biotech	St. Elizabeth Seton Elementary School	HCDSB
Saleh, Fatima	Spectrum of Taste	D02	Health Sciences Human	W. H. Morden Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Salman, Sameeha	When life dims your lights, just add a Conductor!	F12	Phys & Math Sci	Al-Falah Islamic School	IND
Sayeed, Sehrish	Decay on Display: The Sweet Truth About Sugary Drinks And Your Teeth	N06	Health Sciences Human	Dr. David R Williams	HDSB
Schubert, Kayla	Older than Osmosis	B16	Health Sciences Human	Rolling Meadows Public School	HDSB
Sels, Bridgette	AquaTag	H07	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Seoh, Thomas	Stochastic Dynamics in Epidemiological Models: Exploration of Predictability Using SIR Frameworks	P12	Health Sciences Human	W. H. Morden Public School	HDSB
Shahid, Momin	Chewing the 5-Second rule	C16	Phys & Math Sci	Tiger Jeet Singh Public School	HDSB
Sharma, Avaya	Who Are The Sic'est Oakvillians	B10	Health Sciences Human	Oakville Christian School	IND
Sharma, Seher	ART in the era of ARTificial Intelligence: Are we ready for it?	N19	Eng & Comp Sci	W. H. Morden Public School	HDSB
Sheik, Yusuf	Wind's Algorithm	K15	Eng & Comp Sci	Tiger Jeet Singh Public School	HDSB
Sheth, Rayna	Which AI Detects AI?	J16	Eng & Comp Sci	W. H. Morden Public School	HDSB
Siddicky, Sarim	Vision Transformers (ViTs) for the Diagnosis of Diabetic Retinopathy	E18	Health Sciences Human	W. H. Morden Public School	HDSB
Small, Owen	SSS - The Street Smart Safety App	K17	Eng & Comp Sci	Balaclava	HWDSB
Smith, Jared	CO2 Free Ethanol Powered Cars?	L13	Eng & Comp Sci	St. Matthew	HWCDSB
Solomon, Cleoneka	The Cool Clinostat	M20	Life Sciences Non-Human	Cathy Wever	HWDSB
Soofi, Uzair	Auto Hydrator	J08	Eng & Comp Sci	Rattlesnake Point Public School	HDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Sowdagar, Hiba	Role of Liquid Biopsy: Circulating Tumor Cells (CTCs) in Medical Oncology	B07	Health Sciences Human	Ancaster Meadow	HWDSB
Srivastava, Daksh	Modeling Sea Surface Salinity and Temperature Impact on Phytoplankton & Whales: Canadian Atlantic	L16	Earth & Env Sci	Pilgrim Wood Public School	HDSB
Stokes, Madelyn	Destructive Digestion: Foreign Objects in our Pets Digestive Tract	A20	Life Sciences Non-Human	Hawthorne Village Public School	HDSB
Strickland, Georgia	You Want Fries With That?	H18	Phys & Math Sci	Oakville Christian School	IND
Su, Emma	Back to the Water - Creating 3D Printed Prosthetics for Painted Turtles	A05	Eng & Comp Sci	W. H. Morden Public School	HDSB
Su, Irene	Optimal Watering Patterns for Sunflower Development	A14	Life Sciences Non-Human	Munn's Public School	HDSB
Sun, Micah	Supplements: Supportive or Scam? Short and Long term effects of supplements and risk of overdose.	C15	Health Sciences Human	Hawthorne Village Public School	HDSB
Szecsodi, Ben	Affordable Emergency Housing	H01	Eng & Comp Sci	Rolling Meadows Public School	HDSB
Tan, Siqi	Improving PDAC Prognosis: Novel Approach Utilising CRISPR-Mediated Gene Knockout for TME Disruption	E05	Biotech	W. H. Morden Public School	HDSB
Tayal, Jaylan	GreenHound - Your Personal Litter Tracker For a Greener Future	N18	Eng & Comp Sci	John William Boich Public School	HDSB
Taylor, Kyrah	Opticlip	H17	Eng & Comp Sci	Our Lady of the Assumption	HWCDSB
Thomas, Will	From Concept to Code	J14	Eng & Comp Sci	St. Augustine	HWCDSB

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Timmins, Luke	Angles of refraction: Snell's law put into action	G02	Phys & Math Sci	Our Lady of Victory Elementary School	HCDSB
Umah, Michelle	Solar Powered Water Desalination	G01	Phys & Math Sci	Ancaster Meadow	HWDSB
Urs, Janya	Turbine Powered Car	J17	Eng & Comp Sci	John William Boich Public School	HDSB
Vander Wal, Evan	Exploring how viscosity and volume of a liquid affects the trajectory of a sphere	G19	Phys & Math Sci	Dundas Central Public	HWDSB
Vidican, Jonathan	Chaos, break the wave!	J15	Phys & Math Sci	St. Mary Elementary School	HCDSB
Vignesh, Bhavishyaa	Cosmic Fields (Advanced Lunar Food Production System)	A02	Biotech	Post's Corners Public School	HDSB
Vivek, Bhav	Guitar Strum Test	G18	Phys & Math Sci	W. H. Morden Public School	HDSB
Vu, Jayden	Angles of refraction: Snell's law put into action	G02	Phys & Math Sci	Our Lady of Victory Elementary School	HCDSB
Vyas, Eshaan	Stochastic Dynamics in Epidemiological Models: Exploration of Predictability Using SIR Frameworks	P12	Health Sciences Human	W. H. Morden Public School	HDSB
Wadehra, Raima	Dopamine levels- Humour versus tickles, which one releases more dopamine and why?	C03	Health Sciences Human	Hawthorne Village Public School	HDSB
Wamatu, Nyawira	Detect and Protect	M17	Earth & Env Sci	Rolling Meadows Public School	HDSB
Warmington, Matthew	How does a self-charging electric plane use wind power to help us and the world?	H14	Eng & Comp Sci	Highview	HWDSB
Warren, Tessa	Sweet as Sugar	F17	Phys & Math Sci	Oakville Christian School	IND

JUNIOR PROJECTS (7/8)

Name	Project Title	Project Number	Division	School	Board
Waseem, Nashra	Power of the Pancreas	B09	Health Sciences Human	Hawthorne Village Public School	HDSB
Waseem, Zoha	Malicious Melanoma: Convolutional Neural Network's Accuracy in Diagnosing Malignant Melanoma	K10	Health Sciences Human	Al-Falah Islamic School	IND
Waseem, Zoya	Pneumonia Detective: The Effectiveness of a Pneumonia Detection ML VS. Medical Practitioners	K20	Health Sciences Human	Al-Falah Islamic School	IND
Welch, Callie	Have You Ever Felt Like You Were Being Watched	D05	Health Sciences Human	Highview	HWDSB
West, Eli	Anti stress bracelet	D03	Health Sciences Human	John William Boich Public School	HDSB
Willers, Toby	Heated Traffic Light Module	N17	Eng & Comp Sci	John William Boich Public School	HDSB
Wu, Ruofei	GreenHound - Your Personal Litter Tracker For a Greener Future	N18	Eng & Comp Sci	John William Boich Public School	HDSB
Xing, Angel	Solar Powered Water Desalination	G01	Phys & Math Sci	Ancaster Meadow	HWDSB
Yang, Claire	Screens before Sleep	C11	Health Sciences Human	Dr. David R Williams	HDSB
Yang, Zhuo	Automated Pharmaceutical Defect Detection Using Machine Vision	P07	Eng & Comp Sci	W. H. Morden Public School	HDSB
Zeng, Joanna	The Effects of Artificial Light on Marine Life	A01	Earth & Env Sci	Munn's Public School	HDSB
Zheng, Tony	The Gaming Effect	N04	Health Sciences Human	Oakville Christian School	IND
Zheng, Wendy (Yawen)	W.E. Hydrate	K12	Eng & Comp Sci	Rolling Meadows Public School	HDSB

Intermediate Level

INTERMEDIATE PROJECTS (9/10)					
Name	**Project Title**	**Project Number**	**Division**	**School**	**Board**
Alsaadi, Bahaa Al Deen	Bits to Bedside: An Ingenious Exploration of Machine Learning in Triage Assessments	J12	Health Sciences Human	Al-Falah Islamic School	IND
Alsaadi, Zena	Bits to Bedside: An Ingenious Exploration of Machine Learning in Triage Assessments	J12	Health Sciences Human	Al-Falah Islamic School	IND
Barkman, Tristan	Coral Reefs and the Kellwasser Event: Unraveling the Devonian Extinction Mystery	L11	Earth & Env Sci	Home Schooling	IND
Campbell, Isla	A new device of treating and preventing the damage of heart attacks, CASS	E20	Biotech	Blyth Academy	IND
Chan Carusone, Senna	Illuminating Your Emotions: Using Symmetry in Electroencephalogram Data to Detect and Display Stress Levels	P15	Health Sciences Human	Burlington Central High School	HDSB
Dua, Shambhvi	Decoding Brainwaves: A Machine Learning Approach to Seizure Prediction	B14	Health Sciences Human	White Oaks Secondary School	HDSB
Efthimiadis, Anthony	Instant Skin Cancer Diagnosis: AI Hybrid Neural Networks with Precise Evolution Tracking	P11	Eng & Comp Sci	Oakville Trafalgar High School	HDSB
Ipwanshek, Gabriella	Mind & Cycle: Exploring the hormonal pathophysiology of catamenial epilepsy and potential treatments	N05	Health Sciences Human	White Oaks Secondary School	HDSB
Johnson, William	Assessing the Need for a United Nations' Space Sustainability Goal	L14	Earth & Env Sci	Westdale Secondary School	HWDSB
Jovicevic, Teodora	Glucose in Various Substances and How it Affects the Body	G11	Phys & Math Sci	Ancaster High	HWDSB

INTERMEDIATE PROJECTS (9/10)

Name	Project Title	Project Number	Division	School	Board
Kudale, Arnnav	Recreator3D.com - Is recycling filament cheaper than buying spools?	P06	Eng & Comp Sci	White Oaks Secondary School	HDSB
Kurji, Alina	Hydroponics: A Solution for the Food Insecure	N25	Life Sciences Non-Human	Westmount Secondary School	HWDSB
LeBlanc, Jacob	Development of a Novel Integrated System for Electric Vehicle Charging During Vehicle Operation	P02	Eng & Comp Sci	Abbey Park High School	HDSB
Lopes, Isabella	Expansion of the Cosmos part 2	F02	Phys & Math Sci	Bishop Ryan Secondary School	HWCDSB
Luo, Bonnie	FlameWatch: A Real-Time TensorFlow and Edge TPU Powered Home Defense System	P05	Eng & Comp Sci	White Oaks Secondary School	HDSB
Marsh, Claire	The Gluten Sensor: Detecting Gluten in Food Using Artificial Intelligence and TinyML	B03	Health Sciences Human	M. M. Robinson High School	HDSB
Mehfil, Fiza	Detecting and Analyzing Exoplanet Atmospheres using K-Nearest-Neighbours Algorithm and OpenCV	N20	Eng & Comp Sci	Milton District High School	HDSB
Mehr, Ariana	Great Minds Think Alike!	N07	Biotech	Bishop P. F. Reding Secondary School	HCDSB
Morash, Ella	The Psychology of Music: Understanding how music affects us and how we can use it to our advantage	B01	Health Sciences Human	Blyth Academy	IND
Pacifici, Nicholas	The PrepStep: A Mobile Health Platform to Detect Ventricular Cardiomyopathy in Athletes Using AI	H08	Health Sciences Human	St. Mary Secondary School	HWCDSB
Park, Jieun	Language Policies and Mass Psychology Within a Community of Practice Regarding Sacred Language	B11	Health Sciences Human	Bishop Tonnos Secondary School	HWCDSB

INTERMEDIATE PROJECTS (9/10)

Name	Project Title	Project Number	Division	School	Board
Perlawar, Prathamesh	Green Solutions: Transforming Food Waste into Bioplastic	E10	Biotech	White Oaks Secondary School	HDSB
Powell, Luke	Flashify: An Innovative Flash Card Alternative	N21	Eng & Comp Sci	Aldershot High School	HDSB
Qin, Yuyang	How does the geometry and texture impact the stability of tires under extreme weather conditions	G06	Phys & Math Sci	Hillfield Strathallan College	IND
Rajkumar, Raahith	Biofuel Bounty: Unveiling the Power of Waste Oils	E14	Biotech	Hillfield Strathallan College	IND
Rashid, Nabira	Investigating the Effect of Light Color on Solar Cell Voltage Output	F13	Phys & Math Sci	White Oaks Secondary School	HDSB
Rastogi, Maithili	Investigating the Effect of Light Color on Solar Cell Voltage Output	F13	Phys & Math Sci	White Oaks Secondary School	HDSB
Salimi, Rida	Analyzing Cosmic Light Pollution by Comparing Different Coloured Filters	L09	Earth & Env Sci	Garth Webb Secondary School	HDSB
Saravanan, Rakshan	The electrocorpulgraph: Can AI change auscultation?	E07	Health Sciences Human	Ancaster High	HWDSB
Shaiju, Julian	Great Minds Think Alike!	N07	Biotech	Bishop P. F. Reding Secondary School	HCDSB
Sheel, Vedant	A Novel Approach to ASL Translation Using AI	N26	Eng & Comp Sci	Waterdown District Secondary School	HWDSB
Tripathi, Eva	NephroGenesis: Unlocking the Secrets of Kidney Regeneration	E11	Biotech	Elsie Macgill Secondary School	HDSB
Truant, Kai	True Blue: A Safer Way to kill Bacteria and Viruses with Light	E19	Biotech	Ancaster High	HWDSB
Vargas-Saravanamuttu, Radha Maria	The Patterns that Give Us Life: The Role of Fractal Structure in Lung Function	C01	Phys & Math Sci	Hillfield Strathallan College	IND

INTERMEDIATE PROJECTS (9/10)					
Name	**Project Title**	**Project Number**	**Division**	**School**	**Board**
Veljkovic, Filip	SODIS in Canada 2 - Works With Global Warming, too!	L20	Earth & Env Sci	Corpus Christi Secondary School	HCDSB
Wang, Jasmine	Sparks	H02	Eng & Comp Sci	Iroquois Ridge High School	HDSB
Wang, Jiaqi	How does the geometry and texture impact the stability of tires under extreme weather conditions	G06	Phys & Math Sci	Hillfield Strathallan College	IND
Zander, Leah	Blood Droplet Analysis: Investigating Blood Drop Characteristics for Crime Scene Reconstruction	L01	Health Sciences Human	Appleby College	IND
Zhang, Cody	Using Object Segmentation to Analyze Nutrient Content of Meals	H13	Eng & Comp Sci	Abbey Park High School	HDSB
Zhu, Daniel	Using Object Segmentation to Analyze Nutrient Content of Meals	H13	Eng & Comp Sci	Abbey Park High School	HDSB

Senior Level

SENIOR PROJECTS (11/12)					
Name	**Project Title**	**Project Number**	**Division**	**School**	**Board**
Anderson, Maya	Pandemic School Closures: Was it really worth it?	E02	Health Sciences Human	Hillfield Strathallan College	IND
Badawy, Omar	Future Metropolis: Reimagining urban Transportation	K08	Eng & Comp Sci	Abbey Park High School	HDSB
Balakumar, Subakrish	A.L.T.R. 'Altering society, one litter at a time'	P01	Eng & Comp Sci	Aldershot High School	HDSB
Barbera, Katie	Sustainable Solutions: Exploring Enzyme-Infused Bioplastics for Environmental Impact Reduction	M02	Eng & Comp Sci	Cathedral High School	HWCDSB

SENIOR PROJECTS (11/12)

Name	Project Title	Project Number	Division	School	Board
Blimkie, Kieran	Orebot Mk 1	N16	Eng & Comp Sci	Notre Dame Secondary School	HCDSB
Bountas, Kaitlin	Fight-Or-Flight	D16	Health Sciences Human	Blyth Academy	IND
Bourenane, Yassine	The Effects of Cyanobacteria on Root Growth of Allium Cepa	A03	Life Sciences Non-Human	Ancaster High	HWDSB
Chen, Cici	Hemp: A Healthier Alternative to Disease-causing NPEOs in Modern Textiles	C08	Phys & Math Sci	Oakville Trafalgar High School	HDSB
Elraheb, Joy	Zinc Absorption by Plants: A Phytoremediation Approach	L18	Earth & Env Sci	King's Christian Collegiate	IND
Feng, Aileen	Systematic Review on The Potential of CircRNA as a Novel Biomarker For Pancreatic Cancer Diagnosis	D12	Health Sciences Human	Oakville Trafalgar High School	HDSB
Feng, Melin	Systematic Review on The Potential of CircRNA as a Novel Biomarker For Pancreatic Cancer Diagnosis	D12	Health Sciences Human	Oakville Trafalgar High School	HDSB
Fergani, Sarah	Pandemic School Closures: Was it really worth it?	E02	Health Sciences Human	Hillfield Strathallan College	IND
Frolic-Smart, Artemisia	Effect of a seed's period of dormancy on the length of a radicle formed during germination	M13	Life Sciences Non-Human	Westdale Secondary School	HWDSB
Gendy, Marly	Investigating Potential Cure for Cystic Fibrosis Using Innovative Solutions	B17	Health Sciences Human	King's Christian Collegiate	IND
Hua, Nathan	Ethical Delusion on Morality and its Real World Impacts	B06	Health Sciences Human	Aldershot High School	HDSB
Jackson, Claire	Comparison of proteins in the Homo sapiens and Pan troglodyte's genome	A09	Life Sciences Non-Human	Westdale Secondary School	HWDSB

SENIOR PROJECTS (11/12)

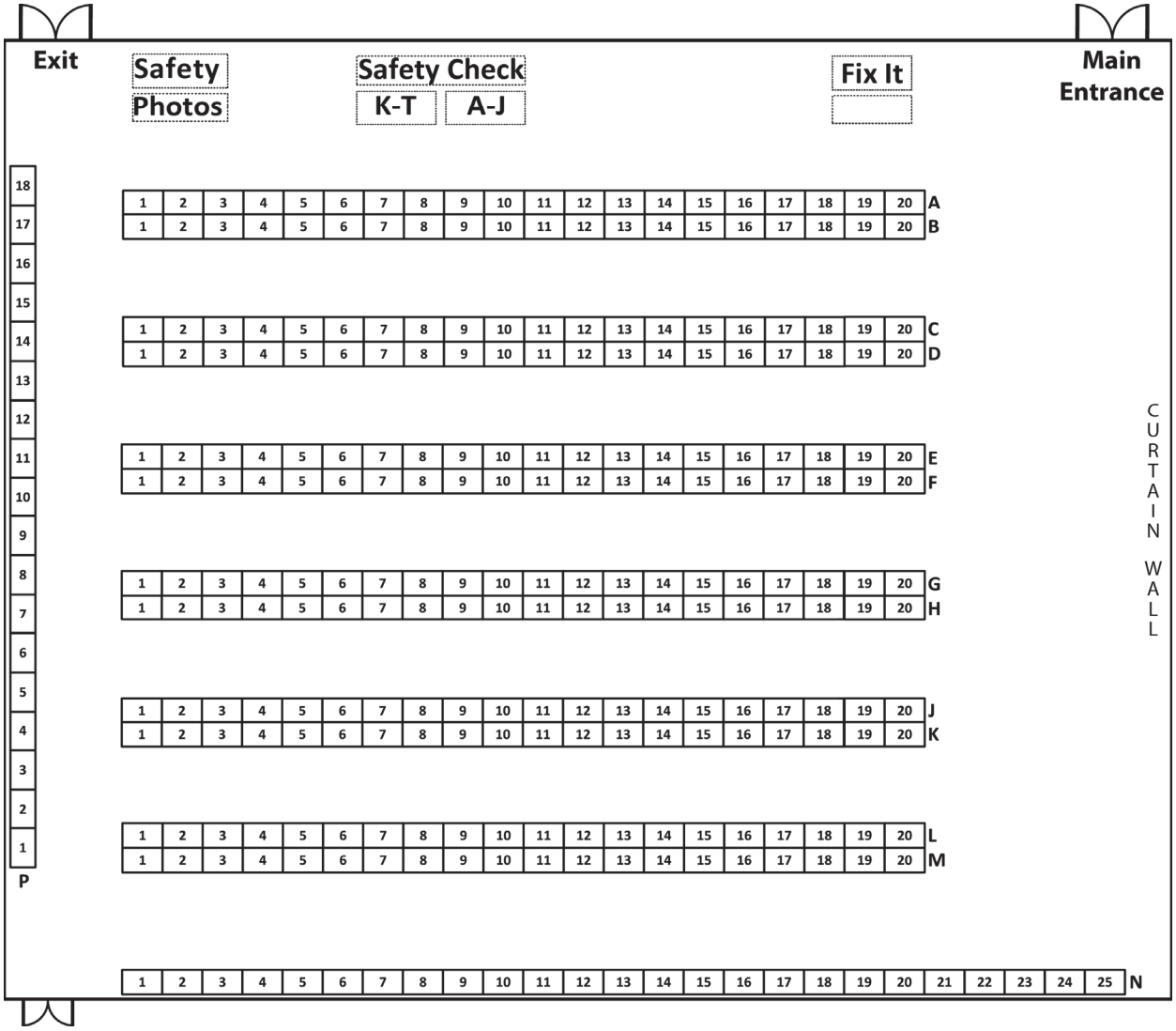
Name	Project Title	Project Number	Division	School	Board
Jarabana, Srihith	Accurately Forecasting a Dementia Diagnosis Using Protein Biomarkers and Quantum Machine Learning	B13	Health Sciences Human	Abbey Park High School	HDSB
Johnson, Katelyn	The Effects of Sodium Chloride on the Reproduction of Lemna Minor: A Model for Road Salt Run-Off	A08	Earth & Env Sci	Westdale Secondary School	HWDSB
Khan, Mohid	Harnessing the power of Peizoelectricity for Sustainable Energy	J11	Eng & Comp Sci	Assumption College School	BHNCDSB
LeBlanc, Maya	Analysis of CD16+, CD16- and CD4+ T Cells to Identify Novel Gene Signatures and Diagnostics for SLE	N03	Health Sciences Human	Abbey Park High School	HDSB
Lepischak, Katherine	Going South	A07	Life Sciences Non-Human	Westdale Secondary School	HWDSB
Makkar, Akshin	Weed-Watch: an Innovative AI-Based Ground Weed Detection System for Agricultural Practices	H12	Eng & Comp Sci	King's Christian Collegiate	IND
Maric, Luca	HHO Generator Efficiency: Optimizing conditions to maximize HHO gas	K05	Eng & Comp Sci	King's Christian Collegiate	IND
Mitchell, Kiera	Modelling Spread and Infection Risk for COVID-19 in Hallway Scenarios	F09	Phys & Math Sci	Delhi District Secondary School	GEDSB
Nagasaki, Kibo	Bye-Bye Haber-Bosch	N10	Phys & Math Sci	Mentor College	IND
Nasr, Zeyad	Modelling the Trajectory of an Airborne Object Using Computer Simulation. Application for Basketball	N14	Eng & Comp Sci	Dundas Valley Secondary School	HWDSB
O'Dell, Oscar	Snake versus Slime: Who can build the better network?	A19	Life Sciences Non-Human	King's Christian Collegiate	IND

SENIOR PROJECTS (11/12)

Name	Project Title	Project Number	Division	School	Board
Olejniczak, Jacob	Negative Effects of Energy Drinks and Minimizing Them	C17	Health Sciences Human	King's Christian Collegiate	IND
Ouwendyk, Brodi	Stopping Potentially Hazardous Objects in Space with High-Velocity Spacecraft	F11	Phys & Math Sci	Delhi District Secondary School	GEDSB
Patial, Navraj	Harnessing the power of Peizoelectricity for Sustainable Energy	J11	Eng & Comp Sci	Assumption College School	BHNCDSB
Ponnambalam, Kadhir	An Innovative Method to Prevent Food Wastage Using an AI Based Multiple Linear Regression Model	J09	Eng & Comp Sci	Hillfield Strathallan College	IND
Quadry, Zoha Fatima	Using Luciferase to detect toxins that affect oxygen levels in the environment	A16	Biotech	Abbey Park High School	HDSB
Raguz, Mark Anthony	Flying Car Proof of Concept: A Revolution In Future Land and Air Travel	N22	Eng & Comp Sci	Holy Trinity Secondary School	HCDSB
Rajkumar, Sahith	Herbal Heroes: Unveiling the Antibacterial Potential of Ayurvedic Medications Against Staphylococcus	E15	Biotech	Hillfield Strathallan College	IND
Rathod, Anish	Integrating A CNN With An Autonomous Drone To Facilitate Visible Water Pollution Monitoring	P10	Eng & Comp Sci	Burlington Central High School	HDSB
Shaikh, Ali	AI in disaster and management	J04	Eng & Comp Sci	Appleby College	IND
Simmons, Cordelia	Hydroplaning Detection and Prevention Using an AI Neural Network	P17	Eng & Comp Sci	North Park Collegiate and Vocational School	GEDSB
Song, Bohmie	Removing Pollution feat. Bacopa monnieri	M19	Earth & Env Sci	Westdale Secondary School	HWDSB
Song, Lily	Talk to the Hand	P16	Eng & Comp Sci	North Park Collegiate and Vocational School	GEDSB
Sun, Anna	Testing and Comparing The Toxicity of Different Brands of Hair Dye	F01	Phys & Math Sci	King's Christian Collegiate	IND

SENIOR PROJECTS (11/12)					
Name	Project Title	Project Number	Division	School	Board
Suresh, Nitish	Ethical Delusion on Morality and its Real World Impacts	B06	Health Sciences Human	Aldershot High School	HDSB
Szymala, Weronika	The Artificial Pancreas	D15	Biotech	Bishop Ryan Secondary School	HWCDSB
Teng, Carmen	Advancing Astrophysical Insight: Multi-Survey Data Integration for Redshift Accuracy and Large-Scale	G07	Phys & Math Sci	White Oaks Secondary School	HDSB
Wahban, Alia	Redefining the Landscape of Hydrogen Safety using Innovative Gasochromic Technology	P03	Eng & Comp Sci	Hillfield Strathallan College	IND
Wang, Season	Plants Vs. Zombies: The Extraction of Fisetin from Different Forms of Strawberries	A18	Life Sciences Non-Human	Oakville Trafalgar High School	HDSB
Xu, William	Accessible microscopy! A cellphone microscope for high-resolution, large FOV, and high-speed imaging	P13	Eng & Comp Sci	Dundas Valley Secondary School	HWDSB
Yin, Brian	Plant Trait Identification Using Convolutional Neural Networks	M15	Eng & Comp Sci	Iroquois Ridge High School	HDSB
Zhang, Shangyi	A Two-Modal Robot for Adaptability in Diverse Environments With Rolling Locomotion and Walking Gait	J13	Eng & Comp Sci	White Oaks Secondary School	HDSB
Zhao, Wendy	Hemp: A Healthier Alternative to Disease-causing NPEOs in Modern Textiles	C08	Phys & Math Sci	Oakville Trafalgar High School	HDSB

Project Floor Layout



BASEF 2024 Award Winners

BASEF Pinnacle Awards

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

Primary Fluid Systems Pinnacle Best in Fair

Maya LeBlanc

N03 *Analysis of CD16+, CD16- and CD4+ T Cells to Identify Novel Gene Signatures and Diagnostics for SLE*

Senior 11/12, Health Sciences Human

Abbey Park High School, Halton District School Board

Primary Fluid Systems Pinnacle Second Best in Fair

Anthony Efthimiadis

P11 *Instant Skin Cancer Diagnosis: AI Hybrid Neural Networks with Precise Evolution Tracking*

Intermediate 9/10, Eng & Comp Sci

Oakville Trafalgar High School, Halton District School Board

Primary Fluid Systems Pinnacle Third Best in Fair

Alia Wahban

P03 *Redefining the Landscape of Hydrogen Safety using Innovative Gasochromic Technology*

Senior 11/12, Eng & Comp Sci

Hillfield Strathallan College

Regeneron International Science and Engineering Fair

As an affiliated fair, BASEF can select high school projects to represent our region at the Regeneron International Science and Engineering Fair. This year, the Regeneron ISEF Fair will be held in Los Angeles, California from May 11th–17th, 2024. Congratulations to the BASEF Regeneron ISEF Team.

Name	Project Number	Project Title	School	Board
Efthimiadis, Anthony	P11	Instant Skin Cancer Diagnosis: AI Hybrid Neural Networks with Precise Evolution Tracking	Abbey Park High School	HDSB
LeBlanc, Maya	N03	Analysis of CD16+, CD16- and CD4+ T Cells to Identify Novel Gene Signatures and Diagnostics for SLE	Abbey Park High School	HDSB
Song, Lily	P16	Talk to the Hand	North Park Collegiate and Vocational School	GEDSB
Wahban, Alia	P03	Redefining the Landscape of Hydrogen Safety using Innovative Gasochromic Technology	Hillfield Strathallan College	IND
Xu, William	P13	Accessible microscopy! A cellphone microscope for high-resolution, large FOV, and high-speed imaging	Dundas Valley Secondary School	HWDSB

Canada-Wide Science and Engineering Fair

Thanks to generous support of its general sponsors, each year BASEF selects students to represent our region at the Canada-Wide Science and Engineering Fair (CWSF). This year, the CWSF will be held in Ottawa, Ontario from May 25th–June 1st. Congratulations to the following students who represent BASEF at the CWSF.

Name	Project Number	Project Title	School	Board
Allarakhia, Imran	P18	LiquiViz: Adaptive AI for 3D Object Detection and Semantic Segmentation in Vision Impairment Devices	W. H. Morden Public School	HDSB
Alsaadi, Bahaa Al Deen	J12	Bits to Bedside: An Ingenious Exploration of Machine Learning in Triage Assessments	Al-Falah Islamic School	IND
Alsaadi, Zena	J12	Bits to Bedside: An Ingenious Exploration of Machine Learning in Triage Assessments	Al-Falah Islamic School	IND
Budz, Evan	N23	Virtual Lifeguard: A Novel AI Approach to Drowning Prevention	Charles R. Beaudoin Public School	HDSB

Name	Project Number	Project Title	School	Board
Gendy, Marly	B17	Investigating Potential Cure for Cystic Fibrosis Using Innovative Solutions	King's Christian Collegiate	IND
LeBlanc, Maya	N03	Analysis of CD16+, CD16- and CD4+ T Cells to Identify Novel Gene Signatures and Diagnostics for SLE	Abbey Park High School	HDSB
Li, Yuewen	E05	Improving PDAC Prognosis: Novel Approach Utilising CRISPR-Mediated Gene Knockout for TME Disruption	W. H. Morden Public School	HDSB
Nagasaki, Kibo	N10		Mentor College	IND
Naidu, Mithru	P18	LiquiViz: Adaptive AI for 3D Object Detection and Semantic Segmentation in Vision Impairment Devices	W. H. Morden Public School	HDSB
O'Dell, Oscar	A19	Snake versus Slime: Who can build the better network?	King's Christian Collegiate	IND
Pacifici, Nicholas	H08	The PrepStep: A Mobile Health Platform to Detect Ventricular Cardiomyopathy in Athletes Using AI	St. Mary Secondary School	HWCD
Qazi, Daniyal	P08	From Pixels to Predictions: A Deep Learning Method to Detect Pneumonia in Chest X-Ray Images	W. H. Morden Public School	HDSB
Qazi, Zayn	P08	From Pixels to Predictions: A Deep Learning Method to Detect Pneumonia in Chest X-Ray Images	W. H. Morden Public School	HDSB
Saravanan, Rakshan	E07	The electrocorpulgraph: Can AI change auscultation?	Ancaster High	HWDSB
Simmons, Cordelia	P17	Hydroplaning Detection and Prevention Using an AI Neural Network	North Park Collegiate and Vocational School	GEDSB
Tan, Siqi	E05	Improving PDAC Prognosis: Novel Approach Utilising CRISPR-Mediated Gene Knockout for TME Disruption	W. H. Morden Public School	HDSB
Zhang, Shangyi	J13	A Two-Modal Robot for Adaptability in Diverse Environments With Rolling Locomotion and Walking Gait	White Oaks Secondary School	HDSB

School Awards

BASEF Committee Trophy

This trophy is awarded to the elementary school accumulating the most points.

▷ *W. H. Morden Public School (HDSB)*

Herb Gildea Memorial Trophy

This trophy is awarded to the secondary school accumulating the most points.

▷ *White Oaks Secondary School (HDSB)*

Merit & Special Award Winners

Name	Project Number	Award(s)	School	Board
Abou-Assaleh, Emmalina	K06	BASEF Inspiration Student Award; Merit Awards – Silver; Nikola Tesla Innovation Awards – Bronze	W. H. Morden Public School	HDSB
Abu Dagga, Obaida	G03	Electrical Contractors Association of Niagara Hamilton Awards; Nikola Tesla Innovation Awards – Gold	Ancaster Meadow	HWDSB
Akwiwu, Zina	E01	Merit Awards – Bronze	St. Thomas the Apostle (Waterdown)	HWCD
Alagukumaran, Diya	K03	Merit Awards – Bronze	Munn's Public School	HDSB
Alden, Calla	A11	Merit Awards – Bronze	Ancaster Meadow	HWDSB
Allarakhia, Imran	P18	Canada-Wide Science Fair Trip Award; Roy Middleton Memorial Award; Hamilton Association for the Advancement of Literature, Science & Art da Vinci Award; Hillfield Strathallan College Entrance Scholarship; Merit Awards – Gold; Mohawk College Electrical Engineering Technology Awards – Energy Systems Award	W. H. Morden Public School	HDSB
Alper, Ege	K11	ArcelorMittal Dofasco Awards – Global R&D Hamilton Award for Technology Application	John William Boich Public School	HDSB

Name	Project Number	Award(s)	School	Board
Alsaadi, Bahaa Al Deen	J12	Canada-Wide Science Fair Trip Award; Merit Awards – Gold; Ola Lunyk-Child Memorial Health Science Award – Third	Al-Falah Islamic School	IND
Alsaadi, Zena	J12	Canada-Wide Science Fair Trip Award; Merit Awards – Gold; Ola Lunyk-Child Memorial Health Science Award – Third	Al-Falah Islamic School	IND
Anand, Ananya	K02	Merit Awards – Bronze	Hawthorne Village Public School	HDSB
Arora, Rishibha	M07	ArcelorMittal Dofasco Awards – Pickling and Cold Rolling Award; Mohawk College Building & Construction Sciences Awards – Civil Engineering Award	John William Boich Public School	HDSB
Arun, Mrittika	K19	Merit Awards – Bronze	John William Boich Public School	HDSB
Badarala, Lohitaksh	J06	Merit Awards – Bronze	Bruce Trail Public School	HDSB
Balakumar, Subakrish	P01	BASEF Inspiration Student Award; Merit Awards – Silver	Aldershot High School	HDSB
Banerjee, Nina	J02	Doris Casey and Gwen Nicolls Disability Solutions Awards	John William Boich Public School	HDSB
Barbera, Katie	M02	BASEF Inspiration Student Award; Merit Awards – Silver	Cathedral High School	HWCD
Barkman, Tristan	L11	McMaster University School of Earth, Environment and Society – Earth and Environmental Sciences Award; Merit Awards – Bronze	Home Schooling	IND
Beecroft, Grayson	H01	Merit Awards – Bronze	Rolling Meadows Public School	HDSB
Belwalkar, Smira	J02	Doris Casey and Gwen Nicolls Disability Solutions Awards	John William Boich Public School	HDSB
Berger, Emily	A10	Farncombe Family Digestive Health Research Awards; Merit Awards – Bronze	Charles R. Beaudoin Public School	HDSB
Betty, Hailey	L04	Merit Awards – Bronze; Rotary Club of Hamilton Stoney Creek Awards – First Place	Cathy Wever	HWDSB
Bharj, Harnarain	J01	ArcelorMittal Dofasco Awards – Engineering Award	Rolling Meadows Public School	HDSB

Name	Project Number	Award(s)	School	Board
Bhatti, Sofia	C19	Merit Awards – Bronze	Al-Falah Islamic School	IND
Blimkie, Kieran	N16	ArcelorMittal Dofasco Awards – Material Handling & Logistics Department Award; Canadian Institute of Mining, Metallurgy and Petroleum (Hamilton Branch) Awards; Merit Awards – Silver	Notre Dame Secondary School	HCDSB
Bourenane, Yassine	A03	BASEF Inspiration Student Award; Merit Awards – Silver	Ancaster High	HWDSB
Budz, Evan	N23	Canada-Wide Science Fair Trip Award; Gowling WLG Innovation Awards – Runner-Up; Merit Awards – Silver; Ola Lunyk-Child Memorial Health Science Award – Second	Charles R. Beaudoin Public School	HDSB
Burgess, Charlotte	D18	Merit Awards – Bronze	W. H. Morden Public School	HDSB
Cani, Vlera	D18	Merit Awards – Bronze	W. H. Morden Public School	HDSB
Castelli, Clare	A06	Merit Awards – Bronze	St. Augustine	HWCD
Castelli, Simon	A06	Merit Awards – Bronze	St. Augustine	HWCD
Chan Carusone, Senna	P15	Dr. Nicola Simmons Award in Cognition Studies; Merit Awards – Silver	Burlington Central High School	HDSB
Chaudhry, Umar	F05	Canadian Nuclear Society (Golden Horseshoe Branch) Awards; Merit Awards – Bronze	Al-Falah Islamic School	IND
Chawla, Karthik	N15	Merit Awards – Silver	W. H. Morden Public School	HDSB
Chen, Nina	M07	ArcelorMittal Dofasco Awards – Pickling and Cold Rolling Award; Mohawk College Building & Construction Sciences Awards – Civil Engineering Award	John William Boich Public School	HDSB
Danda, Sahil	N08	Chemical Institute of Canada – Hamilton Section Awards; Harrison Family Chemistry Award; Merit Awards – Silver	W. H. Morden Public School	HDSB
De Souza, Arya	A05	BASEF Inspiration Student Award; Merit Awards – Silver	W. H. Morden Public School	HDSB
Dear, Leah	P04	Mohawk College Computer Science & Information Technology Excellence Awards	Rolling Meadows Public School	HDSB

Name	Project Number	Award(s)	School	Board
Di Nicola, Gabriel	C14	ArcelorMittal Dofasco Awards – Global R&D Hamilton Award for Outstanding Research; Hamilton Wentworth Occasional Teacher Awards – Healthy Lifestyles Award; Merit Awards – Bronze; Rotary Club of Hamilton Stoney Creek Awards – Third Place	Our Lady of Peace	HWCD
Dong, Heather	J19	Merit Awards – Bronze	W. H. Morden Public School	HDSB
Dua, Shambhvi	B14	BASEF Inspiration Student Award; Doris Casey and Gwen Nicolls Disability Solutions Awards; Merit Awards – Silver	White Oaks Secondary School	HDSB
Durowoju, Hannah	P14	Merit Awards – Bronze	Our Lady of Victory Elementary School	HCDSB
Efthimiadis, Anthony	P11	ArcelorMittal Dofasco Awards – Information Systems Award; Farncombe Family Digestive Health Research Awards – Grand Award; Primary Fluid Systems Pinnacle Second Best in Fair; Hamilton Academy of Dentistry Awards – First Place; International Science & Engineering Affiliated Fair Awards – U.S. Agency for International Development (USAID); ISEF Trip Award; Merit Awards – Gold; Ola Lunyk-Child Memorial Health Science Award – First	Oakville Trafalgar High School	HDSB
Elraheb, Joy	L18	Dillon Consulting Awards – Biological Sciences Award; Merit Awards – Bronze	King's Christian Collegiate	IND
Faisal, Abiha	D11	Merit Awards – Bronze	Rattlesnake Point Public School	HDSB
Farhan, Anaum	L15	ArcelorMittal Dofasco Awards – Environment Award; Canadian Institute of Mining, Metallurgy and Petroleum (Hamilton Branch) Awards; Merit Awards – Bronze	Rattlesnake Point Public School	HDSB
Fayyaz, Alishba	L15	ArcelorMittal Dofasco Awards – Environment Award; Canadian Institute of Mining, Metallurgy and Petroleum (Hamilton Branch) Awards; Merit Awards – Bronze	Rattlesnake Point Public School	HDSB

Name	Project Number	Award(s)	School	Board
Feng, Aileen	D12	Merit Awards – Silver	Oakville Trafalgar High School	HDSB
Feng, Melin	D12	Merit Awards – Silver	Oakville Trafalgar High School	HDSB
Fernandes, Aaliyah	F17	Merit Awards – Bronze	Oakville Christian School	IND
Forrest, Emma	K17	Merit Awards – Bronze	Balaclava	HWDSB
Frolic-Smart, Artemisia	M13	Dr. M. Doyle Award; Merit Awards – Silver	Westdale Secondary School	HWDSB
Gendy, Marly	B17	Canada-Wide Science Fair Trip Award; Merit Awards – Silver	King's Christian Collegiate	IND
Gharbia, Aya	G17	Merit Awards – Silver; Mohawk College Computer Science & Information Technology Excellence Awards	Al-Falah Islamic School	IND
Gilchrist, Jameson	L02	Merit Awards – Bronze	St. Elizabeth Seton Elementary School	HCDSB
Gomber, Aarunya	H03	Merit Awards – Bronze	W. H. Morden Public School	HDSB
Halim, Joshua	N11	Merit Awards – Bronze	Oakville Christian School	IND
Hart, Nicholas	E04	Merit Awards – Bronze	Charles R. Beaudoin Public School	HDSB
Horn, Ethan	M03	Merit Awards – Silver; Mohawk College Computer Science & Information Technology Excellence Awards	Rolling Meadows Public School	HDSB
Hua, Nathan	B06	Dr. Laura Blew Social Sciences Awards	Aldershot High School	HDSB
Huang, Michelle	L10	Merit Awards – Bronze	Cathy Wever	HWDSB
Huang, Tiffany	L10	Merit Awards – Bronze	Cathy Wever	HWDSB
Humphreys, Elliot	F06	Merit Awards – Bronze	Oakville Christian School	IND
Jackson, Claire	A09	Merit Awards – Silver	Westdale Secondary School	HWDSB
Jain, Tiara	M10	Merit Awards – Bronze; Water Environment Association of Ontario Award	John William Boich Public School	HDSB

Name	Project Number	Award(s)	School	Board
Jarabana, Srihith	B13	BASEF Inspiration Student Award; Merit Awards – Silver	Abbey Park High School	HDSB
Javidi, Glareen	A14	Conservation Halton Awards	Munn's Public School	HDSB
Johnson, Katelyn	A08	Merit Awards – Bronze; University of Ottawa Admission Scholarship	Westdale Secondary School	HWDSB
Johnson, William	L14	International Science & Engineering Affiliated Fair Awards – Ricoh USA, Inc.; Merit Awards – Bronze	Westdale Secondary School	HWDSB
Jones, Darius	L02	Merit Awards – Bronze	St. Elizabeth Seton Elementary School	HCDSB
Kaliga, Varnika	N02	Merit Awards – Bronze	Sunningdale Public School	HDSB
Kar, Vivaan	F20	ArcelorMittal Dofasco Awards – Hot Mill Award; Merit Awards – Silver	W. H. Morden Public School	HDSB
Khan, Mohid	J11	BASEF Inspiration Student Award; Merit Awards – Bronze	Assumption College School	BHNCD
Khan, Wardah	D08	Merit Awards – Bronze	Al-Falah Islamic School	IND
Kim, Nayune	G15	Merit Awards – Bronze	Charles R. Beaudoin Public School	HDSB
Kinsella, Anabella	K07	ArcelorMittal Dofasco Awards – Process Automation Award; Merit Awards – Bronze	St. Bernadette	HWCD
Kudale, Arnnav	P06	Merit Awards – Bronze	White Oaks Secondary School	HDSB
Kulasic, Zaid	F07	John W. Howard Materials Research Award; Mohawk College Building & Construction Sciences Awards – Building Sciences Award	Al-Falah Islamic School	IND
Lai, Brandon	F03	Merit Awards – Bronze	Oakville Christian School	IND
LeBlanc, Jacob	P02	Merit Awards – Silver; Mohawk College Electrical Engineering Technology Awards – Computer Engineering Technology Award	Abbey Park High School	HDSB
LeBlanc, Jordan	N24	McMaster University MGD Institute for Infectious Disease Research Awards; Merit Awards – Bronze	St. Matthew Elementary School	HCDSB

Name	Project Number	Award(s)	School	Board
LeBlanc, Maya	N03	Canada-Wide Science Fair Trip Award; Drs. Ranjan Sur and Monalisa Sur Award; Primary Fluid Systems Pinnacle Best in Fair; ISEF Trip Award; Merit Awards – Gold; Mohawk College Mathematics Awards – Senior Award; Sanofi Biogenius Canada Award	Abbey Park High School	HDSB
Lepischak, Katherine	A07	Merit Awards – Silver	Westdale Secondary School	HWDSB
Li, Yuewen	E05	Canada-Wide Science Fair Trip Award; Merit Awards – Gold	W. H. Morden Public School	HDSB
Liaghati, Lily	A04	Merit Awards – Bronze	Munn's Public School	HDSB
Liu, Katelynn	G15	Merit Awards – Bronze	Charles R. Beaudoin Public School	HDSB
Lopes, Isabella	F02	Merit Awards – Silver	Bishop Ryan Secondary School	HWCD
Lotfi, Andrew	E09	Merit Awards – Bronze	Oakville Christian School	IND
Luo, Bonnie	P05	Merit Awards – Silver; Talkit.ca Computer Engineering Awards – First Place	White Oaks Secondary School	HDSB
Makkar, Akshin	H12	McMaster University Faculty of Engineering Entrance Awards	King's Christian Collegiate	IND
Maric, Luca	K05	Canadian Nuclear Society (Golden Horseshoe Branch) Awards; Chemical Institute of Canada – Hamilton Section Awards	King's Christian Collegiate	IND
Marrazzo, Lauren	B12	Merit Awards – Bronze; Rotary Club of Hamilton Stoney Creek Awards – Second Place	St. Clare of Assisi	HWCD
Marsh, Claire	B03	Farncombe Family Digestive Health Research Awards; Mahut-Brent Award for Young People in Science and Engineering; Merit Awards – Bronze	M. M. Robinson High School	HDSB
Mawji, Ayaan	K11	ArcelorMittal Dofasco Awards – Global R&D Hamilton Award for Technology Application	John William Boich Public School	HDSB

Name	Project Number	Award(s)	School	Board
McKerracher, Gavin	K01	Electrical Contractors Association of Niagara Hamilton Awards – Electrical Contractors Association of Niagara Hamilton Award; Merit Awards – Bronze	Rolling Meadows Public School	HDSB
Mehfil, Fiza	N20	Hamilton Amateur Astronomers James A. Winger Award – Junior; Merit Awards – Silver	Milton District High School	HDSB
Mehr, Ariana	N07	Merit Awards – Bronze	Bishop P. F. Reding Secondary School	HCDSB
Mejia Perfiliev, Sofia	A10	Farncombe Family Digestive Health Research Awards; Merit Awards – Bronze	Charles R. Beaudoin Public School	HDSB
Merchant, Sahana	K06	BASEF Inspiration Student Award; Merit Awards – Silver; Nikola Tesla Innovation Awards – Bronze	W. H. Morden Public School	HDSB
Mitchell, Kiera	F09	Firestone Institute Respiratory Health Award; Merit Awards – Bronze	Delhi District Secondary School	GEDSB
Mithun, Joshua	K07	ArcelorMittal Dofasco Awards – Process Automation Award; Merit Awards – Bronze	St. Bernadette	HWCD
Morales, Alena	B16	Venture Academy at McMaster University Awards	Rolling Meadows Public School	HDSB
Mousa, Rayan	G10	Association for Iron & Steel Technology Northern Chapter Awards – Third Place; Society of Tribologists & Lubrication Engineers – Hamilton Section Awards	Al-Falah Islamic School	IND
Muthukumarana, Dithira	L13	Canadian Nuclear Society (Golden Horseshoe Branch) Awards; Mohawk College Building & Construction Sciences Awards – Transportation Award; Nelson Steel Awards	St. Matthew	HWCD
Nagasaki, Kibo	N10	Canada-Wide Science Fair Trip Award; Chemical Institute of Canada – Hamilton Section Awards; Gowling WLG Innovation Award – Honourable Mention; McMaster University Department of Chemistry and Chemical Biology Award; Merit Awards – Gold	Mentor College	IND

Name	Project Number	Award(s)	School	Board
Naidu, Mithru	P18	Canada-Wide Science Fair Trip Award; Roy Middleton Memorial Award; Hamilton Association for the Advancement of Literature, Science & Art da Vinci Award; Hillfield Strathallan College Entrance Scholarship Award; Merit Awards – Gold; Mohawk College Electrical Engineering Technology Awards – Energy Systems Award	W. H. Morden Public School	HDSB
Nair, Arshia	B02	Merit Awards – Bronze	Tiger Jeet Singh Public School	HDSB
Nasr, Zeyad	N14	Merit Awards – Silver	Dundas Valley Secondary School	HWDSB
Nastase, Sami	H10	BASEF Inspiration Student Award; Merit Awards – Silver	W. H. Morden Public School	HDSB
Ndibmun, Hanniel	G04	Artistically Inspired Display Awards	Cathy Wever	HWDSB
O'Dell, Oscar	A19	Bay Area Health Trust Scholarship / Paul Lakin Life Sciences Award; Canada-Wide Science Fair Trip Award; Merit Awards – Gold	King's Christian Collegiate	IND
Olejniczak, Jacob	C17	McMaster University Faculty of Engineering Entrance Awards; Merit Awards – Bronze	King's Christian Collegiate	IND
Orphanos, Rachael	A20	Hamilton Wentworth Occasional Teacher Awards – Presentation & Aesthetics Award	Hawthorne Village Public School	HDSB
Ouwendyk, Brodi	F11	Hamilton Amateur Astronomers James A. Winger Award– Senior	Delhi District Secondary School	GEDSB
Pacifici, Nicholas	H08	Canada-Wide Science Fair Trip Award; IEEE (Institute of Electrical and Electronic Engineers) Hamilton Section Awards; Merit Awards – Gold	St. Mary Secondary School	HWCD
Parachin, Maya	K16	ArcelorMittal Dofasco Awards – Product Development Business Process Award	Oakville Christian School	IND
Park, Jieun	B11	Dr. Laura Blew Social Sciences Awards; International Science & Engineering Affiliated Fair Awards – American Psychological Association; Merit Awards – Bronze	Bishop Tonnos Secondary School	HWCD
Patel, Nevin	E09	Merit Awards – Bronze	Oakville Christian School	IND

Name	Project Number	Award(s)	School	Board
Patial, Navraj	J11	BASEF Inspiration Student Award; Merit Awards – Bronze	Assumption College School	BHNCD
Peart, Evelyn	J10	Merit Awards – Bronze; Nelson Steel Awards	Tiger Jeet Singh Public School	HDSB
Perlawar, Prathamesh	E10	Merit Awards – Bronze	White Oaks Secondary School	HDSB
Piccoli, Luca	C14	ArcelorMittal Dofasco Awards – Global R&D Hamilton Award for Outstanding Research; Hamilton Wentworth Occasional Teacher Awards – Healthy Lifestyles Award; Merit Awards – Bronze; Rotary Club of Hamilton Stoney Creek Awards – Third Place	Our Lady of Peace	HWCD
Polyanska, Maria	H15	BASEF Inspiration Student Award; Merit Awards – Silver	Forest Trail Public School	HDSB
Ponnambalam, Kadhir	J09	Merit Awards – Silver	Hillfield Strathallan College	IND
Ponnambalam, Karthik	N09	Merit Awards – Bronze	Hillfield Strathallan College	IND
Powell, Luke	N21	ArcelorMittal Dofasco Awards – Human Resources Training & Development Award; Merit Awards – Bronze	Aldershot High School	HDSB
Prias, Mariana	K09	Merit Awards – Bronze	Highview	HWDSB
Prokipczuk, Katherine	M14	Hamilton Wentworth Occasional Teacher Awards – Environment & Education Award	Ancaster Meadow	HWDSB
Qazi, Daniyal	P08	ArcelorMittal Dofasco Awards – Ironmaking Award; Canada-Wide Science Fair Trip Award; Merit Awards – Gold	W. H. Morden Public School	HDSB
Qazi, Zayn	P08	ArcelorMittal Dofasco Awards – Ironmaking Award; Canada-Wide Science Fair Trip Award; Merit Awards – Gold	W. H. Morden Public School	HDSB
Qin, Yuyang	G06	Merit Awards – Bronze	Hillfield Strathallan College	IND
Quadry, Zoha Fatima	A16	Chairs' Awards	Abbey Park High School	HDSB
Qureshi, Ana	N12	Merit Awards – Bronze	Al-Falah Islamic School	IND

Name	Project Number	Award(s)	School	Board
Rajkumar, Raahith	E14	Canadian Nuclear Society (Golden Horseshoe Branch) Awards; Merit Awards – Silver; Society of Tribologists & Lubrication Engineers – Hamilton Section Awards	Hillfield Strathallan College	IND
Rajkumar, Sahith	E15	BASEF Inspiration Student Award; Merit Awards – Silver	Hillfield Strathallan College	IND
Rao, Rahul	F20	ArcelorMittal Dofasco Awards – Hot Mill Award; Merit Awards – Silver	W. H. Morden Public School	HDSB
Rashid, Nabira	F13	Merit Awards – Bronze	White Oaks Secondary School	HDSB
Rastogi, Maithili	F13	Merit Awards – Bronze	White Oaks Secondary School	HDSB
Rathod, Anish	P10	Dillon Consulting Awards – Science and Engineering Award; Laurentian Chapter of SETAC Awards; Merit Awards – Bronze	Burlington Central High School	HDSB
Rechan, Anika C	N02	Merit Awards – Bronze	Sunningdale Public School	HDSB
Rosien, Sophia	H07	Merit Awards – Bronze	Rolling Meadows Public School	HDSB
Saeed, Ahmed	G03	Electrical Contractors Association of Niagara Hamilton Awards; Nikola Tesla Innovation Awards – Gold	Ancaster Meadow	HWDSB
Salman, Sameeha	F12	Artistically Inspired Display Awards	Al-Falah Islamic School	IND
Saravanan, Rakshan	E07	Canada-Wide Science Fair Trip Award; Merit Awards – Gold	Ancaster High	HWDSB
Schubert, Kayla	B16	Venture Academy at McMaster University Awards	Rolling Meadows Public School	HDSB
Sels, Bridgette	H07	Merit Awards – Bronze	Rolling Meadows Public School	HDSB
Shaiju, Julian	N07	Merit Awards – Bronze	Bishop P. F. Reding Secondary School	HCDSB
Sharma, Avaya	B10	New Health Scientist Award	Oakville Christian School	IND

Name	Project Number	Award(s)	School	Board
Sheel, Vedant	N26	ArcelorMittal Dofasco Awards – Steelmaking Award; Gowling WLG Innovation Grand Award; Hillfield Strathallan College Awards of Excellence – Scientific Process Award; Merit Awards – Bronze	Waterdown District Secondary School	HWDSB
Siddicky, Sarim	E18	Merit Awards – Bronze	W. H. Morden Public School	HDSB
Simmons, Cordelia	P17	Canada-Wide Science Fair Trip Award; Merit Awards – Silver; Mohawk College Electrical Engineering Technology Awards – Electrical Engineering Award	North Park Collegiate and Vocational School	GEDSB
Small, Owen	K17	Merit Awards – Bronze	Balaclava	HWDSB
Smith, Jared	L13	Canadian Nuclear Society (Golden Horseshoe Branch) Awards; Mohawk College Building & Construction Sciences Awards – Transportation Award; Nelson Steel Awards	St. Matthew	HWCD
Song, Bohmie	M19	Conservation Halton Awards; Environmental Inspiration Award; Merit Awards – Silver	Westdale Secondary School	HWDSB
Song, Lily	P16	ArcelorMittal Dofasco Awards – Commercial Department Award; ISEF Trip Award; McMaster University Faculty of Engineering Entrance Awards; Merit Awards – Gold	North Park Collegiate and Vocational School	GEDSB
Sowdagar, Hiba	B07	Hamilton Academy of Dentistry Awards – Third Place	Ancaster Meadow	HWDSB
Srivastava, Daksh	L16	Canadian Meteorological and Oceanographic Society (CMOS) Award – First; McMaster University School of Earth, Environment and Society – Geography Award	Pilgrim Wood Public School	HDSB
Stokes, Madelyn	A20	Hamilton Wentworth Occasional Teacher Awards – Presentation & Aesthetics Award	Hawthorne Village Public School	HDSB
Su, Emma	A05	BASEF Inspiration Student Award; Merit Awards – Silver	W. H. Morden Public School	HDSB
Su, Irene	A14	Conservation Halton Awards	Munn's Public School	HDSB
Suresh, Nitish	B06	Dr. Laura Blew Social Sciences Awards	Aldershot High School	HDSB
Szecsodi, Ben	H01	Merit Awards – Bronze	Rolling Meadows Public School	HDSB

Name	Project Number	Award(s)	School	Board
Szymala, Weronika	D15	ArcelorMittal Dofasco Awards – Medical Department Award; Merit Awards – Bronze	Bishop Ryan Secondary School	HWCD
Tan, Siqi	E05	Canada-Wide Science Fair Trip Award; Merit Awards – Gold	W. H. Morden Public School	HDSB
Tayal, Jaylan	N18	BASEF Inspiration Student Award; Merit Awards – Silver	John William Boich Public School	HDSB
Teng, Carmen	G07	Merit Awards – Bronze	White Oaks Secondary School	HDSB
Thomas, Will	J14	Merit Awards – Silver; Talkit.ca Computer Engineering Awards – Second Place	St. Augustine	HWCD
Tripathi, Eva	E11	Merit Awards – Bronze	Elsie Macgill Secondary School	HDSB
Truant, Kai	E19	Dr. Colin J.L. Lock Memorial Chemistry Award; Merit Awards – Bronze	Ancaster High	HWDSB
Vargas-Saravanamuttu, Radha Maria	C01	Merit Awards – Bronze	Hillfield Strathallan College	IND
Veljkovic, Filip	L20	Canadian Meteorological and Oceanographic Society (CMOS) Award – Second; Merit Awards – Bronze	Corpus Christi Secondary School	HCDSB
Vidican, Jonathan	J15	BASEF Inspiration Student Award; Merit Awards – Silver; Mohawk College Mathematics Awards – Junior Award; Nikola Tesla Innovation Awards – Silver	St. Mary Elementary School	HCDSB
Vignesh, Bhavishyaa	A02	Merit Awards – Silver	Post's Corners Public School	HDSB
Wahban, Alia	P03	ArcelorMittal Dofasco Awards – Chemical Testing Award; Association for Iron & Steel Technology Northern Chapter Awards – First Place; Grand Awards – Primary Fluid Systems Pinnacle Third Best in Fair; ISEF Trip Award; McMaster University Department of Chemical Engineering Award; Merit Awards – Gold	Hillfield Strathallan College	IND
Wang, Jiaqi	G06	Merit Awards – Bronze	Hillfield Strathallan College	IND
Wang, Season	A18	McMaster University MGD Institute for Infectious Disease Research Awards – Grand Award; Merit Awards – Bronze	Oakville Trafalgar High School	HDSB

Name	Project Number	Award(s)	School	Board
Warren, Tessa	F17	Merit Awards – Bronze	Oakville Christian School	IND
Waseem, Zoha	K10	Hamilton Academy of Dentistry Awards – Second Place; Procor Engineering Awards – Junior Award	Al-Falah Islamic School	IND
Waseem, Zoya	K20	ArcelorMittal Dofasco Awards – Quality Systems Award; Hillfield Strathallan College Awards of Excellence – Life Sciences Award; McMaster University MGD Institute for Infectious Disease Research Awards; Merit Awards – Bronze	Al-Falah Islamic School	IND
Wu, Ruofei	N18	BASEF Inspiration Student Award; Merit Awards – Silver	John William Boich Public School	HDSB
Xu, William	P13	ArcelorMittal Dofasco Awards – Central Trades & Services Department Award; Association for Iron & Steel Technology Northern Chapter Awards – Second Place; Hillfield Strathallan College Awards of Excellence – Innovation Award; IEEE (Institute of Electrical and Electronic Engineers) Hamilton Section Awards; ISEF Trip Award; Merit Awards – Gold	Dundas Valley Secondary School	HWDSB
Yang, Zhuo	P07	Merit Awards – Silver	W. H. Morden Public School	HDSB
Yin, Brian	M15	Laurentian Chapter of SETAC Awards; Merit Awards – Silver; Royal Botanical Gardens Award	Iroquois Ridge High School	HDSB
Zhang, Cody	H13	BASEF Inspiration Student Award; Merit Awards – Silver; Procor Engineering Awards – Intermediate Award	Abbey Park High School	HDSB
Zhang, Shangyi	J13	Canada-Wide Science Fair Trip Award; International Science & Engineering Affiliated Fair Awards – Yale Science & Engineering Association; Mechanical Contractors Association Hamilton Niagara Award; Merit Awards – Gold; Procor Engineering Awards – Senior Award	White Oaks Secondary School	HDSB
Zhu, Daniel	H13	BASEF Inspiration Student Award; Merit Awards – Silver; Procor Engineering Awards – Intermediate Award	Abbey Park High School	HDSB

BASEF 2024 Champion Teacher Award

The Champion Teacher Award recognizes a STEM teacher who displays a remarkable ability to empower and excite student interest in science and actively promotes the Bay Area Science & Engineering Fair. The winner is selected by a panel of BASEF organizing committee members from among those nominated online by their peers, students, and their parents. The Award includes induction into the BASEF Champion Teacher Hall of Fame, a trophy, and $500 for use in the winning teacher's classroom.

For the 2024 fair, we would like to recognize a teacher who fosters curiosity, provides support and encouragement, demonstrates enthusiasm towards learning, and provides each of her students with quality research skills in a rich, in-depth learning environment.

Allison Janssen – White Oaks Secondary School (Halton District School Board)

The nominator writes: **"***Mrs. Janssen's teaching style is very [kinesthetic] and experimental. Especially considering the IB physics program does not require or outline physical labs, her enthusiasm towards conceptual understanding through "physics toys" and thought experiments fosters curiosity in the class. She also provides lots of support and encouragement towards innovative experiments for the Internal Assessment (an IB-required physics report). Outside of the classroom, Mrs. Janssen has helped and encouraged my forays into electromagnetism, eventually culminating in a research project she recommended I submit at BASEF.* **"**

BASEF Inspiration Teacher Awards

BASEF Inspiration Teacher Awards are presented to 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. **Schools without BASEF projects for at least 5 years*

Cushing, Paul	Holy Trinity Secondary School (HCDSB)
Kay, Gregory	Rattlesnake Point Public School (HDSB)
Sawyer, Lenora	Delhi District Secondary School (GEDSB)
Syed, Ijial	Blyth Academy (IND)

Emergency Procedures

Hillfield Strathallan College

In Case of Emergency:	> Dial 911 > Dial (905) 961-4977 for the Security Desk > Inform the nearest BASEF volunteer
Location:	299 Fennell Ave West, Hamilton, ON, L9C 1G3
Responder Directions:	Enter campus off Fennell Ave and follow signs to main entrance. A representative from BASEF will be waiting to direct EMS to the exact location.
Other Key HSC Phone Numbers:	College Main Line: (905) 389-1367

Mohawk College

In Case of Emergency:	> Dial 55 on College phones > Dial 9-911 on College phone or 911 on Bell pay phones > Press the Emergency button on Bell pay phones > Press the button on emergency station intercom > Inform the nearest BASEF volunteer
Location	135 Fennell Ave West, Hamilton, ON, L9C 0E5
Responder Directions:	Contact College Security (Dial 55) who will handle directing first responders.
Other Key Mohawk College Phone Numbers:	Security Desk: 905-575-2003 OR (905)-575-2316 OR ext. 2003

Emergency Evacuation:	Emergency Lockdown:

<u>If you Smell Smoke:</u>
• Call Campus Security immediately.
 	
<u>Upon Discovery of Fire (Flames):</u>
• Leave fire area immediately and close doors behind you.
• Pull the nearest fire alarm.
• Evacuate the building via the nearest exit.
• Call Security or the appropriate emergency number.
 	
<u>Upon Activation of the Fire Alarm:</u>
• Go to the nearest exit and leave the building.
• Close doors behind you.
 	
<u>Note:</u>
• 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.
	<u>Threat Inside the Building:</u>
	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.
	
	<u>End of Lockdown:</u>
	• 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.
	
	<u>Threat Outside the Building:</u>
	Hold and secure:
	• The threat is outside and everyone remains inside the building.
	• Notification will be communicated by a voice message.

BASEF

BASEF 2024 wishes the best of luck to all participants. We hope to see you next year for BASEF 2025!