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## **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 <a href="https://www.native-land.ca">www.native-land.ca</a>.

#### **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 <a href="21st Century Competencies">21st Century Competencies</a>.

#### **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.



# <u>Message from Hillfield Strathallan College</u>



Welcome to the 2025 Bay Area Science and Engineering Fair. Hillfield Strathallan College is thrilled to host this prestigious event and we extend a warm welcome to all the brilliant young scientists and engineers joining us today. Congratulations on being selected—your presence here is a testament to your hard work, creativity, and dedication to scientific inquiry.

At HSC, we share BASEF's passion for fostering a love of learning and providing opportunities for students to explore their interests through challenging and enriching experiences. We've witnessed firsthand the incredible journey of discovery that participation in BASEF provides, and we're incredibly proud to support this vital program.

For 65 years, BASEF has been a launchpad for innovation, bringing together hundreds of talented students from across the region. The dedication and ingenuity displayed by participants are truly inspiring, and we're excited to see the groundbreaking projects you've brought to this year's fair. Many of you will go on to represent our region at the Canada-Wide Science Fair and the International Science and Engineering Fair, and we wish you the very best in those future endeavours.

The success of BASEF is a direct result of the incredible support from our community. Thank you to our sponsors, judges, volunteers, parents, and teachers. Your commitment to nurturing the next generation of scientists and engineers is invaluable.



We are delighted to be your hosts this year and we hope you have a rewarding and memorable experience at HSC. Regardless of the outcome, remember that you've already achieved something remarkable by being here. We are confident that you will continue to achieve great things and inspire us all with your passion for STEAM.

Best of luck, and we look forward to seeing the future of science and engineering unfold before us!

Sincerely,

Marc Ayotte
Head of College, Hillfield Strathallan College



# BASEF Chairs' Message



### **Welcome to the Bay Area Science and Engineering Fair!**

We, your returning co-chairs, Dana Bee and David Reed, are thrilled to see such an inspiring showcase of youth innovation. BASEF is more than just a science fair: it's a celebration of curiosity, discovery, and perseverance.

We invite you to explore the 286 projects on display and engage in thought-provoking discussions with the 385 talented students that are participating this year.

To our generous sponsors and donors: thank you for believing in the potential of young minds. Your support fuels dreams and provides students with the resources and opportunities to explore, create, and innovate.



For our 2025 Fair, we are proud to welcome back our **Title Sponsor: Primary Fluid Systems Inc.** 

Thank you for investing in our youth and supporting the spirit of learning, collaboration, and innovation in STEM.

We also thank long-time **Diamond Level Sponsor: ArcelorMittal Dofasco** 

A special thank you to our host, also a Diamond Level Sponsor for warmly welcoming BASEF students, parents, judges, and volunteers: Hillfield Strathallan College (HSC)

Your commitment to fostering young talent is truly remarkable.

As a 100% volunteer-driven registered charity, BASEF would not be possible without the extraordinary dedication of our thirty-member Organizing Committee. Their countless hours of effort have made BASEF 2025 a resounding success. Thank you!

May this year's fair ignite new passions, inspire future breakthroughs, and remind us that the pursuit of knowledge knows no bounds.

Sincerely,

Dana Bee & David Reed **BASEF Co-Chairs** 



# **BASEF 2025 Organizing Committee**

**BASEF Chairs** 

**2025 Co-Chairs**......Dana Bee & David Reed

Scully (2015-2020)

**Finance** 

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

**Budget** ...... David Reed **Fundraising** ...... Sue Olynyk (Chair)

Dan Bowman & Ryan LaRue

**BASEF Meetings** 

**Recording Secretary**......Mike Klinck

Meeting Meals ......Chris Kuttenkeuler & Jane Wood

2025 Fair

Fair Facilities ...... David Reed (Lead)

Dan Bowman & Mark Simpson

**Registrar** ...... George Geczy

**Judging** ......Donna Stack-Durward (Judge-In-Chief)

Dan Bowman, George Geczy, Ryan LaRue, Caroline Mahut,

Nelson Ruiz Blanco, Jane Wood

**Scientific Review Committee** ... Dana Bee & Donna Stack-Durward (ex officio)

Dan Bowman, Cynthia Cupido, Katie Brent, George Geczy,

Ryan LaRue, Vince Pacifici

**Special Awards Coordinators** ... Dana Bee & Eleanor O'Flynn

**Volunteer Coordinators**......Victoria Lee & Caroline Mahut (Leads)

Chris Kuttenkeuler

Activity Morning ......Katie Brent & Student Advisors

Awards Ceremony Team ...........Gerard Chiasson (lead)

Dan Bowman, Wayne Bowdish, George Geczy, Ryan LaRue,

Sue Olynyk

**Awards Ceremony Emcees** ...... Chris Blackwood & Cathy Hayman **Fair Food** ...... Chris Kuttenkeuler & Jane Wood

Brand Committee

Brand Director ......Ryan LaRue
Photography & Graphics ........Wayne Bowdish

Photography & Graphics ......wayne bowdish

Social Media & Marketing.......Maya Clapperton, George Geczy, Student Advisors

Website......Wayne Bowdish

Information Systems & Technology

IS/IT ......Gerard Chiasson & George Geczy

Canada-Wide Science Fair (CWSF) & International Science and Engineering Fair (ISEF) Delegations

**CWSF**......Dan Bowman (Lead)

George Geczy, Caroline Mahut, Donna Stack-Durward



Outreach & Bursaries

Committee ......Dana Bee & Mike Klinck

Student Advisors

**Team**.....Evan Budz, Anthony Efthimiadis, Claire Marsh

Members-at-Large

Members ......Cathy Hayman & Ingrid Scully

Host Venue Liaisons

Hillfield Strathallan College .... Celeste Settle & Ryan Bouchard

Mohawk College ......Alec Harmer, Dana Jacobs, Wendy Makey

School Board Liaisons

BHNCDSB.......Jasmine Vorkaic
GEDSB......Jason Hall
HCDSB.......Matt Kovacs
HDSB......Ingrid Scully
HWCDSB.....Adrienne Coletto

**HWDSB** ......Vacancy

Six Nations ......Reva Bomberry

**School Boards:** 

**BHNCDSB** Brant Haldimand Norfolk Catholic District School Board

GEDSB Grand Erie District School Board
HCDSB Halton Catholic District School Board

**HDSB** Halton District School Board

**HWCDSB** Hamilton-Wentworth Catholic District School Board

**HWDSB** Hamilton-Wentworth District School Board

Please reach out (chair@basef.ca) if you would like to join our team!







# **BASEF 2025 Schedule of Events**

BASEF 2025 is held at *Hillfield Strathallan College* ("**HSC"**) and *Mohawk College's McIntyre Performing Arts Centre* ("**McIntyre Theatre"**) on the Fennell Campus. See the maps on the next pages.

### Thursday, March 20th: Registration, Project Setup, & Safety Check

4:00-8:00 pm	On-site registration, setup, and project safety checks are performed. Note: valuables left in the gym overnight are left at	HSC
	the student's own risk!	

### Friday, March 21st: Activity Morning & Project Judging

9:00-9:20 am	Students arrive at HSC and are seated in the theatre for Activity Morning. Note: it is the responsibility of the students to arrange their own transportation to and from the venue.	
9:30 am-12:00 pm	Activity Morning will feature an exciting line-up of events prepared especially for our BASEF participants:  > Forensics & Tech Crimes Presentation by Sergeants Mike Eves and Ken Kirkpatrick of the Hamilton Police Service  > Interactive Gameshow presented by the Student Advisor team  > The Magic of Molecules chemistry show presented by Dr. Paul Harrison and team  > BASEF Alumni Panel presented by Katie Brent, Caroline Mahut, Isabella O'Brien, Calvin Rieder, and Joseph Saturnino. Panelist bios can be found below.	
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 22<sup>nd</sup>: Public Viewing

9:00 am-12:00 pm	Students are asked to be at their projects until the end of the viewing.	HSC
12:00-12:15 pm	Project take-down. All projects <u>must</u> be removed by 12:15 pm.	

### Friday, March 28th: Awards Ceremony

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



### **BASEF Alumni Panelists:**

#### **Katie Brent**

Katie Brent is a six-time BASEF and four-time Canada-Wide Science Fair (CWSF) alumna. She has continued to volunteer with both fairs. Katie credits her science fair participation as a key route through which she was able to develop her critical thinking and research skills. Katie earned an Honours Bachelor of Arts in Anthropology and a Concurrent Certificate in Applied Social Sciences Research from McMaster University, and a Master of Science in Evolutionary Anthropology with a Collaborative Specialization in Musculoskeletal Sciences from the University of Toronto. She is currently pursuing a Combined Interdisciplinary Doctorate in Biological Anthropology & Archaeology and Biomedical Engineering from the University of Western Ontario. Her current research focuses on how human skeletal variation can play a role in the way that bone and joint diseases develop and are treated. In her spare time, Katie loves making art—especially pottery—and enjoys solving puzzles and riddles.

#### **Caroline Mahut**

Caroline is a mechanical engineer specializing in hybrid vehicles and a five-time BASEF alumna. Also a five-time CWSF finalist, she continues to give back as a volunteer, chaperone, and mentor for BASEF students competing at CWSF. This year, as a member of the BASEF organizing committee, she is serving as the Volunteer Coordinator for the fair.

#### Isabella O'Brien

Isabella is a two-time alumna of BASEF and CWSF. She was also a Global Finalist in the 2015 Google Science Fair and attended ISEF as Canada's representative at Broadcom Masters International. For her undergraduate degree, she attended the University of Southern California on a full scholarship and earned a degree in political science. Isabella is currently a master's student in comparative government at the University of Oxford.

### **Calvin Rieder**

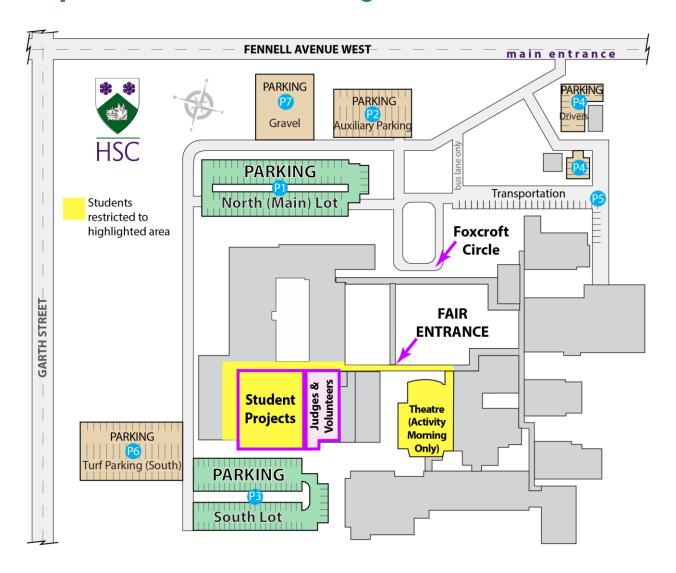
Calvin is an engineering researcher at the University of Toronto. His work focuses on the development of sustainable energy systems for use in developing countries. He is a BASEF alumni who participated in the Fair from 2010-2014 with projects on condensing drinking water from the air at night. Through these projects, he represented BASEF at the 2010 and 2011 Canada-Wide Science Fairs and the 2014 International Science and Engineering Fair. While he has always been fascinated by the sciences, it was his experiences in BASEF that steered him into engineering as a career and led him to his interest in finding ways to implement technology more effectively for people in low-income countries.

#### Joseph Saturnino

Joseph is a 4<sup>th</sup> year student studying mechatronics engineering with a minor in business at McMaster University. He competed at BASEF for 6 years with projects relating to robotics and embedded systems. He is currently the Chief Technical Officer (CTO) of Escape Game Entertainment which has escape room locations in four cities in Ontario. In this role, he is responsible for the development of new and innovative technical solutions for the automation of manufacturing and running of escape rooms.



## Map: Hillfield Strathallan College





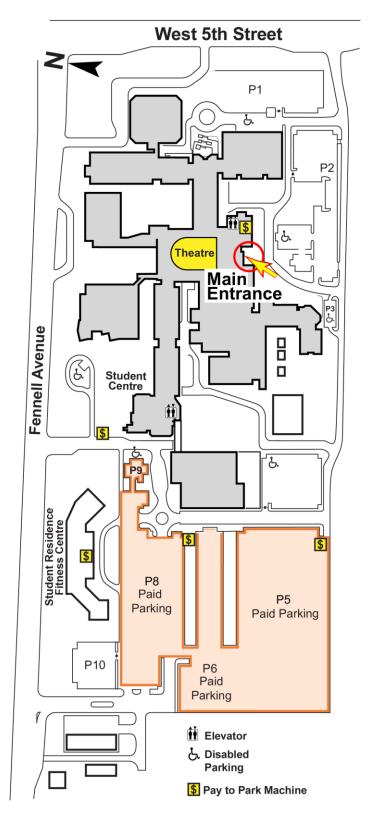
This digital program will be periodically updated over the course of the Fair to reflect the most up-to-date information. The most recent version of the program can be downloaded from our website at:

www.basef.ca/program2025.

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 Ryan LaRue at <a href="mailto:RyanLaRue@basef.ca">Ryan.LaRue@basef.ca</a>.



## 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 digital 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 2025 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. 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.
- ▶ Health Considerations: 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, though BASEF will not mandate the use of a face mask at this year's Fair.
- ▶ **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 <a href="https://www.basef.ca/program2025">www.basef.ca/program2025</a>.

## Parent Responsibilities: Day-by-Day

### ▶ Day 1: Registration & Setup. Thursday, March 20th, 2025 @ 4:00-8:00 pm

- Project setup is <u>only</u> on March 20<sup>th</sup>, 2025 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. 10). 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 <u>cannot leave</u> 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 the next day.



### ▶ Day 2: Student Arrival for Activity Morning. Friday, March 21st, 2025 @ 9:00-9:20 am

- Parents must arrange transportation for student(s) to/from HSC. Activity Morning will start at 9:30 am so we recommend that students arrive and are settled before that time. Please do not drop students off before 9:00 am as BASEF/HSC cannot provide the appropriate supervision.
- P You may use the "Foxcroft Circle" (see map on pg. 10) as a temporary drop-off zone. Note that parking inside the Circle is <u>not permitted</u> as it is a fire route.
- Volunteers and signage will guide arriving students to the HSC theatre for an exciting morning of activities.
- 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 21st, 2025 @ 1:00-4:00 pm

- Judging starts at 1:00 pm, sharp. Usually, students will be interviewed by at least four 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 21st, 2025, beyond 4:00 pm

- After the judging period has finished at 4:00 pm, students will be dismissed in an orderly fashion. Please make transportation arrangements for your student(s) to leave HSC promptly.
- P 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. 10).
- The Fair is not open to students or the public during the evening of March 21st.

### **▶ Day 3: Public Viewing.** Saturday, March 22<sup>nd</sup>, 2025, 9:00 am-12:00 pm

- Your student(s) must 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 the great projects on display and to see your own student giving presentations for visitors.
- Parking is free for everyone, and both the HSC North and South Lots should be used.
- Projects <u>may not be removed</u> until the end of the Public Viewing. You must arrange to take down your project <u>between 12:00-12:15 pm.</u> After this time, projects will be removed and discarded by the volunteer staff.

### ▶ **Awards Ceremony.** Friday, March 28<sup>th</sup>, 2025 @ 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 is available at MOHAWK COLLEGE for the Awards Ceremony. Please pre-pay at one of the pay stations located around the Campus parking lots (see map on pg. 11).
- 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.
- Each of our Trip Award Winners and their parent(s) are required to attend an information meeting immediately after the Awards Ceremony (approximately one hour).



# **BASEF 2025 Sponsors & Charitable Donors**

## **General Funding Sponsors**

Title (\$25,000+)

Primary Fluid Systems Inc.

Diamond (\$10,000+)

ArcelorMittal Dofasco

Hillfield Strathallan College

Platinum (\$5,000+)

	Gold (\$2,500+)	
Enbridge	Mohawk College	Sun-Canadian Pipe Line
	Silver (\$1,000+)	
Burlington Hydro	Canadian Linen & Uniform Service	D.E.N.M. Engineering
Halton Catholic District School Board	Halton District School Board	Hamilton-Wentworth Catholic District School Board
Hamilton-Wentworth District School Board	McMaster University	Oakville Christian School
Ontario Power Generation	Rotary Club of Ancaster AM	Taylor Leibow Accountants & Advisors
	Bronze (\$500+)	
CareGo Tek	Hamilton Police Retirees' Association	Mysys Ltd.
NewAE Technology Inc.	Optimist Club of Stoney Creek	Society of Tribologists & Lubrication Engineers- Hamilton Chapter
	Synapse Life Science Consortium	
	Friends (\$250+)	
BioEndeavor Inc.	Distinctive Engineering Inc.	Electrical Contractors Association of Niagara Hamilton
Nikola Tesla Educational Corp.	Staples Ancaster	Talkit.ca



### **Charitable Donors**

- Sir Frederick Banting and Dr. Charles Best were the co-discoverers of insulin used in the treatment of diabetes. In 1923, Dr. Banting was awarded the Nobel Prize in Medicine.
- Dr. Roberta Bondar was the first Canadian woman to have flown in space as an international astronaut on board the Space Shuttle Discovery. Dr. Bondar is a trained physician, scientist, astronaut, and photographer.
- Dr. John Charles Polanyi won the 1986 Nobel Prize for chemistry for using chemiluminescence of molecules to explain energy relationships in chemical reactions.
- Elsie McGill was Canada's first woman graduate in electrical engineering. She also held a master's degree in aeronautical engineering. She is considered the first woman to be a designer of airplanes.

Banting & Best Level (\$1,000+)			
Peter Child	Steve & Cathy Hayman	Ben Gulak	
Rita Kops		Eudora LeBlanc	
Во	Bondar Level (\$500+)		
Mike & Terra Klinck	Mantecon Partners	Peter & Sue Olynyk	
Ро	lanyi Level (\$200	+)	
Dan & Debbie Bowman	Efthimiadis Family	Dr. Ryan LaRue	
John & Eleanor O'Flynn	David Reed	Dr. Nicola Simmons	
Zhang Family			
McGill Level (\$50+)			

**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.

Jim Casey

Linda Millar



"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 sparks 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 Susan.Olynyk@basef.ca."

- Sue Olynyk, P.Eng., Fundraising Chair

### Become a Supporter of BASEF

BASEF is entirely volunteer run. We receive no financial compensation for our efforts and no funding from federal or provincial governments. Donors like you are needed to provide BASEF's funding each and every year so that students can participate free of charge.

Should you wish to contribute to BASEF as a charitable donor, three options are available:

- 1. **Send your donation via e-transfer** to <u>Treasurer@basef.ca</u>. We are not set up for direct deposit, so please use "BASEF2025" as your security answer. Please also include your contact details with the e-transfer.
- 2. Make a secure donation via PayPal Giving Fund through our website:

https://www.basef.ca/donate/

3. **Mail a cheque** made payable to "Bay Area Science & Engineering Fair":

Bay Area Science & Engineering Fair c/o BASEF Treasurer 143 Hyde Park Ave Hamilton ON, L8P 4M8

**BASEF is a registered charity** (BN 11895 1565 RR0001), so you may request a tax receipt for income tax purposes. Please reach out to <u>Treasurer@basef.ca</u> for more information. Some charitable donors choose to remain anonymous, while others are acknowledged at the earliest opportunity in our Digital Program, on our Jumbotron screen, and during the Awards Ceremony. Just let us know your preference.

If your **place of business** would like to become a BASEF sponsor, please reach out to <a href="mailto:fundraising@basef.ca">fundraising@basef.ca</a> for more information and our sponsorship schedule. We would be happy to work with you. Support of a regional science fair is an excellent avenue for your organization to reach out into the community which you serve. You are helping the youth of this community to develop into scientifically and technologically-prepared adults for the workforce of tomorrow. For more information about BASEF sponsorship, please visit our website at the link below:

https://www.basef.ca/becoming-a-basef-general-sponsor/



# **BASEF 2025 Awards**

### ArcelorMittal Dofasco Merit Awards

Merit Awards recognize the tremendous amount of thought and effort that has gone into the projects entered in BASEF. They are the result of an extensive judging process undertaken by 140 independent judging volunteers who have come forward from educational institutions, local government organizations, businesses, and industries in our region. All participants in BASEF 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:



Scoring for Merit Awards typically proceeds as follows:

- Description A score ≥ 90% or higher earns a Gold Medal and a cash award
- Description 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 and a cash award. Trophies are sent to the winners' schools.



2<sup>nd</sup> Best-in-Fair: \$800



Best-in-Fair: \$1,000





3rd Best-in-Fair: \$500



### Drs. Ranjan Sur and Monalisa Sur Award

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



### **Roy Middleton Memorial Award**

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



### **BASEF Committee Trophy**

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



### **Herb Gildea Memorial Trophy**

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





### **Grand Prize Trip Awards**

### 2025 Canada-Wide Science Fair (CWSF)

▶ Up to 17 students (depending on funding) will be chosen from excellent exhibits to advance to CWSF, which will be held May 31<sup>st</sup>-June 5<sup>th</sup>, 2025. All projects at BASEF 2025 are eligible to advance to CWSF. Winners of CWSF trip awards will receive an expense-paid trip to Fredericton, New Brunswick to present their projects.



### **Sponsored By:**



























### 2025 Regeneron International Science and Engineering Fair (ISEF)

▶ This year, BASEF has made the difficult decision to not participate in the Regeneron International Science and Engineering Fair (ISEF) to be held in Columbus, Ohio, May 10-17, 2025. Given the unique challenges of cross-border travel at this time, we believe that this is the most responsible course of action. We trust the participants and their families will understand this decision.





### Special Awards

"We are truly grateful for the support from our numerous community organizations, businesses and individuals who contribute Special Awards to BASEF, making it successful year after year. Your contributions are helping to ignite curiosity, inspire innovation, and empower young minds to explore the wonders of science.

This year, we are pleased to announce a total of 140 special awards, amounting to \$24,700 in cash and \$14,750 in academic scholarships. Your donations have played a vital role in reaching this milestone, further solidifying BASEF's position as a platform that promotes excellence in scientific exploration.

Your generosity is not just an investment in education: it's an investment in the next generation of changemakers."

Dana Bee Special Awards Coordinator



Eleanor O'Flynn 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
Prizes:	red Display Awards Two awards of \$50 each To the most artistically inspired display.	Cathy Hayman
Prizes:	ron & Steel Technology Northern Chapter Awards  1st \$250 2nd \$150 3rd \$100  For outstanding projects related to one of the following fields: metallurgy, materials science, chemical, electrical, mechanical, industrial, environmental, civil and computer engineering.	Shannon Clark
Prizes:	\$500 awards  Awarded based on merit judging marks to top projects	BASEF

that win \$250 or less in other prizes and have not

previously won a BASEF Inspiration Award.



**BASEF Inspiration Teacher Awards:** 

**BASEF** 

Prizes: \$500 awards

Criteria: Awarded to teachers at 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

Canadian Institute of Mining, Metallurgy and Petroleum (Hamilton

Shannon Clark

**Branch) Awards** 

Prizes: Two awards of \$100 each

Criteria: Outstanding projects relating to mining, metallurgy and

petroleum, any level.

Canadian Meteorological and Oceanographic Society Awards

Dominique Brunet

Prizes: 1<sup>st</sup> \$100 2<sup>nd</sup> \$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).

**Canadian Nuclear Society (Golden Horseshoe Branch) Awards** 

Ross Harper

Prizes: Two awards of \$125 each for intermediate or senior projects and two awards of \$75 each for junior projects.

Peter J. Kriemadis Stephen Marshall

Criteria: Projects relating to nuclear science and engineering,

energy research, or climate sciences.

BASEF

Chairs' Award
Prize: \$100

Criteria: A project that exhibits good scientific, engineering or

mathematical thought.

**Chemical Institute of Canada - Hamilton Section Awards** 

Don Barclay Tom Sutton

Prizes: Three awards of \$100 each

Criteria: Projects relating to chemistry, chemical engineering, or

chemical technology.

TOTH Sattori

**Conservation Halton Awards** 

Prizes: Two awards of \$100 each

Criteria: Projects that contribute to environmental research,

Ilona Feldman Tamanna Kohi

Christine Bowen

protection, conservation, restoration or awareness by

Halton students.

**Dillon Consulting Limited** 

Science and Engineering Award

Prize: \$250

Chris Graham Darcie Reid Caitlin Vandermeer

Criteria: Project showing excellence in science and/or

engineering.



**Special Awards Judges** Dillon Consulting Limited, Continued... **Biological Sciences Award** Prize: \$250 Criteria: Project showing excellence in biological sciences. **Doris Casey and Gwen Nicolls Disability Solutions Awards** Jim Casey Two awards of \$100 each Prizes: Al Nicolls Criteria: Most innovative and creative technical solutions focused on assisting individuals to overcome or compensate for physical or cognitive disabilities. Dr. Colin J.L. Lock Memorial Chemistry Award BASEF Prize: \$100 Criteria: A project involving chemistry, especially crystals. **Dr. Laura Blew Social Sciences Awards BASFF** Prizes. Two awards of \$100 each Criteria: Projects that best demonstrate an understanding of the scientific process as it applies to social sciences issues. Dr. M. Doyle Biology Award BASEF Prize: \$250, a plaque, and a trophy for the winner's school Criteria: Best biology project. **Dr. Nicola Simmons Award in Cognition Studies** BASEF Prize: Criteria: An exemplary project in cognition studies (animals or **Electrical Contractors Association of Niagara Hamilton Awards** Michael Furii Two awards of \$250 each Prizes: Criteria: Projects displaying the best and safest use of electricity in the most creative manner. **Environmental Inspiration Award** Isabella O'Brien Prize: Criteria: The best project that addresses an environmental problem in an inspirational or innovative way. **Farncombe Family Digestive Health Research Awards** Amber Hann Prizes: Two awards of \$250 each and a grand award of \$750, Liam Rondeau which includes a one-hour interview with one of Mark Wulczynski 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.



Firestone Institute for Respiratory Health Award

Nandhitha Ragunayakam

Quan 7hou

Derek Sheppard

Peter Banting

Bruce Farrand

Herb Schellhorn

Tony Petric

**BASEF** 

Institute.

For the best senior project on lung health, air pollution, Criteria:

allergy or respiratory infections.

**Gowling WLG Innovation Awards** 

**Grand Winner** 

Prize:

Prize: \$300 and a complimentary consultation with a patent or

trademark agent at the Gowling WLG Hamilton office.

\$250 and a tour of the research labs at the Firestone

Criteria: Best project demonstrating potentially patentable

subject matter.

Runner Up

\$200 Prize:

Criteria: An excellent project demonstrating potentially

patentable subject matter.

**Honourable Mention** 

Certificate Prize:

Criteria: An excellent project demonstrating potentially

patentable subject matter.

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.

**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:

Criteria: Junior project that demonstrates a high level of visual

appeal, creativity, and overall quality of presentation.

**Harrison Family Chemistry Award** 

Prize: \$100

For a project that has significant chemistry content. Criteria:

Jim Ghoshdastidar Sharonna Greenberg

2025 - 23



Hillfield Strathallan College Awards of Excellence

**BASEF** 

Alicia Anton

Dana Bee

Lily Song

Neha Gupta

**Life Sciences Award** 

Criteria: Junior project that best displays excellence in life

sciences.

Scientific Process Award

\$100

Prize: \$100

Prize:

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.

IEEE (Institute of Electrical and Electronic Engineers) Hamilton Section

**Awards** 

Prizes: Two awards of \$100 each

Criteria: Best use of electronics in a science or engineering

project.

International Science & Engineering Affiliated Fair Awards

Isra Bashir

Prizes: 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.

Yale Science & Engineering Association Award

For an outstanding Grade 11 project in computer

science, engineering, physics or chemistry.

James A. Winger Award, sponsored by the Hamilton Amateur Astronomers

Prizes: Two awards of \$100 each for students in Grade 7 to 9

Two awards of \$100 each for students in Grade 10 to 12

Criteria: Best projects demonstrating an understanding of a topic

related to astronomy, physics, light pollution abatement,

or space travel.

Mario Carr Dee Rowan

Jo Ann Salci Chris Streich



John W. Howard Materials Research Award

**BASEF** 

Prize: \$100

Prizes:

Criteria: A project demonstrating innovation in engineering

materials, especially concrete.

**Laurentian Chapter of SETAC Award** 

Two awards of \$100 each and a certificate

Criteria: Best projects and presentations on a topic related to

environmental toxicology, chemistry, pollution, contamination, remediation or environmental

protection.

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.

**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.

**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.

**McMaster University Faculty of Engineering Entrance Awards** 

See "Scholarships"

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.

**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.

Lara Alves Beese Abithiny Selvarajah

> Katie Brent Caroline Mahut

Jim Ghoshdastidar Sharonna Greenberg

Claire Velikonja

Shelby Amponsah Vanessa Chalmoukous

Amna Abbas Maya George

Luc Bernier



McMaster University Awards, Continued...

**Venture Academy**Shelby Amponsah

Prize: Free registration for one week of summer camp for two Vanessa Chalmoukous

projects.

Criteria: Deserving intermediate/senior projects

Mechanical Contractors Association of Hamilton Niagara Award

Bill Patterson

Nathaniel Adie

Tyler Sowden

Mason Kadem

Brian Stefanchuk

Prize: \$250

Criteria: Best engineering project at the intermediate or senior

level.

**Mohawk College Awards** 

**Building & Construction Sciences Awards** 

**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** 

Prizes: Three awards of \$50 each

Criteria: Projects that demonstrate a thorough understanding of

computer application and design in today's world.

**Electrical Engineering Technology Awards** 

**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
Prizes: 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



Nelson Steel Awards Sophia Blaschke

Prizes: Two awards of \$200 each

Criteria: Outstanding junior projects related to two of the

following fields: steel, environmental or chemistry.

New Health Scientist Award

BASEF

Prize: \$50

Criteria: A worthy junior project showing good potential for

improving the health of our community.

Nikola Tesla Innovation Awards Vic Djurdjevic

Prizes: Gold \$150 Silver \$100 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.

Ola Lunyk-Child Memorial Health Awards Peter Child

Prizes: 1<sup>st</sup> \$250 2<sup>nd</sup> \$150 3<sup>rd</sup> \$100

Criteria: Excellent projects related to any aspect of nursing,

nursing research or other medically related fields.

Procor Engineering Awards Michael Durowoju

Prizes: Junior \$50 Intermediate \$100 Senior \$150 Tanveer Mehta Criteria: Excellent engineering projects.

Professional Engineers Ontario - Oakville Chapter Awards

Mai Abdou

Prizes: Three awards of \$200 each

Criteria: Deserving engineering projects - one at each level.

\*\*Vencent Wang\*\*

Rotary Club of Hamilton Stoney Creek Awards

Prizes: 1st \$250 2nd \$150 3rd \$100

James McDonnell

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.

Royal Botanical Gardens Award BASEF

Prize: 1-year RBG family membership

Criteria: Best project in plant or environmental sciences.

Society of Tribologists & Lubrication Engineers - Hamilton Chapter Richard Schrama

Prize: Two awards of \$250 each

Criteria: Projects that utilize the principles of tribology, (friction,

wear and lubrication), to solve a technical problem.

Talkit.ca Computer Engineering Awards

BASEF

Prizes: 1<sup>st</sup> \$100 2<sup>nd</sup> \$50

Criteria: For outstanding projects using computer electronics or

software.



The Imagination to Enterprise Awards

Ben Gulak

Prizes: 1st \$1,250 2nd \$750

Criteria: Projects that best combine creativity with real-world

marketability. These awards honour innovative ideas that demonstrate both imaginative problemsolving and practical potential for real-world application, showcasing how scientific ingenuity can translate into impactful, market-ready solutions.

The Research Institute of St. Joe's Hamilton, Health Research Awards

Jamie Bennett

Prizes: Two awards of \$100 at the intermediate level

Sylvia Chong Alana Penny

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.

**Water Environment Association of Ontario Award** 

Dean lamarino Amr Melligy

Prize: \$100

For a project focused on innovative ideas for preserving

and/or enhancing Ontario's water environment.

## **Scholarships**

### Bay Area Health Trust Scholarship/Paul Lakin Life Sciences Award

Prize: One \$750 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.

## Carleton University Faculty of Engineering and Design and Faculty of Science Entrance Scholarship

Prize: \$1,000 entrance scholarship applied to tuition fees

Criteria: Best grade 12 science project; conditional on the student enrolling and registering in a

program with the Faculty of Engineering and Design or the Faculty of Science at

Carleton University for the Fall 2025 semester

### Hillfield Strathallan College Entrance Scholarship

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 2025-2026 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 2025 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.

### **Bursaries**

Each year, BASEF runs an outreach program where we provide financial assistance to students though a bursary. Bursaries of \$30 each may be awarded to Grade 7-12 students in BASEF's catchment area to assist with project-related expenses. Students, and teachers in care of students, can apply by filling out a form on our website.

New for the 2025 Fair, thanks to an anonymous donor, Arduino kits were also made available, free-of-charge to the students, as part of our outreach program. Each kit contained an Arduino microprocessor, a package of sensors and accessories, and a multimeter. With these components, the possibilities are endless for a student interested in completing a project in the fields of computer science and electronics. This new program was a great success and BASEF will be accepting applications for Arduino Kit bursaries for BASEF 2026 in late 2025.



### 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 2026, please reach out to <a href="mailto:chair@basef.ca">chair@basef.ca</a>.



# **BASEF 2025 Merit Award Judges**



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

Training for Merit Judges was held both on-line and in-person. We welcome many first-time judges in 2025. Thank you for sharing your talents with us!

The new Merit Judging Form that was introduced in 2024 was well-received by the judges. We are using it again in 2025. We have a

great turnout of Merit Judges this year. Each project is to be judged independently by typically four judges who are all 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, and I look forward to seeing you in 2026!"

- Donna Stack-Durward, Judge-In-Chief

- Indicates a merit judge who also serves as part of the safety inspection team. Please contact our safety lead at <a href="mailto:safety@basef.ca">safety@basef.ca</a> if you would like to serve as a safety inspector in the future.
- Indicates a category chair. Please contact our judge-in-chief at <u>judging@basef.ca</u> if you would like to serve as a category chair in the future.

		MERIT JUDGES 2025
	Aggarwal, Salonee	Ontario Government
Q	Alam, Nafiul	School
	Alexei, Andrea	McMaster University
	Arežina, Ana	Veolia Water Technologies & Solutions
	Balaban, Mariana	Norfolk County - Engineering, Environmental Infrastructure and Services
Q	Bandow, James	The Fossil Hill Group



	MERIT JUDGES 2025		
	Banerjee, Priya	Boston Scientific Corp	
	Barbato, Bev	Retired (Hamilton Health Sciences)	
	Barbera, Lidia	McMaster University	
Q	Bashir, Isra	Student at McMaster University	
	Batey, Penny	Penny's Learning Centre	
Q	Birch, Nigel	Alta Technology Ltd	
	Bochenski, Boguslaw	Hydro One Networks Inc.	
	Brusey, Barry	Retired (ArcelorMittal Dofasco)	
	<b>Burchett, Rebecca</b>	McMaster University	
	Butt, Javeria	Toronto General Hospital	
	Caldwell, Alice	McMaster University	
	Cao, Jennifer	Veolia Water Technologies & Solutions	
	Carr, Tim	Solodigitalis Inc.	
	Catacutan, Denise	McMaster University	
	Chen, Karen	Halton Healthcare	
	Chhiba, Ryan	Student at McMaster University	
	Chzhen, Maria	University of Toronto	
	Cooper, Ruth	SR&ED Division, CRA	
	Cowbrough, Braeden	McMaster University	
Q	Critchley, Stuart	Retired (ArcelorMittal Dofasco; Hatch)	
	Croft, Michael	Student at McMaster University	
	Cupido, Cynthia	McMaster University, Hamilton Health Sciences	
	Czebe, Andy	L3Harris Wescam	
	Dahal, Rajan	Hamilton Health Sciences	
	De Tina, Renato	Retired (ArcelorMittal Dofasco)	
	<b>Durward, Deanne</b>	Ramboll	
	Easo, Suzanne	Roche	
	Fagbuyi, Abiola	Hamilton Health Sciences	
	Fedoryshin, Laura	Saskatchewan Polytechnic	
	Forbes, James	Retired	
	French, Craig	Extreme Networks	
	Gail, Braden	PhD Student at University of Toronto	
	George, Teena	Khalsa Community School	
Q	Ghaffari, Anahita	Government of Canada	



	MERIT JUDGES 2025		
	Ghaffari, Ayda	Hamilton Wentworth District School Board	
	Ghoshdastidar, Jim (Avik)	McMaster University	
	Greenberg, Sharonna	McMaster University	
	Gupta, Itty	Elsie MacGill Secondary School	
	Hafezalseheh, Hesam	McMaster University	
Q	Hall-Bruce, Mikayla	McMaster University	
	Hämäläinen, Emma	MSc Student at McMaster University	
	Harris, Laura	Hamilton Wentworth District School Board	
	Harrison, Eric	Retired	
	Hazelden, Linda	Semi-Retired	
	Henry, Aleah	Veolia Water Technologies and Solutions	
	Hol, Adrienne	Avenue Physiotherapy	
	Howard, Dave	L. H. Schwindt & Company Inc.	
	Hucal, Adrian	University of Western Ontario	
	Hucal, Kalynna	Hamilton Health Sciences	
	Hucal, Lesia	Hamilton Wentworth Catholic District School Board	
	Intini, Kevin	Hamilton Stamping Ltd.	
	Jahan, Samiya	ArcelorMittal Dofasco	
	Jathar, Amit	OpenText	
	Jeung, Gordon	Ontario Power Generation	
	Johnson, Stephen	Thermo Fisher Scientific	
	Johnson, Warren	Retired (Secondary School Science Head)	
	Jordan, Gwyneth	Veolia Water Technologies and Solutions	
	Kim, Kate Kyuri	The Hospital for Sick Children	
	LaChapelle, Griffin	McMaster University	
	Lam, Shirley	Ramboll	
	LaRue, Ryan	WSP Canada	
Q	Lewis, Justin	AVAR Environmental Inc.	
	Liu, Gary	McMaster University	
	Lwin, Ye	N/A	
	MacAulay, Miranda	Dr. Jacob Optometry Corporation	
	MacLean, Lachlan	Student	
	Mahut, Andy	Semi-Retired	
	Maia, Susanne	Hamilton Health Sciences	



	MERIT	T JUDGES 2025
	Martin, Paul	Retired
	McNally, Mike	Retired
	Mendes Fonseca, Nizia	McMaster University
	Mepham, Jennifer	HWDSB/GEDSB/WRDSB
	Mercik, Aleks	PV Labs
Q	Morin, Shane	Retired (Xerox)
	Mulla, Dan	Postdoctoral Fellow at York University
	Niro, Gino	EngOL Inc.
	Noshin, Tasnia	McMaster University
	Obeid, Ahmad	CK Engineering Inc.
	Osterlund, Elizabeth	Postdoctoral Fellow at McMaster University
	Papuckoski, Simon	L3Harris Technologies
	Peers, Amanda	Halton District School Board
	Pepler, Meghan	McMaster University
	Perono, Genevieve	McMaster University
	Pinto Leao, João Paulo	Veolia Water Technologies and Solutions
	Poloniato, Len	Oakridge Group Inc.
	Prajapati, Poonam	Hamilton Health Sciences
	Putman, Scott	IT Force
	Qazi, Arish	ClaroNav Inc.
	Qazi, Nazish	University Health Network
	Rawson, Sam	Start Electric
	Reid, Dennis	Retired
	Renton, Pam	Retired Software Engineer (Wescam, MMRI)
	Robert, Celeste	Moreau
	Romanek, Virginia	McMaster University
	Romero, Raul	Future Talk
	Saenz de Miera, Mirnaly	CanmetMATERIALS
	Safranyos, Sharon	BeiGene Canada
	Sangueza, Julia	Mettler Toledo
	Savelli, Alicia	PhD Student at University of Toronto
Q	Schaefer, Janet	Homemaker
	Sengupta, Joydeep	ArcelorMittal Dofasco
_		

Hillfield Strathallan College

Q

Seto, Vanessa



MERIT JUDGES 2025		
	Shepard, Ben	Self-Employed
Q	Simpson, Mark	Retired (VP of Engineering and Operations)
	Singh, Inderjit	Culligan Water
	Snively, Nicole	Schneider Electric
Q	Soomro, Asfia	Scientist
	Stafrace, Amanda	Occasional Teacher at Appleby College
	Steele, Louise	Retired (Professional Engineer; Professor at Seneca College)
	Stefanchuk, Brian	Mohawk College
	Steffler, Matt	Habitat for Humanity
	Stegman, Kyle	McMaster University
	Stewart, Mark	McMaster Innovation Park
	Terbrack, Nathan	JNE Consulting
	Theron, Kiara	Hamilton Health Sciences - McMaster Children's Hospital
Q	Toth, Janice	Retired
	Turna, Shantel	Bentley Systems
Q	Van Riemsdijk, Isadora	Retired
Q	Vanderzwet, Lory	Retired (Mohawk College Engineering Technology)
	Vidican, Mihaela	Banking/Self-Employed
	Wagg, Terry	Retired (McMaster University)
Q	Walsh, Steven	Hamilton Public Health
	Wang, Lu	Retired
Q	Wehrle, Paul	Retired; Freelance IT Project Manager
	Wiater-Protas, Izabela	Syensqo
	Wilson, Anne-Marie	Retired (Hamilton Wentworth District School Board)
	Wolfsgruber, Steve	Alithya
	Wolfsgruber, Richard	Retired
	Wood, Jane	Retired (ArcelorMittal Dofasco)
	Wu, Christopher	Epson Canada Ltd.
	Xu, Tom	Halton Healthcare
Q	Yeaman, Shayne	ArcelorMittal Dofasco
Q	Young, Bruce	St Joseph's Healthcare Hamilton
Q	Yueh, Jeffrey	School
	Zheng, Zheng	Northeastern University Toronto Campus



## **BASEF 2025 Volunteers**

We would like to thank all of our volunteers who help to make BASEF 2025 possible! Please contact <u>volunteers@basef.ca</u> if you would like to serve as a BASEF volunteer in the future.

Q Indicates a member of the safety team

Indicates a member of the photography team

	Agullana, Nicole
	Al Hares, Alisar
Q	Aldrey, Liz
	Bates, Al
	Bercik, Erik
Q 🗖	Bowdish, Ryan
	Buchanan, Bernard
Q	Peter Child
Q	Enns, Terri
	Harold, Elise
	Hayhurst, Trevor
Q	Hayman, Cathy
Q	Hayman, Steve
	Hewitson, Scott
	Hood, Jamie
Q	Kops, Rita
	Kuttenkeuler, Christine
	LeBlanc, Maya

	Lee, Victoria
Qo	Lewis, Justin
	Mahut, Caroline
Qo	Novak, John
	Odejayi, Oluremi
Q	Reid, Dennis
Q	Schaefer, Richard
	Toth, Janice
	Trotta, Marc
	Vanderzwet Servos, Lorraine
	Vidican, Mihaela
	Woods, Selma
	Wabhan, Alia
Q	Wong, Kelly
	Yang, Wei

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Flickr: <a href="www.flickr.com/photos/team-basef">www.flickr.com/photos/team-basef</a>

■ Blog: www.basef.ca/blog/









# **BASEF 2025 Projects & Exhibitors**

### **School Boards Represented:**

**BHNCDSB** Brant Haldimand Norfolk Catholic District School Board

CSCMAConseil scolaire catholique MonAvenirGEDSBGrand Erie District School BoardHCDSBHalton Catholic District School Board

**HDSB** Halton District School Board

**HWCDSB** Hamilton-Wentworth Catholic District School Board

**HWDSB** Hamilton-Wentworth District School Board

**IND** Independent

# **Project Listings**

The project number hyperlinks to the project abstract and online listing... try it!

Proj. #	LAST NAME(S), FIRST NAME(s). "Project Title." Division, Level. School, Board.
<u>A01</u>	AL BENDER, TALA. "The 5 Second Rule. Is it real?" Life Sciences Non-Human, Junior 7/8. Charles R. Beaudoin Public School, HDSB.
<u>A02</u>	SARAVANAN, RAKSHAN. "Alak-AZA-m: An Ancient solution to say bye to E.Coli" Life Sciences Non-Human, Senior 11/12. Ancaster High, HWDSB.
<u>A04</u>	CHAUHAN, NEVAAN. "Animal and plant cells" Life Sciences Non-Human, Junior 7/8. St. Joseph, HWCDSB.
<u>A05</u>	EGO, CHARLOTTE & EGO, MAXWELL. "The Effect of Different Water Amounts and Soil Types on Bean and Tomato Plant Emergence" Life Sciences Non-Human, Junior 7/8. Our Lady of Mount Carmel, HWCDSB.
<u>A06</u>	KAUR, SAMREEN & VUKCEVIC, EMMA. "Microbe Mania" Life Sciences Non-Human, Junior 7/8. Charles R. Beaudoin Public School, HDSB.
<u>A07</u>	MALETIC, KLARA. "Investigating Animal Memory and Senses Using Guinea Pigs" Life Sciences Non-Human, Junior 7/8. St. Andrew Elementary School, HCDSB.
<u>A08</u>	VAN LOENEN, SYDNEY. "Battle of the Beds: Marigold Soil Showdown" Life Sciences Non-Human, Junior 7/8. Trinity Christian School, IND.
<u>A09</u>	BYRNE, CHARLIE. "The Five Second Rule: Fact or Fiction" Life Sciences Non-Human, Junior 7/8. Trinity Christian School, IND.
<u>A10</u>	RESCHKE, ABBY. "The Puppy Project Uncovering the Truth of Dogs' Favourite Colour" Life Sciences Non-Human, Junior 7/8. Trinity Christian School, IND.
A12	MELACINI, LARA. "How do varying concentrations of Dawn dish soap in water affect the germination rate of beans?" Life Sciences Non-Human, Senior 11/12. Westdale Secondary School, HWDSB.
<u>A13</u>	WARREN, EDITH. "Bacteria Be Gone" Life Sciences Non-Human, Junior 7/8. Oakville Christian School, IND.
<u>A14</u>	NECHIFOR, DIANA. "What is the Effect of Changing the Colour of Bell Peppers on their Vitamin C Concentration?" Life Sciences Non-Human, Senior 11/12. Westdale Secondary School, HWDSB.



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A16	LEIGHNINGER, PAUL. "How Do Different Temperatures Affect the Ripening Rates of Bananas" Life Sciences Non-Human, Senior 11/12. Westdale Secondary School, HWDSB.
<u>A17</u>	STOCKTON, ZABEL. "How does the type of flour fed to sourdough starter effect the volume growth after 24 hours?" Life Sciences Non-Human, Senior 11/12. Westdale Secondary School, HWDSB.
<u>A18</u>	JAGT, MEGAN. "Pawsitive Pups" Life Sciences Non-Human, Junior 7/8. Oakville Christian School, IND.
<u>B01</u>	GANDHI, ANYA & WALKER, EMMA. "Which of These 3 Marketing Strategies Could Be The Next Viral One?" Health Sciences Human, Junior 7/8. Dr. David R Williams, HDSB.
<u>B02</u>	EASO, ALEXANDER. "Tune into Treatment: Exploring Music's Therapeutic Potential in Alzheimer's Disease" Health Sciences Human, Intermediate 9/10. Waterdown District Secondary School, HWDSB.
<u>B03</u>	NAIR, SHRUTI & OBHI, JYOT. "Is the World Really That Bad?" Health Sciences Human, Junior 7/8. Frank Panabaker South, HWDSB.
<u>B04</u>	ALI, AYESHA. "Can sleeping less than 8 hours affect the Memory of a 12 to 13 year old?" Health Sciences Human, Junior 7/8. Al-Falah Islamic School, IND.
<u>B05</u>	ABBOTT, KEIRA & TUMMON, ZOE. "Are You Smarter Than A 7th Grader?" Health Sciences Human, Junior 7/8. C.H. Norton Public School, HDSB.
<u>B06</u>	EASO, SABRINA. "Allergy Erased? Exploring CRISPR in Peanut Allergy" Health Sciences Human, Junior 7/8. Balaclava, HWDSB.
<u>B07</u>	LIAGHATI, DANIEL. "Bronchitis Uncovered, the Science Behind Bronchitis" Health Sciences Human, Junior 7/8. Munn's Public School, HDSB.
<u>B08</u>	AMEEN, SUHA & XU, GLENNA. "Colour Psychology" Health Sciences Human, Junior 7/8. Sunningdale Public School, HDSB.
<u>B09</u>	XU, JACQUELINE. "The Effects of Placebo on Memory Recall" Health Sciences Human, Junior 7/8. Palermo Public School, HDSB.
<u>B10</u>	LIN, ABIGAIL. "Does Colour Affect Taste?" Health Sciences Human, Junior 7/8. St. Andrew Elementary School, HCDSB.
<u>B11</u>	AZEEM, SHAYAAN. "How do hypoxia scores and age impact survival of PAAD Cancer patients, and what patterns emerge?" Health Sciences Human, Senior 11/12. Westdale Secondary School, HWDSB.
<u>B12</u>	SALMAN, SAMEEHA. "Sound Check: White Noise, Music, or No Sound" Health Sciences Human, Junior 7/8. Al-Falah Islamic School, IND.
<u>B13</u>	BOYD, CONNOR & WU, JUNCHENG. "Anterconnected" Life Sciences Non-Human, Senior 11/12. Garth Webb Secondary School, HDSB.
B14	SOLOMON, GABRIEL. "Comparing microbes on household surfaces and testing for the best disinfectant" Life Sciences Non-Human, Intermediate 9/10. Assumption Secondary School, HCDSB.
<u>B15</u>	MEJIA PERFILIEV, SOFIA & RICKARD, PHOEBE. "Challenging the 5 second rule" Life Sciences Non-Human, Junior 7/8. Charles R. Beaudoin Public School, HDSB.
<u>B16</u>	WONDERS, ALEXANDRA. "Bottled water, is it really cleaner?" Life Sciences Non-Human, Junior 7/8. Palermo Public School, HDSB.



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<u>B17</u>	DIMIAN, MIRIAM & ROGULSKI-HOANG, AVA. "DNA UNCOVERED" Life Sciences Non-Human, Junior 7/8. St. Andrew Elementary School, HCDSB.
<u>B18</u>	GONG, ANNIE. "Investigating feeding efficiency in primitive Cambrian sponges using computational fluid dynamics" Life Sciences Non-Human, Senior 11/12. Appleby College, IND.
<u>C01</u>	SAFAVERDIAN, KIAN. "How to solve gastroesophageal reflux disease without the need of capsule endoscopy" Health Sciences Human, Junior 7/8. Munn's Public School, HDSB.
<u>C02</u>	DING, LANA & ZHU, SALENA. "The Role of Ascorbic Acid in Enhancing Melanoma Treatment through Oxidative Stress Modulation" Health Sciences Human, Intermediate 9/10. Oakville Trafalgar High School, HDSB.
<u>C03</u>	ALSAADI, SHAM. "Brain Drain: The Effects of Dehydration on Your Cognitive Functions" Health Sciences Human, Junior 7/8. Al-Falah Islamic School, IND.
<u>C04</u>	REINECKE, MAKAYLA. "Chew IQ" Health Sciences Human, Junior 7/8. Trinity Christian School, IND.
<u>C05</u>	NAIR, ABHIRAAM. "Method for Conducting a Systematic Literature Review: Social Media Use Among Young Adolescents" Health Sciences Human, Junior 7/8. St. Augustine, HWCDSB.
<u>C06</u>	TANG, CHURONG. "Inferring Biomarkers from UroA-treated Cell Transcriptome & CRC Cell Heterogeneity via Deep Learning" Biotechnology, Senior 11/12. Home Schooling, IND.
<u>C07</u>	PANNELLA, LIAM. "Fun With Fingers" Health Sciences Human, Junior 7/8. Oakville Christian School, IND.
<u>C08</u>	NAGASAKI, KIBO. "Models of selective metabolic control of amino acids and lipids by insulin" Health Sciences Human, Senior 11/12. Mentor College, IND.
<u>C09</u>	CHIACO, CLAREWYNN & IVANOV, MELANIA. "Visual Characteristic Perception Observatory" Health Sciences Human, Junior 7/8. St. Andrew Elementary School, HCDSB.
<u>C10</u>	KHALIL, AMMAR. "Evolution of the Human Digestive System" Health Sciences Human, Junior 7/8. Hawthorne Village Public School, HDSB.
<u>C11</u>	AMALADOSS, ANTONY. "Don't Believe Everything You See -(How Effective Are Children At Distinguishing Al vs. Human Images)" Health Sciences Human, Junior 7/8. Trinity Christian School, IND.
<u>C12</u>	ISHAQUE, FARAZA. "How does Art affect the brain?" Health Sciences Human, Junior 7/8. Rattlesnake Point Public School, HDSB.
<u>C14</u>	ZBIKOWSKI, AYDEN. "Why Do Soccer Injuries Happen & Where Do Those Injuries Occur" Health Sciences Human, Junior 7/8. Charles R. Beaudoin Public School, HDSB.
<u>C16</u>	FOUAGOU, LLOYD. "Impact of Different Levels Adrenaline on Alertness." Health Sciences Human, Senior 11/12. Westdale Secondary School, HWDSB.
<u>C18</u>	ROSELLE, MADELAINE & SHERBINO, JOCELYN. "Chew on this: the effect of chewing gum on memory retention in high school students" Health Sciences Human, Intermediate 9/10. Sherwood Secondary School, HWDSB.
<u>D01</u>	REDDIAR, MEGHA. "Forensic Psychology: For the Greater Good" Health Sciences Human, Junior 7/8. Hawthorne Village Public School, HDSB.
<u>D02</u>	ALI, MANAAL. "Slow to Heal: Unraveling Wound Recovery in Diabetes" Health Sciences Human, Junior 7/8. Al-Falah Islamic School, IND.



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<u>D03</u>	GALLENGER, MIYANA & KHALID, HANIYA. "Does no sleep affect your mood?" Health Sciences Human, Junior 7/8. Highview, HWDSB.
<u>D05</u>	WELCH, CALLIE. "Does screentime affect sleep" Health Sciences Human, Junior 7/8. Highview, HWDSB.
<u>D06</u>	ARMITAGE, CLAIRE. "Fruit Faceoff" Health Sciences Human, Junior 7/8. Trinity Christian School, IND.
<u>D07</u>	FATIMA, NOOR. "Is the heart more than a physical pump?" Health Sciences Human, Junior 7/8. Rattlesnake Point Public School, HDSB.
D08	MBUAGBAW, TATIANA. "Squeaky Clean" Health Sciences Human, Junior 7/8. St. Augustine, HWCDSB.
<u>D09</u>	CHARTRAND, ARYA & KNOWLES, OLIVIA. "Does age affect peripheral vision" Health Sciences Human, Junior 7/8. Highview, HWDSB.
<u>D10</u>	ANTO, CATHERINE & OLIVERI, DOMENICA. "Can Students Effectively Learn in Class While Texting?" Health Sciences Human, Junior 7/8. St. Andrew Elementary School, HCDSB.
<u>D12</u>	JOHNKUTTY, SAM & PARK, JIEUN. "Alzheimer's Disease: A Comparison of Current and Potential Treatments" Health Sciences Human, Intermediate 9/10. Bishop Tonnos Secondary School, HWCDSB.
<u>D13</u>	EMEDOH, JESSICA & JAMES, DARAMFON. "Sleep" Health Sciences Human, Junior 7/8. St. Scholastica School, HCDSB.
<u>D14</u>	JONES, PAISLEY. "Fluorescent Flashbacks" Health Sciences Human, Junior 7/8. Trinity Christian School, IND.
<u>D15</u>	CHANG, SHAWN & WU, ZHENG. "Music's Effect on Memory in Educational Settings" Health Sciences Human, Senior 11/12. White Oaks Secondary School, HDSB.
<u>D16</u>	MAJEWSKI, NICOLE. "Towards a Consens(e)us on Early Dementia Diagnosis: Sensory Symptoms as Subtype Differentiators" Health Sciences Human, Intermediate 9/10. Oakville Trafalgar High School, HDSB.
<u>D17</u>	LIAGHATI, LILY. "Inside the Mind: All About Brain Bleed" Health Sciences Human, Junior 7/8. Munn's Public School, HDSB.
<u>D18</u>	RUSTRIAN WHIJARES, SOFIA. "Hues Stopwatch" Health Sciences Human, Junior 7/8. Trinity Christian School, IND.
<u>E01</u>	HOLMAN, AVERY. "The Nose Knows" Health Sciences Human, Junior 7/8. Trinity Christian School, IND.
<u>E02</u>	GERGINOVA, CAMELIA & YUAN, RUTH. "Psychotropics On The Human Mind" Health Sciences Human, Junior 7/8. Sunningdale Public School, HDSB.
<u>E03</u>	NRI, MUNACHI. "Colour Psychology" Health Sciences Human, Junior 7/8. St. Scholastica School, HCDSB.
<u>E04</u>	BILAL, ZAINAB. "What Factors Influence the Compromise Effect of Decision-Making?" Health Sciences Human, Junior 7/8. Al-Falah Islamic School, IND.
<u>E05</u>	NUSCA, TRINITY. "Classifying music using numbers" Health Sciences Human, Senior 11/12. ESC Sainte-Trinité, CSCMA.
<u>E06</u>	LODDER, HARPER. "The Colour Effect" Health Sciences Human, Junior 7/8. Trinity Christian School, IND.



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<u>E07</u>	SUN, MICAH. "PAAD Diagnosis & Prognosis using novel glycolysis-related gene signatures with machine learning" Biotechnology, Junior 7/8. Hawthorne Village Public School, HDSB.
<u>E08</u>	SOWDAGAR, HIBA. "Role of Tumour Infiltrating Lymphocytes (TILs) Therapy in Predicting Treatment Response in Melanoma" Biotechnology, Intermediate 9/10. Ancaster High, HWDSB.
<u>E09</u>	HORSFALL-OKO, GABRIELLA & VALDES GARCIA, VERONICA. "Dandruff?" Biotechnology, Junior 7/8. St. Scholastica School, HCDSB.
<u>E10</u>	SELVAKKUMARAN, PARI. "Electro-Plants: Harvest Green Energy From Plants" Biotechnology, Junior 7/8. Charles R. Beaudoin Public School, HDSB.
<u>E11</u>	WASEEM, ZOYA. "The Cancer MIRACLE A Novel Diagnostic Model Using Salivary miRNA Profiling for Oral Cancer Detection" Biotechnology, Intermediate 9/10. White Oaks Secondary School, HDSB.
<u>E12</u>	LEVIE, ALEX & SZYMALA, WERONIKA. "The Artificial Pancreas 2.0" Biotechnology, Senior 11/12. Bishop Ryan Secondary School, HWCDSB.
<u>E13</u>	ATAYA, JUNNAH. "The difference in effectiveness of neutralisation of HCl between difference brands of antacids" Biotechnology, Senior 11/12. Westdale Secondary School, HWDSB.
<u>E15</u>	GHEVA, SARAH & PARSONS, EMAYA. "S.E. Sunglasses" Biotechnology, Junior 7/8. Rolling Meadows Public School, HDSB.
<u>E16</u>	CHAN, HANNAH & MIRZA, AIZA. "Effects of different cleaning products on bacteria" Biotechnology, Junior 7/8. Dr. David R Williams, HDSB.
<u>E17</u>	PEREA, JADE ANNE & VELEZ-GOMEZ, SALOME. "Urine Luck" Biotechnology, Junior 7/8. St. Scholastica School, HCDSB.
<u>E18</u>	KARTHIK, AKSHITA. "Saffron, a Natural Replicant for Serotonin?" Biotechnology, Intermediate 9/10. Garth Webb Secondary School, HDSB.
<u>F03</u>	PARIKH, AYAN & SUN, GAVIN. "Pesticides - The Effects on Fruits" Phys & Math Sci, Junior 7/8. Charles R. Beaudoin Public School, HDSB.
F04	HIBBERT, JAXON & NABI, WAFI. "Launch Angles & Football Distance" Phys & Math Sci, Junior 7/8. Highview, HWDSB.
<u>F05</u>	ABDULLAH, MUHAMMAD. "Viscosity Of Motor Oil" Phys & Math Sci, Junior 7/8. Oxford Learning Academy, IND.
F06	BASHIR, QASSIM. "The Perfect Book" Phys & Math Sci, Junior 7/8. Sir William Osler, HWDSB.
<u>F07</u>	ROOPRAI, JASMEET. "Soccer Kick Velocity Experiment - Effect of Shoe Types on Ball Speed and Accuracy" Phys & Math Sci, Junior 7/8. Munn's Public School, HDSB.
F08	ALY, YOUSSEF. "Odysseus's Challenge" Phys & Math Sci, Junior 7/8. Highview, HWDSB.
<u>F09</u>	ROBERTS, ANNABELLE & YUN, CELINA. "Interstellar Travel" Phys & Math Sci, Junior 7/8. St. Andrew Elementary School, HCDSB.
<u>F10</u>	FULLER, OLIVIA & RYCKMAN, RYLEIGH. "What type of solution makes the bubble last longer" Phys & Math Sci, Junior 7/8. Highview, HWDSB.
<u>F11</u>	KAMINSKI, LUCAS. "The Impact Of Cold Temperatures On Electric Motors" Phys & Math Sci, Junior 7/8. Trinity Christian School, IND.
F12	KAR, VIVAAN & RAO, RAHUL. "The Power of Pectin: Attenuating Toxic By-Products for Enhanced Hydrogel Drug Delivery" Biotechnology, Junior 7/8. W. H. Morden Public School, HDSB.



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F13	SRIVASTAVA, DAKSH. "CRISPRecise: A Novel Low-Cost Non-Invasive HCC Treatment Harnessing CRISPR-engineered probiotics" Biotechnology, Intermediate 9/10. Iroquois Ridge High School, HDSB.
<u>F14</u>	MERCHANT, SAHANA & VORA, NESSA. "The mRNA Folding Problem: Optimizing PolyRNA Sequences in mRNA Vaccines for Pancreatic Cancer" Biotechnology, Junior 7/8. W. H. Morden Public School, HDSB.
<u>F15</u>	AHMAD, MUHAMMAD. "Microscopic Mystics" Biotechnology, Junior 7/8. Al-Falah Islamic School, IND.
<u>F16</u>	LIU, MICHELLE & WANG, HANNAH. "How Can We Modify Bandages to Improve and Accelerate the Process of Healing" Biotechnology, Junior 7/8. W. H. Morden Public School, HDSB.
<u>F17</u>	SHCHERBAKOV, PHILLIP. "Different Types of Fertilizers and their effect on Radishes" Biotechnology, Junior 7/8. Munn's Public School, HDSB.
<u>F18</u>	DUAN, EVA & EUM, TAEYEON. "Sodium Alginate-Chitosan Hydrogel Burn Wound Dressing with pH-Sensitive Infection Detection" Biotechnology, Intermediate 9/10. Oakville Trafalgar High School, HDSB.
<u>G01</u>	ATA UL HAQUE, FATIMA & KAKWANI, VARNIKA. "Seaweed Bioplastic" Phys & Math Sci, Junior 7/8. Rattlesnake Point Public School, HDSB.
<b>G02</b>	GALLO, ALEXIS. "How to make a lava lap" Phys & Math Sci, Junior 7/8. Highview, HWDSB.
<u>G03</u>	ASRAR, OMAR. "Electricity's Magic" Phys & Math Sci, Junior 7/8. Oxford Learning Academy, IND.
<u>G04</u>	ELSHERBENI, FARIDA & SNAPE, CLARA. "More Bomb For Your Buck" Phys & Math Sci, Junior 7/8. W. H. Morden Public School, HDSB.
<u>G05</u>	BARBERA, KATIE. "Crochet as a Method for Modeling Advanced Mathematical Surfaces: Hyperbolic Geometry and Knot Theory" Phys & Math Sci, Senior 11/12. Cathedral High School, HWCDSB.
<u>G06</u>	KIM, GRACE. "Heated VS Frozen The Golf Ball Showdown" Phys & Math Sci, Junior 7/8. Trinity Christian School, IND.
<u>G07</u>	BALKISSOON, DECLAN. "CARBON FILTERS!" Phys & Math Sci, Junior 7/8. Oxford Learning Academy, IND.
<u>G08</u>	ALEXANDER, ALYSSA. "How does baking time impact the Vitamin C concentration in red bell pepper?" Phys & Math Sci, Senior 11/12. Westdale Secondary School, HWDSB.
<u>G10</u>	NAJBOR, BEN. "Viscosity - Which liquid is more dense?" Phys & Math Sci, Junior 7/8. Highview, HWDSB.
<u>G11</u>	SANDHU, SOFIA. "Afterglow" Phys & Math Sci, Junior 7/8. Oxford Learning Academy, IND.
<u>G12</u>	LAMMERS, MICHELLE. "Frostbitten Batteries" Phys & Math Sci, Junior 7/8. Trinity Christian School, IND.
<u>G14</u>	ALKAISI, ADAM. "Temperature Loss In A Dead Orange" Phys & Math Sci, Junior 7/8. Oxford Learning Academy, IND.
<u>G15</u>	FALOWO, MODUPE & PATEL, KARINA. "Pop Pop Popping Boba!!!" Phys & Math Sci, Junior 7/8. Oakville Christian School, IND.
<u>G17</u>	FUNG, JAMES. "Apple Oxidation" Phys & Math Sci, Junior 7/8. St. Andrew Elementary School, HCDSB.



<u>G18</u>	DAGG, NATE. "Bewildering Bioplastics" Phys & Math Sci, Junior 7/8. Charles R. Beaudoin Public School, HDSB.
<u>H02</u>	KUDALE, ARNNAV. "CropGuardian: A 3D-Printed Drone with Intelligent Crop Monitoring" Eng & Comp Sci, Intermediate 9/10. White Oaks Secondary School, HDSB.
<u>H03</u>	FRYDMAN, ANDRE & MAWJI, AYAAN. "PingPoint Vision: Personal Table Tennis Coach" Eng & Comp Sci, Junior 7/8. John William Boich Public School, HDSB.
<u>H04</u>	MABAYYED, MAYA & MALHOTRA, ISHITA. "EcoFlow: Using Biomimetic Filtration Systems to Capture Plastic Pollution" Eng & Comp Sci, Intermediate 9/10. Burlington Central High School, HDSB.
<u>H05</u>	MAGAGULA, HLELO. "Bubble nurture" Eng & Comp Sci, Junior 7/8. Our Lady of the Assumption, HWCDSB.
<u>H06</u>	DI NICOLA, GABRIEL & PICCOLI, LUCA. "Urban Health Index: A Novel Approach to Modelling Sociodemographic Disparities in Hamilton" Phys & Math Sci, Junior 7/8. Our Lady of Peace, HWCDSB.
<u>H07</u>	GHORI, SHANZAY. "How do different food substances react to the Kastle-Myer Blood Test?" Phys & Math Sci, Junior 7/8. Al-Falah Islamic School, IND.
<u>H08</u>	JAMES, RYAN. "Investigation on the comparison of the different amounts of Calcium in different types of milks" Phys & Math Sci, Senior 11/12. Westdale Secondary School, HWDSB.
<u>H09</u>	GARG, SHIVI. "Drain The Tank!" Phys & Math Sci, Junior 7/8. Oxford Learning Academy, IND.
<u>H10</u>	JAVIDI, GLAREEN. "Waterproofing with Charcoal: How Does Adding Charcoal Affect Bioplastic?" Phys & Math Sci, Junior 7/8. Munn's Public School, HDSB.
<u>H11</u>	MOHANTY, ARYAN. "FruitPlast: Pioneering Sustainable Plastic Production from Fruit Waste" Phys & Math Sci, Junior 7/8. Dr. David R Williams, HDSB.
<u>H12</u>	AKANNI, SINDARA. "Hydration Exploration" Phys & Math Sci, Junior 7/8. Oakville Christian School, IND.
<u>H13</u>	HOARE, NOLAN. "Rust: Can We Prevent It?" Phys & Math Sci, Junior 7/8. St. Joachim, HWCDSB.
<u>H14</u>	MERIFIELD, NOAH. "what is the fastest way to empty a water bottle" Phys & Math Sci, Junior 7/8. Highview, HWDSB.
<u>H15</u>	ALAM, ESHAL. "Electric generators v.s. batteries, which is better for emergency power?" Phys & Math Sci, Intermediate 9/10. Milton District High School, HDSB.
<u>H16</u>	ARMITAGE, NATE. "Golf Ball Brawl" Phys & Math Sci, Junior 7/8. Trinity Christian School, IND.
<u>H17</u>	BENDING, ALEX. "How temp affects timing of pickeling" Phys & Math Sci, Junior 7/8. Highview, HWDSB.
<u>J02</u>	HAZRA, DEVAN. "Cataract Attack App: ML Powered Cataract Diagnosis using User Taken Images" Eng & Comp Sci, Junior 7/8. W. H. Morden Public School, HDSB.
<u>J03</u>	IPWANSHEK, GABRIELLA. "A Novel Machine Learning Model for Noninvasive Diagnosis of Endometriosis" Eng & Comp Sci, Intermediate 9/10. White Oaks Secondary School, HDSB.
<u>J04</u>	ANAND, ANANYA. "Woof2Words: The dog translator that translates dog barks into basic human text." Eng & Comp Sci, Junior 7/8. Hawthorne Village Public School, HDSB.
<u>J05</u>	ABOU-ASSALEH, EMMALINA & SU, EMMA. "From Flex to Text: A Novel Muscle Communication System Utilizing Electromyography" Eng & Comp Sci, Junior 7/8. W. H. Morden Public School, HDSB.



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<u>J06</u>	CHATHAROO, KEYAAN. "Solaris - Solar Car" Eng & Comp Sci, Junior 7/8. Rattlesnake Point Public School, HDSB.
<u>J07</u>	ORPHANOS, RACHAEL. "Special Weather Statement: Infrastructure VS Climate Change." Eng & Comp Sci, Junior 7/8. Hawthorne Village Public School, HDSB.
<u>J08</u>	KIRAN, YUTI. "The Coral Shield" Eng & Comp Sci, Junior 7/8. John William Boich Public School, HDSB.
<u>J09</u>	MARSH, CLAIRE. "Autism Identification Tool: An Al Approach to Reducing Diagnostic Barriers" Eng & Comp Sci, Senior 11/12. M. M. Robinson High School, HDSB.
<u>J10</u>	PARANTHAMAN, VAISANNYA. "Smart Breath for COPD Slogan: Breath Deep, Live Better" Eng & Comp Sci, Intermediate 9/10. St. Kateri Tekakwitha, HCDSB.
<u>J12</u>	BHATTI, ALINA & BHATTI, SOFIA. "Lung Lens" Eng & Comp Sci, Junior 7/8. Al-Falah Islamic School, IND.
<u>J13</u>	BELWALKER, SMIRA & ROBB, ALLIE. "The AquaOrb" Eng & Comp Sci, Junior 7/8. John William Boich Public School, HDSB.
<u>J15</u>	BULATOVIC STOJANOVIC, ELENA & NAGARAJAN, SREEJA. "Anxie-BYE - A novel device that uses musical therapy to help those with Anxiety Disorders" Eng & Comp Sci, Junior 7/8. Charles R. Beaudoin Public School, HDSB.
<u>J16</u>	HUANG, TIFFANY. "Diagnosing Basal Cell Carcinoma with A.I" Eng & Comp Sci, Junior 7/8. Cathy Wever, HWDSB.
<u>J17</u>	ARAVIND, KRISH & HASHMI, MOIZ. "Revolutionizing Water Generation: Enhancing Atmospheric Water Harvesting with Piezoelectric Technolo" Eng & Comp Sci, Senior 11/12. White Oaks Secondary School, HDSB.
<u>K01</u>	ROSIEN, SOPHIA & ZHENG, WENDY. "S.O.U.P." Eng & Comp Sci, Junior 7/8. Rolling Meadows Public School, HDSB.
<u>K02</u>	SALIM, KHAYLA. "Let's Chat!" Eng & Comp Sci, Senior 11/12. North Park Collegiate and Vocational School, GEDSB.
<u>K03</u>	KHAN, NABIHA. "The Trigger Turbine: Improving wind turbines for a cleaner future" Eng & Comp Sci, Junior 7/8. Rattlesnake Point Public School, HDSB.
<u>K04</u>	KASHYAP, SHRIYAK & KHAN, FAIZAN. "Clear Energy: Exploring the Potential of Transparent Solar Panels" Eng & Comp Sci, Senior 11/12. Assumption College School, BHNCDSB.
<u>K05</u>	AVERY, IAN & MCALEESE, VAN. "Cart Compass" Eng & Comp Sci, Junior 7/8. Our Lady of the Assumption, HWCDSB.
<u>K06</u>	BYREDDY, SAI ISHANTH REDDY. "ECHBTDA: Enchancing Codon Optimization via Hybrid BiLSTM and Transformer Deep Learning Approach" Eng & Comp Sci, Senior 11/12. Craig Kielburger Secondary, HDSB.
<u>K07</u>	HE, WESLEY & TSUI, JAYDEN. "From Fibers to Filters: Stopping Microplastic Pollution at the Source" Eng & Comp Sci, Junior 7/8. W. H. Morden Public School, HDSB.
<u>K08</u>	GOUD, NETRA & JABER, YARA. "NewU" Eng & Comp Sci, Junior 7/8. Rattlesnake Point Public School, HDSB.
<u>K09</u>	IRELAND, REGAN & SAMMY, SERENA. "Slumber Solutions" Eng & Comp Sci, Junior 7/8. John William Boich Public School, HDSB.
<u>K10</u>	THOMAS, MATTHEW. "From Thin Air" Eng & Comp Sci, Junior 7/8. St. Augustine, HWCDSB.



Proj. #	LAST NAME(S), FIRST NAME(s). "Project Title." Division, Level. School, Board.
<u>K11</u>	RASHID, NABIRA & RASTOGI, MAITHILI. "Innovating Solar Technology: Natural Dye- Sensitized Cells for Sustainable Energy Solutions" Eng & Comp Sci, Senior 11/12. White Oaks Secondary School, HDSB.
<u>K12</u>	KAUR, ASHMEET. "The Robo Recycler" Eng & Comp Sci, Junior 7/8. John William Boich Public School, HDSB.
<u>K13</u>	JENEWAY, HARRY. "Can I Blame My Ball" Eng & Comp Sci, Junior 7/8. Oakville Christian School, IND.
<u>K14</u>	SIDDIQUE, USMAN. "Gravity Powered Water Fountain" Eng & Comp Sci, Junior 7/8. Al-Falah Islamic School, IND.
<u>K15</u>	ELNOUR, MAJD. "Build simple electric motor ." Eng & Comp Sci, Junior 7/8. Oxford Learning Academy, IND.
<u>K16</u>	MCCONKEY, OWEN & VOYTEK, DAVIS. "How safe are Bike helmets" Health Sciences Human, Junior 7/8. Charles R. Beaudoin Public School, HDSB.
<u>K17</u>	DARLING, EMILY & DWARKA, ELYSIA. "CurrentCleaner - Trash Collector and Water Filter" Eng & Comp Sci, Junior 7/8. John William Boich Public School, HDSB.
<u>K18</u>	CHAN CARUSONE, SENNA. "Unmanned Underwater Vehicles to Scale the Delivery of Coral Probiotics" Eng & Comp Sci, Intermediate 9/10. Burlington Central High School, HDSB.
<u>L01</u>	MEDINA, SOFIA & OSMAN, MALAK. "Earthquake Safe!" Eng & Comp Sci, Junior 7/8. Charles R. Beaudoin Public School, HDSB.
<u>L02</u>	MEHR, ARIANA & SHAIJU, JULIAN. "EpiGo: An Advanced and Optimized Approach for the Detection and Intervention of Allergic Reactions" Eng & Comp Sci, Senior 11/12. Bishop P. F. Reding Secondary School, HCDSB.
<u>L04</u>	ALPER, EGE & VAVILLA, ARNAV. "BioPeel" Eng & Comp Sci, Junior 7/8. John William Boich Public School, HDSB.
<u>L05</u>	MANNING, KALLEM. "Healthy Competition: Optimizing Physical and Mental Health Using an Al-Supported Fitness Tracker" Eng & Comp Sci, Senior 11/12. M. M. Robinson High School, HDSB.
<u>L06</u>	JAIN, TIARA. "PulseMate - Your Health, Always in Check" Eng & Comp Sci, Junior 7/8. John William Boich Public School, HDSB.
<u>L07</u>	ESKANDER, SOFIA. "Humans vs Robots" Eng & Comp Sci, Junior 7/8. Oakville Christian School, IND.
<u>L08</u>	BANERJEE, NINA & MCINTOSH, DARCY. "ActiveEnergy" Eng & Comp Sci, Junior 7/8. John William Boich Public School, HDSB.
<u>L09</u>	LIU, DOLPHIN & MEI, JIYANG. "No Eye Know The Way" Eng & Comp Sci, Junior 7/8. W. H. Morden Public School, HDSB.
<u>L10</u>	IGBINOSUN, SAMUEL & JAUHARI, VIAAN. "Road Network Efficiency Predictor" Eng & Comp Sci, Junior 7/8. Charles R. Beaudoin Public School, HDSB.
<u>L11</u>	POWELL, FLORENCE. "From Grey To Green; can drones improve our cities?" Eng & Comp Sci, Junior 7/8. Frontenac Public School, HDSB.
<u>L13</u>	ADEDIGBA, OLUWANIFEMI. "Model of Hydro-electricty" Eng & Comp Sci, Junior 7/8. St. Scholastica School, HCDSB.
<u>L14</u>	CHEERS, LUKE & HINDMARSH, ASHTON. "Hamilton Harbour Hero" Eng & Comp Sci, Junior 7/8. St. Bernadette, HWCDSB.



Proj. #	LAST NAME(S), FIRST NAME(s). "Project Title." Division, Level. School, Board.
<u>L15</u>	LI, CALEB & PATEL, NIREK. "Energy Shortage Exploration: Solutions for Underserved Communities" Eng & Comp Sci, Senior 11/12. Oakville Trafalgar High School, HDSB.
<u>L16</u>	HAN, QIANHAO. "Honeycomb-Inspired Concussion Protection Helmet with Intelligent EEG Feedback System" Eng & Comp Sci, Intermediate 9/10. The Bishop Strachan School, IND.
<u>L17</u>	BLAKE, ALEXANDER & GILANI, HUMZA. "Empowering The Disabled With Affordable Mind Controlled Technology" Eng & Comp Sci, Junior 7/8. W. H. Morden Public School, HDSB.
<u>L18</u>	ZHU, DANIEL. "Innovative Quadruped Spider-Inspired SAR Robot Simulation Using Proximal Policy Optimization RL" Eng & Comp Sci, Intermediate 9/10. Abbey Park High School, HDSB.
<u>M02</u>	SHAIKH, HUDA. "Aquatic Plant Crisis" Earth & Env Sci, Junior 7/8. Al-Falah Islamic School, IND.
<u>M03</u>	PARANTHAMAN, VAIBAVV. "Tiny is Mighy (Impact on nano/micro plastic in the environment)" Earth & Env Sci, Intermediate 9/10. St. Kateri Tekakwitha, HCDSB.
<u>M04</u>	ARAYA, ZACHARAYA. "Multiple Factor Regression Analysis of Climate and Topographical Factors on Wildfire Size in BC" Earth & Env Sci, Senior 11/12. Abbey Park High School, HDSB.
<u>M05</u>	MA, JACOB & SHUAI, CANDICE. "Bioplastics : The Key To A Better Future" Earth & Env Sci, Junior 7/8. W. H. Morden Public School, HDSB.
<u>M06</u>	WADEHRA, RAIMA. "A Study on the Hadalpelagic Zone and How We Can Further Explore It." Earth & Env Sci, Junior 7/8. Hawthorne Village Public School, HDSB.
<u>M07</u>	BAJWA, KHADIJA. "How Do Different Water Filter Brands Affect pH, TDS, and Turbidity of Drinking Water" Earth & Env Sci, Junior 7/8. Al-Falah Islamic School, IND.
<u>M08</u>	BOYD, TRISTAN & SARUN, TANUSH. "Are Biodegradable Plastics a Viable Replacement for Single-use Plastics?" Earth & Env Sci, Senior 11/12. Garth Webb Secondary School, HDSB.
<u>M09</u>	MCKENZIE, LORNA & MCKENZIE, ROBERT. "Is There a Relationship Between Temperature and Tornado Frequency in Ontario?" Earth & Env Sci, Junior 7/8. Charles R. Beaudoin Public School, HDSB.
<u>M10</u>	HAN, RYAN & IRUMHEKHA, DANIEL. "The Future of Sustainable Packaging: A Comparative Biodegradation Study" Earth & Env Sci, Senior 11/12. King's Christian Collegiate, IND.
<u>M11</u>	HANNA, CELINA. "Green Growth" Earth & Env Sci, Junior 7/8. Oakville Christian School, IND.
<u>M13</u>	BOOTH, CHLOE & PINFOLD, SHAUNTEL. "Solving the mystery of the Bermuda triangle" Earth & Env Sci, Junior 7/8. Hawthorne Village Public School, HDSB.
<u>M15</u>	SU, IRENE & XU, ROSE. "EcoClear: An Efficient Way To Reduce Recycling Contamination" Eng & Comp Sci, Junior 7/8. Munn's Public School, HDSB.
<u>M16</u>	KHAN, KADEN & YANG, JOSHUA. "Lip Reading Made Simple for Deaf People" Eng & Comp Sci, Junior 7/8. Frank Panabaker South, HWDSB.
<u>M17</u>	FAISAL, ABIHA. "Cybertruck Analysis: Tough, Rough, or Just a Bluff?" Eng & Comp Sci, Intermediate 9/10. St. Kateri Tekakwitha, HCDSB.
<u>M18</u>	CHEN, ELLA & LI, EVELYN. "The James Webb Space Telescope and how it can improve deep sea exploration" Eng & Comp Sci, Junior 7/8. Munn's Public School, HDSB.
<u>N01</u>	GUPTA, AADYA. "The Journey of DNA" Life Sciences Non-Human, Intermediate 9/10. Westmount Secondary School, HWDSB.
<u>N02</u>	MAH, EVELYN. "Let There Be Light" Life Sciences Non-Human, Junior 7/8. Trinity Christian School, IND.



Proj. #	LAST NAME(S), FIRST NAME(s). "Project Title." Division, Level. School, Board.
<u>N03</u>	GOLEC, ALLISTER & NUNES, SEBASTIAN. "Building the Perfect Greenhouse" Life Sciences Non-Human, Junior 7/8. Charles R. Beaudoin Public School, HDSB.
<u>N04</u>	SCHROTH, LUKAS. "Discovering Bacteria on Surfaces" Life Sciences Non-Human, Junior 7/8. Oakville Christian School, IND.
<u>N05</u>	DENG, ALEX. "Food Under Attack: Which Preservation Method Works Best?" Life Sciences Non-Human, Junior 7/8. Pilgrim Wood Public School, HDSB.
<u>N06</u>	FAROOQ, SOFIA & KHURRAM, EIMAMA. " 5 Second Rule?" Life Sciences Non-Human, Junior 7/8. Rattlesnake Point Public School, HDSB.
<u>N07</u>	KIM, SHIYOON. "Impact of Colour Combinations on Photosynthetic Rate" Life Sciences Non-Human, Senior 11/12. Westdale Secondary School, HWDSB.
<u>N09</u>	ALLANKI, DHANVITHA & ZAMAN, FATIMA. "Does music improve the way you study" Health Sciences Human, Junior 7/8. Rattlesnake Point Public School, HDSB.
<u>N10</u>	RAJENDRAN, POOJA SREE. "The Cognitive Power of Tertiary Colors" Health Sciences Human, Junior 7/8. John William Boich Public School, HDSB.
<u>N11</u>	LEBLANC, JACOB MICHAEL. "Re-evaluating AQHI: A New Model for Assessing Wildfire Smoke and Benzo(a)pyrene Health Risks" Health Sciences Human, Intermediate 9/10. Abbey Park High School, HDSB.
<u>N12</u>	THANOS, ELIAS. "The Hippocrates System" Biotechnology, Junior 7/8. Trinity Christian School, IND.
<u>N13</u>	BADARALA, LOHITAKSH. "Q-CaDD: Accelerating In Silico Methodologies with Quantum Computation and Machine Learning for EGFR" Biotechnology, Junior 7/8. Bruce Trail Public School, HDSB.
<u>N14</u>	KHADHOORI, HASHIM & KIM, MINJAE. "Development of an Arduino-Based ECG Monitoring System for Cardiac Abnormality Detection" Biotechnology, Intermediate 9/10. Garth Webb Secondary School, HDSB.
<u>N15</u>	BARKMAN, TRISTAN. "A Turbulence Model Based on Kinetic Molecular Collisions" Phys & Math Sci, Senior 11/12. Home Schooling, IND.
<u>N16</u>	ENG, STEPHANIE. "Solar-Powered Water Purifier" Phys & Math Sci, Junior 7/8. Pilgrim Wood Public School, HDSB.
<u>N18</u>	BASIC, GABRIELA & LUFINAMA, BERNISE. "Crystallization Station" Phys & Math Sci, Junior 7/8. St. Scholastica School, HCDSB.
<u>N19</u>	DAYA, KADEN. "IEC Fusion Medicine" Phys & Math Sci, Junior 7/8. W. H. Morden Public School, HDSB.
<u>N20</u>	STORSLEY, LOGAN. "Pitching It Up" Phys & Math Sci, Junior 7/8. Oakville Christian School, IND.
<u>P01</u>	MCDERMOTT, LIAM. "Dodging Doomsday: Simulating Al-Powered Asteroid Deflection" Phys & Math Sci, Intermediate 9/10. North Park Collegiate and Vocational School, GEDSB.
<u>P02</u>	HUFFMAN, RYLAN. "How Does Flex Affect Your Shot?" Phys & Math Sci, Junior 7/8. Highview, HWDSB.
<u>P03</u>	FONSEKA, AKAIN. "Using AI to Predict Cancer Risk Based on Lifestyle Data" Eng & Comp Sci, Junior 7/8. St. Matthew, HWCDSB.
P04	PYARASANI, HASINI. "Eco-Bunny" Eng & Comp Sci, Junior 7/8. Dr. David R Williams, HDSB.
<u>P05</u>	TRIVEDI, JHEEL. "Salus AI" Eng & Comp Sci, Junior 7/8. W. H. Morden Public School, HDSB.



Proj. #	LAST NAME(S), FIRST NAME(s). "Project Title." Division, Level. School, Board.
<u>P06</u>	ALI, SAFA. "Impact of Artificial Intelligence based Reading and Educational Support (AIRES) on Grade 1" Eng & Comp Sci, Junior 7/8. Hawthorne Village Public School, HDSB.
<u>P07</u>	ARUNAMANIVANNAN, AKSHATH SVAMIN & SHAHANI, NIRVAN. "Nimbus AI" Eng & Comp Sci, Junior 7/8. Rattlesnake Point Public School, HDSB.
<u>P08</u>	ALSAADI, BAHAA & ALSAADI, ZENA. "Bits to Bedside: An Ingenious Exploration of Machine Learning in Triage Assessments (Continued)" Eng & Comp Sci, Senior 11/12. Bishop P. F. Reding Secondary School, HCDSB.
<u>P09</u>	SURI, RANBIR. "The Speed and Impact Tracker" Eng & Comp Sci, Intermediate 9/10. Burlington Central High School, HDSB.
<u>P10</u>	MAGUIRE, CONNOR. "I am Getting Winded" Eng & Comp Sci, Intermediate 9/10. North Park Collegiate and Vocational School, GEDSB.
<u>P11</u>	BUDZ, EVAN. "Development of an Autonomous Bionic Sea Turtle Robot to Conduct Ecological Monitoring using Al" Eng & Comp Sci, Intermediate 9/10. Dr. Frank J. Hayden Secondary School, HDSB.
<u>P12</u>	LUO, BONNIE. "ParkClean Duo: A Drone Guided Tank Robot for Park Waste Detection and Cleanup" Eng & Comp Sci, Intermediate 9/10. White Oaks Secondary School, HDSB.
<u>P13</u>	DHOTHER, MIA & IPWANSHEK, SOPHIE. "How loud is too loud?" Eng & Comp Sci, Junior 7/8. Dr. David R Williams, HDSB.
<u>P14</u>	FAROOQI, MUHAMMAD ABDULLAH. "Navigation Testing On A Line Following Car" Eng & Comp Sci, Junior 7/8. Al-Falah Islamic School, IND.
<u>P15</u>	ROSENBOOM, ADRIANNA. "EzFashion" Eng & Comp Sci, Junior 7/8. John William Boich Public School, HDSB.
<u>P16</u>	FARAG, GABRIEL. "Game On" Eng & Comp Sci, Junior 7/8. Oakville Christian School, IND.
<u>P17</u>	ARUN, MRITTIKA. "DiagnoScribe AI - GenAl Agent to Automate Diagnostic Prescriptions" Eng & Comp Sci, Junior 7/8. John William Boich Public School, HDSB.
<u>P18</u>	WANG, JASMINE. "Wildfire Detection and Prediction system using a Sequential Transformer model for improved accuracy" Eng & Comp Sci, Intermediate 9/10. Iroquois Ridge High School, HDSB.
<u>P20</u>	WANG, ANDY. "Decoding the Gut: Al-Powered Predictive Analysis of Gut Microbiome for Early Disease Detection" Eng & Comp Sci, Intermediate 9/10. Oakville Trafalgar High School, HDSB.
<u>P21</u>	QIN, YUYANG & ZHANG, JIAHE. "Fresh Water- Innovation for More Sustainable and Cost- Efficient Water Filter System" Eng & Comp Sci, Senior 11/12. Hillfield Strathallan College, IND.
<u>P22</u>	PONNAMBALAM, KARTHIK. "Third Eye: An Innovative Assistive Vision System Leveraging Object Detection for Visually Impaired" Eng & Comp Sci, Junior 7/8. Hillfield Strathallan College, IND.
<u>P23</u>	LEBLANC, JORDAN. "Mind-Motion: An EEG-Powered Robotic Exoskeleton for FMD Patients" Eng & Comp Sci, Junior 7/8. St. Matthew Elementary School, HCDSB.
<u>P24</u>	REISE, MILES. "I-GEN: Linking Generations" Eng & Comp Sci, Junior 7/8. John William Boich Public School, HDSB.



Proj. #	LAST NAME(S), FIRST NAME(s). "Project Title." Division, Level. School, Board.
P25	MAHARAJH, NIAM. "Electromagnetic generators, harnessing human power, to feed our demand for electricity" Eng & Comp Sci, Intermediate 9/10. Garth Webb Secondary School, HDSB.
<u>Q01</u>	LU, KANG YUN. "A Cleaner Planet - Improving the Efficiency of Water Electrolysis with Innovative Electrode Design" Eng & Comp Sci, Intermediate 9/10. Oakville Trafalgar High School, HDSB.
<u>Q02</u>	PANG, BOYU. "Precision Control in Thrust Vectoring Nozzles: Enhancing Accuracy Through Servo-Based Control" Eng & Comp Sci, Senior 11/12. Appleby College, IND.
<u>Q03</u>	POWELL, LUKE. "BlinkBoost: Utilizing Image Recognition Technology to Improve Blink Rate and Eye Health" Eng & Comp Sci, Intermediate 9/10. Aldershot High School, HDSB.
<u>Q05</u>	URS, JANYA NIRUP. "LifeLink - The Device That Saves Lives" Eng & Comp Sci, Junior 7/8. John William Boich Public School, HDSB.
<u>Q06</u>	RATHOD, ANISH. "PIONEER: Pipe Inspection and Observation for Non-Destructive Evaluation and Environmental Review" Eng & Comp Sci, Senior 11/12. Burlington Central High School, HDSB.
<u>Q07</u>	PACIFICI, NICHOLAS. "Sideline Diagnostics: An AI-Enabled Tool Used to Diagnose Emergency Room Patients with POCUS" Eng & Comp Sci, Senior 11/12. St. Mary Secondary School, HWCDSB.
<u>Q08</u>	KUMAR, KIAN. "educAltion" Eng & Comp Sci, Junior 7/8. W. H. Morden Public School, HDSB.
<u>Q09</u>	POBLETE, VICENTE. "Best Water Filter With Hydropower Station" Eng & Comp Sci, Junior 7/8. St. Andrew Elementary School, HCDSB.
<u>Q10</u>	HALIM, JOSHUA. "Reach Beyond the Stars" Eng & Comp Sci, Junior 7/8. Oakville Christian School, IND.
<u>Q11</u>	LUO, BETTY. "ATLAS: an Al-based Traffic Light Assistant" Eng & Comp Sci, Junior 7/8. Munn's Public School, HDSB.
<u>Q12</u>	POLYANSKA, MARIA. "PicoTrack: Solar Powered Real-Time Monitoring of Near-Stratospheric Conditions" Eng & Comp Sci, Intermediate 9/10. Garth Webb Secondary School, HDSB.
<u>Q13</u>	HUANG, RYANE & HUANG, SIOBHAN. "BAC to Your Senses: DUI Prevention System using CNNs and Sensor Technology" Eng & Comp Sci, Junior 7/8. W. H. Morden Public School, HDSB.
<u>Q14</u>	QAZI, DANIYAL & QAZI, ZAYN. "Your Eyes Can Tell No Lies: Combating Identity Theft With AI-Driven Iris Recognition" Eng & Comp Sci, Junior 7/8. W. H. Morden Public School, HDSB.
<u>Q16</u>	KHAN, MOHID & PATIAL, NAVRAJ. "Saving Lives on the Road Through AI" Eng & Comp Sci, Senior 11/12. Assumption College School, BHNCDSB.
<u>Q18</u>	LAL, DANIEL & MILLER, HUNTER. "Advanced Reaction Engine System" Eng & Comp Sci, Senior 11/12. Milton District High School, HDSB.
<u>Q19</u>	RECHAN, ANIKA C. "Diabetes Decoded: The Synergy of Triphala and Metformin" Biotechnology, Junior 7/8. Sunningdale Public School, HDSB.
<u>Q20</u>	SHEEL, VEDANT. "Immediate Pulmonary Fibrosis Prognosis Using Machine Learning Algorithms" Eng & Comp Sci, Senior 11/12. Waterdown District Secondary School, HWDSB.
<u>R01</u>	ALLARAKHIA, IMRAN. "CareBotix in Motion: Advanced Simulation Environments & VLA Models for Robust Dexterous Manipulation" Eng & Comp Sci, Intermediate 9/10. Abbey Park High School, HDSB.



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<u>R02</u>	HORZELENBERG, MYLES & MATHESON, GAVIN. "Dizzy Worms Composting Systems" Eng & Comp Sci, Junior 7/8. St. Joseph, HWCDSB.	
<u>R03</u>	MANJUNATH, VEDANTH & ZAMIL, YEHYA. "Blind Man Glasses" Eng & Comp Sci, Junior 7/8. Rattlesnake Point Public School, HDSB.	
<u>R04</u>	CHAUDHRY, UMAR. "Gas Busters: Who You Gonna Call for Cleaner Air? Automated Ventilation System for Smart Homes" Eng & Comp Sci, Junior 7/8. Al-Falah Islamic School, IND.	
<u>R05</u>	ARORA, RISHIBHA. "Controlling Road Pollution using Smoke Absorber Equipped with IR Sensor Module" Earth & Env Sci, Junior 7/8. John William Boich Public School, HDSB.	
<u>R06</u>	CHAUDHRY, HIBA. "Walk Light, Live Right - Reducing Your Ecological Footprint" Earth & Env Sci, Junior 7/8. Al-Falah Islamic School, IND.	
<u>R07</u>	MATHUR, ANVAY & NAYFEH, ADAM. "How does indoor air quality change based on the use of household products" Earth & Env Sci, Intermediate 9/10. Garth Webb Secondary School, HDSB.	
<u>R08</u>	CHIJUKA, KACHI & DIRECTO, ZACH. "Multi-parameter study assessing the impacts of compost-based additives on different soil types" Earth & Env Sci, Senior 11/12. King's Christian Collegiate, IND.	

### **Junior Level Exhibitors**

JR 7/8 LAST NAME, FIRST NAME. "Project Title." Project Number, Division. School, Board.

**ABBOTT, KEIRA.** "Are You Smarter Than A 7th Grader?" B05, Health Sciences Human. C.H. Norton Public School, HDSB.

**ABDULLAH, MUHAMMAD.** "Viscosity Of Motor Oil" F05, Phys & Math Sci. Oxford Learning Academy, IND.

**ABOU-ASSALEH, EMMALINA.** "From Flex to Text: A Novel Muscle Communication System Utilizing Electromyography" J05, Eng & Comp Sci. W. H. Morden Public School, HDSB.

**ADEDIGBA, OLUWANIFEMI.** "Model of Hydro-electricty" L13, Eng & Comp Sci. St. Scholastica School, HCDSB.

AHMAD, MUHAMMAD. "Microscopic Mystics" F15, Biotechnology. Al-Falah Islamic School, IND.

**AKANNI, SINDARA.** "Hydration Exploration" H12, Phys & Math Sci. Oakville Christian School, IND.

**AL BENDER, TALA.** "The 5 Second Rule. Is it real?" A01, Life Sciences Non-Human. Charles R. Beaudoin Public School, HDSB.

**ALI, AYESHA.** "Can sleeping less than 8 hours affect the Memory of a 12 to 13 year old?" B04, Health Sciences Human. Al-Falah Islamic School, IND.

**ALI, MANAAL.** "Slow to Heal: Unraveling Wound Recovery in Diabetes" D02, Health Sciences Human. Al-Falah Islamic School, IND.

**ALI, SAFA.** "Impact of Artificial Intelligence based Reading and Educational Support (AIRES) on Grade 1" P06, Eng & Comp Sci. Hawthorne Village Public School, HDSB.

**ALKAISI, ADAM.** "Temperature Loss In A Dead Orange" G14, Phys & Math Sci. Oxford Learning Academy, IND.



**ALLANKI, DHANVITHA.** "Does music improve the way you study" N09, Health Sciences Human. Rattlesnake Point Public School, HDSB.

ALPER, EGE. "BioPeel" L04, Eng & Comp Sci. John William Boich Public School, HDSB.

**ALSAADI, SHAM.** "Brain Drain: The Effects of Dehydration on Your Cognitive Functions" C03, Health Sciences Human. Al-Falah Islamic School, IND.

ALY, YOUSSEF. "Odysseus's Challenge" F08, Phys & Math Sci. Highview, HWDSB.

**AMALADOSS, ANTONY.** "Don't Believe Everything You See -(How Effective Are Children At Distinguishing AI vs. Human Images)" C11, Health Sciences Human. Trinity Christian School, IND.

**AMEEN, SUHA.** "Colour Psychology" B08, Health Sciences Human. Sunningdale Public School, HDSB.

**ANAND, ANANYA.** "Woof2Words: The dog translator that translates dog barks into basic human text." J04, Eng & Comp Sci. Hawthorne Village Public School, HDSB.

**ANTO, CATHERINE.** "Can Students Effectively Learn in Class While Texting?" D10, Health Sciences Human. St. Andrew Elementary School, HCDSB.

ARMITAGE, CLAIRE. "Fruit Faceoff" D06, Health Sciences Human. Trinity Christian School, IND.

ARMITAGE, NATE. "Golf Ball Brawl" H16, Phys & Math Sci. Trinity Christian School, IND.

**ARORA, RISHIBHA.** "Controlling Road Pollution using Smoke Absorber Equipped with IR Sensor Module" R05, Earth & Env Sci. John William Boich Public School, HDSB.

**ARUN, MRITTIKA.** "DiagnoScribe AI - GenAl Agent to Automate Diagnostic Prescriptions" P17, Eng & Comp Sci. John William Boich Public School, HDSB.

**ARUNAMANIVANNAN, AKSHATH SVAMIN.** "Nimbus AI" P07, Eng & Comp Sci. Rattlesnake Point Public School, HDSB.

ASRAR, OMAR. "Electricity's Magic" G03, Phys & Math Sci. Oxford Learning Academy, IND.

**ATA UL HAQUE, FATIMA.** "Seaweed Bioplastic" G01, Phys & Math Sci. Rattlesnake Point Public School, HDSB.

AVERY, IAN. "Cart Compass" K05, Eng & Comp Sci. Our Lady of the Assumption, HWCDSB.

**BADARALA, LOHITAKSH.** "Q-CaDD: Accelerating In Silico Methodologies with Quantum Computation and Machine Learning for EGFR" N13, Biotechnology. Bruce Trail Public School, HDSB.

**BAJWA, KHADIJA.** "How Do Different Water Filter Brands Affect pH, TDS, and Turbidity of Drinking Water" M07, Earth & Env Sci. Al-Falah Islamic School, IND.

BALKISSOON, DECLAN. "CARBON FILTERS!" G07, Phys & Math Sci. Oxford Learning Academy, IND.

BANERJEE, NINA. "ActiveEnergy" L08, Eng & Comp Sci. John William Boich Public School, HDSB.

BASHIR, QASSIM. "The Perfect Book" F06, Phys & Math Sci. Sir William Osler, HWDSB.

BASIC, GABRIELA. "Crystallization Station" N18, Phys & Math Sci. St. Scholastica School, HCDSB.

BELWALKER, SMIRA. "The AquaOrb" J13, Eng & Comp Sci. John William Boich Public School, HDSB.

BENDING, ALEX. "How temp affects timing of pickeling" H17, Phys & Math Sci. Highview, HWDSB.

BHATTI, ALINA. "Lung Lens" J12, Eng & Comp Sci. Al-Falah Islamic School, IND.

BHATTI, SOFIA. "Lung Lens" J12, Eng & Comp Sci. Al-Falah Islamic School, IND.

**BILAL, ZAINAB.** "What Factors Influence the Compromise Effect of Decision-Making?" E04, Health Sciences Human. Al-Falah Islamic School, IND.



**BLAKE, ALEXANDER.** "Empowering The Disabled With Affordable Mind Controlled Technology" L17, Eng & Comp Sci. W. H. Morden Public School, HDSB.

**BOOTH, CHLOE.** "Solving the mystery of the Bermuda triangle" M13, Earth & Env Sci. Hawthorne Village Public School, HDSB.

**BULATOVIC STOJANOVIC, ELENA.** "Anxie-BYE - A novel device that uses musical therapy to help those with Anxiety Disorders" J15, Eng & Comp Sci. Charles R. Beaudoin Public School, HDSB.

**BYRNE, CHARLIE.** "The Five Second Rule: Fact or Fiction" A09, Life Sciences Non-Human. Trinity Christian School, IND.

**CHAN, HANNAH.** "Effects of different cleaning products on bacteria" E16, Biotechnology. Dr. David R Williams, HDSB.

**CHARTRAND, ARYA.** "Does age affect peripheral vision" D09, Health Sciences Human. Highview, HWDSB.

**CHATHAROO, KEYAAN.** "Solaris - Solar Car" J06, Eng & Comp Sci. Rattlesnake Point Public School, HDSB

**CHAUDHRY, HIBA.** "Walk Light, Live Right - Reducing Your Ecological Footprint" R06, Earth & Env Sci. Al-Falah Islamic School, IND.

**CHAUDHRY, UMAR.** "Gas Busters: Who You Gonna Call for Cleaner Air? Automated Ventilation System for Smart Homes" R04, Eng & Comp Sci. Al-Falah Islamic School, IND.

CHAUHAN, NEVAAN. "Animal and plant cells" A04, Life Sciences Non-Human. St. Joseph, HWCDSB.

CHEERS, LUKE. "Hamilton Harbour Hero" L14, Eng & Comp Sci. St. Bernadette, HWCDSB.

**CHEN, ELLA.** "The James Webb Space Telescope and how it can improve deep sea exploration" M18, Eng & Comp Sci. Munn's Public School, HDSB.

**CHIACO, CLAREWYNN.** "Visual Characteristic Perception Observatory" C09, Health Sciences Human. St. Andrew Elementary School, HCDSB.

**DAGG, NATE.** "Bewildering Bioplastics" G18, Phys & Math Sci. Charles R. Beaudoin Public School, HDSB.

**DARLING, EMILY.** "CurrentCleaner - Trash Collector and Water Filter" K17, Eng & Comp Sci. John William Boich Public School, HDSB.

DAYA, KADEN. "IEC Fusion Medicine" N19, Phys & Math Sci. W. H. Morden Public School, HDSB.

**DENG, ALEX.** "Food Under Attack: Which Preservation Method Works Best?" N05, Life Sciences Non-Human. Pilgrim Wood Public School, HDSB.

**DHOTHER, MIA.** "How loud is too loud?" P13, Eng & Comp Sci. Dr. David R Williams, HDSB.

**DI NICOLA, GABRIEL.** "Urban Health Index: A Novel Approach to Modelling Sociodemographic Disparities in Hamilton" H06, Phys & Math Sci. Our Lady of Peace, HWCDSB.

**DIMIAN, MIRIAM.** "DNA UNCOVERED" B17, Life Sciences Non-Human. St. Andrew Elementary School, HCDSB.

**DWARKA, ELYSIA.** "CurrentCleaner - Trash Collector and Water Filter" K17, Eng & Comp Sci. John William Boich Public School, HDSB.

**EASO, SABRINA.** "Allergy Erased? Exploring CRISPR in Peanut Allergy" B06, Health Sciences Human. Balaclava, HWDSB.

**EGO, CHARLOTTE.** "The Effect of Different Water Amounts and Soil Types on Bean and Tomato Plant Emergence" A05, Life Sciences Non-Human. Our Lady of Mount Carmel, HWCDSB.



**EGO, MAXWELL.** "The Effect of Different Water Amounts and Soil Types on Bean and Tomato Plant Emergence" A05, Life Sciences Non-Human. Our Lady of Mount Carmel, HWCDSB.

**ELNOUR, MAJD.** "Build simple electric motor ." K15, Eng & Comp Sci. Oxford Learning Academy, IND.

**ELSHERBENI, FARIDA.** "More Bomb For Your Buck" G04, Phys & Math Sci. W. H. Morden Public School, HDSB.

EMEDOH, JESSICA. "Sleep" D13, Health Sciences Human. St. Scholastica School, HCDSB.

**ENG, STEPHANIE.** "Solar-Powered Water Purifier" N16, Phys & Math Sci. Pilgrim Wood Public School, HDSB.

ESKANDER, SOFIA. "Humans vs Robots" L07, Eng & Comp Sci. Oakville Christian School, IND.

**FALOWO, MODUPE.** "Pop Pop Popping Boba!!!" G15, Phys & Math Sci. Oakville Christian School, IND.

FARAG, GABRIEL. "Game On" P16, Eng & Comp Sci. Oakville Christian School, IND.

**FAROOQ, SOFIA.** " 5 Second Rule?" N06, Life Sciences Non-Human. Rattlesnake Point Public School, HDSB.

**FAROOQI, MUHAMMAD ABDULLAH.** "Navigation Testing On A Line Following Car" P14, Eng & Comp Sci. Al-Falah Islamic School, IND.

**FATIMA, NOOR.** "Is the heart more than a physical pump?" D07, Health Sciences Human. Rattlesnake Point Public School, HDSB.

**FONSEKA, AKAIN.** "Using AI to Predict Cancer Risk Based on Lifestyle Data" P03, Eng & Comp Sci. St. Matthew, HWCDSB.

**FRYDMAN, ANDRE.** "PingPoint Vision: Personal Table Tennis Coach" H03, Eng & Comp Sci. John William Boich Public School, HDSB.

**FULLER, OLIVIA.** "What type of solution makes the bubble last longer" F10, Phys & Math Sci. Highview, HWDSB.

FUNG, JAMES. "Apple Oxidation" G17, Phys & Math Sci. St. Andrew Elementary School, HCDSB.

**GALLENGER, MIYANA.** "Does no sleep affect your mood?" D03, Health Sciences Human. Highview, HWDSB.

GALLO, ALEXIS. "How to make a lava lap" G02, Phys & Math Sci. Highview, HWDSB.

**GANDHI, ANYA.** "Which of These 3 Marketing Strategies Could Be The Next Viral One?" B01, Health Sciences Human. Dr. David R Williams, HDSB.

GARG, SHIVI. "Drain The Tank!" H09, Phys & Math Sci. Oxford Learning Academy, IND.

**GERGINOVA, CAMELIA.** "Psychotropics On The Human Mind" E02, Health Sciences Human. Sunningdale Public School, HDSB.

GHEVA, SARAH. "S.E. Sunglasses" E15, Biotechnology. Rolling Meadows Public School, HDSB.

**GHORI, SHANZAY.** "How do different food substances react to the Kastle-Myer Blood Test?" H07, Phys & Math Sci. Al-Falah Islamic School, IND.

**GILANI, HUMZA.** "Empowering The Disabled With Affordable Mind Controlled Technology" L17, Eng & Comp Sci. W. H. Morden Public School, HDSB.

**GOLEC, ALLISTER.** "Building the Perfect Greenhouse" N03, Life Sciences Non-Human. Charles R. Beaudoin Public School, HDSB.



GOUD, NETRA. "NewU" K08, Eng & Comp Sci. Rattlesnake Point Public School, HDSB.

HALIM, JOSHUA. "Reach Beyond the Stars" Q10, Eng & Comp Sci. Oakville Christian School, IND.

HANNA, CELINA. "Green Growth" M11, Earth & Env Sci. Oakville Christian School, IND.

**HAZRA, DEVAN.** "Cataract Attack App: ML Powered Cataract Diagnosis using User Taken Images" J02, Eng & Comp Sci. W. H. Morden Public School, HDSB.

**HE, WESLEY.** "From Fibers to Filters: Stopping Microplastic Pollution at the Source" K07, Eng & Comp Sci. W. H. Morden Public School, HDSB.

HIBBERT, JAXON. "Launch Angles & Football Distance" F04, Phys & Math Sci. Highview, HWDSB.

HINDMARSH, ASHTON. "Hamilton Harbour Hero" L14, Eng & Comp Sci. St. Bernadette, HWCDSB.

HOARE, NOLAN. "Rust: Can We Prevent It?" H13, Phys & Math Sci. St. Joachim, HWCDSB.

HOLMAN, AVERY. "The Nose Knows" E01, Health Sciences Human. Trinity Christian School, IND.

HORSFALL-OKO, GABRIELLA. "Dandruff?" E09, Biotechnology. St. Scholastica School, HCDSB.

**HORZELENBERG, MYLES.** "Dizzy Worms Composting Systems" R02, Eng & Comp Sci. St. Joseph, HWCDSB.

**HUANG, RYANE.** "BAC to Your Senses: DUI Prevention System using CNNs and Sensor Technology" Q13, Eng & Comp Sci. W. H. Morden Public School, HDSB.

**HUANG, SIOBHAN.** "BAC to Your Senses: DUI Prevention System using CNNs and Sensor Technology" Q13, Eng & Comp Sci. W. H. Morden Public School, HDSB.

**HUANG, TIFFANY.** "Diagnosing Basal Cell Carcinoma with A.I" J16, Eng & Comp Sci. Cathy Wever, HWDSB.

HUFFMAN, RYLAN. "How Does Flex Affect Your Shot?" P02, Phys & Math Sci. Highview, HWDSB.

**IGBINOSUN, SAMUEL.** "Road Network Efficiency Predictor" L10, Eng & Comp Sci. Charles R. Beaudoin Public School, HDSB.

IPWANSHEK, SOPHIE. "How loud is too loud?" P13, Eng & Comp Sci. Dr. David R Williams, HDSB.

**IRELAND, REGAN.** "Slumber Solutions" K09, Eng & Comp Sci. John William Boich Public School, HDSB.

**ISHAQUE, FARAZA.** "How does Art affect the brain?" C12, Health Sciences Human. Rattlesnake Point Public School, HDSB.

**IVANOV, MELANIA.** "Visual Characteristic Perception Observatory" C09, Health Sciences Human. St. Andrew Elementary School, HCDSB.

JABER, YARA. "NewU" K08, Eng & Comp Sci. Rattlesnake Point Public School, HDSB.

JAGT, MEGAN. "Pawsitive Pups" A18, Life Sciences Non-Human. Oakville Christian School, IND.

**JAIN, TIARA.** "PulseMate - Your Health, Always in Check" L06, Eng & Comp Sci. John William Boich Public School, HDSB.

JAMES, DARAMFON. "Sleep" D13, Health Sciences Human. St. Scholastica School, HCDSB.

**JAUHARI, VIAAN.** "Road Network Efficiency Predictor" L10, Eng & Comp Sci. Charles R. Beaudoin Public School, HDSB.

**JAVIDI, GLAREEN.** "Waterproofing with Charcoal: How Does Adding Charcoal Affect Bioplastic?" H10, Phys & Math Sci. Munn's Public School, HDSB.

JENEWAY, HARRY. "Can I Blame My Ball" K13, Eng & Comp Sci. Oakville Christian School, IND.



**JONES, PAISLEY.** "Fluorescent Flashbacks" D14, Health Sciences Human. Trinity Christian School, IND.

**KAKWANI, VARNIKA.** "Seaweed Bioplastic" G01, Phys & Math Sci. Rattlesnake Point Public School, HDSB.

**KAMINSKI, LUCAS.** "The Impact Of Cold Temperatures On Electric Motors" F11, Phys & Math Sci. Trinity Christian School, IND.

**KAR, VIVAAN.** "The Power of Pectin: Attenuating Toxic By-Products for Enhanced Hydrogel Drug Delivery" F12, Biotechnology. W. H. Morden Public School, HDSB.

**KAUR, ASHMEET.** "The Robo Recycler" K12, Eng & Comp Sci. John William Boich Public School, HDSR

**KAUR, SAMREEN.** "Microbe Mania" A06, Life Sciences Non-Human. Charles R. Beaudoin Public School, HDSB.

**KHALID, HANIYA.** "Does no sleep affect your mood?" D03, Health Sciences Human. Highview, HWDSB.

**KHALIL, AMMAR.** "Evolution of the Human Digestive System" C10, Health Sciences Human. Hawthorne Village Public School, HDSB.

**KHAN, KADEN.** "Lip Reading Made Simple for Deaf People" M16, Eng & Comp Sci. Frank Panabaker South, HWDSB.

**KHAN, NABIHA.** "The Trigger Turbine: Improving wind turbines for a cleaner future" K03, Eng & Comp Sci. Rattlesnake Point Public School, HDSB.

**KHURRAM, EIMAMA.** " 5 Second Rule?" N06, Life Sciences Non-Human. Rattlesnake Point Public School, HDSB.

**KIM, GRACE.** "Heated VS Frozen The Golf Ball Showdown" G06, Phys & Math Sci. Trinity Christian School, IND.

KIRAN, YUTI. "The Coral Shield" J08, Eng & Comp Sci. John William Boich Public School, HDSB.

**KNOWLES, OLIVIA.** "Does age affect peripheral vision" D09, Health Sciences Human. Highview, HWDSB.

KUMAR, KIAN. "educAltion" Q08, Eng & Comp Sci. W. H. Morden Public School, HDSB.

**LAMMERS, MICHELLE.** "Frostbitten Batteries" G12, Phys & Math Sci. Trinity Christian School, IND.

**LEBLANC, JORDAN.** "Mind-Motion: An EEG-Powered Robotic Exoskeleton for FMD Patients" P23, Eng & Comp Sci. St. Matthew Elementary School, HCDSB.

**LI, EVELYN.** "The James Webb Space Telescope and how it can improve deep sea exploration" M18, Eng & Comp Sci. Munn's Public School, HDSB.

**LIAGHATI, DANIEL.** "Bronchitis Uncovered, the Science Behind Bronchitis" B07, Health Sciences Human. Munn's Public School, HDSB.

**LIAGHATI, LILY.** "Inside the Mind: All About Brain Bleed" D17, Health Sciences Human. Munn's Public School, HDSB.

**LIN, ABIGAIL.** "Does Colour Affect Taste?" B10, Health Sciences Human. St. Andrew Elementary School, HCDSB.

LIU, DOLPHIN. "No Eye Know The Way" L09, Eng & Comp Sci. W. H. Morden Public School, HDSB.

**LIU, MICHELLE.** "How Can We Modify Bandages to Improve and Accelerate the Process of Healing" F16, Biotechnology. W. H. Morden Public School, HDSB.



LODDER, HARPER. "The Colour Effect" E06, Health Sciences Human. Trinity Christian School, IND.

LUFINAMA, BERNISE. "Crystallization Station" N18, Phys & Math Sci. St. Scholastica School, HCDSB.

**LUO, BETTY.** "ATLAS: an Al-based Traffic Light Assistant" Q11, Eng & Comp Sci. Munn's Public School, HDSB.

**MA, JACOB.** "Bioplastics : The Key To A Better Future" M05, Earth & Env Sci. W. H. Morden Public School, HDSB.

MAGAGULA, HLELO. "Bubble nurture" H05, Eng & Comp Sci. Our Lady of the Assumption, HWCDSB.

MAH, EVELYN. "Let There Be Light" N02, Life Sciences Non-Human. Trinity Christian School, IND.

**MALETIC, KLARA.** "Investigating Animal Memory and Senses Using Guinea Pigs" A07, Life Sciences Non-Human. St. Andrew Elementary School, HCDSB.

**MANJUNATH, VEDANTH.** "Blind Man Glasses" R03, Eng & Comp Sci. Rattlesnake Point Public School, HDSB.

**MATHESON, GAVIN.** "Dizzy Worms Composting Systems" R02, Eng & Comp Sci. St. Joseph, HWCDSB.

**MAWJI, AYAAN.** "PingPoint Vision: Personal Table Tennis Coach" H03, Eng & Comp Sci. John William Boich Public School, HDSB.

MBUAGBAW, TATIANA. "Squeaky Clean" D08, Health Sciences Human. St. Augustine, HWCDSB.

MCALEESE, VAN. "Cart Compass" K05, Eng & Comp Sci. Our Lady of the Assumption, HWCDSB.

**MCCONKEY, OWEN.** "How safe are Bike helmets" K16, Health Sciences Human. Charles R. Beaudoin Public School, HDSB.

MCINTOSH, DARCY. "ActiveEnergy" L08, Eng & Comp Sci. John William Boich Public School, HDSB.

**MCKENZIE, LORNA.** "Is There a Relationship Between Temperature and Tornado Frequency in Ontario?" M09, Earth & Env Sci. Charles R. Beaudoin Public School, HDSB.

**MCKENZIE, ROBERT.** "Is There a Relationship Between Temperature and Tornado Frequency in Ontario?" M09, Earth & Env Sci. Charles R. Beaudoin Public School, HDSB.

MEDINA, SOFIA. "Earthquake Safe!" L01, Eng & Comp Sci. Charles R. Beaudoin Public School, HDSB.

MEI, JIYANG. "No Eye Know The Way" L09, Eng & Comp Sci. W. H. Morden Public School, HDSB.

**MEJIA PERFILIEV, SOFIA.** "Challenging the 5 second rule" B15, Life Sciences Non-Human. Charles R. Beaudoin Public School, HDSB.

**MERCHANT, SAHANA.** "The mRNA Folding Problem: Optimizing PolyRNA Sequences in mRNA Vaccines for Pancreatic Cancer" F14, Biotechnology. W. H. Morden Public School, HDSB.

**MERIFIELD, NOAH.** "what is the fastest way to empty a water bottle" H14, Phys & Math Sci. Highview, HWDSB.

**MIRZA, AIZA.** "Effects of different cleaning products on bacteria" E16, Biotechnology. Dr. David R Williams, HDSB.

**MOHANTY, ARYAN.** "FruitPlast: Pioneering Sustainable Plastic Production from Fruit Waste" H11, Phys & Math Sci. Dr. David R Williams, HDSB.

NABI, WAFI. "Launch Angles & Football Distance" F04, Phys & Math Sci. Highview, HWDSB.

**NAGARAJAN, SREEJA.** "Anxie-BYE - A novel device that uses musical therapy to help those with Anxiety Disorders" J15, Eng & Comp Sci. Charles R. Beaudoin Public School, HDSB.



**NAIR, ABHIRAAM.** "Method for Conducting a Systematic Literature Review: Social Media Use Among Young Adolescents" C05, Health Sciences Human. St. Augustine, HWCDSB.

**NAIR, SHRUTI.** "Is the World Really That Bad?" B03, Health Sciences Human. Frank Panabaker South, HWDSB.

NAJBOR, BEN. "Viscosity - Which liquid is more dense?" G10, Phys & Math Sci. Highview, HWDSB.

NRI, MUNACHI. "Colour Psychology" E03, Health Sciences Human. St. Scholastica School, HCDSB.

**NUNES, SEBASTIAN.** "Building the Perfect Greenhouse" N03, Life Sciences Non-Human. Charles R. Beaudoin Public School, HDSB.

**OBHI, JYOT.** "Is the World Really That Bad?" B03, Health Sciences Human. Frank Panabaker South, HWDSB.

**OLIVERI, DOMENICA.** "Can Students Effectively Learn in Class While Texting?" D10, Health Sciences Human. St. Andrew Elementary School, HCDSB.

**ORPHANOS, RACHAEL.** "Special Weather Statement: Infrastructure VS Climate Change." J07, Eng & Comp Sci. Hawthorne Village Public School, HDSB.

**OSMAN, MALAK.** "Earthquake Safe!" L01, Eng & Comp Sci. Charles R. Beaudoin Public School, HDSB.

PANNELLA, LIAM. "Fun With Fingers" C07, Health Sciences Human. Oakville Christian School, IND.

**PARIKH, AYAN.** "Pesticides - The Effects on Fruits" F03, Phys & Math Sci. Charles R. Beaudoin Public School, HDSB.

PARSONS, EMAYA. "S.E. Sunglasses" E15, Biotechnology. Rolling Meadows Public School, HDSB.

PATEL, KARINA. "Pop Pop Popping Boba!!!" G15, Phys & Math Sci. Oakville Christian School, IND.

PEREA, JADE ANNE. "Urine Luck" E17, Biotechnology. St. Scholastica School, HCDSB.

**PICCOLI, LUCA.** "Urban Health Index: A Novel Approach to Modelling Sociodemographic Disparities in Hamilton" H06, Phys & Math Sci. Our Lady of Peace, HWCDSB.

**PINFOLD, SHAUNTEL.** "Solving the mystery of the Bermuda triangle" M13, Earth & Env Sci. Hawthorne Village Public School, HDSB.

**POBLETE, VICENTE.** "Best Water Filter With Hydropower Station" Q09, Eng & Comp Sci. St. Andrew Elementary School, HCDSB.

**PONNAMBALAM, KARTHIK.** "Third Eye: An Innovative Assistive Vision System Leveraging Object Detection for Visually Impaired" J01, Eng & Comp Sci. Hillfield Strathallan College, IND.

**POPE, BENTLEY.** "Sensor Showdown: Infrared Versus Ultrasonic in Autonomous Vehicles" P21, Eng & Comp Sci. Oakville Christian School, IND.

**POWELL, FLORENCE.** "From Grey To Green; can drones improve our cities?" L11, Eng & Comp Sci. Frontenac Public School, HDSB.

**PYARASANI, HASINI.** "Eco-Bunny" P04, Eng & Comp Sci. Dr. David R Williams, HDSB.

**QAZI, DANIYAL.** "Your Eyes Can Tell No Lies: Combating Identity Theft With Al-Driven Iris Recognition" Q14, Eng & Comp Sci. W. H. Morden Public School, HDSB.

**QAZI, ZAYN.** "Your Eyes Can Tell No Lies: Combating Identity Theft With AI-Driven Iris Recognition" Q14, Eng & Comp Sci. W. H. Morden Public School, HDSB.

**RAJENDRAN, POOJA SREE.** "The Cognitive Power of Tertiary Colors" N10, Health Sciences Human. John William Boich Public School, HDSB.



**RAO, RAHUL.** "The Power of Pectin: Attenuating Toxic By-Products for Enhanced Hydrogel Drug Delivery" F12, Biotechnology. W. H. Morden Public School, HDSB.

**RECHAN, ANIKA C.** "Diabetes Decoded: The Synergy of Triphala and Metformin" P26, Biotechnology. Sunningdale Public School, HDSB.

**REDDIAR, MEGHA.** "Forensic Psychology: For the Greater Good" D01, Health Sciences Human. Hawthorne Village Public School, HDSB.

REINECKE, MAKAYLA. "Chew IQ" C04, Health Sciences Human. Trinity Christian School, IND.

**REISE, MILES.** "I-GEN: Linking Generations" P24, Eng & Comp Sci. John William Boich Public School, HDSB.

**RESCHKE, ABBY.** "The Puppy Project Uncovering the Truth of Dogs' Favourite Colour" A10, Life Sciences Non-Human. Trinity Christian School, IND.

**RICKARD, PHOEBE.** "Challenging the 5 second rule" B15, Life Sciences Non-Human. Charles R. Beaudoin Public School, HDSB.

ROBB, ALLIE. "The AquaOrb" J13, Eng & Comp Sci. John William Boich Public School, HDSB.

**ROBERTS, ANNABELLE.** "Interstellar Travel" F09, Phys & Math Sci. St. Andrew Elementary School, HCDSB.

**ROGULSKI-HOANG, AVA.** "DNA UNCOVERED" B17, Life Sciences Non-Human. St. Andrew Elementary School, HCDSB.

**ROOPRAI, JASMEET.** "Soccer Kick Velocity Experiment - Effect of Shoe Types on Ball Speed and Accuracy" F07, Phys & Math Sci. Munn's Public School, HDSB.

**ROSENBOOM, ADRIANNA.** "EzFashion" P15, Eng & Comp Sci. John William Boich Public School, HDSB.

ROSIEN, SOPHIA. "S.O.U.P." K01, Eng & Comp Sci. Rolling Meadows Public School, HDSB.

**RUSTRIAN WHIJARES, SOFIA.** "Hues Stopwatch" D18, Health Sciences Human. Trinity Christian School, IND.

**RYCKMAN, RYLEIGH.** "What type of solution makes the bubble last longer" F10, Phys & Math Sci. Highview, HWDSB.

**SAFAVERDIAN, KIAN.** "How to solve gastroesophageal reflux disease without the need of capsule endoscopy" C01, Health Sciences Human. Munn's Public School, HDSB.

**SALMAN, SAMEEHA.** "Sound Check: White Noise, Music, or No Sound" B12, Health Sciences Human. Al-Falah Islamic School, IND.

**SAMMY, SERENA.** "Slumber Solutions" K09, Eng & Comp Sci. John William Boich Public School, HDSB.

SANDHU, SOFIA. "Afterglow" G11, Phys & Math Sci. Oxford Learning Academy, IND.

**SCHROTH, LUKAS.** "Discovering Bacteria on Surfaces" N04, Life Sciences Non-Human. Oakville Christian School, IND.

**SELVAKKUMARAN, PARI.** "Electro-Plants: Harvest Green Energy From Plants" E10, Biotechnology. Charles R. Beaudoin Public School, HDSB.

SHAHANI, NIRVAN. "Nimbus Al" P07, Eng & Comp Sci. Rattlesnake Point Public School, HDSB.

SHAIKH, HUDA. "Aquatic Plant Crisis" M02, Earth & Env Sci. Al-Falah Islamic School, IND.



**SHCHERBAKOV, PHILLIP.** "Different Types of Fertilizers and their effect on Radishes" F17, Biotechnology. Munn's Public School, HDSB.

**SHUAI, CANDICE.** "Bioplastics: The Key To A Better Future" M05, Earth & Env Sci. W. H. Morden Public School, HDSB.

**SIDDIQUE, USMAN.** "Gravity Powered Water Fountain" K14, Eng & Comp Sci. Al-Falah Islamic School, IND.

**SNAPE, CLARA.** "More Bomb For Your Buck" G04, Phys & Math Sci. W. H. Morden Public School, HDSB.

STORSLEY, LOGAN. "Pitching It Up" N20, Phys & Math Sci. Oakville Christian School, IND.

**SU, EMMA.** "From Flex to Text: A Novel Muscle Communication System Utilizing Electromyography" J05, Eng & Comp Sci. W. H. Morden Public School, HDSB.

**SU, IRENE.** "EcoClear: An Efficient Way To Reduce Recycling Contamination" M15, Eng & Comp Sci. Munn's Public School, HDSB.

**SUN, GAVIN.** "Pesticides - The Effects on Fruits" F03, Phys & Math Sci. Charles R. Beaudoin Public School, HDSB.

**SUN, MICAH.** "PAAD Diagnosis & Prognosis using novel glycolysis-related gene signatures with machine learning" E07, Biotechnology. Hawthorne Village Public School, HDSB.

THANOS, ELIAS. "The Hippocrates System" N12, Biotechnology. Trinity Christian School, IND.

THOMAS, MATTHEW. "From Thin Air" K10, Eng & Comp Sci. St. Augustine, HWCDSB.

TRIVEDI, JHEEL. "Salus AI" P05, Eng & Comp Sci. W. H. Morden Public School, HDSB.

**TSUI, JAYDEN.** "From Fibers to Filters: Stopping Microplastic Pollution at the Source" K07, Eng & Comp Sci. W. H. Morden Public School, HDSB.

**TUMMON, ZOE.** "Are You Smarter Than A 7th Grader?" B05, Health Sciences Human. C.H. Norton Public School, HDSB.

**URS, JANYA NIRUP.** "LifeLink - The Device That Saves Lives" Q05, Eng & Comp Sci. John William Boich Public School, HDSB.

VALDES GARCIA, VERONICA. "Dandruff?" E09, Biotechnology. St. Scholastica School, HCDSB.

**VAN LOENEN, SYDNEY.** "Battle of the Beds: Marigold Soil Showdown" A08, Life Sciences Non-Human. Trinity Christian School, IND.

VAVILLA, ARNAV. "BioPeel" L04, Eng & Comp Sci. John William Boich Public School, HDSB.

VELEZ-GOMEZ, SALOME. "Urine Luck" E17, Biotechnology. St. Scholastica School, HCDSB.

**VORA, NESSA.** "The mRNA Folding Problem: Optimizing PolyRNA Sequences in mRNA Vaccines for Pancreatic Cancer" F14, Biotechnology. W. H. Morden Public School, HDSB.

**VOYTEK, DAVIS.** "How safe are Bike helmets" K16, Health Sciences Human. Charles R. Beaudoin Public School, HDSB.

**VUKCEVIC, EMMA.** "Microbe Mania" A06, Life Sciences Non-Human. Charles R. Beaudoin Public School, HDSB.

**WADEHRA, RAIMA.** "A Study on the Hadalpelagic Zone and How We Can Further Explore It." M06, Earth & Env Sci. Hawthorne Village Public School, HDSB.

**WALKER, EMMA.** "Which of These 3 Marketing Strategies Could Be The Next Viral One?" B01, Health Sciences Human. Dr. David R Williams, HDSB.



**WANG, HANNAH.** "How Can We Modify Bandages to Improve and Accelerate the Process of Healing" F16, Biotechnology. W. H. Morden Public School, HDSB.

WARREN, EDITH. "Bacteria Be Gone" A13, Life Sciences Non-Human. Oakville Christian School, IND.

WELCH, CALLIE. "Does screentime affect sleep" D05, Health Sciences Human. Highview, HWDSB.

**WONDERS, ALEXANDRA.** "Bottled water, is it really cleaner?" B16, Life Sciences Non-Human. Palermo Public School, HDSB.

XU, GLENNA. "Colour Psychology" B08, Health Sciences Human. Sunningdale Public School, HDSB.

**XU, JACQUELINE.** "The Effects of Placebo on Memory Recall" B09, Health Sciences Human. Palermo Public School, HDSB.

**XU, ROSE.** "EcoClear: An Efficient Way To Reduce Recycling Contamination" M15, Eng & Comp Sci. Munn's Public School, HDSB.

**YANG, JOSHUA.** "Lip Reading Made Simple for Deaf People" M16, Eng & Comp Sci. Frank Panabaker South, HWDSB.

**YUAN, RUTH.** "Psychotropics On The Human Mind" E02, Health Sciences Human. Sunningdale Public School, HDSB.

YUN, CELINA. "Interstellar Travel" F09, Phys & Math Sci. St. Andrew Elementary School, HCDSB.

**ZAMAN, FATIMA.** "Does music improve the way you study" N09, Health Sciences Human. Rattlesnake Point Public School, HDSB.

**ZAMIL, YEHYA.** "Blind Man Glasses" R03, Eng & Comp Sci. Rattlesnake Point Public School, HDSB.

**ZBIKOWSKI, AYDEN.** "Why Do Soccer Injuries Happen & Where Do Those Injuries Occur" C14, Health Sciences Human. Charles R. Beaudoin Public School, HDSB.

ZHENG, WENDY. "S.O.U.P." K01, Eng & Comp Sci. Rolling Meadows Public School, HDSB.

### **Intermediate Level Exhibitors**

INT 9/10 LAST NAME, FIRST NAME. "Project Title." Project Number, Division. School, Board.

**ALAM, ESHAL.** "Electric generators v.s. batteries, which is better for emergency power?" H15, Phys & Math Sci. Milton District High School, HDSB.

**ALLARAKHIA, IMRAN.** "CareBotix in Motion: Advanced Simulation Environments & VLA Models for Robust Dexterous Manipulation" R01, Eng & Comp Sci. Abbey Park High School, HDSB.

**BUDZ, EVAN.** "Development of an Autonomous Bionic Sea Turtle Robot to Conduct Ecological Monitoring using AI" P11, Eng & Comp Sci. Dr. Frank J. Hayden Secondary School, HDSB.

**CHAN CARUSONE, SENNA.** "Unmanned Underwater Vehicles to Scale the Delivery of Coral Probiotics" K18, Eng & Comp Sci. Burlington Central High School, HDSB.

**DING, LANA.** "The Role of Ascorbic Acid in Enhancing Melanoma Treatment through Oxidative Stress Modulation" C02, Health Sciences Human. Oakville Trafalgar High School, HDSB.

**DUAN, EVA.** "Sodium Alginate-Chitosan Hydrogel Burn Wound Dressing with pH-Sensitive Infection Detection" F18, Biotechnology. Oakville Trafalgar High School, HDSB.

**EASO, ALEXANDER.** "Tune into Treatment: Exploring Music's Therapeutic Potential in Alzheimer's Disease" B02, Health Sciences Human. Waterdown District Secondary School, HWDSB.



**EUM, TAEYEON.** "Sodium Alginate-Chitosan Hydrogel Burn Wound Dressing with pH-Sensitive Infection Detection" F18, Biotechnology. Oakville Trafalgar High School, HDSB.

**FAISAL, ABIHA.** "Cybertruck Analysis: Tough, Rough, or Just a Bluff?" M17, Eng & Comp Sci. St. Kateri Tekakwitha, HCDSB.

**GUPTA, AADYA.** "The Journey of DNA" N01, Life Sciences Non-Human. Westmount Secondary School, HWDSB.

**HAN, QIANHAO.** "Honeycomb-Inspired Concussion Protection Helmet with Intelligent EEG Feedback System" L16, Eng & Comp Sci. The Bishop Strachan School, IND.

**IPWANSHEK, GABRIELLA.** "A Novel Machine Learning Model for Noninvasive Diagnosis of Endometriosis" J03, Eng & Comp Sci. White Oaks Secondary School, HDSB.

**JOHNKUTTY, SAM.** "Alzheimer's Disease: A Comparison of Current and Potential Treatments" D12, Health Sciences Human. Bishop Tonnos Secondary School, HWCDSB.

**KARTHIK, AKSHITA.** "Saffron, a Natural Replicant for Serotonin?" E18, Biotechnology. Garth Webb Secondary School, HDSB.

**KHADHOORI, HASHIM.** "Development of an Arduino-Based ECG Monitoring System for Cardiac Abnormality Detection" N14, Biotechnology. Garth Webb Secondary School, HDSB.

**KIM, MINJAE.** "Development of an Arduino-Based ECG Monitoring System for Cardiac Abnormality Detection" N14, Biotechnology. Garth Webb Secondary School, HDSB.

**KUDALE, ARNNAV.** "CropGuardian: A 3D-Printed Drone with Intelligent Crop Monitoring" H02, Eng & Comp Sci. White Oaks Secondary School, HDSB.

**LEBLANC, JACOB MICHAEL.** "Re-evaluating AQHI: A New Model for Assessing Wildfire Smoke and Benzo(a)pyrene Health Risks" N11, Health Sciences Human. Abbey Park High School, HDSB.

**LU, KANG YUN.** "A Cleaner Planet - Improving the Efficiency of Water Electrolysis with Innovative Electrode Design" Q01, Eng & Comp Sci. Oakville Trafalgar High School, HDSB.

**LUO, BONNIE.** "ParkClean Duo: A Drone Guided Tank Robot for Park Waste Detection and Cleanup" P12, Eng & Comp Sci. White Oaks Secondary School, HDSB.

**MABAYYED, MAYA.** "EcoFlow: Using Biomimetic Filtration Systems to Capture Plastic Pollution" H04, Eng & Comp Sci. Burlington Central High School, HDSB.

**MAGUIRE, CONNOR.** "I am Getting Winded" P10, Eng & Comp Sci. North Park Collegiate and Vocational School, GEDSB.

**MAHARAJH, NIAM.** "Electromagnetic generators, harnessing human power, to feed our demand for electricity" P25, Eng & Comp Sci. Garth Webb Secondary School, HDSB.

**MAJEWSKI, NICOLE.** "Towards a Consens(e)us on Early Dementia Diagnosis: Sensory Symptoms as Subtype Differentiators" D16, Health Sciences Human. Oakville Trafalgar High School, HDSB.

**MALHOTRA, ISHITA.** "EcoFlow: Using Biomimetic Filtration Systems to Capture Plastic Pollution" H04, Eng & Comp Sci. Burlington Central High School, HDSB.

**MATHUR, ANVAY.** "How does indoor air quality change based on the use of household products" R07, Earth & Env Sci. Garth Webb Secondary School, HDSB.

**MCDERMOTT, LIAM.** "Dodging Doomsday: Simulating Al-Powered Asteroid Deflection" P01, Phys & Math Sci. North Park Collegiate and Vocational School, GEDSB.

**NAYFEH, ADAM.** "How does indoor air quality change based on the use of household products" R07, Earth & Env Sci. Garth Webb Secondary School, HDSB.



**PARANTHAMAN, VAIBAVV.** "Tiny is Mighy (Impact on nano/micro plastic in the environment)" M03, Earth & Env Sci. St. Kateri Tekakwitha, HCDSB.

**PARANTHAMAN, VAISANNYA.** "Smart Breath for COPD Slogan: Breath Deep, Live Better" J10, Eng & Comp Sci. St. Kateri Tekakwitha, HCDSB.

**PARK, JIEUN.** "Alzheimer's Disease: A Comparison of Current and Potential Treatments" D12, Health Sciences Human. Bishop Tonnos Secondary School, HWCDSB.

**POLYANSKA, MARIA.** "PicoTrack: Solar Powered Real-Time Monitoring of Near-Stratospheric Conditions" Q12, Eng & Comp Sci. Garth Webb Secondary School, HDSB.

**POWELL, LUKE.** "BlinkBoost: Utilizing Image Recognition Technology to Improve Blink Rate and Eye Health" Q03, Eng & Comp Sci. Aldershot High School, HDSB.

**ROSELLE, MADELAINE.** "Chew on this: the effect of chewing gum on memory retention in high school students" C18, Health Sciences Human. Sherwood Secondary School, HWDSB.

**SHERBINO, JOCELYN.** "Chew on this: the effect of chewing gum on memory retention in high school students" C18, Health Sciences Human. Sherwood Secondary School, HWDSB.

**SOLOMON, GABRIEL.** "Comparing microbes on household surfaces and testing for the best disinfectant" B14, Life Sciences Non-Human. Assumption Secondary School, HCDSB.

**SOWDAGAR, HIBA.** "Role of Tumour Infiltrating Lymphocytes (TILs) Therapy in Predicting Treatment Response in Melanoma" E08, Biotechnology. Ancaster High, HWDSB.

**SRIVASTAVA, DAKSH.** "CRISPRecise: A Novel Low-Cost Non-Invasive HCC Treatment Harnessing CRISPR-engineered probiotics" F13, Biotechnology. Iroquois Ridge High School, HDSB.

**SURI, RANBIR.** "The Speed and Impact Tracker" P09, Eng & Comp Sci. Burlington Central High School, HDSB.

**WANG, ANDY.** "Decoding the Gut: Al-Powered Predictive Analysis of Gut Microbiome for Early Disease Detection" P20, Eng & Comp Sci. Oakville Trafalgar High School, HDSB.

**WANG, JASMINE.** "Wildfire Detection and Prediction system using a Sequential Transformer model for improved accuracy" P18, Eng & Comp Sci. Iroquois Ridge High School, HDSB.

**WASEEM, ZOYA.** "The Cancer MIRACLE A Novel Diagnostic Model Using Salivary miRNA Profiling for Oral Cancer Detection" E11, Biotechnology. White Oaks Secondary School, HDSB.

**ZHU, DANIEL.** "Innovative Quadruped Spider-Inspired SAR Robot Simulation Using Proximal Policy Optimization RL" L18, Eng & Comp Sci. Abbey Park High School, HDSB.

**ZHU, SALENA.** "The Role of Ascorbic Acid in Enhancing Melanoma Treatment through Oxidative Stress Modulation" C02, Health Sciences Human. Oakville Trafalgar High School, HDSB.



### Senior Level Exhibitors

SR 11/12 LAST NAME, FIRST NAME. "Project Title." Project Number, Division. School, Board.

**ALEXANDER, ALYSSA.** "How does baking time impact the Vitamin C concentration in red bell pepper?" G08, Phys & Math Sci. Westdale Secondary School, HWDSB.

**ALSAADI, BAHAA.** "Bits to Bedside: An Ingenious Exploration of Machine Learning in Triage Assessments (Continued...)" P08, Eng & Comp Sci. Bishop P. F. Reding Secondary School, HCDSB.

**ALSAADI, ZENA.** "Bits to Bedside: An Ingenious Exploration of Machine Learning in Triage Assessments (Continued...)" P08, Eng & Comp Sci. Bishop P. F. Reding Secondary School, HCDSB.

**ARAVIND, KRISH.** "Revolutionizing Water Generation: Enhancing Atmospheric Water Harvesting with Piezoelectric Technolo" J17, Eng & Comp Sci. White Oaks Secondary School, HDSB.

**ARAYA, ZACHARAYA.** "Multiple Factor Regression Analysis of Climate and Topographical Factors on Wildfire Size in BC" M04, Earth & Env Sci. Abbey Park High School, HDSB.

**ATAYA, JUNNAH.** "The difference in effectiveness of neutralisation of HCl between difference brands of antacids" E13, Biotechnology. Westdale Secondary School, HWDSB.

**AZEEM, SHAYAAN.** "How do hypoxia scores and age impact survival of PAAD Cancer patients, and what patterns emerge?" B11, Health Sciences Human. Westdale Secondary School, HWDSB.

**BARBERA, KATIE.** "Crochet as a Method for Modeling Advanced Mathematical Surfaces: Hyperbolic Geometry and Knot Theory" G05, Phys & Math Sci. Cathedral High School, HWCDSB.

**BARKMAN, TRISTAN.** "A Turbulence Model Based on Kinetic Molecular Collisions" N15, Phys & Math Sci. Home Schooling, IND.

BLIMKIE, KIERAN. "Nursebot" P22, Eng & Comp Sci. Notre Dame Secondary School, HCDSB.

**BOYD, CONNOR.** "Anterconnected" B13, Life Sciences Non-Human. Garth Webb Secondary School, HDSB.

**BOYD, TRISTAN.** "Are Biodegradable Plastics a Viable Replacement for Single-use Plastics?" M08, Earth & Env Sci. Garth Webb Secondary School, HDSB.

**BYREDDY, SAI ISHANTH REDDY.** "ECHBTDA: Enchancing Codon Optimization via Hybrid BiLSTM and Transformer Deep Learning Approach" K06, Eng & Comp Sci. Craig Kielburger Secondary, HDSB.

**CHANG, SHAWN.** "Music's Effect on Memory in Educational Settings" D15, Health Sciences Human. White Oaks Secondary School, HDSB.

**CHIJUKA, KACHI.** "Multi-parameter study assessing the impacts of compost-based additives on different soil types" R08, Earth & Env Sci. King's Christian Collegiate, IND.

**DIRECTO, ZACH.** "Multi-parameter study assessing the impacts of compost-based additives on different soil types" R08, Earth & Env Sci. King's Christian Collegiate, IND.

**FOUAGOU, LLOYD.** "Impact of Different Levels Adrenaline on Alertness." C16, Health Sciences Human. Westdale Secondary School, HWDSB.

**GONG, ANNIE.** "Investigating feeding efficiency in primitive Cambrian sponges using computational fluid dynamics" B18, Life Sciences Non-Human. Appleby College, IND.

**HAN, RYAN.** "The Future of Sustainable Packaging: A Comparative Biodegradation Study" M10, Earth & Env Sci. King's Christian Collegiate, IND.

**HASHMI, MOIZ.** "Revolutionizing Water Generation: Enhancing Atmospheric Water Harvesting with Piezoelectric Technolo" J17, Eng & Comp Sci. White Oaks Secondary School, HDSB.



**IRUMHEKHA, DANIEL.** "The Future of Sustainable Packaging: A Comparative Biodegradation Study" M10, Earth & Env Sci. King's Christian Collegiate, IND.

**JAMES, RYAN.** "Investigation on the comparison of the different amounts of Calcium in different types of milks" H08, Phys & Math Sci. Westdale Secondary School, HWDSB.

**KASHYAP, SHRIYAK.** "Clear Energy: Exploring the Potential of Transparent Solar Panels" K04, Eng & Comp Sci. Assumption College School, BHNCDSB.

**KHAN, FAIZAN.** "Clear Energy: Exploring the Potential of Transparent Solar Panels" K04, Eng & Comp Sci. Assumption College School, BHNCDSB.

**KHAN, MOHID.** "Saving Lives on the Road Through AI" Q16, Eng & Comp Sci. Assumption College School, BHNCDSB.

**KIM, SHIYOON.** "Impact of Colour Combinations on Photosynthetic Rate" N07, Life Sciences Non-Human. Westdale Secondary School, HWDSB.

**LAL, DANIEL.** "Advanced Reaction Engine System" Q18, Eng & Comp Sci. Milton District High School, HDSB.

**LEIGHNINGER, PAUL.** "How Do Different Temperatures Affect the Ripening Rates of Bananas" A16, Life Sciences Non-Human. Westdale Secondary School, HWDSB.

**LEVIE, ALEX.** "The Artificial Pancreas 2.0" E12, Biotechnology. Bishop Ryan Secondary School, HWCDSB.

**LI, CALEB.** "Energy Shortage Exploration: Solutions for Underserved Communities" L15, Eng & Comp Sci. Oakville Trafalgar High School, HDSB.

**MANNING, KALLEM.** "Healthy Competition: Optimizing Physical and Mental Health Using an Al-Supported Fitness Tracker" L05, Eng & Comp Sci. M. M. Robinson High School, HDSB.

**MARSH, CLAIRE.** "Autism Identification Tool: An Al Approach to Reducing Diagnostic Barriers" J09, Eng & Comp Sci. M. M. Robinson High School, HDSB.

**MEHR, ARIANA.** "EpiGo: An Advanced and Optimized Approach for the Detection and Intervention of Allergic Reactions" L02, Eng & Comp Sci. Bishop P. F. Reding Secondary School, HCDSB.

**MELACINI, LARA.** "How do varying concentrations of Dawn dish soap in water affect the germination rate of beans?" A12, Life Sciences Non-Human. Westdale Secondary School, HWDSB.

**MILLER, HUNTER.** "Advanced Reaction Engine System" Q18, Eng & Comp Sci. Milton District High School, HDSB.

**NAGASAKI, KIBO.** "Models of selective metabolic control of amino acids and lipids by insulin" C08, Health Sciences Human. Mentor College, IND.

**NECHIFOR, DIANA.** "What is the Effect of Changing the Colour of Bell Peppers on their Vitamin C Concentration?" A14, Life Sciences Non-Human. Westdale Secondary School, HWDSB.

**NUSCA, TRINITY.** "Classifying music using numbers" E05, Health Sciences Human. ESC Sainte-Trinité, CSCMA.

**PACIFICI, NICHOLAS.** "Sideline Diagnostics: An Al-Enabled Tool Used to Diagnose Emergency Room Patients with POCUS" Q07, Eng & Comp Sci. St. Mary Secondary School, HWCDSB.

**PANG, BOYU.** "Precision Control in Thrust Vectoring Nozzles: Enhancing Accuracy Through Servo-Based Control" Q02, Eng & Comp Sci. Appleby College, IND.

**PATEL, NIREK.** "Energy Shortage Exploration: Solutions for Underserved Communities" L15, Eng & Comp Sci. Oakville Trafalgar High School, HDSB.



**PATIAL, NAVRAJ.** "Saving Lives on the Road Through AI" Q16, Eng & Comp Sci. Assumption College School, BHNCDSB.

**QIN, YUYANG.** "Fresh Water- Innovation for More Sustainable and Cost-Efficient Water Filter System" H01, Eng & Comp Sci. Hillfield Strathallan College, IND.

**RASHID, NABIRA.** "Innovating Solar Technology: Natural Dye-Sensitized Cells for Sustainable Energy Solutions" K11, Eng & Comp Sci. White Oaks Secondary School, HDSB.

**RASTOGI, MAITHILI.** "Innovating Solar Technology: Natural Dye-Sensitized Cells for Sustainable Energy Solutions" K11, Eng & Comp Sci. White Oaks Secondary School, HDSB.

**RATHOD, ANISH.** "PIONEER: Pipe Inspection and Observation for Non-Destructive Evaluation and Environmental Review" Q06, Eng & Comp Sci. Burlington Central High School, HDSB.

**SALIM, KHAYLA.** "Let's Chat!" K02, Eng & Comp Sci. North Park Collegiate and Vocational School, GEDSB.

**SARAVANAN, RAKSHAN.** "Alak-AZA-m: An Ancient solution to say bye to E.Coli" A02, Life Sciences Non-Human. Ancaster High, HWDSB.

**SARUN, TANUSH.** "Are Biodegradable Plastics a Viable Replacement for Single-use Plastics?" M08, Earth & Env Sci. Garth Webb Secondary School, HDSB.

**SHAIJU, JULIAN.** "EpiGo: An Advanced and Optimized Approach for the Detection and Intervention of Allergic Reactions" L02, Eng & Comp Sci. Bishop P. F. Reding Secondary School, HCDSB.

**SHEEL, VEDANT.** "Immediate Pulmonary Fibrosis Prognosis Using Machine Learning Algorithms" J14, Eng & Comp Sci. Waterdown District Secondary School, HWDSB.

**STOCKTON, ZABEL.** "How does the type of flour fed to sourdough starter effect the volume growth after 24 hours?" A17, Life Sciences Non-Human. Westdale Secondary School, HWDSB.

**SZYMALA, WERONIKA.** "The Artificial Pancreas 2.0" E12, Biotechnology. Bishop Ryan Secondary School, HWCDSB.

**TANG, CHURONG.** "Inferring Biomarkers from UroA-treated Cell Transcriptome & CRC Cell Heterogeneity via Deep Learning" C06, Biotechnology. Home Schooling, IND.

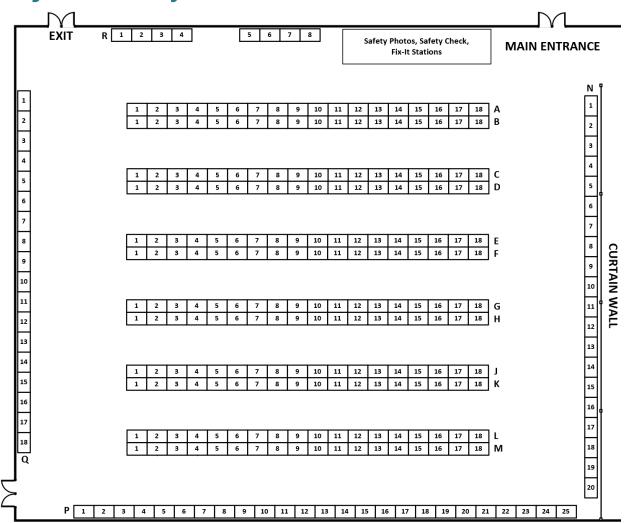
**WU, JUNCHENG.** "Anterconnected" B13, Life Sciences Non-Human. Garth Webb Secondary School, HDSB.

**WU, ZHENG.** "Music's Effect on Memory in Educational Settings" D15, Health Sciences Human. White Oaks Secondary School, HDSB.

**ZHANG, JIAHE.** "Fresh Water- Innovation for More Sustainable and Cost-Efficient Water Filter System" H01, Eng & Comp Sci. Hillfield Strathallan College, IND.



## **Project Floor Layout**







# **BASEF 2025 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 2025 Fair, we would like to recognize a teacher who approaches teaching with patience, creativity, and a deep sense of care for his students' well-being. His dedication and passion for education make him truly deserving of BASEF 2025's Champion Teacher Award.



### **Richard Humpartzoomian**

North Park Collegiate and Vocational School Grand Erie District School Board

The nominator writes: "Mr. Humpartzoomian is a dedicated and inspiring educator who consistently goes above and beyond to support his students. Through his encouragement, insightful suggestions, and clear explanations, he fosters an environment where every student can thrive. He recognizes and nurtures the unique strengths of each individual, whether in coding, hands-on applications, or innovative thinking. His ability to see potential in every student allows them to grow in confidence and ability, especially in high-level academic pursuits such as BASEF projects."





# **Emergency Procedures**

## Hillfield Strathallan College

In Case of Emergency:

> Dial 911
> Dial (905) 961-4977 for the Security Desk
> Inform the nearest BASEF volunteer

299 Fennell Ave West, Hamilton, ON, L9C 1G3

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:**

### <u>If you Smell Smoke:</u>

• Call Campus Security immediately.

### **Upon Discovery of Fire (Flames):**

- 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.

### **Upon Activation of the Fire Alarm:**

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

#### Note:

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

### **Emergency Lockdown:**

### Threat Inside the Building:

Upon hearing the voice message advising lockdown:

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

#### End of Lockdown:

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

### Threat Outside the Building:

#### Hold and secure:

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

