

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



The Actuarial Foundation of Canada Award

Junior

Sponsor: The Actuarial Foundation of Canada Award
\$500 cash and certificate

Arushi Nath – Toronto – ON

Developing algorithms to determine asteroid's physical properties and success of deflection missions

The Actuarial Foundation of Canada Award

Intermediate

Sponsor: The Actuarial Foundation of Canada Award
\$750 cash and certificate

Reine Huang – Greater Vancouver – BC

Detecting and Preventing Human Falling with Lateral Stability

The Actuarial Foundation of Canada Award

Senior

Sponsor: The Actuarial Foundation of Canada Award
\$1,000 cash and certificate

Dolev Klein Harari – United Counties – ON

An Earthshattering Coding Prophecy

The Beaty Centre for Species Discovery Award

Senior

Sponsor: The Beaty Centre for Species Discovery Award
\$1,000 cash, certificate and one-year Canadian Museum of Nature family membership

Graeme Hopkins – Saskatoon – SK

Paleoecology and Geology of a Fossil-Bearing Quaternary Clay Formation New to Science

Canadian Acoustical Association Award

Senior

Sponsor: Canadian Acoustical Association Award
\$1,000 cash and certificate plus subscription to the Canadian Acoustical Association's quarterly journal

Sarah Lagarde – North-West New Brunswick – NB

How Playing an Instrument Benefits Youth Mental Health

Canadian Artificial Intelligence Association Award

Junior

Sponsor: Canadian Artificial Intelligence Association Award
\$500 cash and certificate

Gurnoor Kaur – Waterloo-Wellington – ON

MalaScope: A Deep Learning Enabled Lensless Microscope for the Rapid Detection of Malaria

Canadian Botanical Association Award

Junior

Sponsor: Canadian Botanical Association Award
\$500 cash and certificate

Sebastian Audet – Pacific Northwest – BC

Seymour Lake is having a Floating Heart attack

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Canadian Society of Clinical Chemists Award

Senior

Sponsor: Canadian Society of Clinical Chemists Award
\$1,000 cash and certificate

Albert Guo – South Fraser – BC

Alzheimer's in 16x16 Words: Transformers for Biomarker-Based Diagnosis

Canadian Stockholm Junior Water Prize

Senior

Sponsor: Canadian Stockholm Junior Water Prize
Stockholm Junior Water Prize Competition Event, August 19-23, 2023, winning project to represent Canada at the International Stockholm Junior Water Prize Competition. The two runner-up projects will each receive a \$300 cash prize.

Mariane Angers – Réseau Technoscience – QC

Vert Houlo, Wh

Ava Fischer – Simcoe County – ON

exSTREAM FUNgi

Baljot Rai – Bison – MB

Development of a Mussel-based Biosorbent for Phosphorus: The Solution to the Eutrophication Crisis

CAP Physics Prize

Senior

Sponsor: CAP Physics Prize
\$1,000 cash and certificate

Afaq Virk – United Counties – ON

eECHOlocation: An Innovation to Mitigate Visual Impairment

Centre for Canadian Nuclear Sustainability Award

Intermediate

Sponsor: Centre for Canadian Nuclear Sustainability Award
\$750 cash and certificate

Alia Wahban – Bay Area – ON

Replacing Natural Gas With Hydrogen Fuel to Power Ontario

deutraMed Chemistry and Innovation Award

Junior

Sponsor: deutraMed Chemistry and Innovation Award
\$500 cash and certificate

Hudson Gibbs – United Counties – ON

Wait! Are the juice trucks out?

Digital Moment Innovation Award

Junior

Sponsor: Digital Moment Innovation Award
\$500 cash and certificate

Ali Soufi, Antony Zhang – South Fraser – BC

Refugee Pal

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Digital Moment Innovation Award

Intermediate

Sponsor: Digital Moment Innovation Award
\$750 cash and certificate

Yasmine Ben Arous – Réseau Technoscience – QC

Calmos

Digital Moment Innovation Award

Senior

Sponsor: Digital Moment Innovation Award
\$1,000 cash and certificate

Aahaan Maini – Bay Area – ON

Circulate: Designing an Algorithmic Blood Distribution System to Tackle the Indian Blood Shortage

Engineering Innovation Award

Senior

Sponsor: Engineering Innovation Award
\$1,000 cash and certificate

Nik Artsimenia – Calgary Youth – AB

The "Helping Hand" Project

Excellence in Astronomy Award

Junior

Sponsor: Excellence in Astronomy Award
Telescope and certificate plus a one year membership to RASC

Arushi Nath – Toronto – ON

Developing algorithms to determine asteroid's physical properties and success of deflection missions

Excellence in Astronomy Award

Intermediate

Sponsor: Excellence in Astronomy Award
Telescope and certificate plus a one year membership to RASC

Alexander Abesteh – Ottawa – ON

Timelike and Null Geodesics around a Reissner-Nordström Black Hole

First Nations University of Canada Award

Junior

Sponsor: First Nations University of Canada Award
\$500 cash and certificate

Fred McKay Campbell – MFNERC Schools – MB

Exploring the Potential of Juniper and Cedar as Alternative Sources for Essential Oil Extraction

Genome Alberta and Genome Canada Award

Senior

Sponsor: Genome Alberta and Genome Canada Award
\$1,000 cash and certificate

Elizabeth Chen – Edmonton – AB

Optimization of CAR-T Cell Therapy using RNA-Sequencing Analysis for Biomarker Identification

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Hydrogen Optimized Green Energy Award

Senior

Sponsor: Hydrogen Optimized Green Energy Award
\$1,000 cash and certificate

William Chiu, Rohit Koneru – Toronto – ON

Quantum Annealing for Real-Time Reconfiguration of Electrical Grids to Minimize Transmission Loss

Intact Climate Change Resilience Award

Junior

Sponsor: Intact Climate Change Resilience Award
\$500 cash and certificate

Aryan Sharma – Calgary Youth – AB

A Novel Solution to Plastic Pollution

Intact Climate Change Resilience Award

Intermediate

Sponsor: Intact Climate Change Resilience Award
\$750 cash and certificate

Fayhaa Kafi – South Fraser – BC

The Orange Brick 2.0

Intact Climate Change Resilience Award

Senior

Sponsor: Intact Climate Change Resilience Award
\$1,000 cash and certificate and a virtual tour of the University of Waterloo and the Intact Centre on Climate Adaptation, Canada's leading research centre on climate change resilience, in Waterloo, Ontario.

Alyssa Anderson – South-East New Brunswick – NB

Phytotron Ventilation: Seedling Survival in a Changing Environment

International Summer School for Young Physicists Award

Senior

Sponsor: International Summer School for Young Physicists Award
Certificate and a full scholarship to participate in the International Summer School for Young Physicists 2023 (ISSYP 2023) from July 17-28.

Kevin Shao – Thames Valley – ON

Characterizing the Intrinsic Profile and Environmental Variations of the 5780Å DIB

Nanotechnology for Sustainable Society Award

Junior

Sponsor: Nanotechnology for Sustainable Society Award
\$500 cash and certificate

Ryvan Hammoud – South Fraser – BC

Smart Naloxone Kit

Nanotechnology for Sustainable Society Award

Intermediate

Sponsor: Nanotechnology for Sustainable Society Award
\$750 cash and certificate

Sophia Zhang – Eastern Newfoundland – NL

Triboelectric Nanogenerator for Wind Energy Harvesting

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Nanotechnology for Sustainable Society Award

Senior

Sponsor: Nanotechnology for Sustainable Society Award

\$1,000 cash and certificate and an opportunity to visit and present their project at the Waterloo Institute for Nanotechnology at the University of Waterloo in Waterloo, Ontario.

Hooman Reza Nezhad – Waterloo-Wellington – ON

From Dust to Habitation – Molten Salt Electrolysis for the In-situ Reduction of Martian Regolith

Nutrients for Life Foundation Award

Junior

Sponsor: Nutrients for Life Foundation Award

\$500 cash and certificate

Mya Hart, Violeta Mena-Lozada – Prince Edward Island – PE

Water is more than wet

Renewable Energy Award

Junior

Sponsor: Renewable Energy Award

\$500 cash and certificate

Dmytro Doroshenko, Saif Shah – Central Alberta Rotary – AB

Pop Can Solar Heater

Renewable Energy Award

Intermediate

Sponsor: Renewable Energy Award

\$750 cash and certificate

Malachi Coonishish – Aboriginal Québec Autochtone – QC

How To Increase Solar Panel Energy Output

Renewable Energy Award

Senior

Sponsor: Renewable Energy Award

\$1,000 cash and certificate

Mariane Angers – Réseau Technoscience – QC

Vert Houlo, Wh

S.M. Blair Family Foundation Award

Junior

Sponsor: S.M. Blair Family Foundation Award

\$500 cash and certificate

Ash Dickens – Prince Albert & Northeast Saskatchewan – SK

C.I. Active Headband: Helping to Be Active with Cochlear Implants

S.M. Blair Family Foundation Award

Intermediate

Sponsor: S.M. Blair Family Foundation Award

\$750 cash and certificate

Ashish Chettimada – Waterloo-Wellington – ON

ReAlign: A Novel Solution for the Early Detection and Management of Amblyopia

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



S.M. Blair Family Foundation Award

Senior

Sponsor: S.M. Blair Family Foundation Award
\$1,000 cash and certificate

Moulik Budhiraja, Katelyn Wu – Waterloo-Wellington – ON

Nail Braille: A Novel Approach Towards Braille Education

Shad Canada Scholarship Awards

Intermediate

Sponsor: Shad Canada Scholarship Awards
Certificate. This award is a \$1,000 scholarship towards the program fee to attend Shad in July 2024. To be eligible for the scholarship, the finalist must apply and be admitted to the program during the Shad 2024 application cycle.

Spencer Pearce – Western Manitoba – MB

Noise Pollution or Productivity? Investigating the Effects of Sound on Concentration

Shad Canada Scholarship Awards

Intermediate

Sponsor: Shad Canada Scholarship Awards
Certificate. This award is a \$2,000 scholarship towards the program fee to attend Shad in July 2024. To be eligible for the scholarship, the finalist must apply and be admitted to the program during the Shad 2024 application cycle.

Isabelle Durepos – Districts francophones du N.-B. – NB

La société et tes pensées

Shad Canada Scholarship Awards

Intermediate

Sponsor: Shad Canada Scholarship Awards
Certificate. This award is a \$3,000 scholarship towards the program fee to attend Shad in July 2024. To be eligible for the scholarship, the finalist must apply and be admitted to the program during the Shad 2024 application cycle.

Vedant Sheel – Bluewater – ON

A Voice For The Voiceless

Statistical Society of Canada Award

Intermediate

Sponsor: Statistical Society of Canada Award
\$750 cash and certificate

Jonathan Leung – Greater Vancouver – BC

A Survey of Spider Diversity at the University of British Columbia Farm

Statistical Society of Canada Award

Senior

Sponsor: Statistical Society of Canada Award
\$1,000 cash and certificate

Dolev Klein Harari – United Counties – ON

An Earthshattering Coding Prophecy

Technology in Agriculture Award

Junior

Sponsor: Technology in Agriculture Award
\$500 cash and certificate

Jordan LeBlanc – Bay Area – ON

Transferring Pollen Using a Mechanical Bee

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Technology in Agriculture Award

Intermediate

Sponsor: Technology in Agriculture Award
\$750 cash and certificate

Thông Quách – Saskatoon – SK

FlaxFloc - A Saskatchewan Plant-Based Material in Turbidity Removal for Sustainable Water Treatment

Technology in Agriculture Award

Senior

Sponsor: Technology in Agriculture Award
\$1,000 cash and certificate

Mac Dykeman – 4-H Canada – CA

An Innovative Approach to Ammonia Control in Poultry Operations

University of Ottawa Undergraduate Research Scholarship Award

Senior

Sponsor: University of Ottawa Undergraduate Research Scholarship Award
\$11,500 research scholarship and certificate

Ava Fischer – Simcoe County – ON

exSTREAM FUNgi

Excellence Award - Bronze

Junior

Sponsor: Excellence Award - Bronze
Medal and certificate

Luca Agnello – Ottawa – ON

Énergie volcanique

Maggie Alexander – Renfrew County – ON

Who's Cell Phone is the Grossest?

Imran Allarakhia – Bay Area – ON

My SEER (Social Emotional Engaging Robot): Social Robots to Detect and Manage Student Anxiety

Sebastian Audet – Pacific Northwest – BC

Seymour Lake is having a Floating Heart attack

Alexandra Bishop – Algoma Rotary – ON

Exploring The Effectiveness of Multipurpose Toothpastes on the Oral Flora

Marshall Bobier – Regina – SK

R-U Insulated

Maria Brons – Prince Albert & Northeast Saskatchewan – SK

Eggs vs. Time

Jasmine Chow – West Kootenay & Boundary – BC

Can chip bags be used as an emergency blanket?

Emmersyn da Mata, Hailee Marshall – Frontier Schools – MB

Walk your Butt to the Can

Dexter Deheer – Central Alberta Rotary – AB

Can you Crypto Mine with a RaspberryPi?

Claire Friesen – Central Alberta Rotary – AB

The Way It Flows: Laminar vs. Turbulent

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Deepraj Singh Gill – Fraser Valley – BC

How a Commercial Jetliner Functions

Safwan Hussain – Waterloo-Wellington – ON

Building a Multiclass Brain Tumor Classification Model using a Convolutional Neural Network (CNN)

Jeffrey Ion – Bay Area – ON

Think Fast!

Abigail Jennings – Ottawa – ON

Dress up: Gender Bias in Character Design

Ben Kawa – Sudbury – ON

Driver Wake Up!

Emily Krause, E'lise Nguyen – Ottawa – ON

M.E.P.

William Li – West Kootenay & Boundary – BC

Centrifugal Space Fitness Center

Ariel Mason – Calgary Youth – AB

Using Machine Learning to Detect Breast Cancer

Khafri Mau – Greater Vancouver – BC

The First Step to Growing Plants on Mars

Emily McKenna – Winnipeg Schools – MB

Compaction Action: Measuring the effect of additives on soil compaction

Sia Mehta – Simcoe County – ON

Glaze the Roof

Daniel Nashed – Manitoba Schools Science Symposium – MB

Which one soundproofs best?

Shail Patel – Frontenac, Lennox & Addington – ON

Dextera: An Affordable, Functional, Myoelectric Prosthetic Hand

Zenia Pereira, Nandika Senthilkumar – Edmonton – AB

Alex, the AI that Doesn't Exist

Maggie Polischuk – Sudbury – ON

'Steer Clear' The Break-Away Steering Wheel!

Hanna Ryan – Yukon Stikine – YT

What's the best way to dry your hands?

Ayana Torres – Ottawa – ON

Amélioration de toiture: déflecteur de vent

Jack Washburn – Frontenac, Lennox & Addington – ON

Sham(e)poo: Clean Hair without the Dirty Secret Ingredients of Commercial Shampoos

Mark Wendland – Renfrew County – ON

Tank Battles in 2D & 3D

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Excellence Award - Bronze

Intermediate

Sponsor: Excellence Award - Bronze

Medal and certificate

Alexander Abesteh – Ottawa – ON

Timelike and Null Geodesics around a Reissner-Nordström Black Hole

Munir Al-Taher – Canadian Black Scientists Network Youth – CA

Changing the way we refill electric cars

Wafaa Amin, Asia Urquhart – Halifax – NS

A Novel Study of Physiological and Social Relation with Low-Valence Emotions: Pediatric PCEST Care

Kaitlyn Chan – Vancouver Island – BC

Greening the Flames: Investigating the abilities of plants to reduce the impact of wildfires

Armaan Chaudhari – Western Manitoba – MB

Antibiotics: Synthetic and Natural

Aiyyan Faisal – Winnipeg Schools – MB

Exploration of Genetic Algorithm for Function Optimization

Swas Ghosh – Northern British Columbia – BC

Green Pools of CO₂: The Effects of CO₂ on Household Plants

Angelina Hang, Noah Oliver Pang – Greater Vancouver – BC

Turning Algae Into Fibers: The Solution to Textile Waste

Micah Hansen – Peace Country – AB

Homemade Fertilizers

Nycea Hazelwood – Lethbridge – AB

Biomagnification – When a little becomes a lot

Reine Huang – Greater Vancouver – BC

Detecting and Preventing Human Falling with Lateral Stability

Sterling Huang, Ethan Xu – Toronto – ON

HydroElectrica: Water Purification + Dual Electricity Generation System

Nimish Jain – Greater Vancouver – BC

Highly Evolved Lip Learning mOdel (HELLO): A Novel Machine Learning Model for Accurate Lipreading.

Tanya Jivani, Lalithya Raavi – Wood Buffalo – AB

From Raw to Cooked: Exploring Cooking Methods on Ascorbic Acid Retention in Tomatoes

Sophie Kong – Prince Edward Island – PE

Soil Microbial Fuel Cell

William Larder – Annapolis Valley – NS

Culvert Remediation for Fish Passage in Barkhouse Brook

Anna Lawand – Cape Breton – NS

Natural Antibiotics Comparison Experiment

Maya LeBlanc – Bay Area – ON

*Nitrous Oxide Reduction in an Industrial Wet Scrubber Utilizing NosZ Reductase and *P. denitrificans**

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Jad Menkara – Windsor – ON

Novel Thermoelectric Generator for Automobile Exhaust Waste Heat Recovery

Katharine Morley – Vancouver Island – BC

Plastered Plants Defeat Drought: Exploring the effects of ethanol on drought resistance in plants

Alpita Patro – Eastern Newfoundland – NL

Investigating the Antibacterial Activity of Natural Remedies Against Non-Pathogenic E. coli

Izabela Quest – Frontenac, Lennox & Addington – ON

Stopping Cancer in its Tracks: How does fructose enable cancer cell metastasis?

Mohamed Saleh – Windsor – ON

Pumpkin Plastic: An Innovative Bioplastic to Replace Petroleum-based Plastic

Rishi Shah – Thames Valley – ON

From Pixels to Precision

Roocha Shukla – Waterloo-Wellington – ON

The Power that Brings Flowers

Prabhdeep Singh – Thames Valley – ON

Asion: An ML-powered Sky Navigation and Constellation Recognition System

Ella Strachan – Winnipeg Schools – MB

Mapping Microplastics: Computer Modelling to Predict & Address Microplastic Accumulation in Lakes

Alexia Tomasello – Districts francophones du N.-B. – NB

La conservation des chauves-souris, un défi de taille !

Beth Tubman – Strait – NS

From Flower to Flavour – How pollen type affects honey

Brian Yin – Bay Area – ON

Student Engagement Rewards System

Excellence Award - Bronze

Senior

Sponsor: Excellence Award - Bronze

Medal and certificate

Hannah Allen – South Shore – NS

Food for Thought

Hadlea Bradbury – Simcoe County – ON

Gluten Tox

Joshua Chow – Calgary Youth – AB

How Your Weight Could Be Putting You at Risk: Unraveling the Link between BMI and Colorectal Adenomas

Maria Chzhen – Bay Area – ON

Comparison of Regression Algorithms in Multivariable Drought Modeling and Analysis

Emma Coakley – South-East New Brunswick – NB

Inflatable Pouch Motors in Upper Limb Prosthetics

Julia Dargacz – Niagara – ON

The Progress Towards the Synthesis of Silatrane Lipid Head Groups

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Sietse de Backer – Prince Edward Island – PE

Synced Up: Comparing Methods to Scale Synchronized Servers

Justin Du – Greater Vancouver – BC

Interrsect: Aggregated Note Summarization by Machine Learning

Mac Dykeman – 4-H Canada – CA

An Innovative Approach to Ammonia Control in Poultry Operations

Ava Haynes – Saskatchewan First Nations – SK

Cyanobacteria

Evan Howells – Yukon Stikine – YT

Flight of the Bumble Bee: Comparing pollen foraging patterns of bumble bees and honey bees in Yukon

Kaleb Hussey – South-East New Brunswick – NB

The Effect of Weight Configuration and Load Knowledge on Trunk Motion in Adolescents

Pathomphu Kanapornthada, Nutdanai Sunanthakhantharot – Thailand – IN

SAFEFALL: Fall Detection System using 3D Human Skeleton Model

Liz Krelove, Karys Littlejohns – Simcoe County – ON

*Investigating the effects of stimulants and depressants in aquatic pollutants on *Daphnia magna**

Jonathan Li – Frontenac, Lennox & Addington – ON

Depressed or Not? Using Large Language Models to Predict Depression from Social Media Posts

Ziang Li – Bay Area – ON

I.C.: Predict Food Recipe from Image using CNN/Transformer & Knowledge Distillation for Portability

Shayan Mahmood – Thames Valley – ON

Morphological Characterization of Imaged iPSC-Derived Endothelial Cells Using Machine Learning

Renzo Masiclat – Southeast Alberta – AB

Cranberries: A Potential Treatment and Prophylaxis Against Urinary Tract Infections

Rylie McGrath – South-East New Brunswick – NB

The Moss Pit: Comparing the performance of three moss species local to Saint John on two substrates

Nila Munro, Donell O'Connor – Strait – NS

Waste Not, Want Not; Enhancing Nuclear Energy Output

Anush Mutyala – Peel – ON

Energyspike: Pioneering Wireless Mind-Control Implants using Energy-Efficient Neuromorphic Computing

Annika Paliwal – Bison – MB

A Long-Term Study Using Serious Games to Diagnose and Treat Dementia

Ria Patel – Ottawa – ON

The Spark of Life: Exploration of neuromuscular junctions, insulin secretion, and cardiac regulation

William Rodgers, Rylan Wainman – Beaufort-Delta – NT

Steroid Use

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Misimi Sanni – Bay Area – ON

Emerging Prosthetics: The Novel Development of a Cost-Effective Electronic Prosthetic Arm

Adara Shilling – Greater Vancouver – BC

Plastic Roots

Rodin Shokravi, Kevin Yuan – Greater Vancouver – BC

A Novel System: Replicating Materials' Arithmetic Mean Height Using LRAs & Piezo Elements

Jonas Tkacz – Conseil scolaire acadien provincial – NS

Un vaccin informatique: l'utilisation de l'intelligence artificielle pour combattre les virus

Afaq Virk – United Counties – ON

eECHOlocation: An Innovation to Mitigate Visual Impairment

Errita Xu – Toronto – ON

Road Salt: Its Implications and Exploring Agro-Based Alternatives

Aaron Zhao – Greater Vancouver – BC

ExoTremor: A Low-Cost, 3D-Printed Exoskeleton that Suppresses Hand Tremors in Movement Disorder Patients

Excellence Award - Silver

Junior

Sponsor: Excellence Award - Silver

Medal and certificate

Patrick Casey – Prince Edward Island – PE

Printer vs. Cinder

Amy Clark – Manitoba Schools Science Symposium – MB

What is radiation?

Riley Edmunds – Lambton County – ON

One Drop at a Time: How effective are biodegradable filters?

Anthony Efthimiadis – Bay Area – ON

Diagnostic Screening of Basal Cell Carcinoma Cancer With AI

Tahlia Feldman – Simcoe County – ON

Battery Catastrophe

Ryhan Hammoud – South Fraser – BC

Smart Naloxone Kit

Kathy Han – Saskatoon – SK

Hidden Dangers in Plain Sight: Investigating Pathogenic Bacteria in Household Plant Soil

Nara Harvey – Greater Vancouver – BC

A Biological Solution to Phosphate and Nitrate Pollution

Ethan Hon – York – ON

Carbon Nanotubes and their Applications in Agriculture

Blake Howes, Madelyn Howes – Bluewater – ON

The Science of Smiles

Jacob LeBlanc – Bay Area – ON

Sustainability Metrics for Consumer Products Using Open-Source Data, Python and QR Code Technology

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Anne Mister, Annabelle Tasset-Scherer – Ottawa – ON
Gérons le son!

Alyssa Morena – Ottawa – ON
Hydrogen Fuel of the Future – Dry Hydrogen Storage

Thomas Mullaly, Arthur Queiroz – Sudbury – ON
Can worms be a part of the Styrofoam pollution solution?

Cyndi Rayson – Lambton County – ON
Bioremediation to the Rescue: An Environmental Solution to Pollution

Madhav Saravanan – Peel – ON
Microplastics, Macro Problem

Layla Sawan – Thames Valley – ON
GreenGenie Composting System

Aryan Sharma – Calgary Youth – AB
A Novel Solution to Plastic Pollution

Sehar Sidhu – Windsor – ON
ChatGPT is everywhere: Is this AI chatbot a friend or foe?

Sara Waqas – Calgary Youth – AB
Can Bioengineering Alter Genetic Mutations and Create Organs Using Stem Cells?

Excellence Award - Silver

Intermediate

Sponsor: Excellence Award - Silver
Medal and certificate

Joy Akinkunmi – Canadian Black Scientists Network Youth – CA
Pill Smart

Shayan Awan – Wood Buffalo – AB
TM&R Band: Age with Confidence

Yasmine Ben Arous – Réseau Technoscience – QC
Calmos

Vaishu Bhathala Venkata – Saskatchewan Chinook – SK
MonstorMunch: The Solution To Childhood Obesity?

Chloe Fillion, Sophie Fillion – Niagara – ON
The Digital Air Rifle Ballistic Measuring Device

Ila Giroux, Kavi Giroux – Algoma Rotary – ON
Drone Assisted Orchard Assessment

Anqi Guan – Manitoba Schools Science Symposium – MB
Smart Farming: Self-Powered Hydrogel as a Fertilizer for Plant Growth

Mateo Jarquin – Réseau Technoscience – QC
Need a hand with that?

Maryam Khanum – Northern British Columbia – BC
Feasibility Assessment of MFC to Treat Oil and Gas Produced Water and Generate Electricity

Sarah Murimboh – Annapolis Valley – NS
The Effects of Humidity and Temperature on Deformities in Tenebrio molitor

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Spencer Pearce – Western Manitoba – MB

Noise Pollution or Productivity? Investigating the Effects of Sound on Concentration

Justin Peng – Greater Vancouver – BC

Atmos: A Neural Edge-Cloud Visual to Auditory Spatial Augmentation Device for the Visually Impaired

Kadhir Ponnambalam – Bay Area – ON

*Electrotaxis of the Tardigrade Species *Hypsibius exemplaris* in a Microfluidic Environment*

Thông Quách – Saskatoon – SK

FlaxFloc - A Saskatchewan Plant-Based Material in Turbidity Removal for Sustainable Water Treatment

Nishka Rai – Wood Buffalo – AB

F.R.O.S.T. – Frostbite Risk Observation & Safety Technology

Vedant Sheel – Bluewater – ON

A Voice For The Voiceless

Danill Tyurin – Calgary Youth – AB

The Feasibility and Prototyping of a Mechanical Counterpressure EVA Space Suit

Ann Wang – Greater Vancouver – BC

Battling Bacterial Biofilms

Justin Yu – Fraser Valley – BC

Zap the Lead Problem! Cost-effective and Immediate Electrochemical Pipe Scale Accelerator

Sophia Zhang – Eastern Newfoundland – NL

Triboelectric Nanogenerator for Wind Energy Harvesting

Excellence Award - Silver

Senior

Sponsor: Excellence Award - Silver

Medal and certificate

Mariane Angers – Réseau Technoscience – QC

Vert Houlo, Wh

Nik Artsimonia – Calgary Youth – AB

The "Helping Hand" Project

Jason Bae – Bay Area – ON

ADHD Treatment: Investigating the Effectiveness of Fine Motor Learning on Frontal Lobe Activity

Sam Bae – Bay Area – ON

Creating bioplastic that promotes the most effective filtration of atmospheric aerosol particles

Tanish Bhatt – Eastern Newfoundland – NL

An Immunoinformatics-based Approach to Identifying a Theoretical Vaccine Against SARS-CoV-2 Variants

Keanu Chan – East Kootenay – BC

PRrecision Exospinal Constructive Innovative Stereotactic Evolution (PRECISE)

William Chiu, Rohit Koneru – Toronto – ON

Quantum Annealing for Real-Time Reconfiguration of Electrical Grids to Minimize Transmission Loss

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Jonathan Gong – South Fraser – BC

COVID-19 Chest X-ray Image Classification and Improved U-Net Segmentation

Vinny Gu – York – ON

DermaScan: A Novel Approach to Skin Cancer Classification and Detection Using ML Models

Albert Guo – South Fraser – BC

Alzheimer's in 16x16 Words: Transformers for Biomarker-Based Diagnosis

Aaryan Harshith – Sudbury – ON

LightIR: An Intraoperative Probe to Enhance Tumour Resections

Graeme Hopkins – Saskatoon – SK

Paleoecology and Geology of a Fossil-Bearing Quaternary Clay Formation New to Science

Daiying Li – Toronto – ON

GMCVD: Detecting key gut microbiota to reduce cardiovascular disease risk for precise prevention

Rebecca Li – Réseau Technoscience – QC

Cyrene and Neurodegeneration

Marissa Magsino – Manitoba Schools Science Symposium – MB

*Manipulating *Tenebrio molitor* with chemical compounds to maximize the biodegradation of polystyrene*

Aahaan Maini – Bay Area – ON

Circulate: Designing an Algorithmic Blood Distribution System to Tackle the Indian Blood Shortage

Hooman Reza Nezhad – Waterloo-Wellington – ON

From Dust to Habitation – Molten Salt Electrolysis for the In-situ Reduction of Martian Regolith

Kevin Shao – Thames Valley – ON

Characterizing the Intrinsic Profile and Environmental Variations of the 5780Å DIB

Prabhnoor Sidhu – Central Interior BC – BC

Mitigating the Effects of Debris Flows: Part Two

Evan Warburton – Vancouver Island – BC

The Dual Dipole Radio Telescope

Excellence Award - Gold

Junior

Sponsor: Excellence Award - Gold

Medal and certificate

Caroline Chan – Toronto – ON

RecycleBot: An AI Enabled Waste Sorting Trash Can

Justin Guo – Greater Vancouver – BC

What Method of Meat Thawing Results in Least Bacterial Contamination?

Richard Ilioukevitch – Northwest Saskatchewan – SK

The Rescue Rangers Autonomous Robotic Search and Rescue System

Gurnoor Kaur – Waterloo-Wellington – ON

MalaScope: A Deep Learning Enabled Lensless Microscope for the Rapid Detection of Malaria

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Jordan LeBlanc – Bay Area – ON
Transferring Pollen Using a Mechanical Bee

Andrei Marti – Vancouver Island – BC
Sweet Scores

Arushi Nath – Toronto – ON
Developing algorithms to determine asteroid's physical properties and success of deflection missions

Harry Nickerson – Halifax – NS
Do You Really See What Eye See?

Adelyn Noh – Edmonton – AB
Latherin' Up Your Mind: Priming Humans and AI

Annika Saini – Calgary Youth – AB
A DIY Air Purifier To Clean Particulate Matter and Chemicals from Household Air

Excellence Award - Gold

Intermediate

Sponsor: Excellence Award - Gold
Medal and certificate

Noah Bryan – Canadian Black Scientists Network Youth – CA
The Phage Takes Centre Stage for Water Quality Testing!

Tesko Chaganti – YSC Virtual – CA
The Secrets of Healthy Aging: Discovery of Novel & Natural Senolytic PI3K Inhibitors

Ashish Chettimada – Waterloo-Wellington – ON
ReAlign: A Novel Solution for the Early Detection and Management of Amblyopia

Veronica Guo – Greater Vancouver – BC
Biological Photovoltaics: Testing Algae for the Optimal Battery

Renata Hollander – Calgary Youth – AB
The Mathematics of Language Through History: Does Zipf's Law Always Apply?

Fayhaa Kafi – South Fraser – BC
The Orange Brick 2.0

Jonathan Leung – Greater Vancouver – BC
A Survey of Spider Diversity at the University of British Columbia Farm

Mateo Mathenge – Halifax – NS
Green Energy: The answer is blowing in the wind

Yurui Qin – Saskatoon – SK
A Novel Approach to Using Artificial Intelligence to Aid the Hearing Impaired

Bram St. Peters – Halifax – NS
Could moon colonists add human biosolids or sand to lunar soil to increase food production on the moon?

Excellence Award - Gold

Senior

Sponsor: Excellence Award - Gold
Medal and certificate

Alyssa Anderson – South-East New Brunswick – NB
Phytotron Ventilation: Seedling Survival in a Changing Environment

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Moulik Budhiraja, Katelyn Wu – Waterloo-Wellington – ON

Nail Braille: A Novel Approach Towards Braille Education

Elizabeth Chen – Edmonton – AB

Optimization of CAR-T Cell Therapy using RNA-Sequencing Analysis for Biomarker Identification

Ryan Cullen – Eastern Newfoundland – NL

Simulating Le Chatelier's Principle

Safia Deol – Lambton County – ON

The IncrediGels: Multifaceted Biopolymers for Dental Procedures

Ava Fischer – Simcoe County – ON

exSTREAM FUNgi

Heather Kornylo – Northern Vancouver Island – BC

Auto-Pend Lab

Thomas Murimboh – Annapolis Valley – NS

The Best Cell Provider! An Evaluation of Probiotic Products

Jasmin Pelletier – Réseau Technoscience – QC

As-tu le profil d'un gagnant?

Sarah Reyes Zamora, Diego Rodriguez Collantes – Mexico – IN

Tlaolli Xiuhtic

Camela Temacini – Niagara – ON

Recreating a Tumour Microenvironment: Solving a Major Problem in Cancer Cell Culture

Challenge Award - Agriculture, Fisheries and Food

Junior

Sponsor: Challenge Award - Agriculture, Fisheries and Food
Certificate

Jordan LeBlanc – Bay Area – ON

Transferring Pollen Using a Mechanical Bee

Challenge Award - Agriculture, Fisheries and Food

Intermediate

Sponsor: Challenge Award - Agriculture, Fisheries and Food
Certificate

Ila Giroux, Kavi Giroux – Algoma Rotary – ON

Drone Assisted Orchard Assessment

Challenge Award - Agriculture, Fisheries and Food

Senior

Sponsor: Challenge Award - Agriculture, Fisheries and Food
Certificate

Hannah Allen – South Shore – NS

Food for Thought

Challenge Award - Curiosity and Ingenuity

Junior

Sponsor: Challenge Award - Curiosity and Ingenuity

Arushi Nath – Toronto – ON

Developing algorithms to determine asteroid's physical properties and success of deflection missions

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Challenge Award - Curiosity and Ingenuity

Intermediate

Sponsor: Challenge Award - Curiosity and Ingenuity

Bram St. Peters – Halifax – NS

Could moon colonists add human biosolids or sand to lunar soil to increase food production on the moon?

Challenge Award - Curiosity and Ingenuity

Senior

Sponsor: Challenge Award - Curiosity and Ingenuity

Heather Kornylo – Northern Vancouver Island – BC

Auto-Pend Lab

Challenge Award - Digital Technology

Junior

Sponsor: Challenge Award - Digital Technology

Richard Ilioukevitch – Northwest Saskatchewan – SK

The Rescue Rangers Autonomous Robotic Search and Rescue System

Challenge Award - Digital Technology

Intermediate

Sponsor: Challenge Award - Digital Technology

Yurui Qin – Saskatoon – SK

A Novel Approach to Using Artificial Intelligence to Aid the Hearing Impaired

Challenge Award - Digital Technology

Senior

Sponsor: Challenge Award - Digital Technology

Moulik Budhiraja, Katelyn Wu – Waterloo-Wellington – ON

Nail Braille: A Novel Approach Towards Braille Education

Challenge Award - Disease and Illness

Junior

Sponsor: Challenge Award - Disease and Illness

Andrei Marti – Vancouver Island – BC

Sweet Scores

Challenge Award - Disease and Illness

Intermediate

Sponsor: Challenge Award - Disease and Illness

Tesko Chaganti – YSC Virtual – CA

The Secrets of Healthy Aging: Discovery of Novel & Natural Senolytic PI3K Inhibitors

Challenge Award - Disease and Illness

Senior

Sponsor: Challenge Award - Disease and Illness

Elizabeth Chen – Edmonton – AB

Optimization of CAR-T Cell Therapy using RNA-Sequencing Analysis for Biomarker Identification

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Challenge Award - Energy

Junior

Sponsor: Challenge Award - Energy

Alyssa Morena – Ottawa – ON

Hydrogen Fuel of the Future – Dry Hydrogen Storage

Challenge Award - Energy

Intermediate

Sponsor: Challenge Award - Energy

Veronica Guo – Greater Vancouver – BC

Biological Photovoltaics: Testing Algae for the Optimal Battery

Challenge Award - Energy

Senior

Sponsor: Challenge Award - Energy

William Chiu, Rohit Koneru – Toronto – ON

Quantum Annealing for Real-Time Reconfiguration of Electrical Grids to Minimize Transmission Loss

Challenge Award - Environment and Climate Change

Junior

Sponsor: Challenge Award - Environment and Climate Change

Annika Saini – Calgary Youth – AB

A DIY Air Purifier To Clean Particulate Matter and Chemicals from Household Air

Challenge Award - Environment and Climate Change

Intermediate

Sponsor: Challenge Award - Environment and Climate Change

Noah Bryan – Canadian Black Scientists Network Youth – CA

The Phage Takes Centre Stage for Water Quality Testing!

Challenge Award - Environment and Climate Change

Senior

Sponsor: Challenge Award - Environment and Climate Change

Ava Fischer – Simcoe County – ON

exSTREAM FUNgi

Challenge Award - Health and Wellness

Junior

Sponsor: Challenge Award - Health and Wellness

Tahlia Feldman – Simcoe County – ON

Battery Catastrophe

Challenge Award - Health and Wellness

Intermediate

Sponsor: Challenge Award - Health and Wellness

Nishka Rai – Wood Buffalo – AB

F.R.O.S.T. – Frostbite Risk Observation & Safety Technology

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Challenge Award - Health and Wellness

Senior

Sponsor: Challenge Award - Health and Wellness

Safia Deol – Lambton County – ON

The IncrediGels: Multifaceted Biopolymers for Dental Procedures

Challenge Award - Natural Resources

Junior

Sponsor: Challenge Award - Natural Resources

Caroline Chan – Toronto – ON

RecycleBot: An AI Enabled Waste Sorting Trash Can

Challenge Award - Natural Resources

Intermediate

Sponsor: Challenge Award - Natural Resources

Sophia Zhang – Eastern Newfoundland – NL

Triboelectric Nanogenerator for Wind Energy Harvesting

Sanofi Biogenius Canada Award

Junior

Sponsor: Sanofi Biogenius Canada Award

Three projects each receive a \$500 cash award and certificate

Soleil Brookes – Pacific Northwest – BC

Moss Filters: How They Affect Air Quality

Aryan Sharma – Calgary Youth – AB

A Novel Solution to Plastic Pollution

Sara Waqas – Calgary Youth – AB

Can Bioengineering Alter Genetic Mutations and Create Organs Using Stem Cells?

Sanofi Biogenius Canada Award

Intermediate

Sponsor: Sanofi Biogenius Canada Award

Three projects each receive a \$750 cash award and certificate

Noah Bryan – Canadian Black Scientists Network Youth – CA

The Phage Takes Centre Stage for Water Quality Testing!

Katelynn Standell – Southeast Alberta – AB

Set Phages to Kill: The Next Step in AMR

Ann Wang – Greater Vancouver – BC

Battling Bacterial Biofilms

Sanofi Biogenius Canada Award

Senior

Sponsor: Sanofi Biogenius Canada Award

Three projects each receive a \$1,000 cash award and certificate

Emily Baker – Labrador, Western and Central NL – NL

The Creden-SHELLS for a Plastic Replacement

Safia Deol – Lambton County – ON

The IncrediGels: Multifaceted Biopolymers for Dental Procedures

Marissa Magsino – Manitoba Schools Science Symposium – MB

*Manipulating *Tenebrio molitor* with chemical compounds to maximize the biodegradation of polystyrene*

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Youth Can Innovate Award

Junior

Sponsor: Youth Can Innovate Award
\$500 cash, presentation award and certificate

Tahlia Feldman – Simcoe County – ON
Battery Catastrophe

Richard Ilioukevitch – Northwest Saskatchewan – SK
The Rescue Rangers Autonomous Robotic Search and Rescue System

Gurnoor Kaur – Waterloo-Wellington – ON
MalaScope: A Deep Learning Enabled Lensless Microscope for the Rapid Detection of Malaria

Arushi Nath – Toronto – ON
Developing algorithms to determine asteroid's physical properties and success of deflection missions

Youth Can Innovate Award

Intermediate

Sponsor: Youth Can Innovate Award
\$750 cash, a presentation award and a certificate

Ashish Chettimada – Waterloo-Wellington – ON
ReAlign: A Novel Solution for the Early Detection and Management of Amblyopia

Chloe Fillion, Sophie Fillion – Niagara – ON
The Digital Air Rifle Ballistic Measuring Device

Veronica Guo – Greater Vancouver – BC
Biological Photovoltaics: Testing Algae for the Optimal Battery

Yurui Qin – Saskatoon – SK
A Novel Approach to Using Artificial Intelligence to Aid the Hearing Impaired

Youth Can Innovate Award

Senior

Sponsor: Youth Can Innovate Award
\$1,000 cash, a presentation award and a certificate

Mariane Angers – Réseau Technoscience – QC
Vert Houlo, Wh

Moulik Budhiraja, Katelyn Wu – Waterloo-Wellington – ON
Nail Braille: A Novel Approach Towards Braille Education

Keanu Chan – East Kootenay – BC
PRrecision Exospinal Constructive Innovative Stereotactic Evolution (PRECISE)

Safia Deol – Lambton County – ON
The IncrediGels: Multifaceted Biopolymers for Dental Procedures

Jonathan Gong – South Fraser – BC
COVID-19 Chest X-ray Image Classification and Improved U-Net Segmentation

Vinny Gu – York – ON
DermaScan: A Novel Approach to Skin Cancer Classification and Detection Using ML Models

Albert Guo – South Fraser – BC
Alzheimer's in 16x16 Words: Transformers for Biomarker-Based Diagnosis

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Aahaan Maini – Bay Area – ON

Circulate: Designing an Algorithmic Blood Distribution System to Tackle the Indian Blood Shortage

Youth Can Innovate Award

Senior

Sponsor: Youth Can Innovate Award

An additional \$7,000 cash award and certificate

Moulik Budhiraja, Katelyn Wu – Waterloo-Wellington – ON

Nail Braille: A Novel Approach Towards Braille Education

Keanu Chan – East Kootenay – BC

PRrecision Exospinal Constructive Innovative Stereotactic Evolution (PRECISE)

Albert Guo – South Fraser – BC

Alzheimer's in 16x16 Words: Transformers for Biomarker-Based Diagnosis

Aahaan Maini – Bay Area – ON

Circulate: Designing an Algorithmic Blood Distribution System to Tackle the Indian Blood Shortage

Platinum Award - Discovery

Junior

Sponsor: Platinum Award - Discovery

Crystal award

Andrei Marti – Vancouver Island – BC

Sweet Scores

Platinum Award - Discovery

Intermediate

Sponsor: Platinum Award - Discovery

Crystal award

Noah Bryan – Canadian Black Scientists Network Youth – CA

The Phage Takes Centre Stage for Water Quality Testing!

Platinum Award - Innovation

Intermediate

Sponsor: Platinum Award - Innovation

Crystal award

Yurui Qin – Saskatoon – SK

A Novel Approach to Using Artificial Intelligence to Aid the Hearing Impaired

Platinum Award - Innovation

Senior

Sponsor: Platinum Award - Innovation

Crystal award

Moulik Budhiraja, Katelyn Wu – Waterloo-Wellington – ON

Nail Braille: A Novel Approach Towards Braille Education

Best Project Award - Discovery

Open

Sponsor: Best Project Award - Discovery

Crystal award

Elizabeth Chen – Edmonton – AB

Optimization of CAR-T Cell Therapy using RNA-Sequencing Analysis for Biomarker Identification

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Best Project Award - Innovation

Open

Sponsor: Best Project Award - Innovation

Crystal award

Arushi Nath – Toronto – ON

Developing algorithms to determine asteroid's physical properties and success of deflection missions

Dalhousie University Faculty of Science Entrance Scholarship

Senior

Sponsor: Dalhousie University Faculty of Science Entrance Scholarship

Senior Gold Medallist - \$5000 Entrance Scholarship

Alyssa Anderson – South-East New Brunswick – NB

Phytotron Ventilation: Seedling Survival in a Changing Environment

Moulik Budhiraja, Katelyn Wu – Waterloo-Wellington – ON

Nail Braille: A Novel Approach Towards Braille Education

Elizabeth Chen – Edmonton – AB

Optimization of CAR-T Cell Therapy using RNA-Sequencing Analysis for Biomarker Identification

Ryan Cullen – Eastern Newfoundland – NL

Simulating Le Chatelier's Principle

Safia Deol – Lambton County – ON

The IncrediGels: Multifaceted Biopolymers for Dental Procedures

Ava Fischer – Simcoe County – ON

exSTREAM FUNgi

Heather Kornylo – Northern Vancouver Island – BC

Auto-Pend Lab

Thomas Murimboh – Annapolis Valley – NS

The Best Cell Provider! An Evaluation of Probiotic Products

Jasmin Pelletier – Réseau Technoscience – QC

As-tu le profil d'un gagnant?

Camela Temacini – Niagara – ON

Recreating a Tumour Microenvironment: Solving a Major Problem in Cancer Cell Culture

Dalhousie University Faculty of Science Entrance Scholarship

Senior

Sponsor: Dalhousie University Faculty of Science Entrance Scholarship

Senior Silver Medallist - \$2500 Entrance Scholarship

Mariane Angers – Réseau Technoscience – QC

Vert Houlo, Wh

Nik Artsimonia – Calgary Youth – AB

The "Helping Hand" Project

Jason Bae – Bay Area – ON

ADHD Treatment: Investigating the Effectiveness of Fine Motor Learning on Frontal Lobe Activity

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Sam Bae – Bay Area – ON

Creating bioplastic that promotes the most effective filtration of atmospheric aerosol particles

Tanish Bhatt – Eastern Newfoundland – NL

An Immunoinformatics-based Approach to Identifying a Theoretical Vaccine Against SARS-CoV-2 Variants

Keanu Chan – East Kootenay – BC

PRrecision Exospinal Constructive Innovative Stereotactic Evolution (PRECISE)

William Chiu, Rohit Koneru – Toronto – ON

Quantum Annealing for Real-Time Reconfiguration of Electrical Grids to Minimize Transmission Loss

Jonathan Gong – South Fraser – BC

COVID-19 Chest X-ray Image Classification and Improved U-Net Segmentation

Vinny Gu – York – ON

DermaScan: A Novel Approach to Skin Cancer Classification and Detection Using ML Models

Albert Guo – South Fraser – BC

Alzheimer's in 16x16 Words: Transformers for Biomarker-Based Diagnosis

Aaryan Harshith – Sudbury – ON

LightIR: An Intraoperative Probe to Enhance Tumour Resections

Graeme Hopkins – Saskatoon – SK

Paleoecology and Geology of a Fossil-Bearing Quaternary Clay Formation New to Science

Daiying Li – Toronto – ON

GMCVD: Detecting key gut microbiota to reduce cardiovascular disease risk for precise prevention

Rebecca Li – Réseau Technoscience – QC

Cyrene and Neurodegeneration

Marissa Magsino – Manitoba Schools Science Symposium – MB

*Manipulating *Tenebrio molitor* with chemical compounds to maximize the biodegradation of polystyrene*

Aahaan Maini – Bay Area – ON

Circulate: Designing an Algorithmic Blood Distribution System to Tackle the Indian Blood Shortage

Hooman Reza Nezhad – Waterloo-Wellington – ON

From Dust to Habitation – Molten Salt Electrolysis for the In-situ Reduction of Martian Regolith

Kevin Shao – Thames Valley – ON

Characterizing the Intrinsic Profile and Environmental Variations of the 5780Å DIB

Prabhnoor Sidhu – Central Interior BC – BC

Mitigating the Effects of Debris Flows: Part Two

Evan Warburton – Vancouver Island – BC

The Dual Dipole Radio Telescope

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



UBC Science (Vancouver) Entrance Award

Senior

Sponsor: UBC Science (Vancouver) Entrance Award
Senior Gold Medallist - \$4000 Entrance Award

Alyssa Anderson – South-East New Brunswick – NB
Phytotron Ventilation: Seedling Survival in a Changing Environment

Moulik Budhiraja, Katelyn Wu – Waterloo-Wellington – ON
Nail Braille: A Novel Approach Towards Braille Education

Elizabeth Chen – Edmonton – AB
Optimization of CAR-T Cell Therapy using RNA-Sequencing Analysis for Biomarker Identification

Ryan Cullen – Eastern Newfoundland – NL
Simulating Le Chatelier's Principle

Safia Deol – Lambton County – ON
The IncrediGels: Multifaceted Biopolymers for Dental Procedures

Ava Fischer – Simcoe County – ON
exSTREAM FUNgi

Heather Kornlyo – Northern Vancouver Island – BC
Auto-Pend Lab

Thomas Murimboh – Annapolis Valley – NS
The Best Cell Provider! An Evaluation of Probiotic Products

Jasmin Pelletier – Réseau Technoscience – QC
As-tu le profil d'un gagnant?

Camela Temacini – Niagara – ON
Recreating a Tumour Microenvironment: Solving a Major Problem in Cancer Cell Culture

University of Alberta Entrance Scholarship

Open

Sponsor: University of Alberta Entrance Scholarship
A \$5,000 entrance scholarship is offered to each gold medal winner.

Alyssa Anderson – South-East New Brunswick – NB
Phytotron Ventilation: Seedling Survival in a Changing Environment

Noah Bryan – Canadian Black Scientists Network Youth – CA
The Phage Takes Centre Stage for Water Quality Testing!

Moulik Budhiraja, Katelyn Wu – Waterloo-Wellington – ON
Nail Braille: A Novel Approach Towards Braille Education

Tesko Chaganti – YSC Virtual – CA
The Secrets of Healthy Aging: Discovery of Novel & Natural Senolytic PI3K Inhibitors

Caroline Chan – Toronto – ON
RecycleBot: An AI Enabled Waste Sorting Trash Can

Elizabeth Chen – Edmonton – AB
Optimization of CAR-T Cell Therapy using RNA-Sequencing Analysis for Biomarker Identification

Ashish Chettimada – Waterloo-Wellington – ON
ReAlign: A Novel Solution for the Early Detection and Management of Amblyopia

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Ryan Cullen – Eastern Newfoundland – NL <i>Simulating Le Chatelier's Principle</i>
Safia Deol – Lambton County – ON <i>The IncrediGels: Multifaceted Biopolymers for Dental Procedures</i>
Ava Fischer – Simcoe County – ON <i>exSTREAM FUNgi</i>
Justin Guo – Greater Vancouver – BC <i>What Method of Meat Thawing Results in Least Bacterial Contamination?</i>
Veronica Guo – Greater Vancouver – BC <i>Biological Photovoltaics: Testing Algae for the Optimal Battery</i>
Renata Hollander – Calgary Youth – AB <i>The Mathematics of Language Through History: Does Zipf's Law Always Apply?</i>
Richard Ilioukevitch – Northwest Saskatchewan – SK <i>The Rescue Rangers Autonomous Robotic Search and Rescue System</i>
Fayhaa Kafi – South Fraser – BC <i>The Orange Brick 2.0</i>
Gurnoor Kaur – Waterloo-Wellington – ON <i>MalaScope: A Deep Learning Enabled Lensless Microscope for the Rapid Detection of Malaria</i>
Heather Kornylo – Northern Vancouver Island – BC <i>Auto-Pend Lab</i>
Jordan LeBlanc – Bay Area – ON <i>Transferring Pollen Using a Mechanical Bee</i>
Jonathan Leung – Greater Vancouver – BC <i>A Survey of Spider Diversity at the University of British Columbia Farm</i>
Andrei Marti – Vancouver Island – BC <i>Sweet Scores</i>
Mateo Mathenge – Halifax – NS <i>Green Energy: The answer is blowing in the wind</i>
Thomas Murimboh – Annapolis Valley – NS <i>The Best Cell Provider! An Evaluation of Probiotic Products</i>
Arushi Nath – Toronto – ON <i>Developing algorithms to determine asteroid's physical properties and success of deflection missions</i>
Harry Nickerson – Halifax – NS <i>Do You Really See What Eye See?</i>
Adelyn Noh – Edmonton – AB <i>Latherin' Up Your Mind: Priming Humans and AI</i>
Jasmin Pelletier – Réseau Technoscience – QC <i>As-tu le profil d'un gagnant?</i>
Yurui Qin – Saskatoon – SK <i>A Novel Approach to Using Artificial Intelligence to Aid the Hearing Impaired</i>

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Annika Saini – Calgary Youth – AB

A DIY Air Purifier To Clean Particulate Matter and Chemicals from Household Air

Bram St. Peters – Halifax – NS

Could moon colonists add human biosolids or sand to lunar soil to increase food production on the moon?

Camela Temacini – Niagara – ON

Recreating a Tumour Microenvironment: Solving a Major Problem in Cancer Cell Culture

University of Alberta Entrance Scholarship

Open

Sponsor: University of Alberta Entrance Scholarship

A \$2,500 entrance scholarship is offered to each silver medal winner.

Joy Akinkunmi – Canadian Black Scientists Network Youth – CA

Pill Smart

Mariane Angers – Réseau Technoscience – QC

Vert Houlo, Wh

Nik Artsimenia – Calgary Youth – AB

The “Helping Hand” Project

Shayan Awan – Wood Buffalo – AB

TM&R Band: Age with Confidence

Jason Bae – Bay Area – ON

ADHD Treatment: Investigating the Effectiveness of Fine Motor Learning on Frontal Lobe Activity

Sam Bae – Bay Area – ON

Creating bioplastic that promotes the most effective filtration of atmospheric aerosol particles

Yasmine Ben Arous – Réseau Technoscience – QC

Calmos

Vaishu Bhathala Venkata – Saskatchewan Chinook – SK

MonstorMunch: The Solution To Childhood Obesity?

Tanish Bhatt – Eastern Newfoundland – NL

An Immunoinformatics-based Approach to Identifying a Theoretical Vaccine Against SARS-CoV-2 Variants

Patrick Casey – Prince Edward Island – PE

Printer vs. Cinder

Keanu Chan – East Kootenay – BC

PRrecision Exospinal Constructive Innovative Stereotactic Evolution (PRECISE)

William Chiu, Rohit Koneru – Toronto – ON

Quantum Annealing for Real-Time Reconfiguration of Electrical Grids to Minimize Transmission Loss

Amy Clark – Manitoba Schools Science Symposium – MB

What is radiation?

Riley Edmunds – Lambton County – ON

One Drop at a Time: How effective are biodegradable filters?

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



-
- Anthony Efthimiadis** – Bay Area – ON
Diagnostic Screening of Basal Cell Carcinoma Cancer With AI
-
- Tahlia Feldman** – Simcoe County – ON
Battery Catastrophe
-
- Chloe Filion, Sophie Filion** – Niagara – ON
The Digital Air Rifle Ballistic Measuring Device
-
- Ila Giroux, Kavi Giroux** – Algoma Rotary – ON
Drone Assisted Orchard Assessment
-
- Jonathan Gong** – South Fraser – BC
COVID-19 Chest X-ray Image Classification and Improved U-Net Segmentation
-
- Vinny Gu** – York – ON
DermaScan: A Novel Approach to Skin Cancer Classification and Detection Using ML Models
-
- Anqi Guan** – Manitoba Schools Science Symposium – MB
Smart Farming: Self-Powered Hydrogel as a Fertilizer for Plant Growth
-
- Albert Guo** – South Fraser – BC
Alzheimer's in 16x16 Words: Transformers for Biomarker-Based Diagnosis
-
- Ryhan Hammoud** – South Fraser – BC
Smart Naloxone Kit
-
- Kathy Han** – Saskatoon – SK
Hidden Dangers in Plain Sight: Investigating Pathogenic Bacteria in Household Plant Soil
-
- Aaryan Harshith** – Sudbury – ON
LightIR: An Intraoperative Probe to Enhance Tumour Resections
-
- Nara Harvey** – Greater Vancouver – BC
A Biological Solution to Phosphate and Nitrate Pollution
-
- Ethan Hon** – York – ON
Carbon Nanotubes and their Applications in Agriculture
-
- Graeme Hopkins** – Saskatoon – SK
Paleoecology and Geology of a Fossil-Bearing Quaternary Clay Formation New to Science
-
- Blake Howes, Madelyn Howes** – Bluewater – ON
The Science of Smiles
-
- Mateo Jarquin** – Réseau Technoscience – QC
Need a hand with that?
-
- Maryam Khanum** – Northern British Columbia – BC
Feasibility Assessment of MFC to Treat Oil and Gas Produced Water and Generate Electricity
-
- Jacob LeBlanc** – Bay Area – ON
Sustainability Metrics for Consumer Products Using Open-Source Data, Python and QR Code Technology
-
- Daiying Li** – Toronto – ON
GMCVD: Detecting key gut microbiota to reduce cardiovascular disease risk for precise prevention

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Rebecca Li – Réseau Technoscience – QC
Cyrene and Neurodegeneration

Marissa Magsino – Manitoba Schools Science Symposium – MB
*Manipulating *Tenebrio molitor* with chemical compounds to maximize the biodegradation of polystyrene*

Aahaan Maini – Bay Area – ON
Circulate: Designing an Algorithmic Blood Distribution System to Tackle the Indian Blood Shortage

Anne Mister, Annabelle Tasset-Scherer – Ottawa – ON
Gérons le son!

Alyssa Morena – Ottawa – ON
Hydrogen Fuel of the Future – Dry Hydrogen Storage

Thomas Mullaly, Arthur Queiroz – Sudbury – ON
Can worms be a part of the Styrofoam pollution solution?

Sarah Murimboh – Annapolis Valley – NS
*The Effects of Humidity and Temperature on Deformities in *Tenebrio molitor**

Spencer Pearce – Western Manitoba – MB
Noise Pollution or Productivity? Investigating the Effects of Sound on Concentration

Justin Peng – Greater Vancouver – BC
Atmos: A Neural Edge-Cloud Visual to Auditory Spatial Augmentation Device for the Visually Impaired

Kadhir Ponnambalam – Bay Area – ON
*Electrotaxis of the Tardigrade Species *Hypsibius exemplaris* in a Microfluidic Environment*

Thông Quách – Saskatoon – SK
FlaxFloc - A Saskatchewan Plant-Based Material in Turbidity Removal for Sustainable Water Treatment

Nishka Rai – Wood Buffalo – AB
F.R.O.S.T. – Frostbite Risk Observation & Safety Technology

Cyndi Rayson – Lambton County – ON
Bioremediation to the Rescue: An Environmental Solution to Pollution

Hooman Reza Nezhad – Waterloo-Wellington – ON
From Dust to Habitation – Molten Salt Electrolysis for the In-situ Reduction of Martian Regolith

Madhav Saravanan – Peel – ON
Microplastics, Macro Problem

Layla Sawan – Thames Valley – ON
GreenGenie Composting System

Kevin Shao – Thames Valley – ON
Characterizing the Intrinsic Profile and Environmental Variations of the 5780Å DIB

Aryan Sharma – Calgary Youth – AB
A Novel Solution to Plastic Pollution

Vedant Sheel – Bluewater – ON
A Voice For The Voiceless

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Prabhnoor Sidhu – Central Interior BC – BC
Mitigating the Effects of Debris Flows: Part Two

Sehar Sidhu – Windsor – ON
ChatGPT is everywhere: Is this AI chatbot a friend or foe?

Danill Tyurin – Calgary Youth – AB
The Feasibility and Prototyping of a Mechanical Counterpressure EVA Space Suit

Ann Wang – Greater Vancouver – BC
Battling Bacterial Biofilms

Sara Waqas – Calgary Youth – AB
Can Bioengineering Alter Genetic Mutations and Create Organs Using Stem Cells?

Evan Warburton – Vancouver Island – BC
The Dual Dipole Radio Telescope

Justin Yu – Fraser Valley – BC
Zap the Lead Problem! Cost-effective and Immediate Electrochemical Pipe Scale Accelerator

Sophia Zhang – Eastern Newfoundland – NL
Triboelectric Nanogenerator for Wind Energy Harvesting

University of Alberta Entrance Scholarship

Open

Sponsor: University of Alberta Entrance Scholarship
A \$1,500 entrance scholarship is offered to each bronze medal winner.

Alexander Abesteh – Ottawa – ON
Timelike and Null Geodesics around a Reissner-Nordström Black Hole

Luca Agnello – Ottawa – ON
Énergie volcanique

Munir Al-Taher – Canadian Black Scientists Network Youth – CA
Changing the way we refill electric cars

Maggie Alexander – Renfrew County – ON
Who's Cell Phone is the Grossest?

Imran Allarakhia – Bay Area – ON
My SEER (Social Emotional Engaging Robot): Social Robots to Detect and Manage Student Anxiety

Hannah Allen – South Shore – NS
Food for Thought

Wafaa Amin, Asia Urquhart – Halifax – NS
A Novel Study of Physiological and Social Relation with Low-Valence Emotions: Pediatric PCEST Care

Sebastian Audet – Pacific Northwest – BC
Seymour Lake is having a Floating Heart attack

Alexandra Bishop – Algoma Rotary – ON
Exploring The Effectiveness of Multipurpose Toothpastes on the Oral Flora

Marshall Bobier – Regina – SK
R-U Insulated

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Hadlea Bradbury – Simcoe County – ON
Gluten Tox

Maria Brons – Prince Albert & Northeast Saskatchewan – SK
Eggs vs. Time

Kaitlyn Chan – Vancouver Island – BC
Greening the Flames: Investigating the abilities of plants to reduce the impact of wildfires

Armaan Chaudhari – Western Manitoba – MB
Antibiotics: Synthetic and Natural

Jasmine Chow – West Kootenay & Boundary – BC
Can chip bags be used as an emergency blanket?

Joshua Chow – Calgary Youth – AB
How Your Weight Could Be Putting You at Risk: Unraveling the Link between BMI and Colorectal Adenomas

Maria Chzhen – Bay Area – ON
Comparison of Regression Algorithms in Multivariable Drought Modeling and Analysis

Emma Coakley – South-East New Brunswick – NB
Inflatable Pouch Motors in Upper Limb Prosthetics

Emmersyn da Mata, Hailee Marshall – Frontier Schools – MB
Walk your Butt to the Can

Julia Dargacz – Niagara – ON
The Progress Towards the Synthesis of Silatrane Lipid Head Groups

Sietse de Backer – Prince Edward Island – PE
Synced Up: Comparing Methods to Scale Synchronized Servers

Dexter Deheer – Central Alberta Rotary – AB
Can you Crypto Mine with a RaspberryPi?

Justin Du – Greater Vancouver – BC
Intersect: Aggregated Note Summarization by Machine Learning

Mac Dykeman – 4-H Canada – CA
An Innovative Approach to Ammonia Control in Poultry Operations

Aiyaan Faisal – Winnipeg Schools – MB
Exploration of Genetic Algorithm for Function Optimization

Claire Friesen – Central Alberta Rotary – AB
The Way It Flows: Laminar vs. Turbulent

Swas Ghosh – Northern British Columbia – BC
Green Pools of CO₂: The Effects of CO₂ on Household Plants

Deepraj Singh Gill – Fraser Valley – BC
How a Commercial Jetliner Functions

Angelina Hang, Noah Oliver Pang – Greater Vancouver – BC
Turning Algae Into Fibers: The Solution to Textile Waste

Micah Hansen – Peace Country – AB
Homemade Fertilizers

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Ava Haynes – Saskatchewan First Nations – SK
Cyanobacteria

Nycea Hazelwood – Lethbridge – AB
Biomagnification – When a little becomes a lot

Evan Howells – Yukon Stikine – YT
Flight of the Bumble Bee: Comparing pollen foraging patterns of bumble bees and honey bees in Yukon

Reine Huang – Greater Vancouver – BC
Detecting and Preventing Human Falling with Lateral Stability

Sterling Huang, Ethan Xu – Toronto – ON
HydroElectrica: Water Purification + Dual Electricity Generation System

Safwan Hussain – Waterloo-Wellington – ON
Building a Multiclass Brain Tumor Classification Model using a Convolutional Neural Network (CNN)

Kaleb Hussey – South-East New Brunswick – NB
The Effect of Weight Configuration and Load Knowledge on Trunk Motion in Adolescents

Jeffrey Ion – Bay Area – ON
Think Fast!

Nimish Jain – Greater Vancouver – BC
Highly Evolved Lip Learning mOdel (HELLO): A Novel Machine Learning Model for Accurate Lipreading.

Abigail Jennings – Ottawa – ON
Dress up: Gender Bias in Character Design

Tanya Jivani, Lalithya Raavi – Wood Buffalo – AB
From Raw to Cooked: Exploring Cooking Methods on Ascorbic Acid Retention in Tomatoes

Ben Kawa – Sudbury – ON
Driver Wake Up!

Sophie Kong – Prince Edward Island – PE
Soil Microbial Fuel Cell

Emily Krause, E'lise Nguyen – Ottawa – ON
M.E.P.

Liz Krelove, Karys Littlejohns – Simcoe County – ON
*Investigating the effects of stimulants and depressants in aquatic pollutants on *Daphnia magna**

William Larder – Annapolis Valley – NS
Culvert Remediation for Fish Passage in Barkhouse Brook

Anna Lawand – Cape Breton – NS
Natural Antibiotics Comparison Experiment

Maya LeBlanc – Bay Area – ON
*Nitrous Oxide Reduction in an Industrial Wet Scrubber Utilizing NosZ Reductase and *P. denitrificans**

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Jonathan Li – Frontenac, Lennox & Addington – ON
Depressed or Not? Using Large Language Models to Predict Depression from Social Media Posts

William Li – West Kootenay & Boundary – BC
Centrifugal Space Fitness Center

Ziang Li – Bay Area – ON
I.C.: Predict Food Recipe from Image using CNN/Transformer & Knowledge Distillation for Portability

Shayan Mahmood – Thames Valley – ON
Morphological Characterization of Imaged iPSC-Derived Endothelial Cells Using Machine Learning

Renzo Masiclat – Southeast Alberta – AB
Cranberries: A Potential Treatment and Prophylaxis Against Urinary Tract Infections

Ariel Mason – Calgary Youth – AB
Using Machine Learning to Detect Breast Cancer

Khafri Mau – Greater Vancouver – BC
The First Step to Growing Plants on Mars

Rylie McGrath – South-East New Brunswick – NB
The Moss Pit: Comparing the performance of three moss species local to Saint John on two substrates

Emily McKenna – Winnipeg Schools – MB
Compaction Action: Measuring the effect of additives on soil compaction

Sia Mehta – Simcoe County – ON
Glaze the Roof

Jad Menkara – Windsor – ON
Novel Thermoelectric Generator for Automobile Exhaust Waste Heat Recovery

Katharine Morley – Vancouver Island – BC
Plastered Plants Defeat Drought: Exploring the effects of ethanol on drought resistance in plants

Nila Munro, Donell O'Connor – Strait – NS
Waste Not, Want Not; Enhancing Nuclear Energy Output

Anush Mutyala – Peel – ON
Energyspike: Pioneering Wireless Mind-Control Implants using Energy-Efficient Neuromorphic Computing

Daniel Nashed – Manitoba Schools Science Symposium – MB
Which one soundproofs best?

Annika Paliwal – Bison – MB
A Long-Term Study Using Serious Games to Diagnose and Treat Dementia

Ria Patel – Ottawa – ON
The Spark of Life: Exploration of neuromuscular junctions, insulin secretion, and cardiac regulation

Shail Patel – Frontenac, Lennox & Addington – ON
Dextera: An Affordable, Functional, Myoelectric Prosthetic Hand

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Alpita Patro – Eastern Newfoundland – NL

Investigating the Antibacterial Activity of Natural Remedies Against Non-Pathogenic E. coli

Zenia Pereira, Nandika Senthilkumar – Edmonton – AB

Alex, the AI that Doesn't Exist

Maggie Polischuk – Sudbury – ON

'Steer Clear' The Break-Away Steering Wheel!

Izabela Quest – Frontenac, Lennox & Addington – ON

Stopping Cancer in its Tracks: How does fructose enable cancer cell metastasis?

William Rodgers, Rylan Wainman – Beaufort-Delta – NT

Steroid Use

Hanna Ryan – Yukon Stikine – YT

What's the best way to dry your hands?

Mohamed Saleh – Windsor – ON

Pumpkin Plastic: An Innovative Bioplastic to Replace Petroleum-based Plastic

Misimi Sanni – Bay Area – ON

Emerging Prosthetics: The Novel Development of a Cost-Effective Electronic Prosthetic Arm

Rishi Shah – Thames Valley – ON

From Pixels to Precision

Adara Shilling – Greater Vancouver – BC

Plastic Roots

Rodin Shokravi, Kevin Yuan – Greater Vancouver – BC

A Novel System: Replicating Materials' Arithmetic Mean Height Using LRAs & Piezo Elements

Roocha Shukla – Waterloo-Wellington – ON

The Power that Brings Flowers

Prabhdeep Singh – Thames Valley – ON

Asion: An ML-powered Sky Navigation and Constellation Recognition System

Ella Strachan – Winnipeg Schools – MB

Mapping Microplastics: Computer Modelling to Predict & Address Microplastic Accumulation in Lakes

Jonas Tkacz – Conseil scolaire acadien provincial – NS

Un vaccin informatique: l'utilisation de l'intelligence artificielle pour combattre les virus

Alexia Tomasello – Districts francophones du N.-B. – NB

La conservation des chauves-souris, un défi de taille !

Ayana Torres – Ottawa – ON

Amélioration de toiture: déflecteur de vent

Beth Tubman – Strait – NS

From Flower to Flavour – How pollen type affects honey

Afaq Virk – United Counties – ON

eECHOlocation: An Innovation to Mitigate Visual Impairment

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Jack Washburn – Frontenac, Lennox & Addington – ON

Sham(e)poo: Clean Hair without the Dirty Secret Ingredients of Commercial Shampoos

Mark Wendland – Renfrew County – ON

Tank Battles in 2D & 3D

Errita Xu – Toronto – ON

Road Salt: Its Implications and Exploring Agro-Based Alternatives

Brian Yin – Bay Area – ON

Student Engagement Rewards System

Aaron Zhao – Greater Vancouver – BC

ExoTremor: A Low-Cost, 3D-Printed Exoskeleton that Suppresses Hand Tremors in Movement Disorder Patients

University of Manitoba Entrance Scholarship

Senior

Sponsor: University of Manitoba Entrance Scholarship

Senior Gold Medallist - \$5000 Entrance Scholarship

Alyssa Anderson – South-East New Brunswick – NB

Phytotron Ventilation: Seedling Survival in a Changing Environment

Moulik Budhiraja, Katelyn Wu – Waterloo-Wellington – ON

Nail Braille: A Novel Approach Towards Braille Education

Elizabeth Chen – Edmonton – AB

Optimization of CAR-T Cell Therapy using RNA-Sequencing Analysis for Biomarker Identification

Ryan Cullen – Eastern Newfoundland – NL

Simulating Le Chatelier's Principle

Safia Deol – Lambton County – ON

The IncrediGels: Multifaceted Biopolymers for Dental Procedures

Ava Fischer – Simcoe County – ON

exSTREAM FUNgi

Heather Kornylo – Northern Vancouver Island – BC

Auto-Pend Lab

Thomas Murimboh – Annapolis Valley – NS

The Best Cell Provider! An Evaluation of Probiotic Products

Jasmin Pelletier – Réseau Technoscience – QC

As-tu le profil d'un gagnant?

Camela Temacini – Niagara – ON

Recreating a Tumour Microenvironment: Solving a Major Problem in Cancer Cell Culture

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University of New Brunswick Canada-Wide Science Fair Scholarship

Senior

Sponsor: University of New Brunswick Canada-Wide Science Fair Scholarship

Senior Silver Medallist - \$2500 Entrance Scholarship

Mariane Angers – Réseau Technoscience – QC

Vert Houlo, Wh

Nik Artsimonia – Calgary Youth – AB

The "Helping Hand" Project

Jason Bae – Bay Area – ON

ADHD Treatment: Investigating the Effectiveness of Fine Motor Learning on Frontal Lobe Activity

Sam Bae – Bay Area – ON

Creating bioplastic that promotes the most effective filtration of atmospheric aerosol particles

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Quantum Annealing for Real-Time Reconfiguration of Electrical Grids to Minimize Transmission Loss

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Edmonton, Alberta



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Graeme Hopkins – Saskatoon – SK

Paleoecology and Geology of a Fossil-Bearing Quaternary Clay Formation New to Science

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Hooman Reza Nezhad – Waterloo-Wellington – ON

From Dust to Habitation – Molten Salt Electrolysis for the In-situ Reduction of Martian Regolith

Kevin Shao – Thames Valley – ON

Characterizing the Intrinsic Profile and Environmental Variations of the 5780Å DIB

Prabhnoor Sidhu – Central Interior BC – BC

Mitigating the Effects of Debris Flows: Part Two

Evan Warburton – Vancouver Island – BC

The Dual Dipole Radio Telescope

University of Ottawa Entrance Scholarship

Senior

Sponsor: University of Ottawa Entrance Scholarship
Senior Gold Medallist - \$4,000 Entrance Scholarship

Alyssa Anderson – South-East New Brunswick – NB

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The Dual Dipole Radio Telescope

University of Ottawa Entrance Scholarship

Senior

Sponsor: University of Ottawa Entrance Scholarship
Senior Bronze Medallist - \$1000 Entrance Scholarship

Hannah Allen – South Shore – NS

Food for Thought

Hadlea Bradbury – Simcoe County – ON

Gluten Tox

Joshua Chow – Calgary Youth – AB

How Your Weight Could Be Putting You at Risk: Unraveling the Link between BMI and Colorectal Adenomas

Maria Chzhen – Bay Area – ON

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An Innovative Approach to Ammonia Control in Poultry Operations

Ava Haynes – Saskatchewan First Nations – SK

Cyanobacteria

Award Recipients

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Edmonton, Alberta



Evan Howells – Yukon Stikine – YT

Flight of the Bumble Bee: Comparing pollen foraging patterns of bumble bees and honey bees in Yukon

Kaleb Hussey – South-East New Brunswick – NB

The Effect of Weight Configuration and Load Knowledge on Trunk Motion in Adolescents

Liz Krelove, Karys Littlejohns – Simcoe County – ON

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Annika Paliwal – Bison – MB

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Ria Patel – Ottawa – ON

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Plastic Roots

Rodin Shokravi, Kevin Yuan – Greater Vancouver – BC

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Un vaccin informatique: l'utilisation de l'intelligence artificielle pour combattre les virus

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Afaq Virk – United Counties – ON

eIECHolocation: An Innovation to Mitigate Visual Impairment

Errita Xu – Toronto – ON

Road Salt: Its Implications and Exploring Agro-Based Alternatives

Aaron Zhao – Greater Vancouver – BC

ExoTremor: A Low-Cost, 3D-Printed Exoskeleton that Suppresses Hand Tremors in Movement Disorder Patients

Western University Entrance Scholarship

Open

Sponsor: Western University Entrance Scholarship

Gold Medallist - \$4000 Entrance Scholarship

Alyssa Anderson – South-East New Brunswick – NB

Phytotron Ventilation: Seedling Survival in a Changing Environment

Noah Bryan – Canadian Black Scientists Network Youth – CA

The Phage Takes Centre Stage for Water Quality Testing!

Moulik Budhiraja, Katelyn Wu – Waterloo-Wellington – ON

Nail Braille: A Novel Approach Towards Braille Education

Tesko Chaganti – YSC Virtual – CA

The Secrets of Healthy Aging: Discovery of Novel & Natural Senolytic PI3K Inhibitors

Caroline Chan – Toronto – ON

RecycleBot: An AI Enabled Waste Sorting Trash Can

Elizabeth Chen – Edmonton – AB

Optimization of CAR-T Cell Therapy using RNA-Sequencing Analysis for Biomarker Identification

Ashish Chettimada – Waterloo-Wellington – ON

ReAlign: A Novel Solution for the Early Detection and Management of Amblyopia

Ryan Cullen – Eastern Newfoundland – NL

Simulating Le Chatelier's Principle

Safia Deol – Lambton County – ON

The IncrediGels: Multifaceted Biopolymers for Dental Procedures

Ava Fischer – Simcoe County – ON

exSTREAM FUNgi

Justin Guo – Greater Vancouver – BC

What Method of Meat Thawing Results in Least Bacterial Contamination?

Veronica Guo – Greater Vancouver – BC

Biological Photovoltaics: Testing Algae for the Optimal Battery

Renata Hollander – Calgary Youth – AB

The Mathematics of Language Through History: Does Zipf's Law Always Apply?

Richard Ilioukevitch – Northwest Saskatchewan – SK

The Rescue Rangers Autonomous Robotic Search and Rescue System

Fayhaa Kafi – South Fraser – BC

The Orange Brick 2.0

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Gurnoor Kaur – Waterloo-Wellington – ON

MalaScope: A Deep Learning Enabled Lensless Microscope for the Rapid Detection of Malaria

Heather Kornylo – Northern Vancouver Island – BC

Auto-Pend Lab

Jordan LeBlanc – Bay Area – ON

Transferring Pollen Using a Mechanical Bee

Jonathan Leung – Greater Vancouver – BC

A Survey of Spider Diversity at the University of British Columbia Farm

Andrei Marti – Vancouver Island – BC

Sweet Scores

Mateo Mathenge – Halifax – NS

Green Energy: The answer is blowing in the wind

Thomas Murimboh – Annapolis Valley – NS

The Best Cell Provider! An Evaluation of Probiotic Products

Arushi Nath – Toronto – ON

Developing algorithms to determine asteroid's physical properties and success of deflection missions

Harry Nickerson – Halifax – NS

Do You Really See What Eye See?

Adelyn Noh – Edmonton – AB

Latherin' Up Your Mind: Priming Humans and AI

Jasmin Pelletier – Réseau Technoscience – QC

As-tu le profil d'un gagnant?

Yurui Qin – Saskatoon – SK

A Novel Approach to Using Artificial Intelligence to Aid the Hearing Impaired

Annika Saini – Calgary Youth – AB

A DIY Air Purifier To Clean Particulate Matter and Chemicals from Household Air

Bram St. Peters – Halifax – NS

Could moon colonists add human biosolids or sand to lunar soil to increase food production on the moon?

Camela Temacini – Niagara – ON

Recreating a Tumour Microenvironment: Solving a Major Problem in Cancer Cell Culture

Western University Entrance Scholarship

Open

Sponsor: Western University Entrance Scholarship
Silver Medallist - \$2000 Entrance Scholarship

Joy Akinkunmi – Canadian Black Scientists Network Youth – CA

Pill Smart

Mariane Angers – Réseau Technoscience – QC

Vert Houlo, Wh

Nik Artsimonia – Calgary Youth – AB

The "Helping Hand" Project

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Shayan Awan – Wood Buffalo – AB

TM&R Band: Age with Confidence

Jason Bae – Bay Area – ON

ADHD Treatment: Investigating the Effectiveness of Fine Motor Learning on Frontal Lobe Activity

Sam Bae – Bay Area – ON

Creating bioplastic that promotes the most effective filtration of atmospheric aerosol particles

Yasmine Ben Arous – Réseau Technoscience – QC

Calmos

Vaishu Bhathala Venkata – Saskatchewan Chinook – SK

MonstorMunch: The Solution To Childhood Obesity?

Tanish Bhatt – Eastern Newfoundland – NL

An Immunoinformatics-based Approach to Identifying a Theoretical Vaccine Against SARS-CoV-2 Variants

Patrick Casey – Prince Edward Island – PE

Printer vs. Cinder

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PRrecision Exospinal Constructive Innovative Stereotactic Evolution (PRECISE)

William Chiu, Rohit Koneru – Toronto – ON

Quantum Annealing for Real-Time Reconfiguration of Electrical Grids to Minimize Transmission Loss

Amy Clark – Manitoba Schools Science Symposium – MB

What is radiation?

Riley Edmunds – Lambton County – ON

One Drop at a Time: How effective are biodegradable filters?

Anthony Efthimiadis – Bay Area – ON

Diagnostic Screening of Basal Cell Carcinoma Cancer With AI

Tahlia Feldman – Simcoe County – ON

Battery Catastrophe

Chloe Fillion, Sophie Fillion – Niagara – ON

The Digital Air Rifle Ballistic Measuring Device

Ila Giroux, Kavi Giroux – Algoma Rotary – ON

Drone Assisted Orchard Assessment

Jonathan Gong – South Fraser – BC

COVID-19 Chest X-ray Image Classification and Improved U-Net Segmentation

Vinny Gu – York – ON

DermaScan: A Novel Approach to Skin Cancer Classification and Detection Using ML Models

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Smart Farming: Self-Powered Hydrogel as a Fertilizer for Plant Growth

Albert Guo – South Fraser – BC

Alzheimer's in 16x16 Words: Transformers for Biomarker-Based Diagnosis

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Ryvan Hammoud – South Fraser – BC
Smart Naloxone Kit

Kathy Han – Saskatoon – SK
Hidden Dangers in Plain Sight: Investigating Pathogenic Bacteria in Household Plant Soil

Aaryan Harshith – Sudbury – ON
LightIR: An Intraoperative Probe to Enhance Tumour Resections

Nara Harvey – Greater Vancouver – BC
A Biological Solution to Phosphate and Nitrate Pollution

Ethan Hon – York – ON
Carbon Nanotubes and their Applications in Agriculture

Graeme Hopkins – Saskatoon – SK
Paleoecology and Geology of a Fossil-Bearing Quaternary Clay Formation New to Science

Blake Howes, Madelyn Howes – Bluewater – ON
The Science of Smiles

Mateo Jarquin – Réseau Technoscience – QC
Need a hand with that?

Maryam Khanum – Northern British Columbia – BC
Feasibility Assessment of MFC to Treat Oil and Gas Produced Water and Generate Electricity

Jacob LeBlanc – Bay Area – ON
Sustainability Metrics for Consumer Products Using Open-Source Data, Python and QR Code Technology

Daiying Li – Toronto – ON
GMCVD: Detecting key gut microbiota to reduce cardiovascular disease risk for precise prevention

Rebecca Li – Réseau Technoscience – QC
Cyrene and Neurodegeneration

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*Manipulating *Tenebrio molitor* with chemical compounds to maximize the biodegradation of polystyrene*

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Circulate: Designing an Algorithmic Blood Distribution System to Tackle the Indian Blood Shortage

Anne Mister, Annabelle Tasset-Scherer – Ottawa – ON
Gérons le son!

Alyssa Morena – Ottawa – ON
Hydrogen Fuel of the Future – Dry Hydrogen Storage

Thomas Mullaly, Arthur Queiroz – Sudbury – ON
Can worms be a part of the Styrofoam pollution solution?

Sarah Murimboh – Annapolis Valley – NS
*The Effects of Humidity and Temperature on Deformities in *Tenebrio molitor**

Spencer Pearce – Western Manitoba – MB
Noise Pollution or Productivity? Investigating the Effects of Sound on Concentration

Award Recipients

Canada-Wide Science Fair 2023

Edmonton, Alberta



Justin Peng – Greater Vancouver – BC
Atmos: A Neural Edge-Cloud Visual to Auditory Spatial Augmentation Device for the Visually Impaired

Kadhir Ponnambalam – Bay Area – ON
*Electrotaxis of the Tardigrade Species *Hypsibius exemplaris* in a Microfluidic Environment*

Thông Quách – Saskatoon – SK
FlaxFloc - A Saskatchewan Plant-Based Material in Turbidity Removal for Sustainable Water Treatment

Nishka Rai – Wood Buffalo – AB
F.R.O.S.T. – Frostbite Risk Observation & Safety Technology

Cyndi Rayson – Lambton County – ON
Bioremediation to the Rescue: An Environmental Solution to Pollution

Hooman Reza Nezhad – Waterloo-Wellington – ON
From Dust to Habitation – Molten Salt Electrolysis for the In-situ Reduction of Martian Regolith

Madhav Saravanan – Peel – ON
Microplastics, Macro Problem

Layla Sawan – Thames Valley – ON
GreenGenie Composting System

Kevin Shao – Thames Valley – ON
Characterizing the Intrinsic Profile and Environmental Variations of the 5780Å DIB

Aryan Sharma – Calgary Youth – AB
A Novel Solution to Plastic Pollution

Vedant Sheel – Bluewater – ON
A Voice For The Voiceless

Prabhnoor Sidhu – Central Interior BC – BC
Mitigating the Effects of Debris Flows: Part Two

Sehar Sidhu – Windsor – ON
ChatGPT is everywhere: Is this AI chatbot a friend or foe?

Danill Tyurin – Calgary Youth – AB
The Feasibility and Prototyping of a Mechanical Counterpressure EVA Space Suit

Ann Wang – Greater Vancouver – BC
Battling Bacterial Biofilms

Sara Waqas – Calgary Youth – AB
Can Bioengineering Alter Genetic Mutations and Create Organs Using Stem Cells?

Evan Warburton – Vancouver Island – BC
The Dual Dipole Radio Telescope

Justin Yu – Fraser Valley – BC
Zap the Lead Problem! Cost-effective and Immediate Electrochemical Pipe Scale Accelerator

Sophia Zhang – Eastern Newfoundland – NL
Triboelectric Nanogenerator for Wind Energy Harvesting

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Western University Entrance Scholarship

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Alexander Abesteh – Ottawa – ON

Timelike and Null Geodesics around a Reissner-Nordström Black Hole

Luca Agnello – Ottawa – ON

Énergie volcanique

Munir Al-Taher – Canadian Black Scientists Network Youth – CA

Changing the way we refill electric cars

Maggie Alexander – Renfrew County – ON

Who's Cell Phone is the Grossest?

Imran Allarakhia – Bay Area – ON

My SEER (Social Emotional Engaging Robot): Social Robots to Detect and Manage Student Anxiety

Hannah Allen – South Shore – NS

Food for Thought

Wafaa Amin, Asia Urquhart – Halifax – NS

A Novel Study of Physiological and Social Relation with Low-Valence Emotions: Pediatric PCEST Care

Sebastian Audet – Pacific Northwest – BC

Seymour Lake is having a Floating Heart attack

Alexandra Bishop – Algoma Rotary – ON

Exploring The Effectiveness of Multipurpose Toothpastes on the Oral Flora

Marshall Bobier – Regina – SK

R-U Insulated

Hadlea Bradbury – Simcoe County – ON

Gluten Tox

Maria Brons – Prince Albert & Northeast Saskatchewan – SK

Eggs vs. Time

Kaitlyn Chan – Vancouver Island – BC

Greening the Flames: Investigating the abilities of plants to reduce the impact of wildfires

Armaan Chaudhari – Western Manitoba – MB

Antibiotics: Synthetic and Natural

Jasmine Chow – West Kootenay & Boundary – BC

Can chip bags be used as an emergency blanket?

Joshua Chow – Calgary Youth – AB

How Your Weight Could Be Putting You at Risk: Unraveling the Link between BMI and Colorectal Adenomas

Maria Chzhen – Bay Area – ON

Comparison of Regression Algorithms in Multivariable Drought Modeling and Analysis

Emma Coakley – South-East New Brunswick – NB

Inflatable Pouch Motors in Upper Limb Prosthetics

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Emmersyn da Mata, Hailee Marshall – Frontier Schools – MB

Walk your Butt to the Can

Julia Dargacz – Niagara – ON

The Progress Towards the Synthesis of Silatrane Lipid Head Groups

Sietse de Backer – Prince Edward Island – PE

Synced Up: Comparing Methods to Scale Synchronized Servers

Dexter Deheer – Central Alberta Rotary – AB

Can you Crypto Mine with a RaspberryPi?

Justin Du – Greater Vancouver – BC

Interrsect: Aggregated Note Summarization by Machine Learning

Mac Dykeman – 4-H Canada – CA

An Innovative Approach to Ammonia Control in Poultry Operations

Aiyaan Faisal – Winnipeg Schools – MB

Exploration of Genetic Algorithm for Function Optimization

Claire Friesen – Central Alberta Rotary – AB

The Way It Flows: Laminar vs. Turbulent

Swas Ghosh – Northern British Columbia – BC

Green Pools of CO₂: The Effects of CO₂ on Household Plants

Deepraj Singh Gill – Fraser Valley – BC

How a Commercial Jetliner Functions

Angelina Hang, Noah Oliver Pang – Greater Vancouver – BC

Turning Algae Into Fibers: The Solution to Textile Waste

Micah Hansen – Peace Country – AB

Homemade Fertilizers

Ava Haynes – Saskatchewan First Nations – SK

Cyanobacteria

Nycea Hazelwood – Lethbridge – AB

Biomagnification – When a little becomes a lot

Evan Howells – Yukon Stikine – YT

Flight of the Bumble Bee: Comparing pollen foraging patterns of bumble bees and honey bees in Yukon

Reine Huang – Greater Vancouver – BC

Detecting and Preventing Human Falling with Lateral Stability

Sterling Huang, Ethan Xu – Toronto – ON

HydroElectrica: Water Purification + Dual Electricity Generation System

Safwan Hussain – Waterloo-Wellington – ON

Building a Multiclass Brain Tumor Classification Model using a Convolutional Neural Network (CNN)

Kaleb Hussey – South-East New Brunswick – NB

The Effect of Weight Configuration and Load Knowledge on Trunk Motion in Adolescents

Jeffrey Ion – Bay Area – ON

Think Fast!

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Nimish Jain – Greater Vancouver – BC

Highly Evolved Lip Learning mOdel (HELLO): A Novel Machine Learning Model for Accurate Lipreading.

Abigail Jennings – Ottawa – ON

Dress up: Gender Bias in Character Design

Tanya Jivani, Lalithya Raavi – Wood Buffalo – AB

From Raw to Cooked: Exploring Cooking Methods on Ascorbic Acid Retention in Tomatoes

Ben Kawa – Sudbury – ON

Driver Wake Up!

Sophie Kong – Prince Edward Island – PE

Soil Microbial Fuel Cell

Emily Krause, E'lise Nguyen – Ottawa – ON

M.E.P.

Liz Krelove, Karys Littlejohns – Simcoe County – ON

*Investigating the effects of stimulants and depressants in aquatic pollutants on *Daphnia magna**

William Larder – Annapolis Valley – NS

Culvert Remediation for Fish Passage in Barkhouse Brook

Anna Lawand – Cape Breton – NS

Natural Antibiotics Comparison Experiment

Maya LeBlanc – Bay Area – ON

*Nitrous Oxide Reduction in an Industrial Wet Scrubber Utilizing NosZ Reductase and *P. denitrificans**

Jonathan Li – Frontenac, Lennox & Addington – ON

Depressed or Not? Using Large Language Models to Predict Depression from Social Media Posts

William Li – West Kootenay & Boundary – BC

Centrifugal Space Fitness Center

Ziang Li – Bay Area – ON

I.C.: Predict Food Recipe from Image using CNN/Transformer & Knowledge Distillation for Portability

Shayan Mahmood – Thames Valley – ON

Morphological Characterization of Imaged iPSC-Derived Endothelial Cells Using Machine Learning

Renzo Masiclat – Southeast Alberta – AB

Cranberries: A Potential Treatment and Prophylaxis Against Urinary Tract Infections

Ariel Mason – Calgary Youth – AB

Using Machine Learning to Detect Breast Cancer

Khafri Mau – Greater Vancouver – BC

The First Step to Growing Plants on Mars

Rylie McGrath – South-East New Brunswick – NB

The Moss Pit: Comparing the performance of three moss species local to Saint John on two substrates

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Emily McKenna – Winnipeg Schools – MB <i>Compaction Action: Measuring the effect of additives on soil compaction</i>
Sia Mehta – Simcoe County – ON <i>Glaze the Roof</i>
Jad Menkara – Windsor – ON <i>Novel Thermoelectric Generator for Automobile Exhaust Waste Heat Recovery</i>
Katharine Morley – Vancouver Island – BC <i>Plastered Plants Defeat Drought: Exploring the effects of ethanol on drought resistance in plants</i>
Nila Munro, Donell O'Connor – Strait – NS <i>Waste Not, Want Not; Enhancing Nuclear Energy Output</i>
Anush Mutyala – Peel – ON <i>Energyspike: Pioneering Wireless Mind-Control Implants using Energy-Efficient Neuromorphic Computing</i>
Daniel Nashed – Manitoba Schools Science Symposium – MB <i>Which one soundproofs best?</i>
Annika Paliwal – Bison – MB <i>A Long-Term Study Using Serious Games to Diagnose and Treat Dementia</i>
Ria Patel – Ottawa – ON <i>The Spark of Life: Exploration of neuromuscular junctions, insulin secretion, and cardiac regulation</i>
Shail Patel – Frontenac, Lennox & Addington – ON <i>Dextera: An Affordable, Functional, Myoelectric Prosthetic Hand</i>
Alpita Patro – Eastern Newfoundland – NL <i>Investigating the Antibacterial Activity of Natural Remedies Against Non-Pathogenic E. coli</i>
Zenia Pereira, Nandika Senthilkumar – Edmonton – AB <i>Alex, the AI that Doesn't Exist</i>
Maggie Polischuk – Sudbury – ON <i>'Steer Clear' The Break-Away Steering Wheel!</i>
Izabela Quest – Frontenac, Lennox & Addington – ON <i>Stopping Cancer in its Tracks: How does fructose enable cancer cell metastasis?</i>
William Rodgers, Rylan Wainman – Beaufort-Delta – NT <i>Steroid Use</i>
Hanna Ryan – Yukon Stikine – YT <i>What's the best way to dry your hands?</i>
Mohamed Saleh – Windsor – ON <i>Pumpkin Plastic: An Innovative Bioplastic to Replace Petroleum-based Plastic</i>
Misimi Sanni – Bay Area – ON <i>Emerging Prosthetics: The Novel Development of a Cost-Effective Electronic Prosthetic Arm</i>
Rishi Shah – Thames Valley – ON <i>From Pixels to Precision</i>

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Adara Shilling – Greater Vancouver – BC

Plastic Roots

Rodin Shokravi, Kevin Yuan – Greater Vancouver – BC

A Novel System: Replicating Materials' Arithmetic Mean Height Using LRAs & Piezo Elements

Roocha Shukla – Waterloo-Wellington – ON

The Power that Brings Flowers

Prabhdeep Singh – Thames Valley – ON

Asion: An ML-powered Sky Navigation and Constellation Recognition System

Ella Strachan – Winnipeg Schools – MB

Mapping Microplastics: Computer Modelling to Predict & Address Microplastic Accumulation in Lakes

Jonas Tkacz – Conseil scolaire acadien provincial – NS

Un vaccin informatique: l'utilisation de l'intelligence artificielle pour combattre les virus

Alexia Tomasello – Districts francophones du N.-B. – NB

La conservation des chauves-souris, un défi de taille !

Ayana Torres – Ottawa – ON

Amélioration de toiture: déflecteur de vent

Beth Tubman – Strait – NS

From Flower to Flavour – How pollen type affects honey

Afaq Virk – United Counties – ON

eECHOlocation: An Innovation to Mitigate Visual Impairment

Jack Washburn – Frontenac, Lennox & Addington – ON

Sham(e)poo: Clean Hair without the Dirty Secret Ingredients of Commercial Shampoos

Mark Wendland – Renfrew County – ON

Tank Battles in 2D & 3D

Errita Xu – Toronto – ON

Road Salt: Its Implications and Exploring Agro-Based Alternatives

Brian Yin – Bay Area – ON

Student Engagement Rewards System

Aaron Zhao – Greater Vancouver – BC

ExoTremor: A Low-Cost, 3D-Printed Exoskeleton that Suppresses Hand Tremors in Movement Disorder Patients