

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



The Actuarial Foundation of Canada Award

Junior

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

Stephanie Christle – Bison – MB

Food for the North; Sustainable Farming for Indigenous communities negatively affected by climate change

The Actuarial Foundation of Canada Award

Intermediate

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

Derek Sheen – Waterloo-Wellington – ON

A Novel Approach to Detecting Melanoma Using Deep Learning

The Actuarial Foundation of Canada Award

Senior

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

Koral Kulacoglu, Louis Wu – York – ON

FourSight: Analysis of Cancerous Genetic Profiles With Artificial Neural Networks

The Beaty Centre for Species Discovery Award

Senior

Sponsor: Canadian Museum of Nature
\$1,000 cash, certificate and one-year Canadian Museum of Nature family membership

Annabelle Rayson – Lambton County – ON

Plankton Wars: An Innovative Analysis of Daphnia Genotype Biomanipulation for Algae Bloom Prevention

Brainspace Magazine Award

Junior

Sponsor: Brainspace Magazine
\$500 cash and certificate

Olivier Lafleur – Bluewater – ON

Les plantes, des ordinateurs quantiques?

Canadian Acoustical Association Award

Senior

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

Mac Dykeman – 4-H Canada – CA

A Simple, Scalable Method For Reducing Stress In Chicks During The First Seven Days Post Hatch.

Canadian Meteorological and Oceanographic Society and the Weather Network Award

Senior

Sponsor: Canadian Meteorological and Oceanographic Society & Pelmorex Corp.
\$1,000 cash and certificate

Annabelle Rayson – Lambton County – ON

Plankton Wars: An Innovative Analysis of Daphnia Genotype Biomanipulation for Algae Bloom Prevention

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Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Canadian Society for Clinical Chemists Award

Senior

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

Dheiksha Jayasankar – Niagara – ON

Smiglaside-C Part 2: Developing Hydrogel Films from A.muricata Extracts for Wound Healing Purposes

Canadian Stockholm Junior Water Prize

Senior

Sponsor: Canadian WEF Member Associations, the Canadian Water and Wastewater Association, and Jacobs Stockholm Junior Water Prize Competition Online Event, August 2-24, 2021, for up to two student(s) of the 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.

Emily Goodson – Simcoe County – ON

A Novel Approach to the Reparation of Damaged Freshwater Ecosystems Simulating Wetland Filtration

Jessica Graham – South-East New Brunswick – NB

Modified Fe Nanoparticles and a Rotating Magnetic Drum: Removing Aquatic Microplastics

Annabelle Rayson – Lambton County – ON

Plankton Wars: An Innovative Analysis of Daphnia Genotype Biomanipulation for Algae Bloom Prevention

CAP Physics Prize

Senior

Sponsor: Canadian Association of Physicists
\$1,000 cash and certificate

Zachary Ireland – Manitoba Schools Science Symposium – MB

Quantifying the Likelihood of Neutron Absorption Utilizing Radiative Capture Cross-Sections

Centre for Canadian Nuclear Sustainability Award

Intermediate

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

Naila Mooloo – Ottawa – ON

Forecasting the Power Output of Photovoltaic Systems

deutraMed Chemistry and Innovation Award

Junior

Sponsor: deutraMed Inc.
\$500 cash and certificate

Kevin Cornell – South-East New Brunswick – NB

Accessible Hydrogen Therapy with Graphite Electrodes

Engineering Innovation Award

Senior

Sponsor: Canadian Society for Senior Engineers
\$1,000 cash and certificate

Alexis Krasnova – Thames Valley – ON

Detection and prevention of triggers for photosensitive epilepsy seizures in YouTube videos

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Excellence in Astronomy Award

Junior

Sponsor: Royal Astronomical Society of Canada
Telescope and certificate plus a one year membership to RASC

Arushi Nath – Toronto – ON

Strengthening Planetary Defense: Detecting Unknown Asteroids using Open Data, Math, and Python

Excellence in Astronomy Award

Intermediate

Sponsor: Royal Astronomical Society of Canada
Telescope and certificate plus a one year membership to RASC

Silas Eastwood – Halifax – NS

SMARTEN: Simulated Microgravity and Reduced Friction Test Environment for Nanosatellites

First Nations University of Canada Award

Junior

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

Dylan Bercier – Manitoba First Nations ERC – MB

Tap Water Quality in Kinonjeoshtegon First Nation

Intact Climate Change Resilience Award

Junior

Sponsor: Intact Financial Corporation
\$500 cash and certificate

Sia Mehta – Simcoe County – ON

Thermochromic Economics

Intact Climate Change Resilience Award

Intermediate

Sponsor: Intact Financial Corporation
\$750 cash and certificate

Maya LeBlanc – Bay Area – ON

Carbon Capture Depletion Using Catalyzed Photosynthesis to Promote Crop Growth

Intact Climate Change Resilience Award

Senior

Sponsor: Intact Financial Corporation
\$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.

Emily Goodson – Simcoe County – ON

A Novel Approach to the Reparation of Damaged Freshwater Ecosystems Simulating Wetland Filtration

International Summer School for Young Physicists Award

Senior

Sponsor: Perimeter Institute for Theoretical Physics
Certificate and a full scholarship to participate in the International Summer School for Young Physicists 2021 (ISSYP 2021) from July 19-30.

Gabrielle Seal – Calgary Youth – AB

A Survey of Compact, Intermediate-Velocity H I Clouds in the Inner Milky Way

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Nanotechnology for Sustainable Society Award

Junior

Sponsor: Waterloo Institute for Nanotechnology
\$500 cash and certificate

Sophia Zhang – Eastern Newfoundland – NL
Triboelectric Effect and Nanogenerator

Nanotechnology for Sustainable Society Award

Intermediate

Sponsor: Waterloo Institute for Nanotechnology
\$750 cash and certificate

Katharine Morley – Vancouver Island – BC
Coagulant Conundrum: Exploring the Efficacy of Natural and Chemical Coagulants on Microplastics

Nanotechnology for Sustainable Society Award

Senior

Sponsor: Waterloo Institute for Nanotechnology
\$1,000 cash and certificate

Thomas Pronovost – Réseau Technoscience – QC
Analyse ta foulée!

Nutrients for Life Foundation Award

Senior

Sponsor: Nutrients for Life Foundation Canada
\$1000 cash and certificate

Emily Goodson – Simcoe County – ON
A Novel Approach to the Reparation of Damaged Freshwater Ecosystems Simulating Wetland Filtration

Renewable Energy Award

Junior

Sponsor: Ontario Power Generation
\$500 cash and certificate

Vedant Sheel – Bluewater – ON
Smart Solar Tracker!

Renewable Energy Award

Intermediate

Sponsor: Ontario Power Generation
\$750 cash and certificate

Claire Mantrop – Simcoe County – ON
Water Works

Renewable Energy Award

Senior

Sponsor: Ontario Power Generation
\$1,000 cash and certificate

Bach Nguyen – South-East New Brunswick – NB
Elevated Vehicle Routing in Reverse Logistics for Garbage Transportation in Saint John New Brunswick

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



S.M. Blair Family Foundation Award

Junior

Sponsor: S.M. Blair Family Foundation
\$500 cash and certificate

Ryvan Hammoud – South Fraser – BC

Smart Wash

S.M. Blair Family Foundation Award

Intermediate

Sponsor: S.M. Blair Family Foundation
\$750 cash and certificate

Philippe Provencher – Réseau Technoscience – QC

Le VéloTonome

S.M. Blair Family Foundation Award

Senior

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

Yubo Wang, Matthew Zullo – York – ON

EyeInteract: Accessible Eye Tracking for the Physically Disabled Using Computer Vision

Shad Canada Scholarship Award

Intermediate

Sponsor: Shad Canada
\$1,000 scholarship

Ava Fischer – Simcoe County – ON

COVID Coaster

Shad Canada Scholarship Award

Intermediate

Sponsor: Shad Canada
\$2,000 scholarship

Nishka Rai – Wood Buffalo – AB

Buzz! - An Affordable Chronic Wound Alert System

Shad Canada Scholarship Award

Intermediate

Sponsor: Shad Canada
\$3,000 scholarship

Hassan Amir – Yukon Stikine – YT

Understanding the Impact of Opioid-Related Substances on Yukon Youth

Statistical Society of Canada Award

Intermediate

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

Elizabeth Chen – Edmonton – AB

Design Parameters for CAR-T Cell Therapy using RNA Sequencing Analysis

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Statistical Society of Canada Award

Senior

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

Oumaima Malih – Réseau Technoscience – QC

Réglisse et la durée de vie

Sustainable Agriculture Award

Junior

Sponsor: 4-H Canada
\$500 cash and certificate

Thông Quách, Aurora Leung-Vermette – Saskatoon – SK

Saved from the Lepidopterans

University of Ottawa Undergraduate Research Scholarship Award

Senior

Sponsor: University of Ottawa, Faculty of Science
\$11,500 research scholarship and certificate

Ria Patel – Ottawa – ON

BlueViolet: a wearable eye-health monitor to counter the unseen health effects of COVID-19

York University STEM Entrepreneurship Experience Scholarship Award

Intermediate

Sponsor: York University, Lassonde School of Engineering
Certificate and full scholarship to participate in the Youth Science Canada/York University STEM Entrepreneur Virtual Bootcamp in August 2021

Archie Shou, Edwin Wang – Toronto – ON

AI Object Location Recognition Software for the Blind

York University STEM Entrepreneurship Experience Scholarship Award

Senior

Sponsor: York University, Lassonde School of Engineering
Certificate and full scholarship to participate in the Youth Science Canada/York University STEM Entrepreneur Virtual Bootcamp in August 2021

Morane Charbonneau – Réseau Technoscience – QC

I-Muno

Ria Patel – Ottawa – ON

BlueViolet: a wearable eye-health monitor to counter the unseen health effects of COVID-19

Sparsh Patel – Wood Buffalo – AB

FOCUS! - An EEG And ANN Powered Brain Sensing Headband For Accident Prevention

Excellence Award - Bronze

Junior

Sponsor: Youth Science Canada
Medal and certificate

Sebastian Audet – YSC Virtual – CA

Floating Heart is Breaking my Heart

Kaan Bektas – Toronto – ON

Collision Avoiding and Concussion Identifying Bicycle Helmet

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Hannah Cheang – York – ON
Fish Powered Plant Growth

Isla Corkum – Strait – NS
Which Light Is Right?

Chloe Dafoe – Halifax – NS
Ocean Acidification

Param Dixit – Toronto – ON
Lost In Translation

Nuala Gibbs – United Counties – ON
L'impact du climat: Exploration de l'énergie éolienne

Sadie Hanley – Ottawa – ON
Pitch Perfect: How Cold Temperature Affects the Frequency of Musical Notes

Marion Harvey – Réseau Technoscience – QC
Soulever à la force des fibres

Jordan Hussey – North-West New Brunswick – NB
It's going to be lit!

Nathan Janssen – Thames Valley – ON
Resisting Rust

Frankie La Peter – East Kootenay – BC
'Peer'ing into Pressure

Nate Martin – Manitoba Schools Science Symposium – MB
To Mask or not to Mask? Why is that Even a Question?

Elise Munro – Strait – NS
Lymeon: A Novel Way To Test Lyme Disease in Minutes

Jora Singh Nahal – Cariboo Mainline – BC
Drowsiness Detection and Virtual Friend Speech-Robot for Safe Driving: A Novel App

Caden Oliphant – Thames Valley – ON
Masks Rock! Which Face Masks are More Effective?

Nicholas Pacifici – Bay Area – ON
Head On A Swivel 2.0: Brace For Impact

Alpita Patro – Eastern Newfoundland – NL
Algae: The Future of Biofuel

Timothy Riddolls – Ottawa – ON
Electromagnetic Pulse Effects on Non-Volatile Digital Memory

Hussain Rizvi – Regina – SK
Modelling Invasive Species Growth with Zebra Mussels

Ava Romano – Bay Area – ON
Can CAR T-Cell Therapy Be Used to Cure Alzheimer's Disease?

Onkit Saha – North-West New Brunswick – NB
Thermoelectric, Reusable, and Sustainable Heat cycle

Ella Sehn – Peterborough – ON
Vegetation Sanitation: Measuring the Impact of Oil Spills on Oxygen Production of Aquatic Plants

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Margo Senchenko – South Fraser – BC
Attractive Cat Scratcher

Isaiah Sienna – Bay Area – ON
The Effects of Plastic Contamination in Plastic Water Bottles Due to Environmental Variables

Jaime So – Ottawa – ON
Testing Tampons. Toxic or Terrific?

Maya Sternin – Niagara – ON
What is your temperature?

Misha van Anders – Frontenac, Lennox & Addington – ON
Canoe believe it?

Sophia Zhang – Eastern Newfoundland – NL
Triboelectric Effect and Nanogenerator

Michael Zheng – Calgary Youth – AB
Detecting Mask-Wearing via Machine Learning

Excellence Award - Bronze

Intermediate

Sponsor: Youth Science Canada
Medal and certificate

Farhan Ahmed, Alexander Li – South Fraser – BC
The Methane Recycler

Hassan Amir – Yukon Stikine – YT
Understanding the Impact of Opioid-Related Substances on Yukon Youth

Silas Armstrong – Halifax – NS
House Dressing

Arham Aziz – Thames Valley – ON
Decrypting the facial code of Alzheimer's disease

Katie Buchel – Thames Valley – ON
Wonderous World of Angular Velocity: Diving Edition

Keanu Chan – East Kootenay – BC
Design, Implementation and Assessment of Novel universal Design Internal Spine Concept (NuDISC)

Sophia Croft – Halifax – NS
To Fry or not to Fry: Does Cooking Pollute Indoor Air?

Ava Fischer – Simcoe County – ON
COVID Coaster

Ishan Gehlaut – Toronto – ON
Using Regression Learning to predict Algal Blooms in the Great Lakes

Pari Goyal, Lucie Li – Greater Vancouver – BC
Windblade

Islay Graham – Bluewater – ON
The National Helmet Expiry Inquiry

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Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Grace Ko – Toronto – ON

SoilTO: Using Statistical Analysis to Determine How Race and Income Affect Toronto's Soil Quality

Alex Lea – Central Interior BC – BC

Sustainable Nutrient Regeneration: The Effects of Wood Ash and Nitrogen on Pasture Grass Nutrition

Maya LeBlanc – Bay Area – ON

Carbon Capture Depletion Using Catalyzed Photosynthesis to Promote Crop Growth

Claire Mantrop – Simcoe County – ON

Water Works

Naila Moloo – Ottawa – ON

Forecasting the Power Output of Photovoltaic Systems

Katharine Morley – Vancouver Island – BC

Coagulant Conundrum: Exploring the Efficacy of Natural and Chemical Coagulants on Microplastics

Annalise Musclow, Sydney Dobbin – Peterborough – ON

Quantitative Study of Microplastics in Jackson's Creek

Natalie Parker – Northwestern Ontario – ON

Microplastics - A Big Little Problem

Nadine Persad – West Kootenay & Boundary – BC

Development and Testing of a Novel Post Harvest Treatment

Philippe Provencher – Réseau Technoscience – QC

Le VéloTonome

Nishka Rai – Wood Buffalo – AB

Buzz! - An Affordable Chronic Wound Alert System

Derek Sheen – Waterloo-Wellington – ON

A Novel Approach to Detecting Melanoma Using Deep Learning

Ken Shibata – Toronto – ON

Kyokukey: Wearable Input Device Using Conductive Threads

Sohila Sidhu – Windsor – ON

Proof of Concept: Artificial Pancreas for Patients with Diabetes

Rachel Simantov – Calgary Youth – AB

Framework for Optimal Pandemic Management

Viduni Siriwardana – Greater Vancouver – BC

Novel, High-Yielding DNA Extraction Protocol via Automated Device to Provide Facile Forensic Analysis

Harshita Srikanth – Quinte – ON

Creativity = TRIZ!

Alan Van – Toronto – ON

A Model for Medical Diagnosis Using Artificial Intelligence

Ann Wang – Greater Vancouver – BC

An Acidic Future

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Excellence Award - Bronze

Senior

Sponsor: Youth Science Canada

Medal and certificate

Nuha Akhand, Mariya Turetska – Waterloo-Wellington – ON

Inhibition of Cancer Cells Through Algae Derived EPA

Eunjo An – Vancouver Island – BC

Orange Peels as Biosorbents in the Treatment of Heavy Metal Wastewater

Rhea Bhalla – Calgary Youth – AB

Dementia and COVID-19: Comparison of Responsive Behaviours in the Initial and Later Pandemic Waves

Elsa Bienenstock, Alex Alam – Toronto – ON

Parkinson's Spoon

Chloe Brodie – Calgary Youth – AB

Identifying Zinc-Containing Neurons to Widen Research into Zinc's Role in Neuroplasticity

Morane Charbonneau – Réseau Technoscience – QC

I-Muno

Kristin Cho – Toronto – ON

Inducement of Autoimmune Disease from Lead Exposure and Prevention Using Fermented Food Bacteria

Krish Desai – YSC Virtual – CA

Investigating Kalanchoe pinnata as a potential treatment for acute nephrolithiasis

Armaandeeep Dhanoa – Manitoba Schools Science Symposium – MB

Fabrication of Micro-Optical-Ring-Electrodes and their Application on Biological Samples

Manorama Joshi – Wood Buffalo – AB

Automotive SMART Cane for the Visually and Auditorily Impaired

Samarah Kanji – Calgary Youth – AB

Demyelination in Diffuse Axonal injury in mTBI

Anantjot Khosa – Manitoba Schools Science Symposium – MB

Fabrication of electrodes to detect Cytochrome C Oxidase deficiency

Jeffrey Klinck – Bay Area – ON

MediRecord: a Quasi-Permissioned Blockchain Medical Record Verification System

Alexis Krasnova – Thames Valley – ON

Detection and prevention of triggers for photosensitive epilepsy seizures in YouTube videos

Seungmyoung Lee, Amyna Ismail – Toronto – ON

Eye Spy: A Novel Way to Predict & Detect Alzheimer's Disease

William Li – Greater Vancouver – BC

Development of a Novel Pesticide for Rice Blast Disease

Julia Mansiere – YSC Virtual – CA

Were Urban Heat Islands a Factor in the Deadliness of the Summer 2021 Heat Dome in British Columbia?

Award Recipients

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LiLi Miko – Thames Valley – ON

Can't Afford Accuracy? A Three-Dimensional Printer for Sustainable Scavengers

Tri Nguyen, Rena Warren – Central Alberta Rotary – AB

SmartLifeJacket - An Automatic Inflating Life Jacket When The User Is In Distressed

Teighin Nordholt – South-East New Brunswick – NB

Modifying Cloud Chamber Technologies

Dhyan Patel – Wood Buffalo – AB

Where What Goes: The combination of CV and AI to enhance the recycling experience.

Kiran Prasad, Arushi Rawat – Lambton County – ON

SeaQuester: A Novel Approach to Increasing the Carbon Dioxide Absorption and Alkalinity of the Ocean

Aiden Shlien – Réseau Technoscience – QC

A Miracle or a Mistake?

Prabhnoor Sidhu – Central Interior BC – BC

Mitigating the Effects of Debris Flows

Anna Siekierzycki – Bluewater – ON

Corticosteroid Injections/ Hyaluronic Acid and Their Use in Performance Horses

Michaela Stillwell, Antonia Tannert von Baer – Central Interior BC – BC

The Effects of Microplastics on Phytoplankton

Grace Tuglavina – Labrador, Western & Central Newfoundland – NL

The domino effect-how changing ice patterns in the North have far reaching consequences

Lauren Wilkes – Ottawa – ON

Effet des additifs au sel de voirie sur la réduction de la pollution routière

Yitian Zhang – South-East New Brunswick – NB

Effects of 16/8 Intermittent Fasting Diet on Type 2 Diabetes

Gary Zhu – Thames Valley – ON

Doctor X - An AI Powered Personal Medical Assistant

Excellence Award - Silver

Junior

Sponsor: Youth Science Canada

Medal and certificate

Angela Cao – Greater Vancouver – BC

Fountain of Youth

Armaan Chaudhari – Western Manitoba – MB

Health Benefits of Copper

Ashish Chettimada – Waterloo-Wellington – ON

Bacteriophages: Curing One Infection With Another

Abdul-Rahman Dannawey, Abdul Majeed Al Riahi – Windsor – ON

Smart Cane for Visually Impaired People

Ila Giroux – Algoma Rotary – ON

Fire Cannot Brew Without O2

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Isha Goyal – Calgary Youth – AB

CRISPR vs COVID: Genetic Modification to Treat SARS-CoV-2

Ryyan Hammoud – South Fraser – BC

Smart Wash

Ariana Harrison, Everett Harrison – Edmonton – AB

A Strawy Mess Phase 2

James Hoag – Greater Vancouver – BC

Keep The Noise Out!

Ryan Layton-Matthews – Frontenac, Lennox & Addington – ON

Walking on Thin Ice

Teddy Mao – Bay Area – ON

Transparent Wood: A Window to the Future?

Sia Mehta – Simcoe County – ON

Thermochromic Economics

Sebastien Menard – Frontenac, Lennox & Addington – ON

Roofing for a Green Future

Sarah Murimboh – Annapolis Valley – NS

The Effect of Fertilizers on the Hatch Success of Triops longicaudatus

Reuel Ramalingam – YSC Virtual – CA

Pink to Brown - How to Prevent Concussions

Lauren Rasalingam – Ottawa – ON

Not on my back!

Mohamed Saleh – Windsor – ON

Pumpkin Plastic

Vedant Sheel – Bluewater – ON

Smart Solar Tracker!

Tamsen Taylor – Ottawa – ON

Dark Skies in Ottawa

Julia Valdez – West Kootenay & Boundary – BC

Does the BPM of Music Rather than the Type of Music Affect the Learning Process in Mice?

Excellence Award - Silver

Intermediate

Sponsor: Youth Science Canada

Medal and certificate

Tesko Chaganti – Windsor – ON

Unraveling the Secrets of Healthy Aging

Emily Chan – Greater Vancouver – BC

Sea Scrap Slippers

Ethan Chase – Greater Vancouver – BC

RESeTCO2: Residential Emission Sequestration Technologies for Carbon Dioxide.

Elizabeth Chen – Edmonton – AB

Design Parameters for CAR-T Cell Therapy using RNA Sequencing Analysis

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Sophie Filion, Chloe Filion – Niagara – ON

The Dynamic Highway Speed Emission Control System

Tharunika Gnaneshan – YSC Virtual – CA

Hidden Women: A Project on Women of Color in STEM

Veronica Guo – Greater Vancouver – BC

Bioelectric Batteries: Using Algae to Make the Battery Renewable

Brennah Hammond – Peterborough – ON

Do You PerSEEEve What I PerSEEEve?

Nathan Hellner-Mestelman – Vancouver Island – BC

Breakup is a Drag - Using a lower CubeSat Orbit to Protect Space Infrastructure

Jonathan Leung – Greater Vancouver – BC

A Case Study of Wildlife Feeding and Coyote Attacks in Vancouver's Stanley Park

Ziyu Li, Zipeng Li – Calgary Youth – AB

Tenebrio Molitor Polystyrene Foam Consumption - The Effect of Additional Nutritional Sources

Marissa Magsino – Manitoba Schools Science Symposium – MB

Behavioral modification of Tenebrio molitor by toxins to maximize the biodegradation of polystyrene

Mark Norregaard – 4-H Canada – CA

A Comparison of Natural Corrosion Inhibitors on Metals

Evan Papps – Vancouver Island – BC

Can Slime Mold Adapt and Communicate?

Kadhir Ponnambalam – Bay Area – ON

Effect Of Electrical Field On Tardigrades In A Microfluidic Environment

Kayla Salasidis – Réseau Technoscience – QC

OR in Focus: An Automatic Focusing Overhead Operating Room Light

Archie Shou, Edwin Wang – Toronto – ON

AI Object Location Recognition Software for the Blind

Nathan Yeung, Charlie Zhang – South Fraser – BC

Lento: Goal-Based Productivity

Tara Zhan – Greater Vancouver – BC

Medical Mo-Cap

Timothy Zhou – Calgary Youth – AB

Toilet Leak Detector

Excellence Award - Silver

Senior

Sponsor: Youth Science Canada

Medal and certificate

Rafay Ahmed – Northern Saskatchewan – SK

An FDA-Approved Drug Screening to Eliminate Telomerase Over-Expressing Pancreatic Cancer

Grace Awotundun – Calgary Youth – AB

Quantification of ASD-related Gene Transcripts in Glyphosate-exposed Zebrafish Through Larval Stages

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Virtual – Fredericton, New Brunswick



Oliver Baker – Annapolis Valley – NS

Baseline Assessment of Marine Water Entering Freshwater Waterways Through the Aboiteaux in Dykes

Becca Barbera – Bay Area – ON

QSAR Model for the Inhibition of A β 1-42 Peptide: Molecular Dynamics and Bioinformatics Study

Carlynn Davidson – Winnipeg Schools – MB

Young Extracellular Vesicles as Revitalizing Agents for Age Associated Cellular Dysfunction

Ella Dunsmore – Calgary Youth – AB

Testing Aprepitant as a Possible Therapeutic in Two Pediatric Cancer Cell Lines

Emily Goodson – Simcoe County – ON

A Novel Approach to the Reparation of Damaged Freshwater Ecosystems Simulating Wetland Filtration

Jessica Graham – South-East New Brunswick – NB

Modified Fe Nanoparticles and a Rotating Magnetic Drum: Removing Aquatic Microplastics

Chloe Hill – Simcoe County – ON

Autonomous Search And Rescue Aircraft

Rawaan Ibrahim – Edmonton – AB

Grassheet

Zachary Ireland – Manitoba Schools Science Symposium – MB

Quantifying the Likelihood of Neutron Absorption Utilizing Radiative Capture Cross-Sections

Oumaima Malih – Réseau Technoscience – QC

Réglisse et la durée de vie

Bach Nguyen – South-East New Brunswick – NB

Elevated Vehicle Routing in Reverse Logistics for Garbage Transportation in Saint John New Brunswick

Ria Patel – Ottawa – ON

BlueViolet: a wearable eye-health monitor to counter the unseen health effects of COVID-19

Sparsh Patel – Wood Buffalo – AB

FOCUS! - An EEG And ANN Powered Brain Sensing Headband For Accident Prevention

Parmin Sedigh – Frontenac, Lennox & Addington – ON

Exposure to glyphosate-based herbicide and zebrafish fin regeneration

Kevin Shao – Thames Valley – ON

A Computer Vision-Controlled Smart Robotic Arm

Graydon Strachan – Winnipeg Schools – MB

MAC: A Novel Method for Clinical Weight Estimation

Sarah Syed – Toronto – ON

Harnessing Nanotechnology in Biomass and Carboxyl Grouping for Water Remediation

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Yubo Wang, Matthew Zullo – York – ON

EyeInteract: Accessible Eye Tracking for the Physically Disabled Using Computer Vision

Excellence Award - Gold

Junior

Sponsor: Youth Science Canada

Medal and certificate

Abigail Chan – Waterloo-Wellington – ON

Regulating Digital Eye Strain using Similarity Index

Caroline Chan – Toronto – ON

Do Masks Mask Your Emotions? AI Emotion Recognition in the Era of Face Masks

Audrey Cowen – Toronto – ON

The Hidden Side of Your Dog's Love

Jamie Drysdale – Ottawa – ON

Genetically modifying K 12 Escherichia coli to produce Recombinant Sars-Cov-2 Spike Protein

Aiyaan Faisal – Winnipeg Schools – MB

Geometric Exploration of Musical Rhythms using Phase Space Plots

Malaya Jung Little – West Kootenay & Boundary – BC

Does a Walk in Nature Improve your Memory?

Emily Lin, Ruiyi Sang – South Fraser – BC

Writing a cleaner future with E-Coal

Arushi Nath – Toronto – ON

Strengthening Planetary Defense: Detecting Unknown Asteroids using Open Data, Math, and Python

Anjali Patel – Frontenac, Lennox & Addington – ON

Discovery of Novel Gene Biomarkers to Improve CAR-T Cell Immunotherapy for Pancreatic Adenocarcinoma

Surya Narayan Santhakumar – Quinte – ON

Snow SBOT V2

Excellence Award - Gold

Intermediate

Sponsor: Youth Science Canada

Medal and certificate

Ken Cheng – Toronto – ON

A Need For Speed: Enhancing F1 Race Cars with Computational Fluid Dynamics and Machine Learning

Max Du – Calgary Youth – AB

A Novel Pre-Hospital Indoor Rescue Drone

Silas Eastwood – Halifax – NS

SMARTEN: Simulated Microgravity and Reduced Friction Test Environment for Nanosatellites

Séréna Harvey – Réseau Technoscience – QC

Bactéries pour souper!

Mihaela Iluta, Akram Tahar Chaouch – Réseau Technoscience – QC

Oh la vache!

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Hudson Jantzi – Waterloo-Wellington – ON

Using Robotics to Naturally Trim the Dandelion Cycle - A Novel Approach to Eliminating Chemicals on Lawns

Keerthan Kamala Krishnamoorthy – Manitoba Schools Science Symposium – MB

Using Deep Learning to Identify Harmful Micro-Organisms in Drinking Water

Kibo Nagasaki – Bay Area – ON

Survival of Indigenous Ancestors

Justin Peng – Greater Vancouver – BC

Taking Control: A Novel Galvanic Stimulation Device for the Visually Impaired

Jasmine Schneider – Waterloo-Wellington – ON

Phosphate Removal from Groundwater Using Mussel Shell Biochar

Excellence Award - Gold

Senior

Sponsor: Youth Science Canada

Medal and certificate

Dheiksha Jayasankar – Niagara – ON

Smiglaside-C Part 2: Developing Hydrogel Films from A.muricata Extracts for Wound Healing Purposes

Gurnirmal Kaur – Bay Area – ON

EzerBot: Detecting Phrases Indicative of Emotional Distress Within Online Platforms

Koral Kulacoglu, Louis Wu – York – ON

FourSight: Analysis of Cancerous Genetic Profiles With Artificial Neural Networks

Krish Modi – Lambton County – ON

Pee Xylophone: A Novel Non-Invasive System to Measure Bladder Pressure

Thomas Pronovost – Réseau Technoscience – QC

Analyse ta foulée!

Annabelle Rayson – Lambton County – ON

Plankton Wars: An Innovative Analysis of Daphnia Genotype Biomanipulation for Algae Bloom Prevention

Patricia Rea – York – ON

BioGrade Yeast: The Function of a Novel cfAFP-501-CcMreB Filament-Forming AFP

Gabrielle Seal – Calgary Youth – AB

A Survey of Compact, Intermediate-Velocity H I Clouds in the Inner Milky Way

Maria Xu – Toronto – ON

Analyzing Treatment-related Symptoms in Metastatic Colorectal Cancer Patients with Machine Learning

Grace Yu, Akira Yoshiyama – Fraser Valley – BC

On the Generative Design of Airfoils

Challenge Award - Agriculture, Fisheries and Food

Junior

Sponsor: Youth Science Canada

Certificate

Hannah Cheang – York – ON

Fish Powered Plant Growth

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Challenge Award - Agriculture, Fisheries and Food

Intermediate

Sponsor: Youth Science Canada
Certificate

Nadine Persad – West Kootenay & Boundary – BC
Development and Testing of a Novel Post Harvest Treatment

Challenge Award - Agriculture, Fisheries and Food

Senior

Sponsor: Youth Science Canada
Certificate

Mac Dykeman – 4-H Canada – CA
A Simple, Scalable Method For Reducing Stress In Chicks During The First Seven Days Post Hatch.

Challenge Award - Curiosity and Ingenuity

Junior

Sponsor: Youth Science Canada
Certificate

Arushi Nath – Toronto – ON
Strengthening Planetary Defense: Detecting Unknown Asteroids using Open Data, Math, and Python

Challenge Award - Curiosity and Ingenuity

Intermediate

Sponsor: Youth Science Canada
Certificate

Max Du – Calgary Youth – AB
A Novel Pre-Hospital Indoor Rescue Drone

Challenge Award - Curiosity and Ingenuity

Senior

Sponsor: Youth Science Canada
Certificate

Patricia Rea – York – ON
BioGrade Yeast: The Function of a Novel cfAFP-501-CcMreB Filament-Forming AFP

Challenge Award - Digital Technology

Junior

Sponsor: Youth Science Canada
Certificate

Surya Narayan Santhakumar – Quinte – ON
Snow SBOT V2

Challenge Award - Digital Technology

Intermediate

Sponsor: Youth Science Canada
Certificate

Keerthan Kamala Krishnamoorthy – Manitoba Schools Science Symposium – MB
Using Deep Learning to Identify Harmful Micro-Organisms in Drinking Water

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Challenge Award - Digital Technology

Senior

Sponsor: Youth Science Canada
Certificate

Thomas Pronovost – Réseau Technoscience – QC

Analyse ta foulée!

Challenge Award - Disease and Illness

Junior

Sponsor: Youth Science Canada
Certificate

Anjali Patel – Frontenac, Lennox & Addington – ON

Discovery of Novel Gene Biomarkers to Improve CAR-T Cell Immunotherapy for Pancreatic Adenocarcinoma

Challenge Award - Disease and Illness

Intermediate

Sponsor: Youth Science Canada
Certificate

Séréna Harvey – Réseau Technoscience – QC

Bactéries pour souper!

Challenge Award - Disease and Illness

Senior

Sponsor: Youth Science Canada
Certificate

Koral Kulacoglu, Louis Wu – York – ON

FourSight: Analysis of Cancerous Genetic Profiles With Artificial Neural Networks

Challenge Award - Energy

Junior

Sponsor: Youth Science Canada
Certificate

Vedant Sheel – Bluewater – ON

Smart Solar Tracker!

Challenge Award - Energy

Intermediate

Sponsor: Youth Science Canada
Certificate

Veronica Guo – Greater Vancouver – BC

Bioelectric Batteries: Using Algae to Make the Battery Renewable

Challenge Award - Energy

Senior

Sponsor: Youth Science Canada
Certificate

Bach Nguyen – South-East New Brunswick – NB

Elevated Vehicle Routing in Reverse Logistics for Garbage Transportation in Saint John New Brunswick

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Challenge Award - Environment and Climate Change

Junior

Sponsor: Youth Science Canada
Certificate

Sebastien Menard – Frontenac, Lennox & Addington – ON
Roofing for a Green Future

Challenge Award - Environment and Climate Change

Intermediate

Sponsor: Youth Science Canada
Certificate

Jasmine Schneider – Waterloo-Wellington – ON
Phosphate Removal from Groundwater Using Mussel Shell Biochar

Challenge Award - Environment and Climate Change

Senior

Sponsor: Youth Science Canada
Certificate

Annabelle Rayson – Lambton County – ON
Plankton Wars: An Innovative Analysis of Daphnia Genotype Biomanipulation for Algae Bloom Prevention

Challenge Award - Health and Wellness

Junior

Sponsor: Youth Science Canada
Certificate

Malaya Jung Little – West Kootenay & Boundary – BC
Does a Walk in Nature Improve your Memory?

Challenge Award - Health and Wellness

Intermediate

Sponsor: Youth Science Canada
Certificate

Mihaela Iluta, Akram Tahar Chaouch – Réseau Technoscience – QC
Oh la vache!

Challenge Award - Health and Wellness

Senior

Sponsor: Youth Science Canada
Certificate

Gurnirmal Kaur – Bay Area – ON
EzerBot: Detecting Phrases Indicative of Emotional Distress Within Online Platforms

Challenge Award - Natural Resources

Junior

Sponsor: Youth Science Canada
Certificate

Emily Lin, Ruiyi Sang – South Fraser – BC
Writing a cleaner future with E-Coal

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Challenge Award - Natural Resources

Senior

Sponsor: Youth Science Canada
Certificate

Rawaan Ibrahim – Edmonton – AB

Grassheet

Sanofi Biogenius Canada Award

Junior

Sponsor: Sanofi Canada
\$500 cash and certificate

Sage Elliott – Northern British Columbia – BC

Magnet Magic!

Alpita Patro – Eastern Newfoundland – NL

Algae: The Future of Biofuel

Mohamed Saleh – Windsor – ON

Pumpkin Plastic

Sanofi Biogenius Canada Award

Intermediate

Sponsor: Sanofi Canada
\$750 cash and certificate

Marissa Magsino – Manitoba Schools Science Symposium – MB

Behavioral modification of Tenebrio molitor by toxins to maximize the biodegradation of polystyrene

Sohila Sidhu – Windsor – ON

Proof of Concept: Artificial Pancreas for Patients with Diabetes

Ansh Vashisht – Cariboo Mainline – BC

E. coli Defence: The effect of Antibacterial T4r Bacteriophage on Escherichia Coli on Espheria Coli

Sanofi Biogenius Canada Award

Senior

Sponsor: Sanofi Canada
\$1,000 cash and certificate

Eunjo An – Vancouver Island – BC

Orange Peels as Biosorbents in the Treatment of Heavy Metal Wastewater

Koral Kulacoglu, Louis Wu – York – ON

FourSight: Analysis of Cancerous Genetic Profiles With Artificial Neural Networks

Parmin Sedigh – Frontenac, Lennox & Addington – ON

Exposure to glyphosate-based herbicide and zebrafish fin regeneration

Sanofi International BioGENEius Challenge Award

Sponsor: Sanofi Canada

Trip to represent Canada at the International BioGENEius Challenge

Marissa Magsino – Manitoba Schools Science Symposium – MB

Behavioral modification of Tenebrio molitor by toxins to maximize the biodegradation of polystyrene

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Youth Can Innovate Award

Junior

Sponsor: The Gwyn Morgan and Patricia Trottier Foundation
\$500 cash, presentation award and certificate

Audrey Cowen – Toronto – ON

The Hidden Side of Your Dog's Love

Aiyaan Faisal – Winnipeg Schools – MB

Geometric Exploration of Musical Rhythms using Phase Space Plots

Emily Lin, Ruiyi Sang – South Fraser – BC

Writing a cleaner future with E-Coal

Arushi Nath – Toronto – ON

Strengthening Planetary Defense: Detecting Unknown Asteroids using Open Data, Math, and Python

Youth Can Innovate Award

Intermediate

Sponsor: The Gwyn Morgan and Patricia Trottier Foundation
\$750 cash, presentation award and a certificate

Ethan Chase – Greater Vancouver – BC

RESeTCO2: Residential Emission Sequestration Technologies for Carbon Dioxide.

Max Du – Calgary Youth – AB

A Novel Pre-Hospital Indoor Rescue Drone

Silas Eastwood – Halifax – NS

SMARTEN: Simulated Microgravity and Reduced Friction Test Environment for Nanosatellites

Archie Shou, Edwin Wang – Toronto – ON

AI Object Location Recognition Software for the Blind

Youth Can Innovate Award

Senior

Sponsor: The Gwyn Morgan and Patricia Trottier Foundation
\$1,000 cash award

Jessica Graham – South-East New Brunswick – NB

Modified Fe Nanoparticles and a Rotating Magnetic Drum: Removing Aquatic Microplastics

Dheiksha Jayasankar – Niagara – ON

Smiglaside-C Part 2: Developing Hydrogel Films from A.muricata Extracts for Wound Healing Purposes

Gurnirmal Kaur – Bay Area – ON

EzerBot: Detecting Phrases Indicative of Emotional Distress Within Online Platforms

Koral Kulacoglu, Louis Wu – York – ON

FourSight: Analysis of Cancerous Genetic Profiles With Artificial Neural Networks

Krish Modi – Lambton County – ON

Pee Xylophone: A Novel Non-Invasive System to Measure Bladder Pressure

Sparsh Patel – Wood Buffalo – AB

FOCUS! - An EEG And ANN Powered Brain Sensing Headband For Accident Prevention

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Thomas Pronovost – Réseau Technoscience – QC
Analyse ta foulée!

Grace Yu, Akira Yoshiyama – Fraser Valley – BC
On the Generative Design of Airfoils

Youth Can Innovate Award

Senior

Sponsor: The Gwyn Morgan and Patricia Trottier Foundation
Additional \$7,000 cash award

Gurnirmal Kaur – Bay Area – ON
EzerBot: Detecting Phrases Indicative of Emotional Distress Within Online Platforms

Koral Kulacoglu, Louis Wu – York – ON
FourSight: Analysis of Cancerous Genetic Profiles With Artificial Neural Networks

Krish Modi – Lambton County – ON
Pee Xylophone: A Novel Non-Invasive System to Measure Bladder Pressure

Sparsh Patel – Wood Buffalo – AB
FOCUS! - An EEG And ANN Powered Brain Sensing Headband For Accident Prevention

Platinum Award - Discovery

Junior

Sponsor: Youth Science Canada
Crystal award

Audrey Cowen – Toronto – ON
The Hidden Side of Your Dog's Love

Platinum Award - Discovery

Intermediate

Sponsor: Youth Science Canada
Crystal award

Jasmine Schneider – Waterloo-Wellington – ON
Phosphate Removal from Groundwater Using Mussel Shell Biochar

Platinum Award - Innovation

Intermediate

Sponsor: Youth Science Canada
Crystal award

Max Du – Calgary Youth – AB
A Novel Pre-Hospital Indoor Rescue Drone

Platinum Award - Innovation

Senior

Sponsor: Youth Science Canada
Crystal award

Koral Kulacoglu, Louis Wu – York – ON
FourSight: Analysis of Cancerous Genetic Profiles With Artificial Neural Networks

Best Project Award - Discovery

Sponsor: The Gwyn Morgan and Patricia Trottier Foundation
Crystal award

Annabelle Rayson – Lambton County – ON
Plankton Wars: An Innovative Analysis of Daphnia Genotype Biomanipulation for Algae Bloom Prevention

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Best Project Award - Innovation

Sponsor: The Gwyn Morgan and Patricia Trottier Foundation
Crystal award

Arushi Nath – Toronto – ON

Strengthening Planetary Defense: Detecting Unknown Asteroids using Open Data, Math, and Python

Dalhousie University Faculty of Science Entrance Scholarship

Senior

Sponsor: Dalhousie University, Faculty of Science
Senior Gold Medallist - \$5000 Entrance Scholarship

Dheiksha Jayasankar – Niagara – ON

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Gurnirmal Kaur – Bay Area – ON

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Krish Modi – Lambton County – ON

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Thomas Pronovost – Réseau Technoscience – QC

Analyse ta foulée!

Annabelle Rayson – Lambton County – ON

Plankton Wars: An Innovative Analysis of Daphnia Genotype Biomanipulation for Algae Bloom Prevention

Patricia Rea – York – ON

BioGrade Yeast: The Function of a Novel cfAFP-501-CcmreB Filament-Forming AFP

Gabrielle Seal – Calgary Youth – AB

A Survey of Compact, Intermediate-Velocity H I Clouds in the Inner Milky Way

Maria Xu – Toronto – ON

Analyzing Treatment-related Symptoms in Metastatic Colorectal Cancer Patients with Machine Learning

Grace Yu, Akira Yoshiyama – Fraser Valley – BC

On the Generative Design of Airfoils

Dalhousie University Faculty of Science Entrance Scholarship

Senior

Sponsor: Dalhousie University, Faculty of Science
Senior Silver Medallist - \$2500 Entrance Scholarship

Rafay Ahmed – Northern Saskatchewan – SK

An FDA-Approved Drug Screening to Eliminate Telomerase Over-Expressing Pancreatic Cancer

Grace Awotundun – Calgary Youth – AB

Quantification of ASD-related Gene Transcripts in Glyphosate-exposed Zebrafish Through Larval Stages

Oliver Baker – Annapolis Valley – NS

Baseline Assessment of Marine Water Entering Freshwater Waterways Through the Aboiteaux in Dykes

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Becca Barbera – Bay Area – ON

QSAR Model for the Inhibition of Aβ1-42 Peptide: Molecular Dynamics and Bioinformatics Study

Carlynn Davidson – Winnipeg Schools – MB

Young Extracellular Vesicles as Revitalizing Agents for Age Associated Cellular Dysfunction

Ella Dunsmore – Calgary Youth – AB

Testing Aprepitant as a Possible Therapeutic in Two Pediatric Cancer Cell Lines

Emily Goodson – Simcoe County – ON

A Novel Approach to the Reparation of Damaged Freshwater Ecosystems Simulating Wetland Filtration

Jessica Graham – South-East New Brunswick – NB

Modified Fe Nanoparticles and a Rotating Magnetic Drum: Removing Aquatic Microplastics

Chloe Hill – Simcoe County – ON

Autonomous Search And Rescue Aircraft

Rawaan Ibrahim – Edmonton – AB

Grassheet

Zachary Ireland – Manitoba Schools Science Symposium – MB

Quantifying the Likelihood of Neutron Absorption Utilizing Radiative Capture Cross-Sections

Oumaima Malih – Réseau Technoscience – QC

Réglisse et la durée de vie

Bach Nguyen – South-East New Brunswick – NB

Elevated Vehicle Routing in Reverse Logistics for Garbage Transportation in Saint John New Brunswick

Ria Patel – Ottawa – ON

BlueViolet: a wearable eye-health monitor to counter the unseen health effects of COVID-19

Sparsh Patel – Wood Buffalo – AB

FOCUS! - An EEG And ANN Powered Brain Sensing Headband For Accident Prevention

Parmin Sedigh – Frontenac, Lennox & Addington – ON

Exposure to glyphosate-based herbicide and zebrafish fin regeneration

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Sarah Syed – Toronto – ON

Harnessing Nanotechnology in Biomass and Carboxyl Grouping for Water Remediation

Yubo Wang, Matthew Zullo – York – ON

EyeInteract: Accessible Eye Tracking for the Physically Disabled Using Computer Vision

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



UBC Science (Vancouver) Entrance Award

Senior

Sponsor: The University of British Columbia (Vancouver)
Senior Gold Medallist - \$4000 Entrance Award

Dheiksha Jayasankar – Niagara – ON

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Krish Modi – Lambton County – ON

Pee Xylophone: A Novel Non-Invasive System to Measure Bladder Pressure

Thomas Pronovost – Réseau Technoscience – QC

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Annabelle Rayson – Lambton County – ON

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Grace Yu, Akira Yoshiyama – Fraser Valley – BC

On the Generative Design of Airfoils

University of Manitoba Entrance Scholarship

Senior

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Senior Gold Medallist - \$5000 Entrance Scholarship

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University of New Brunswick Canada-Wide Science Fair Scholarship

Senior

Sponsor: University of New Brunswick

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Sparsh Patel – Wood Buffalo – AB

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Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Yubo Wang, Matthew Zullo – York – ON

EyeInteract: Accessible Eye Tracking for the Physically Disabled Using Computer Vision

University of Ottawa Entrance Scholarship

Senior

Sponsor: University of Ottawa

Senior Gold Medallist - \$4,000 Entrance Scholarship

Dheiksha Jayasankar – Niagara – ON

Smiglaside-C Part 2: Developing Hydrogel Films from A.muricata Extracts for Wound Healing Purposes

Gurnirmal Kaur – Bay Area – ON

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Krish Modi – Lambton County – ON

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Thomas Pronovost – Réseau Technoscience – QC

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Maria Xu – Toronto – ON

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Grace Yu, Akira Yoshiyama – Fraser Valley – BC

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University of Ottawa Entrance Scholarship

Senior

Sponsor: University of Ottawa

Senior Silver Medallist - \$2000 Entrance Scholarship

Rafay Ahmed – Northern Saskatchewan – SK

An FDA-Approved Drug Screening to Eliminate Telomerase Over-Expressing Pancreatic Cancer

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Baseline Assessment of Marine Water Entering Freshwater Waterways Through the Aboiteaux in Dykes

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QSAR Model for the Inhibition of Aβ1-42 Peptide: Molecular Dynamics and Bioinformatics Study

Award Recipients

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A Novel Approach to the Reparation of Damaged Freshwater Ecosystems Simulating Wetland Filtration

Jessica Graham – South-East New Brunswick – NB

Modified Fe Nanoparticles and a Rotating Magnetic Drum: Removing Aquatic Microplastics

Chloe Hill – Simcoe County – ON

Autonomous Search And Rescue Aircraft

Rawaan Ibrahim – Edmonton – AB

Grassheet

Zachary Ireland – Manitoba Schools Science Symposium – MB

Quantifying the Likelihood of Neutron Absorption Utilizing Radiative Capture Cross-Sections

Oumaima Malih – Réseau Technoscience – QC

Réglisse et la durée de vie

Bach Nguyen – South-East New Brunswick – NB

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Ria Patel – Ottawa – ON

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Sparsh Patel – Wood Buffalo – AB

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Parmin Sedigh – Frontenac, Lennox & Addington – ON

Exposure to glyphosate-based herbicide and zebrafish fin regeneration

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Sarah Syed – Toronto – ON

Harnessing Nanotechnology in Biomass and Carboxyl Grouping for Water Remediation

Yubo Wang, Matthew Zullo – York – ON

EyeInteract: Accessible Eye Tracking for the Physically Disabled Using Computer Vision

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



University of Ottawa Entrance Scholarship

Senior

Sponsor: University of Ottawa

Senior Bronze Medallist - \$1000 Entrance Scholarship

Nuha Akhand, Mariya Turetska – Waterloo-Wellington – ON

Inhibition of Cancer Cells Through Algae Derived EPA

Eunjo An – Vancouver Island – BC

Orange Peels as Biosorbents in the Treatment of Heavy Metal Wastewater

Rhea Bhalla – Calgary Youth – AB

Dementia and COVID-19: Comparison of Responsive Behaviours in the Initial and Later Pandemic Waves

Elsa Bienenstock, Alex Alam – Toronto – ON

Parkinson's Spoon

Chloe Brodie – Calgary Youth – AB

Identifying Zinc-Containing Neurons to Widen Research into Zinc's Role in Neuroplasticity

Morane Charbonneau – Réseau Technoscience – QC

I-Muno

Kristin Cho – Toronto – ON

Inducement of Autoimmune Disease from Lead Exposure and Prevention Using Fermented Food Bacteria

Krish Desai – YSC Virtual – CA

Investigating Kalanchoe pinnata as a potential treatment for acute nephrolithiasis

Armaandeeep Dhanoa – Manitoba Schools Science Symposium – MB

Fabrication of Micro-Optical-Ring-Electrodes and their Application on Biological Samples

Manorama Joshi – Wood Buffalo – AB

Automotive SMART Cane for the Visually and Auditorily Impaired

Samarah Kanji – Calgary Youth – AB

Demyelination in Diffuse Axonal injury in mTBI

Anantjot Khosa – Manitoba Schools Science Symposium – MB

Fabrication of electrodes to detect Cytochrome C Oxidase deficiency

Jeffrey Klinck – Bay Area – ON

MediRecord: a Quasi-Permissioned Blockchain Medical Record Verification System

Alexis Krasnova – Thames Valley – ON

Detection and prevention of triggers for photosensitive epilepsy seizures in YouTube videos

Seungmyoung Lee, Amyna Ismail – Toronto – ON

Eye Spy: A Novel Way to Predict & Detect Alzheimer's Disease

William Li – Greater Vancouver – BC

Development of a Novel Pesticide for Rice Blast Disease

Julia Mansiere – YSC Virtual – CA

Were Urban Heat Islands a Factor in the Deadliness of the Summer 2021 Heat Dome in British Columbia?

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



LiLi Miko – Thames Valley – ON

Can't Afford Accuracy? A Three-Dimensional Printer for Sustainable Scavengers

Tri Nguyen, Rena Warren – Central Alberta Rotary – AB

SmartLifeJacket - An Automatic Inflating Life Jacket When The User Is In Distressed

Teighin Nordholt – South-East New Brunswick – NB

Modifying Cloud Chamber Technologies

Dhyan Patel – Wood Buffalo – AB

Where What Goes: The combination of CV and AI to enhance the recycling experience.

Kiran Prasad, Arushi Rawat – Lambton County – ON

SeaQuester: A Novel Approach to Increasing the Carbon Dioxide Absorption and Alkalinity of the Ocean

Aiden Shlien – Réseau Technoscience – QC

A Miracle or a Mistake?

Prabhnoor Sidhu – Central Interior BC – BC

Mitigating the Effects of Debris Flows

Anna Siekierzycki – Bluewater – ON

Corticosteroid Injections/ Hyaluronic Acid and Their Use in Performance Horses

Michaela Stillwell, Antonia Tannert von Baer – Central Interior BC – BC

The Effects of Microplastics on Phytoplankton

Grace Tuglavina – Labrador, Western & Central Newfoundland – NL

The domino effect-how changing ice patterns in the North have far reaching consequences

Lauren Wilkes – Ottawa – ON

Effet des additifs au sel de voirie sur la réduction de la pollution routière

Yitian Zhang – South-East New Brunswick – NB

Effects of 16/8 Intermittent Fasting Diet on Type 2 Diabetes

Gary Zhu – Thames Valley – ON

Doctor X - An AI Powered Personal Medical Assistant

Western University Scholarship

Sponsor: Western University

Gold Medallist - \$4000 Entrance Scholarship

Abigail Chan – Waterloo-Wellington – ON

Regulating Digital Eye Strain using Similarity Index

Caroline Chan – Toronto – ON

Do Masks Mask Your Emotions? AI Emotion Recognition in the Era of Face Masks

Ken Cheng – Toronto – ON

A Need For Speed: Enhancing F1 Race Cars with Computational Fluid Dynamics and Machine Learning

Audrey Cowen – Toronto – ON

The Hidden Side of Your Dog's Love

Jamie Drysdale – Ottawa – ON

Genetically modifying K 12 Escherichia coli to produce Recombinant Sars-Cov-2 Spike Protein

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Max Du – Calgary Youth – AB

A Novel Pre-Hospital Indoor Rescue Drone

Silas Eastwood – Halifax – NS

SMARTEN: Simulated Microgravity and Reduced Friction Test Environment for Nanosatellites

Aiyaan Faisal – Winnipeg Schools – MB

Geometric Exploration of Musical Rhythms using Phase Space Plots

Séréna Harvey – Réseau Technoscience – QC

Bactéries pour souper!

Mihaela Iluta, Akram Tahar Chaouch – Réseau Technoscience – QC

Oh la vache!

Hudson Jantzi – Waterloo-Wellington – ON

Using Robotics to Naturally Trim the Dandelion Cycle - A Novel Approach to Eliminating Chemicals on Lawns

Dheiksha Jayasankar – Niagara – ON

*Smiglaside-C Part 2: Developing Hydrogel Films from *A. muricata* Extracts for Wound Healing Purposes*

Malaya Jung Little – West Kootenay & Boundary – BC

Does a Walk in Nature Improve your Memory?

Keerthan Kamala Krishnamoorthy – Manitoba Schools Science Symposium – MB

Using Deep Learning to Identify Harmful Micro-Organisms in Drinking Water

Gurnirmal Kaur – Bay Area – ON

EzerBot: Detecting Phrases Indicative of Emotional Distress Within Online Platforms

Koral Kulacoglu, Louis Wu – York – ON

FourSight: Analysis of Cancerous Genetic Profiles With Artificial Neural Networks

Emily Lin, Ruiyi Sang – South Fraser – BC

Writing a cleaner future with E-Coal

Krish Modi – Lambton County – ON

Pee Xylophone: A Novel Non-Invasive System to Measure Bladder Pressure

Kibo Nagasaki – Bay Area – ON

Survival of Indigenous Ancestors

Arushi Nath – Toronto – ON

Strengthening Planetary Defense: Detecting Unknown Asteroids using Open Data, Math, and Python

Anjali Patel – Frontenac, Lennox & Addington – ON

Discovery of Novel Gene Biomarkers to Improve CAR-T Cell Immunotherapy for Pancreatic Adenocarcinoma

Justin Peng – Greater Vancouver – BC

Taking Control: A Novel Galvanic Stimulation Device for the Visually Impaired

Thomas Pronovost – Réseau Technoscience – QC

Analyse ta foulée!

Annabelle Rayson – Lambton County – ON

*Plankton Wars: An Innovative Analysis of *Daphnia* Genotype Biomanipulation for Algae Bloom Prevention*

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Patricia Rea – York – ON

BioGrade Yeast: The Function of a Novel cfAFP-501-CcMreB Filament-Forming AFP

Surya Narayan Santhakumar – Quinte – ON

Snow SBOT V2

Jasmine Schneider – Waterloo-Wellington – ON

Phosphate Removal from Groundwater Using Mussel Shell Biochar

Gabrielle Seal – Calgary Youth – AB

A Survey of Compact, Intermediate-Velocity H I Clouds in the Inner Milky Way

Maria Xu – Toronto – ON

Analyzing Treatment-related Symptoms in Metastatic Colorectal Cancer Patients with Machine Learning

Grace Yu, Akira Yoshiyama – Fraser Valley – BC

On the Generative Design of Airfoils

Western University Scholarship

Sponsor: Western University

Silver Medallist - \$2000 Entrance Scholarship

Rafay Ahmed – Northern Saskatchewan – SK

An FDA-Approved Drug Screening to Eliminate Telomerase Over-Expressing Pancreatic Cancer

Grace Awotundun – Calgary Youth – AB

Quantification of ASD-related Gene Transcripts in Glyphosate-exposed Zebrafish Through Larval Stages

Oliver Baker – Annapolis Valley – NS

Baseline Assessment of Marine Water Entering Freshwater Waterways Through the Aboiteaux in Dykes

Becca Barbera – Bay Area – ON

QSAR Model for the Inhibition of A β 1-42 Peptide: Molecular Dynamics and Bioinformatics Study

Angela Cao – Greater Vancouver – BC

Fountain of Youth

Tesko Chaganti – Windsor – ON

Unraveling the Secrets of Healthy Aging

Emily Chan – Greater Vancouver – BC

Sea Scrap Slippers

Ethan Chase – Greater Vancouver – BC

RESeTCO2: Residential Emission Sequestration Technologies for Carbon Dioxide.

Armaan Chaudhari – Western Manitoba – MB

Health Benefits of Copper

Elizabeth Chen – Edmonton – AB

Design Parameters for CAR-T Cell Therapy using RNA Sequencing Analysis

Ashish Chettimada – Waterloo-Wellington – ON

Bacteriophages: Curing One Infection With Another

Abdul-Rahman Dannaway, Abdul Majeed Al Riahi – Windsor – ON

Smart Cane for Visually Impaired People

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Carlynn Davidson – Winnipeg Schools – MB

Young Extracellular Vesicles as Revitalizing Agents for Age Associated Cellular Dysfunction

Ella Dunsmore – Calgary Youth – AB

Testing Aprepitant as a Possible Therapeutic in Two Pediatric Cancer Cell Lines

Sophie Fillion, Chloe Fillion – Niagara – ON

The Dynamic Highway Speed Emission Control System

Ila Giroux – Algoma Rotary – ON

Fire Cannot Brew Without O₂

Tharunika Gnaneshan – YSC Virtual – CA

Hidden Women: A Project on Women of Color in STEM

Emily Goodson – Simcoe County – ON

A Novel Approach to the Reparation of Damaged Freshwater Ecosystems Simulating Wetland Filtration

Isha Goyal – Calgary Youth – AB

CRISPR vs COVID: Genetic Modification to Treat SARS-CoV-2

Jessica Graham – South-East New Brunswick – NB

Modified Fe Nanoparticles and a Rotating Magnetic Drum: Removing Aquatic Microplastics

Veronica Guo – Greater Vancouver – BC

Bioelectric Batteries: Using Algae to Make the Battery Renewable

Brennah Hammond – Peterborough – ON

Do You PerSEEEve What I PerSEEEve?

Ryvan Hammoud – South Fraser – BC

Smart Wash

Ariana Harrison, Everett Harrison – Edmonton – AB

A Strawy Mess Phase 2

Nathan Hellner-Mestelman – Vancouver Island – BC

Breakup is a Drag - Using a lower CubeSat Orbit to Protect Space Infrastructure

Chloe Hill – Simcoe County – ON

Autonomous Search And Rescue Aircraft

James Hoag – Greater Vancouver – BC

Keep The Noise Out!

Rawaan Ibrahim – Edmonton – AB

Grassheet

Zachary Ireland – Manitoba Schools Science Symposium – MB

Quantifying the Likelihood of Neutron Absorption Utilizing Radiative Capture Cross-Sections

Ryan Layton-Matthews – Frontenac, Lennox & Addington – ON

Walking on Thin Ice

Jonathan Leung – Greater Vancouver – BC

A Case Study of Wildlife Feeding and Coyote Attacks in Vancouver's Stanley Park

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Ziyu Li, Zipeng Li – Calgary Youth – AB
Tenebrio Molitor Polystyrene Foam Consumption - The Effect of Additional Nutritional Sources

Marissa Magsino – Manitoba Schools Science Symposium – MB
Behavioral modification of Tenebrio molitor by toxins to maximize the biodegradation of polystyrene

Oumaima Malih – Réseau Technoscience – QC
Réglisse et la durée de vie

Teddy Mao – Bay Area – ON
Transparent Wood: A Window to the Future?

Sia Mehta – Simcoe County – ON
Thermochromic Economics

Sebastien Menard – Frontenac, Lennox & Addington – ON
Roofing for a Green Future

Sarah Murimboh – Annapolis Valley – NS
The Effect of Fertilizers on the Hatch Success of Triops longicaudatus

Bach Nguyen – South-East New Brunswick – NB
Elevated Vehicle Routing in Reverse Logistics for Garbage Transportation in Saint John New Brunswick

Mark Norregaard – 4-H Canada – CA
A Comparison of Natural Corrosion Inhibitors on Metals

Evan Papps – Vancouver Island – BC
Can Slime Mold Adapt and Communicate?

Ria Patel – Ottawa – ON
BlueViolet: a wearable eye-health monitor to counter the unseen health effects of COVID-19

Sparsh Patel – Wood Buffalo – AB
FOCUS! - An EEG And ANN Powered Brain Sensing Headband For Accident Prevention

Kadhir Ponnambalam – Bay Area – ON
Effect Of Electrical Field On Tardigrades In A Microfluidic Environment

Reuel Ramalingam – YSC Virtual – CA
Pink to Brown - How to Prevent Concussions

Lauren Rasalingam – Ottawa – ON
Not on my back!

Kayla Salasidis – Réseau Technoscience – QC
OR in Focus: An Automatic Focusing Overhead Operating Room Light

Mohamed Saleh – Windsor – ON
Pumpkin Plastic

Parmin Sedigh – Frontenac, Lennox & Addington – ON
Exposure to glyphosate-based herbicide and zebrafish fin regeneration

Kevin Shao – Thames Valley – ON
A Computer Vision-Controlled Smart Robotic Arm

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Vedant Sheel – Bluewater – ON
Smart Solar Tracker!

Archie Shou, Edwin Wang – Toronto – ON
AI Object Location Recognition Software for the Blind

Graydon Strachan – Winnipeg Schools – MB
MAC: A Novel Method for Clinical Weight Estimation

Sarah Syed – Toronto – ON
Harnessing Nanotechnology in Biomass and Carboxyl Grouping for Water Remediation

Tamsen Taylor – Ottawa – ON
Dark Skies in Ottawa

Julia Valdez – West Kootenay & Boundary – BC
Does the BPM of Music Rather than the Type of Music Affect the Learning Process in Mice?

Yubo Wang, Matthew Zullo – York – ON
EyeInteract: Accessible Eye Tracking for the Physically Disabled Using Computer Vision

Nathan Yeung, Charlie Zhang – South Fraser – BC
Lento: Goal-Based Productivity

Tara Zhan – Greater Vancouver – BC
Medical Mo-Cap

Timothy Zhou – Calgary Youth – AB
Toilet Leak Detector

Western University Scholarship

Sponsor: Western University
Bronze Medallist - \$1000 Entrance Scholarship

Farhan Ahmed, Alexander Li – South Fraser – BC
The Methane Recycler

Nuha Akhand, Mariya Turetska – Waterloo-Wellington – ON
Inhibition of Cancer Cells Through Algae Derived EPA

Hassan Amir – Yukon Stikine – YT
Understanding the Impact of Opioid-Related Substances on Yukon Youth

Eunjo An – Vancouver Island – BC
Orange Peels as Biosorbents in the Treatment of Heavy Metal Wastewater

Silas Armstrong – Halifax – NS
House Dressing

Sebastian Audet – YSC Virtual – CA
Floating Heart is Breaking my Heart

Arham Aziz – Thames Valley – ON
Decrypting the facial code of Alzheimer's disease

Kaan Bektas – Toronto – ON
Collision Avoiding and Concussion Identifying Bicycle Helmet

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Rhea Bhalla – Calgary Youth – AB

Dementia and COVID-19: Comparison of Responsive Behaviours in the Initial and Later Pandemic Waves

Elsa Bienenstock, Alex Alam – Toronto – ON

Parkinson's Spoon

Chloe Brodie – Calgary Youth – AB

Identifying Zinc-Containing Neurons to Widen Research into Zinc's Role in Neuroplasticity

Katie Buchel – Thames Valley – ON

Wonderous World of Angular Velocity: Diving Edition

Keanu Chan – East Kootenay – BC

Design, Implementation and Assessment of Novel universal Design Internal Spine Concept (NuDISC)

Morane Charbonneau – Réseau Technoscience – QC

I-Muno

Hannah Cheang – York – ON

Fish Powered Plant Growth

Kristin Cho – Toronto – ON

Inducement of Autoimmune Disease from Lead Exposure and Prevention Using Fermented Food Bacteria

Isla Corkum – Strait – NS

Which Light Is Right?

Sophia Croft – Halifax – NS

To Fry or not to Fry: Does Cooking Pollute Indoor Air?

Chloe Dafoe – Halifax – NS

Ocean Acidification

Krish Desai – YSC Virtual – CA

Investigating Kalanchoe pinnata as a potential treatment for acute nephrolithiasis

Armaandeeep Dhanoa – Manitoba Schools Science Symposium – MB

Fabrication of Micro-Optical-Ring-Electrodes and their Application on Biological Samples

Param Dixit – Toronto – ON

Lost In Translation

Ava Fischer – Simcoe County – ON

COVID Coaster

Ishan Gehlaut – Toronto – ON

Using Regression Learning to predict Algal Blooms in the Great Lakes

Nuala Gibbs – United Counties – ON

L'impact du climat: Exploration de l'énergie éolienne

Pari Goyal, Lucie Li – Greater Vancouver – BC

Windblade

Islay Graham – Bluewater – ON

The National Helmet Expiry Inquiry

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Sadie Hanley – Ottawa – ON

Pitch Perfect: How Cold Temperature Affects the Frequency of Musical Notes

Marion Harvey – Réseau Technoscience – QC

Soulever à la force des fibres

Jordan Hussey – North-West New Brunswick – NB

It's going to be lit!

Nathan Janssen – Thames Valley – ON

Resisting Rust

Manorama Joshi – Wood Buffalo – AB

Automotive SMART Cane for the Visually and Auditorily Impaired

Samarah Kanji – Calgary Youth – AB

Demyelination in Diffuse Axonal injury in mTBI

Anantjot Khosa – Manitoba Schools Science Symposium – MB

Fabrication of electrodes to detect Cytochrome C Oxidase deficiency

Jeffrey Klinck – Bay Area – ON

MediRecord: a Quasi-Permissioned Blockchain Medical Record Verification System

Grace Ko – Toronto – ON

SoilTO: Using Statistical Analysis to Determine How Race and Income Affect Toronto's Soil Quality

Alexis Krasnova – Thames Valley – ON

Detection and prevention of triggers for photosensitive epilepsy seizures in YouTube videos

Frankie La Peter – East Kootenay – BC

'Peer'ing into Pressure

Alex Lea – Central Interior BC – BC

Sustainable Nutrient Regeneration: The Effects of Wood Ash and Nitrogen on Pasture Grass Nutrition

Maya LeBlanc – Bay Area – ON

Carbon Capture Depletion Using Catalyzed Photosynthesis to Promote Crop Growth

Seungmyoung Lee, Amyna Ismail – Toronto – ON

Eye Spy: A Novel Way to Predict & Detect Alzheimer's Disease

William Li – Greater Vancouver – BC

Development of a Novel Pesticide for Rice Blast Disease

Julia Mansiere – YSC Virtual – CA

Were Urban Heat Islands a Factor in the Deadliness of the Summer 2021 Heat Dome in British Columbia?

Claire Mantrop – Simcoe County – ON

Water Works

Nate Martin – Manitoba Schools Science Symposium – MB

To Mask or not to Mask? Why is that Even a Question?

LiLi Miko – Thames Valley – ON

Can't Afford Accuracy? A Three-Dimensional Printer for Sustainable Scavengers

Naila Moloo – Ottawa – ON

Forecasting the Power Output of Photovoltaic Systems

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Katharine Morley – Vancouver Island – BC

Coagulant Conundrum: Exploring the Efficacy of Natural and Chemical Coagulants on Microplastics

Elise Munro – Strait – NS

Lymeon: A Novel Way To Test Lyme Disease in Minutes

Annalise Musclow, Sydney Dobbin – Peterborough – ON

Quantitative Study of Microplastics in Jackson's Creek

Jora Singh Nahal – Cariboo Mainline – BC

Drowsiness Detection and Virtual Friend Speech-Robot for Safe Driving: A Novel App

Tri Nguyen, Rena Warren – Central Alberta Rotary – AB

SmartLifeJacket - An Automatic Inflating Life Jacket When The User Is In Distressed

Teighin Nordholt – South-East New Brunswick – NB

Modifying Cloud Chamber Technologies

Caden Oliphant – Thames Valley – ON

Masks Rock! Which Face Masks are More Effective?

Nicholas Pacifici – Bay Area – ON

Head On A Swivel 2.0: Brace For Impact

Natalie Parker – Northwestern Ontario – ON

Microplastics - A Big Little Problem

Dhyan Patel – Wood Buffalo – AB

Where What Goes: The combination of CV and AI to enhance the recycling experience.

Alpita Patro – Eastern Newfoundland – NL

Algae: The Future of Biofuel

Nadine Persad – West Kootenay & Boundary – BC

Development and Testing of a Novel Post Harvest Treatment

Kiran Prasad, Arushi Rawat – Lambton County – ON

SeaQuester: A Novel Approach to Increasing the Carbon Dioxide Absorption and Alkalinity of the Ocean

Philippe Provencher – Réseau Technoscience – QC

Le VéloTonome

Nishka Rai – Wood Buffalo – AB

Buzz! - An Affordable Chronic Wound Alert System

Timothy Riddolls – Ottawa – ON

Electromagnetic Pulse Effects on Non-Volatile Digital Memory

Hussain Rizvi – Regina – SK

Modelling Invasive Species Growth with Zebra Mussels

Ava Romano – Bay Area – ON

Can CAR T-Cell Therapy Be Used to Cure Alzheimer's Disease?

Onkit Saha – North-West New Brunswick – NB

Thermoelectric, Reusable, and Sustainable Heat cycle

Ella Sehn – Peterborough – ON

Vegetation Sanitation: Measuring the Impact of Oil Spills on Oxygen Production of Aquatic Plants

Award Recipients

Canada-Wide Science Fair 2022

Virtual – Fredericton, New Brunswick



Margo Senchenko – South Fraser – BC

Attractive Cat Scratcher

Derek Sheen – Waterloo-Wellington – ON

A Novel Approach to Detecting Melanoma Using Deep Learning

Ken Shibata – Toronto – ON

Kyokukey: Wearable Input Device Using Conductive Threads

Aiden Shlien – Réseau Technoscience – QC

A Miracle or a Mistake?

Prabhnoor Sidhu – Central Interior BC – BC

Mitigating the Effects of Debris Flows

Sohila Sidhu – Windsor – ON

Proof of Concept: Artificial Pancreas for Patients with Diabetes

Anna Siekierzycki – Bluewater – ON

Corticosteroid Injections/ Hyaluronic Acid and Their Use in Performance Horses

Isaiah Sienna – Bay Area – ON

The Effects of Plastic Contamination in Plastic Water Bottles Due to Environmental Variables

Rachel Simantov – Calgary Youth – AB

Framework for Optimal Pandemic Management

Viduni Siriwardana – Greater Vancouver – BC

Novel, High-Yielding DNA Extraction Protocol via Automated Device to Provide Facile Forensic Analysis

Jaime So – Ottawa – ON

Testing Tampons. Toxic or Terrific?

Harshita Srikanth – Quinte – ON

Creativity = TRIZ!

Maya Sternin – Niagara – ON

What is your temperature?

Michaela Stillwell, Antonia Tannert von Baer – Central Interior BC – BC

The Effects of Microplastics on Phytoplankton

Grace Tuglavina – Labrador, Western & Central Newfoundland – NL

The domino effect-how changing ice patterns in the North have far reaching consequences

Alan Van – Toronto – ON

A Model for Medical Diagnosis Using Artificial Intelligence

Misha van Anders – Frontenac, Lennox & Addington – ON

Canoe believe it?

Ann Wang – Greater Vancouver – BC

An Acidic Future

Lauren Wilkes – Ottawa – ON

Effet des additifs au sel de voirie sur la réduction de la pollution routière

Sophia Zhang – Eastern Newfoundland – NL

Triboelectric Effect and Nanogenerator

Award Recipients

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Yitian Zhang – South-East New Brunswick – NB
Effects of 16/8 Intermittent Fasting Diet on Type 2 Diabetes

Michael Zheng – Calgary Youth – AB
Detecting Mask-Wearing via Machine Learning

Gary Zhu – Thames Valley – ON
Doctor X - An AI Powered Personal Medical Assistant