

61st Annual Vancouver Island Regional Science Fair



Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony

Vancouver Island Regional Science Fair (VIRSF) and the Society for the Advancement of Young Scientists (SAYS) would like to thank you for joining and congratulating our brilliant young scientists who participated in the regional science fair this year!



Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony

To begin, we would like to invite Science Associate Dean of Research at the University of Victoria, Dr Laura Cowen for a territorial acknowledgement and words for this year's participants.



Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony

The Dean of the Faculty of Engineering and Computer Science at the University of Victoria, Dr. Mina Hoorfar also has some kind words for our participants this year.



Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony



Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony

The Honourable Jennifer Whiteside, Minister of Education and Child Care would also like to extend congratulations to our participants on behalf of the Government of BC.



Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony

Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony

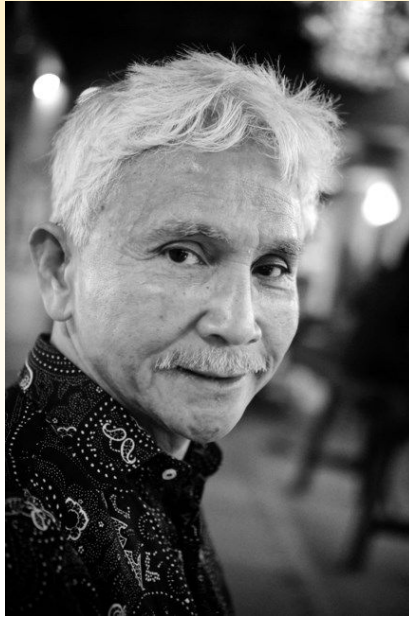
Before we get started with awards, we are going to take a moment to acknowledge a few of the great contributors to VIRSF and SAYS who we have lost this year

Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony



Murray W Enkin OC
29 May 1924 – 06 June 2021

Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony



Onofre (Jim) Geminiano DVM
02 May 1942 – 27 March 2021

Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony



Reginald H Mitchell PhD
01 September 1943 – 23 May 2021

Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony

We would like to thank the following sponsors:

Rotary
Club of Victoria



Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony

We would like to thank the following sponsors:



Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony

We would like to thank the following sponsors:



Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony

We would like to thank the following sponsors:



Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony

We would like to thank the following sponsors:



**Bateman
Foundation**

CONNECT IN NATURE. INSPIRE OUR WORLD.

PARC
systems inc.

CMOS

Canadian Meteorological and
Oceanographic Society



SCMO

Société canadienne de météorologie
et d'océanographie



BCIA

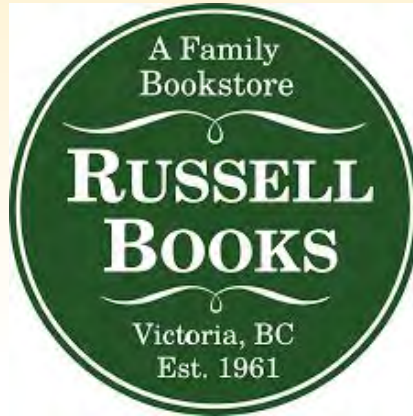
**BC INSTITUTE OF
AGROLOGISTS**

Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony

We would like to thank the following sponsors:



MUNRO'S
BOOKS



Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony

We would like to thank the following sponsors:



VICTORIA
Butterfly
GARDENS

Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony

We would also like to give many thanks to the additional
sponsors who have donated other awards

They will be indicated on their respective awards



Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony

Something new this year!

Instead of ribbons—this year the Chair of Faculty of Mechanical Engineering at the University of Victoria, Brad Buckham, had his team create the 3D printed trophies that some of you will be receiving!!



Welcome to the 61st Annual Vancouver Island Regional Science Fair Awards Ceremony



Science Fair Foundation of British Columbia Awards

These awards and prizes are allocated to VIRSF from the
Science Fair Foundation of BC



Science Fair Foundation of BC Awards

BC Agriculture in the Classroom Award is presented to:

**June Adler & Mai-Ly Tran
Cedar Hill Middle School
Decomposing Food**



Science Fair Foundation of BC Awards

BC Game Developers Innovation Award (Grade 7-8)
is presented to:

Eric Zhang
Christ Church Cathedral Educational Society
What is the Best Number to Choose as the
Third Player in a Guessing Game of 1-100?



Science Fair Foundation of BC Awards

BC Game Developers Innovation Award (Grade 9-10)

is presented to:

Nathan Hellner-Mestleman
Mount Douglas Secondary School
Breakup is a Drag



Science Fair Foundation of BC Awards

BC Game Developers Innovation Award (Grade 11-12)
is presented to:

Geoff Lei
St Michaels University School
A Hidden Markov Model Based Computer
Platform for Evaluating Behaviour Within a
Zero Sum Game



Science Fair Foundation of BC Awards

BC Hydro Power Smart Award

is presented to:

**Phoebe Dendes
Glenlyon Norfolk School
Algae Power! Can Marine Algae
be Used to Produce Electricity
in a Photovoltaic Cell?**



Science Fair Foundation of BC Awards

BC Nature Award (Grade 4-8) is presented to:

Taylor Purves
Alberni Elementary
How Can Oil Spills be Cleaned Up from
Ocean Catastrophes more Efficiently?



Science Fair Foundation of BC Awards

BC Nature Award (Grade 9-12)

is presented to:

**Evan Papps
Glenlyon Norfolk School
Can Slime Mold Adapt and
Communicate?**



Science Fair Foundation of BC Awards

BC Science Teachers Association Award
is presented to:

Yingfan Bai & Abby Hoole
St Michaels University School
Warped Words and the Stroop Effect



Science Fair Foundation of BC Awards

Innovate BC Young Innovator Scholarship is presented to:

Eunjo An
**Orange Peels as Biosorbents in
the Treatment of Heavy Metal
Wastewater**



innovate BC

Science Fair Foundation of BC Awards

NSERC Young Innovators Award

is presented to:

Junming He
Glenlyon Norfolk School
Using Neural Networks to
Classify Garbages

Sarah McDonald
Shawnigan Lake School
Determining the Environmental
Effects of Cigarette Butts and
Vape Cartridges on Lake Water
Samples



Science Fair Foundation of BC Awards

Julia Lane Award Second Prize
is presented to:

Erin Plecas
Glenlyon Norfolk School
ADHD in Classrooms



Science Fair Foundation of BC Awards

Julia Lane Award First Prize

is presented to:

**Katharine Morley
Glenlyon Norfolk School
Coagulant Conundrum: Comparing the
Efficacy of Natural and Chemical
Coagulants**



Science Fair Foundation of BC Awards

Michael Crooks Physics Award

is presented to:

April Simister
Alberni Elementary
Black Holes



Science Fair Foundation of BC Awards

Women in Engineering and Geoscience Award is presented to:

**Sophie Jolivet
Glenlyon Norfolk School
Generating Electricity from the
Waste Heat Created in Composting**



Science Fair Foundation of BC Awards

Genome BC Scholarship Nomination

is presented to:

Sarah McDonald
Shawnigan Lake School
Determining the Environmental Effects of
Cigarette Butts and Vape Cartridges on Lake
Water Samples



Science Fair Foundation of BC Awards

Julia Lane Scholarship Nomination is presented to:

Eunjo An
**Orange Peels as Biosorbents in
the Treatment of Heavy Metal
Wastewater**



Organization and Individual Awards and Prizes

These awards and prizes are generously donated from professional organizations and individuals to encourage and congratulate this year's participants in their pursuit of science



Organization and Individual Awards and Prizes

Alumni Award–Fifth Place
is presented to:

Apollin Lu
St. Michaels University School
Plant Robot



Organization and Individual Awards and Prizes

Alumni Award–Fourth Place
is presented to:

Tess Hellner-Mestleman
Selkirk Montessori School
Chew On This



Organization and Individual Awards and Prizes

Alumni Award—Third Place
is presented to:

**Liam Pope-Lau & Fraser Tuck
St Michaels University School
Life Heat Mk.2: The Self-Heating
Lifejacket**



Organization and Individual Awards and Prizes

Alumni Award—Second Place
is presented to:

Daniel Bekker
Glenlyon Norfolk School
Measuring Distance Through
Bluetooth EMR



Organization and Individual Awards and Prizes

Alumni Award—First Place
is presented to:

Isaac Yu
Glenlyon Norfolk School
Aerodynamic Drag Reduction with
Vortex Generators



Organization and Individual Awards and Prizes

American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Award (Grade 4 - 8)

is presented to:

**Beata Ariana-Minniti
Cedar Hill Middle School
Light at Night**



Organization and Individual Awards and Prizes

American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Award (Grade 9 - 12)

is presented to:

**Phoebe Dendes
Glenlyon Norfolk School
Algae Power! Can Marine Algae be
Used to Produce Electricity in a
Photovoltaic Cell?**



Organization and Individual Awards and Prizes

Drs Rosemary & Walter Balfour Second Award
is presented to:

Anishka Moonsamy
Aspengrove School
What Colours do Dogs See Best?



Organization and Individual Awards and Prizes

Drs Rosemary & Walter Balfour First Award
is presented to:

Nouria Loomer-Douglas
Christ Church Cathedral Educational Society
The Effects of Grooming Horses



Science Fair Foundation of BC Awards

BC Hydro Power Pioneers Award

is presented to:

Nathan Hellner-Mestleman
Mount Douglas Secondary School
Breakup is a Drag



Science Fair Foundation of BC Awards

BC Hydro Power Pioneers Award

is presented to:

Laurian Blachford
Magnus Effect



Organization and Individual Awards and Prizes

British Columbia Institute of Agrologists–Elementary
is presented to:

**Nathan Devine
Pacific Christian School
Rotten Veggies**



Organization and Individual Awards and Prizes

British Columbia Institute of Agrologists–Intermediate
is presented to:

Rafaela Patton
Christ Church Cathedral Educational Society
How Environmental Variables Affect Mushroom
Growth



Organization and Individual Awards and Prizes

British Columbia Institute of Agrologists–Junior
is presented to:

Sophie Jolivet
Glenlyon Norfolk School
Generating Electricity from the Waste Heat Created
in Composting



Organization and Individual Awards and Prizes

British Columbia Institute of Agrologists–Senior
is presented to:

Sarah McDonald
Shawnigan Lake School
Determining the Environmental Effects of
Cigarette Butts and Vape Cartridges on
Lake Water Samples



Organization and Individual Awards and Prizes

Dr Zonk Award
is presented to:

Liam Pope-Lau & Fraser Tuck
St Michaels University School
Life Heat Mk.2: The Self-Heating
Lifejacket



Organization and Individual Awards and Prizes

Canadian Meteorological and Oceanographic Society Award
is presented to:

Laurian Blachford
Magnus Effect



CMOS
Canadian Meteorological and
Oceanographic Society



SCMO
Société canadienne de météorologie
et d'océanographie

Organization and Individual Awards and Prizes

Canadian Meteorological and Oceanographic Society Award
is presented to:

Katharine Morley
Glenlyon Norfolk School
Coagulant Conundrum: Comparing the Efficacy
of Natural and Chemical Coagulants



CMOS
Canadian Meteorological and
Oceanographic Society



SCMO
Société canadienne de météorologie
et d'océanographie

Organization and Individual Awards and Prizes

Canadian Meteorological and Oceanographic Society Award
is presented to:

Eunjo An
Orange Peels as Biosorbents in the
Treatment of Heavy Metal
Wastewater



CMOS
Canadian Meteorological and
Oceanographic Society



SCMO
Société canadienne de météorologie
et d'océanographie

Organization and Individual Awards and Prizes

Gordon Patterson Award
is presented to:

Riley McCarthy
Fast Food Fries



Organization and Individual Awards and Prizes

Gordon Patterson Award
is presented to:

Christine Webster & Riyaan Ali
Alberni Elementary
How Humans See Colour Versus How
Dogs See Colour



Organization and Individual Awards and Prizes

Gordon Patterson Award
is presented to:

Zan Oliphant
Pop to Power the Planet



Organization and Individual Awards and Prizes

PARC Systems Award
is presented to:

Junming He
Glenlyon Norfolk School
Using Neural Networks to Classify
Garbages



Organization and Individual Awards and Prizes

Ocean Networks Canada Award
is presented to:

Katharine Morley
Glenlyon Norfolk School
Coagulant Conundrum: Comparing the
Efficacy of Natural and Chemical Coagulants



Organization and Individual Awards and Prizes

Out of the Box Award
is presented to:

Raphael Lee
Mount Douglas Secondary School
SwimGuard: A Drowning Detection and
Alert System



Organization and Individual Awards and Prizes

Rotary Club of Victoria Environment Fourth Place Award
is presented to:

Katharine Morley
Glenlyon Norfolk School
Coagulant Conundrum: Comparing the
Efficacy of Natural and Chemical
Coagulants



Rotary
Club of Victoria



Organization and Individual Awards and Prizes

Rotary Club of Victoria Environment Third Place Award
is presented to:

**Liam Pope-Lau & Fraser Tuck
St Michaels University School
Life Heat Mk.2: The Self-Heating
Lifejacket**



Rotary
Club of Victoria



Organization and Individual Awards and Prizes

Rotary Club of Victoria Environment Second Place Award
is presented to:

Sarah McDonald
Shawnigan Lake School
Determining the Environmental Effects of
Cigarette Butts and Vape Cartridges on
Lake Water Samples



Rotary
Club of Victoria



Organization and Individual Awards and Prizes

Rotary Club of Victoria Environment First Place Award
is presented to:

Eunjo An
Orange Peels as Biosorbents in
the Treatment of Heavy Metal
Wastewater



Rotary
Club of Victoria



Organization and Individual Awards and Prizes

Royal Astronomical Society of Canada Award
is presented to:

Nathan Hellner-Mestleman
Mount Douglas Secondary School
Breakup is a Drag



ROYAL
ASTRONOMICAL
SOCIETY
OF CANADA

Organization and Individual Awards and Prizes

Royal Astronomical Society of Canada Award
is presented to:

Beata Ariana-Minniti
Cedar Hill Middle School
Light at Night



ROYAL
ASTRONOMICAL
SOCIETY
OF CANADA

Organization and Individual Awards and Prizes

Victoria Natural History Society Award
is presented to:

Liam Shah
St. Michaels University School
Health of Garry Oak Trees – Vancouver
Island's Special Trees



Organization and Individual Awards and Prizes

Victoria Natural History Society Award
is presented to:

Evan Papps
Glenlyon Norfolk School
Can Slime Mold Adapt and
Communicate?



Organization and Individual Awards and Prizes

Victoria Natural History Society Award
is presented to:

Sophie Goodman
Christ Church Cathedral Educational Society
What are Effective Natural Textile Dyes?



Organization and Individual Awards and Prizes

Victoria Natural History Society Award
is presented to:

Julie Forslund
Pacific Christian School
Rocktastic



Organization and Individual Awards and Prizes

Schneider Electric STEAM
“My Pet Would Love That!” Award
is presented to:

Elsa Lee & Felicia Huang
Central Middle School
Automatic Dog Feeder Machine



Organization and Individual Awards and Prizes

**Schneider Electric STEAM
“Preserving the Peace in the House!” Award
is presented to:**

**Reagan Morley
Christ Church Cathedral Educational Society
Soundproofing for my Garage Band: Buffering
Low and High Frequency Sound Waves**



Organization and Individual Awards and Prizes

**Schneider Electric STEAM
“I Would Want That!” Award
is presented to:**

**Beata Ariana-Minniti
Cedar Hill Middle School
Light at Night**



Organization and Individual Awards and Prizes

Schneider Electric STEAM
“My Shirt Would Love That!” Award
is presented to:

Preeya Kaur
St. Michaels University School
Dissolving Oils



Organization and Individual Awards and Prizes

**Schneider Electric STEAM
“I Would Use That!” Award
is presented to:**

**Sophie Jolivet
Glenlyon Norfolk School
Generating Electricity from the Waste Heat
Created in Composting**



Organization and Individual Awards and Prizes

Schneider Electric STEAM
“The Lake Fish Would Love That!” Award
is presented to:

Sarah McDonald
Shawnigan Lake School
Determining the Environmental Effects of
Cigarette Butts and Vape Cartridges on Lake
Water Samples



Organization and Individual Awards and Prizes

**Schneider Electric STEAM
‘I Never Would Have Thought of That!’ Award
is presented to:**

**Claire Collings
Christ Church Cathedral Educational Society
Building a Stellar Engine: Rationale and
Challenges**



Organization and Individual Awards and Prizes

**Schneider Electric STEAM
“Our Environment Would Love That” Award
is presented to:**

**Phoebe Dendes
Glenlyon Norfolk School
Algae Power! Can Marine Algae be Used to
Produce Electricity in a Photovoltaic Cell?**



Overall Awards

These awards are given to the top achievers in each age category.



Overall Awards

Elementary Divisional (Grade 4 - 5) Award Sponsored by Quarky Science

is presented to:

Fourth place:

Levi Martinez

**Pacific Christian School
Launch N Fly**

Third place:

Emily Watson

Pacific Christian School

What Temperatures do Radishes Prefer?



Overall Awards

Elementary Divisional (Grade 4 - 5) Award Sponsored by Quarky Science

is presented to:

Second place:

**Julie Forslund
Pacific Christian School
Rocktastic**

First place:

**Nathan Devine
Pacific Christian School
Rotten Veggies**



Overall Awards

Intermediate Divisional (Grade 6 - 7) Award Sponsored by Victoria Butterfly Gardens

is presented to:

Claire Collings

Special Mention:

**Christ Church Cathedral Educational Society
Building a Stellar Engine: Rationale and Challenges**

Special Mention:

**Liam Pope-Lau & Fraser Tuck
St Michaels University School
Life Heat Mk.2: The Self-Heating Lifejacket**



VICTORIA
Butterfly
GARDENS

Overall Awards

Intermediate Divisional (Grade 6 - 7) Award Sponsored by Victoria Butterfly Gardens

is presented to:

Jaedan Sewagudde-Peden

Special Mention:

**Christ Church Cathedral Educational Society
Can You Break Down Plastic At Home?**

Paige Knowles

Special Mention:

**Cedar Hill Middle School
How Does pH Affect Common Household Cleaners?**



VICTORIA
Butterfly
GARDENS

Overall Awards

**Intermediate Divisional (Grade 6 - 7) Award
Sponsored by Quarky Science
is presented to:**

Third place:

**Laurian Blachford
Magnus Effect**

Second place:

**Tess Hellner-Mestleman
Selkirk Montessori School
Chew On This**



Overall Awards

**Intermediate Divisional (Grade 6 - 7) Award
Sponsored by Shaw Centre for the Salish Sea
is presented to:**

First place:

**Beata Ariana-Minniti
Cedar Hill Middle School
Light at Night**



Overall Awards

Junior Divisional (Grade 8 - 9) Award Sponsored by Munro's Books

is presented to:

Special Mention:

Zoë Carroll

Glenlyon Norfolk School

Climate Change and Plant Growth

Special Mention:

Lucy Turnball

St. Michaels University School

Which Type of Mask Masks Makes the Best Water Filter



**MUNRO'S
BOOKS**

Overall Awards

Junior Divisional (Grade 8 - 9) Award
Sponsored by Bateman Centre
is presented to:

Special Mention:

Daniel Bekker
Glenlyon Norfolk School
Measuring Distance Through Bluetooth EMR



Bateman
Foundation

CONNECT IN NATURE. INSPIRE OUR WORLD.

Overall Awards

Junior Divisional (Grade 8 - 9) Award Sponsored by Russell Books

is presented to:

Ibrahim Khurram

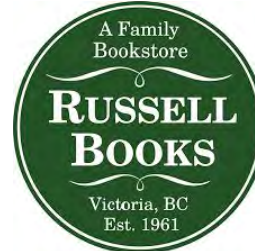
Glenlyon Norfolk School

Fourth place:

**Can We Measure Agitation and Aggression in Patients with Severe
Autism Spectrum Disorder?**

**Manon Denux & Cindy Chen
St Michaels University School
The Leaning Tower of Arugula**

Third place:



Overall Awards

Junior Divisional (Grade 8 - 9) Award Sponsored by Tanner's Books & Bateman Centre

is presented to:

Second place:

**Sophie Jolivet
Glenlyon Norfolk School
Generating Electricity from the Waste Heat Created in Composting**

First place:

**Lois Delaney Harnett-Shaw
St. Margaret's School
Screen Time**



TANNER'S
BOOKS



Bateman
Foundation

CONNECT IN NATURE. INSPIRE OUR WORLD.

Overall Awards

**Senior Divisional (Grade 10 - 12) Award
Sponsored by the Victoria Harbourcats
is presented to:**

Third place:

**Isaac Yu
Glenlyon Norfolk School
Aerodynamic Drag Reduction with Vortex
Generators**



Overall Awards

**Senior Divisional (Grade 10 - 12) Award
Sponsored by the Victoria Harbourcats
is presented to:**

Second place:

**Kevin Lim
Glenlyon Norfolk School
SODIS Water Bottle Holder**



Overall Awards

**Senior Divisional (Grade 10 - 12) Award
Sponsored by the Victoria Harbourcats
is presented to:**

First place:

**Wishva Kosgoda
Mount Douglas Secondary School
The Toilet Paper Epidemic: Exploring the
Effectiveness of Anal Cleansing Methods**



Selection for Canada Wide Science Fair Top Overall Projects

These awards are given to the top seven VIRSF achievers, with special awards given to these top achievers in respective subject areas.



Top Overall

Seventh Place

Kindly Sponsored by the Enkin Family
is presented to:

Erin Plecas
Glenlyon Norfolk School
ADHD in Classrooms



Top Overall

Sixth Place

Kindly Sponsored by Victoria Natural History Society
is presented to:

Evan Papps
Glenlyon Norfolk School
Can Slime Mold Adapt and
Communicate?



Top Overall

Fifth Place

Kindly Sponsored by Stantec
is presented to:

Katharine Morley
Glenlyon Norfolk School
Coagulant Conundrum: Comparing
the Efficacy of Natural and Chemical
Coagulants



Stantec

Top Overall

Fourth Place

Kindly Sponsored by the ASL Environmental Sciences
is presented to:

Nathan Hellner-Mestleman
Mount Douglas Secondary School
Breakup is a Drag



Top Overall

Third Place

Kindly Sponsored by StarFish Medical
is presented to:

Junming He
Glenlyon Norfolk School
Using Neural Networks to Classify
Garbages



Top Overall

Second Place

Kindly Sponsored by Schneider Electric
is presented to:

Sarah McDonald
Shawnigan Lake School
Determining the Environmental Effects of
Cigarette Butts and Vape Cartridges on
Lake Water Samples



Top Overall

First Place

Kindly Sponsored by the Rotary Club of Victoria
is presented to:

Eunjo An
Orange Peels as Biosorbents in
the Treatment of Heavy Metal
Wastewater



Rotary
Club of Victoria



Top Overall

Rotary Post-Secondary Education Scholarship

Kindly Sponsored by the Rotary Club of Victoria
is presented to:

Eunjo An
Orange Peels as Biosorbents in
the Treatment of Heavy Metal
Wastewater



Rotary
Club of Victoria



Top Overall

Engineering Award

Top Project in the Engineering Category
is presented to:

**Junming He
Glenlyon Norfolk School
Using Neural Networks to
Classify Garbages**



Top Overall

Environment Award

Top Project in the Environment Category
is presented to:

Eunjo An
Orange Peels as Biosorbents in
the Treatment of Heavy Metal
Wastewater



UVic Faculty Chair Awards

This award is kindly sponsored by the
University of Victoria Faculty Chairs and President



UVic Faculty Chair Awards

University of Victoria President's Scholarship
is presented to:

Eunjo An
Orange Peels as Biosorbents in
the Treatment of Heavy Metal
Wastewater



**University
of Victoria**
Science

UVic Faculty Chair Awards

University of Victoria Dean of Science Scholarship
is presented to:

Eunjo An
Orange Peels as Biosorbents in
the Treatment of Heavy Metal
Wastewater



**University
of Victoria**
Science

VIRSF would like to extend an immense thank you to all businesses, organizations, and individuals who contributed to the recognition of this year's participants.



VIRSF would also like to thank all participants for which your hard work, dedication, and inspiration does not go unnoticed.

We look forward to seeing you in 2023!

