Greater Vancouver Regional Science Fair

Annual Report

2016

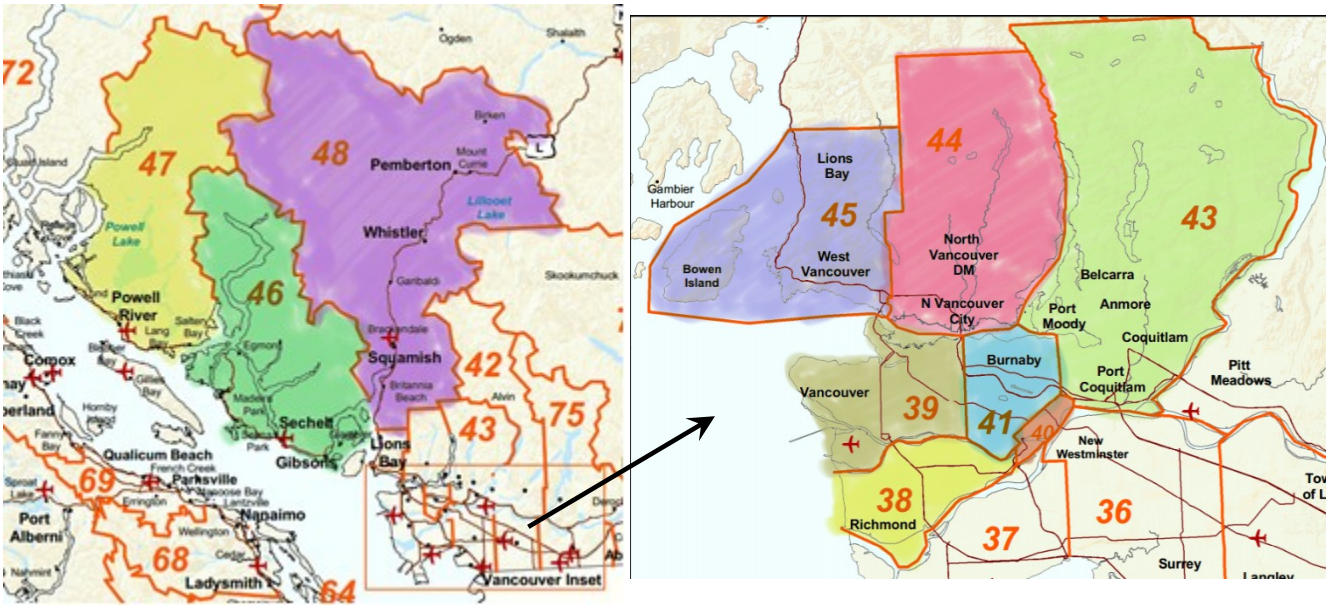
gvrsf

Table of Contents

About the Greater Vancouver Regional Science Fair 3
Why Science Fair? 4
The Greater Vancouver Regional Science Fair Society 5
  Executive Committee 5
  Committee Members 5
Chair's Message 6
2016 Science Fair, a recap 7
  Greater Vancouver Regional Science Fair Results 8
  Canada Wide Science Festival Results 8
  Intel International Science and Engineering Fair Results 10
  Taiwan International Science Fair Results 10
Committee member recognition 11
Financial summary 12
A thank you to sponsors 13
Greater Vancouver Regional Science Fair Sponsors 14
  Partners 14
  Supporter 14
  Gold Sponsors 14
  Bronze Sponsors 14
  Friends 14
  Award Sponsors 14
  Affiliated With 14
The Future 15

About the Greater Vancouver Regional Science Fair

The Greater Vancouver Regional Science Fair (GVRSF) is the regional science fair for 10 school districts encompassing a wide area of the Lower Mainland area. It is open to over 100,000 students from grades 7 to 12 attending public, separate, independent, private and home schools.



Highlighted are the 10 school districts in the Greater Vancouver Regional Science Fair area.

Our annual Science Fair event offers over 300 students in grades 7 to 12 the opportunity to showcase their original scientific research or innovation projects to their peers, university students and professors, parents, industry experts, and more. Students of high caliber projects may be selected by a volunteer group of judges to represent their school at higher levels of competition nationally and internationally. In addition to project exhibition, the Greater Vancouver Regional Science Fair offers various student and educator workshops, research lab tours, fun student activities, and a remarkable science show.

The GVRSF society is a registered charity and non-profit organization run by a diverse group of dedicated volunteers from business, education, and industry.

Why Science Fair?

Our mission is to promote project-based science and encourage youth to conduct research and experimentation in areas of science, technology, engineering, and mathematics.

Science fairs can be found at school, district, regional, national, and international levels for students of all ages. The Greater Vancouver Regional Science Fair provides the opportunity and resources for students in grades 7 through 12 to create and develop original scientific research or innovative projects with the goal of sharing their research and development to their peers, and the community.

The networking with other students, educators, researchers, industry experts, parents, and scientists allow for knowledge to be shared and exchanged, and for new opportunities to manifest.

Students who build projects and participate in science fairs always agree that they had fun doing the work while learning something new about the world around them. Their science fair project work provides an opportunity to extend science beyond the classroom and to take an in-depth look at a topic that is of personal interest.

The Greater Vancouver Regional Science Fair Society

The Greater Vancouver Regional Science Fair is organized by a group of dedicated volunteers who meet regularly throughout the year to plan for this incredible event. The committee is comprised of teachers, education administrators, industry professionals, as well as regional, national, and international science fair alumni.

We welcome additional volunteers and encourage you to contact us if you're interested in contributing to promote youth research projects.

Executive Committee

Robert Young (LightIntegra)
Chairperson

Eugene Chu (Sessional Instructor)
Vice-Chair

Jessica Zhang (UBC)
Treasurer

Jessica Jiang (UBC Undergraduate)
Secretary

Dr. Leonard Foster (UBC)
Chief Judge

Committee Members

Patti Leigh O.B.C. (SFF BC)
Founder

Dr. Andrew Blaber (SFU)
Faculty of Science Liaison

Forson Chan (UBC Medicine)
Member at Large

Stephanie Chong (Vancouver Aquarium)
Awards Coordinator

Kit Doan (Retired Teacher)
Member at Large

Dennise Dombroski (York House School)
Inventory Manager

Carol Dou (UBC Medicine)
UBC Lab Tours Coordinator

Philip Edgcumbe (UBC MD/PhD)
Member at Large

Dr. Hamid Ghanbari (IRC Building Sciences Group)
APEGBC Liaison

Dr. David Grant (Altera)
Chief Registrar

Madeleine Guenette (SFF BC)
Liaison and School Tours Coordinator

Taneille Johnson (UBC Medicine)
Member at Large

Jaclyn Ko (School District #36)
Front Desk, Webmaster

Brian Le (Electronic Arts/Avantheon)
Past Chair

Jeffrey Ma (BCIT Environmental Health)
Photography Coordinator

Andrea Merson (Marketing Consultant)
Marketing Coordinator

Ceddy Nash (Science Educator)
Co-Chief Judge

Michael Peters (UBC Medicine)
UBC Lab Tours Coordinator

Devon Ross (School District #43)
Regional Coordinator

Kevin Shi (UBC Undergraduate)
Alumni Prep Team Coordinator

Ana Ver (Stratford Hall)
Master of Ceremonies

Kenzo Vlasman (Canucks for Kids Fund)
Student Activities Team

Clara Westwell-Roper (UBC MD/PhD)
Ethics Committee Chair

Jieqing Xu (UBC Medicine)
Post-Secondary Seminar Coordinator

Chair's Message

Dear stakeholders and interested parties,

I am pleased to announce the completion of another successful year for the Greater Vancouver Regional Science Fair (GVRSF). The 2016 GVRSF, the 34th year for our fair, is marked with many significant achievements and changes. We have successfully moved into a new and improved venue at the AMS Student Nest within the University of British Columbia. The new facilities allow all of our participating students to exhibit their projects in one larger, brighter space. We have also reached capacity this year with a record number of students and projects at 327 students and 230 projects — more students than in the past six years.

The Greater Vancouver Regional Science Fair is only possible thanks to the continued support from our sponsors and partners, as well as the dedication and hard work of volunteers during the fair and on our organizing committee.

Looking forward to 2017, our primary goals will be to better develop our marketing profile in order to gain a larger presence within the media, to continue to build our sponsorship base, and to expand our resources to more schools and students across the region we serve. The big picture goal is to get more and more students involved in developing inquiry based projects around their own personal interests in science, technology, engineering, and mathematics as well as their questions about the world around them.

Having been on the organizing committee for the GVRSF since 2007, I am humbled to have the opportunity and support of the members of the Greater Vancouver Regional Science Fair society to serve as the Chairperson starting in the 2016 year. Together, the organizing committee will continue to grow the science fair movement in the Lower Mainland.

Robert Young, B.ASc., EIT
Chairperson

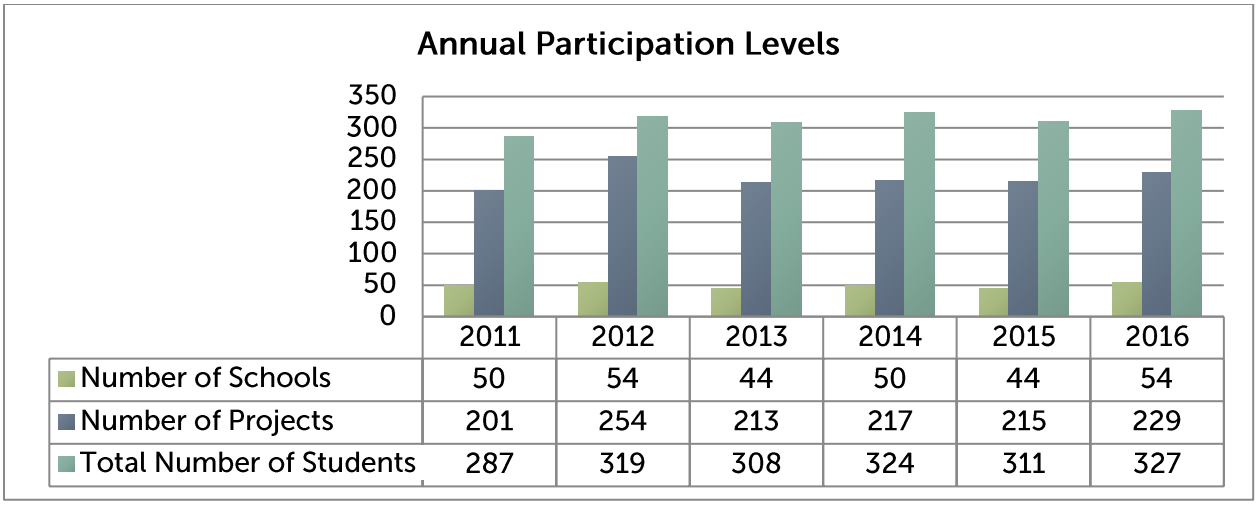
2016 Science Fair, a recap

This year, the 34th annual Greater Vancouver Regional Science Fair was held on April 7th, 8th, and 9th at the University of British Columbia (UBC). The University of British Columbia has hosted the Greater Vancouver Regional Science Fair since 1993. The UBC Faculty of Science's generous annual donation to the GVRSF Society includes, among other things, the cost of this venue. However, a departure from the norm this year had the exhibition space in a brand new building at the university, the AMS Student Nest. All participating Science Fair projects are now displayed together in one large exhibition space.

This year, our organizing team of over 30 volunteers hosted a record 327 students from 54 schools across the Lower Mainland. Together, there were 229 projects; 109 junior (grades 7 and 8), 99 intermediate (grades 9 and 10), and 23 senior (grades 11 and 12). We also hosted over 200 science and technology professionals from industry, research, and academia who volunteered as judges during the adjudication periods.

Students showcased their projects in the fields of discovery, energy, health, information, environment, innovation and resources. Beyond showcasing their projects, participants will also have the opportunity to visit research facilities at the University of British Columbia, attend a Science Show by the Telus World of Science, and build lasting friendships with other participants from across their region. As in previous years, school groups and classrooms were invited to tour the exhibition area on the Friday of the fair; and the general public were invited to view the student projects on the Saturday morning of the fair. Awards available this year included trophies, scholarships, travel awards, and cash prizes valued at more than $35,000.

Students' feedback about the Greater Vancouver Regional Science Fair continues to be positive, with many students walking away at the conclusion of the fair with new knowledge, new friends, and bigger passions in science, technology, engineering, and mathematics.



	2011	2012	2013	2014	2015	2016
Number of Schools	50	54	44	50	44	54
Number of Projects	201	254	213	217	215	229
Total Number of Students	287	319	308	324	311	327

Greater Vancouver Regional Science Fair Results

- Over $35,000 in cash, prizes, trips, scholarships, and participation awards.
- 116 projects received Merit Awards.
- 64 special awards were awarded, totalling over $4,000 cash plus $20,000 in scholarships.
- Award winners are found at https://secure.youthscience.ca/sfiab/gvrsf/main_winners.php

Canada Wide Science Festival Results

Each year, the top GVRSF winners advance to become a finalist on the national stage (the Canada-Wide Science Fair). Team members travel, meet people from across the country and around the world, make new friends, and stretch themselves intellectually and socially, competing with some of their brightest peers and interacting with professional scientists and engineers.

- 17 students were selected to represent the Greater Vancouver Region.
- These finalists returned with awards and scholarships totalling $30,000 including one Gold medal, five Silver, four Bronze, two Challenge Awards, and three Special Awards.
- Award winners are summarized on the next page, and found at http://www.sciencefairs.ca/About/Media/2016-CWSF-Results-BC.aspx

Team GVRSF award winners at the Canada Wide Science Fair		
Ishmum Ataur Grade 10, Britannia Community Secondary	Tumor-Specific TCR-pMHC Database	Bronze Medal $1,750 in cash and scholarships
Eva Cai Grade 11, Collingwood School	Evaluation of Anti-Inflammatory Effects of Flavonoids in Pomelo Peel Extracts	Bronze Medal $2,000 in cash and scholarships
Chloe Chen Grade 10, West Point Grey Academy	Disproving and Rederiving Betz's Law Through Theoretical and Experimental	Silver Medal $2,750 in cash and scholarships
Phyllis Lesnikov Grade 10, Stratford Hall	The Remediation of Britannia Mine through Phytoremediation and Chemical	Silver Medal $2,000 in cash and scholarships
Olivia Li Grade 10 Earl Marriott Secondary	Creating Electrotrophs to Find Changes that Impact Extracellular Electron Uptake	Silver Medal $2,000 in cash and scholarships
Caitlin Mungall Grade 8, Prince of Wales Secondary	Maple Syrup can FIX that	Silver Medal $2,000 in cash and scholarships
Janice Pang Grade 12, Pinetree Secondary	Macrophage Phenotype and Function: Effects of Islet Hormone Signaling	Silver Medal $8,500 in cash and scholarships
Vladislav Pomogaev Grade 12, Riverside Secondary	Designing an Electric Skateboard	Bronze Medal $2,000 in cash and scholarships
Danté Wang Grade 11, Alpha Secondary	An Untapped Source of Energy: Creating a Water Hammer Arrestor/Energy	Bronze Medal $2,000 in cash and scholarships
Kelvin Zhang Grade 10, Gleneagle Secondary	Using Genetic Algorithms to Create Safer Self-Driving Cars	Gold Medal $5,000 in cash and scholarships

Intel International Science and Engineering Fair Results

Each year 12 students across Canada are selected to attend the Intel International Science and Engineering Fair in the USA. Approximately 1,700 high school students from 77 countries, regions, and territories are awarded the opportunity to showcase their independent research and compete for approximately $4 million in prizes.

- One student represented the Greater Vancouver Region for 2016
- This student received the Grand Award (Gordon E. Moore Award) for his project titled *Boosting MFC Biocatalyst Performance: A Novel Gene Identification and Consortia Engineering Approach* valued at $75,000.
- He also took away additional awards totalling over $6,000.

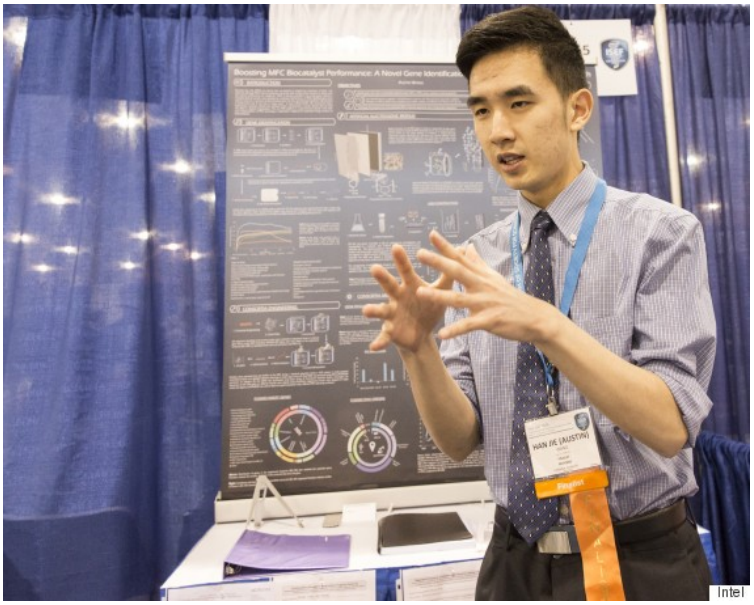


Photo from Intel

Taiwan International Science Fair Results

British Columbian students have attended the Taiwan International Science Fair since its inception in 1991, a legacy of the Pan Pacific component of the 1991 Canada-Wide Science Fair hosted in British Columbia.

- One of two students attending represented the Greater Vancouver Region for 2016
- This student returned with a Gold Medal in the microbiology category for his project titled *A Novel Method to Identify Genes in Electron Transfer of Exoelectrogens.*

Committee member recognition

The Greater Vancouver Regional Science Fair would not be possible without the countless number of hours of effort our dedicated volunteers have put into organizing each year's event. Our Society is a diverse mix of science fair alumni, students, educators, and industry representatives.

On behalf of the Greater Vancouver Regional Science Fair, we are very pleased to announce that David Grant is a recipient of the Youth Science Canada Distinguished Service Award.

This award is given to only 10 volunteers annually who show outstanding leadership and dedication to science education and inquiry-based learning projects in Canada.

David is a Science Fair Alumni and a former Gold Medal Winner at the Canada-Wide Science Fair. In 2006, David moved to Vancouver and joined the Greater Vancouver Regional Science Fair Committee and made a tremendous difference the moment he arrived.

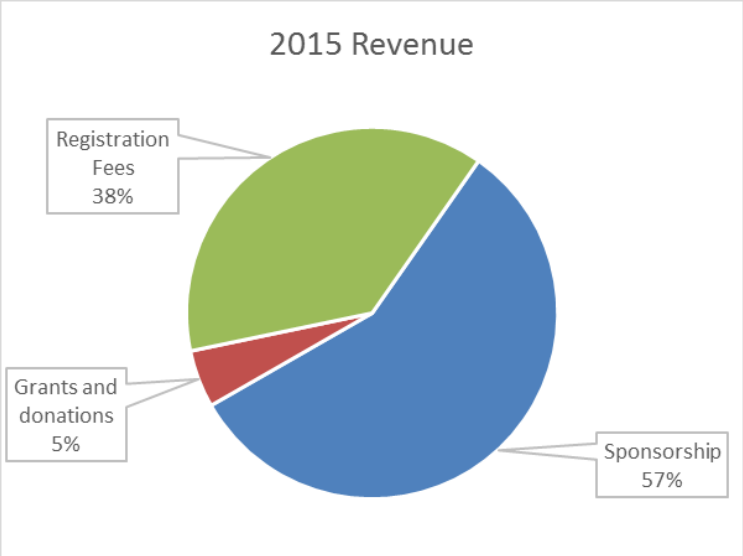
David has been volunteering with science fairs for almost 20 years. He is best known at the school and district level as well as regionally, provincially, and nationally for the development and maintenance of Science Fair in a Box (SFIAB) with his brother. This registration and data management system is used at science fairs across Canada, including the CWSF. David also redesigned the judging system for our fair as the Co-Chief Judge, is a former Vice-Chair of the Committee, and leads the CWSF project selection for our region. David is also dedicated to supporting students in their learning, contributing to their science fair experience in the form of guidance, mentorship, and workshops.

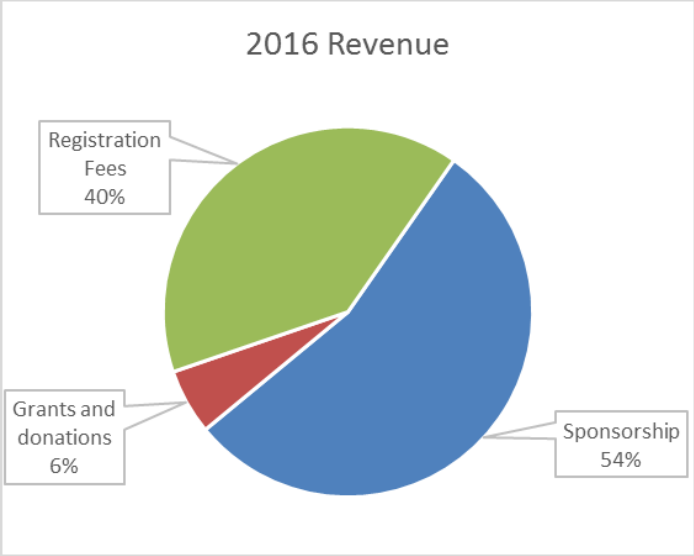
David's work on science fairs is exemplary. He has changed the way science fairs are organized in British Columbia and Canada.

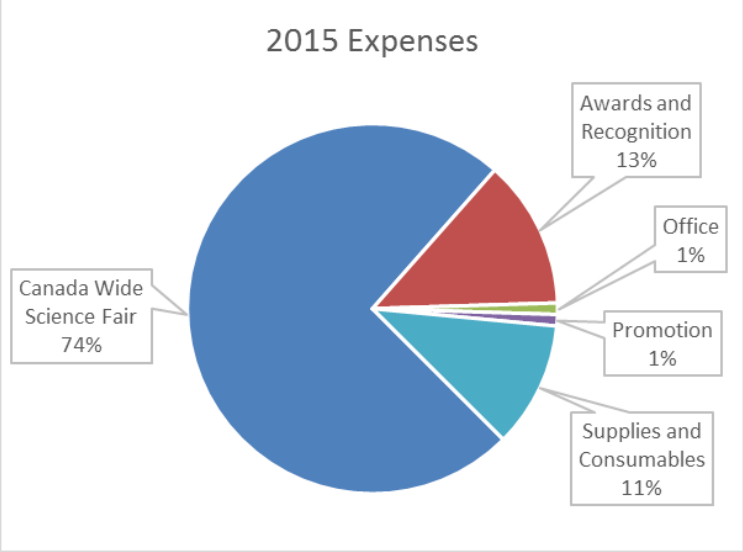
Financial summary

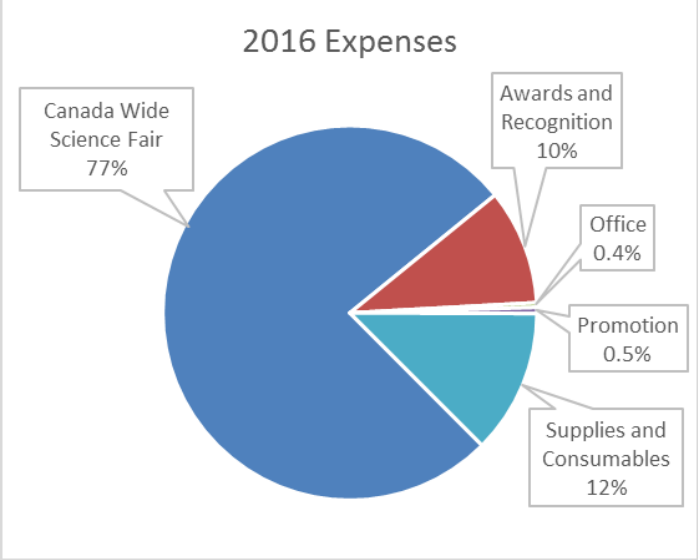
The following summarizes the proportions of revenues and expenses for the Greater Vancouver Regional Science Fair Society, comparing 2015 and 2016. Detailed financial information can be made available upon request.

Our primary sources of revenue include registration fees, grants and donations, and sponsorship amounts. Our primary annual expenses are for student awards and recognitions at our annual fair, and in supporting our Canada Wide Science Fair team.









A thank you to sponsors

Thank you to all of our sponsors, partners, and friends! The Greater Vancouver Regional Science Fair (GVRSF) Society is a not-for-profit charitable organization that depends upon donations from individuals and corporations to finance activities. Without the on-going support of our generous community, we would not be able to bring together over 300 of the region's top science students to share their progress and adventures in science. With this support, the Greater Vancouver Regional Science Fair propels students to the national level Canada-Wide Science Fair and encourages all students to continue to think critically about science and the world around them. We are fortunate to have outstanding sponsors and supporters that contribute to the fair each year and we are always looking for additional contributors to help support youth in science within our community. Monetary donations and award sponsorships are accepted throughout the year.

If you would like to donate to the GVRSF in any way or know of an organization that would like to contribute, please contact chair@gvrsf.ca. Tax receipts for donations are available upon request. By supporting the GVRSF with a donation, you will make a positive impact within the community by empowering youth to continue to be innovative and ask questions through project-based science.

Greater Vancouver Regional Science Fair Sponsors

Partners

Dr. John Hepburn
UBC Vice President Research
GVRSF Honourary Chair

UBC Faculty of Science

Dr. Simon Peacok
Dean

Supporter

Science World at Telus World of Science

Gold Sponsors

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Stratford Hall
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BCIC Young Innovator Scholarship
BC Ministry of Transportation
BC Nature (Federation of British Columbia Naturalists)
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- Institute for Resources, Environment and Sustainability
- Life Sciences Institute
- Michael Smith Laboratories
- School of Population and Public Health

The Vancouver Mycological Society
Vancouver School Board SD #39
W.E. Coates

Affiliated With

Youth Science Canada

The Future

Join us next year for the 35th Annual Greater Vancouver Regional Science Fair at the University of British Columbia, the AMS Student Nest, from Thursday April 6th to Saturday April 8th, 2017.

gvrsf.ca