GVRSF 2014
Annual Report

Photo Credit: Cor Tauri

Greater Vancouver Regional Science Fair

Sponsored and Supported by:

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SCIENCE WORLD BRITISH COLUMBIA

Science Fair Foundation BC

Dr. John Hepburn
UBC Vice President Research,
GVRSF Honourary Chair

UBC Science,
Dr. Simon Peacock, Dean

www.gvrsf.ca

About GVRSF

The Greater Vancouver Regional Science Fair (GVRSF) is the regional science fair for the Greater Vancouver area. It encompasses upwards of 10 school districts – Vancouver, Richmond, North Vancouver, West Vancouver, New Westminster, Burnaby, Coquitlam, Maple Ridge, Sunshine Coast (Sechelt etc.), and Howe Sound. GVRSF is open to over 100,000 students from grades 7 to 12 attending public, separate, independent, private and home schools. GVRSF is a registered charity run by a diverse group of dedicated committee volunteers from business, education, and industry.

Mission

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

Major Activities

In 2014, the GVRSF committee volunteers organized and staged the 32nd Annual Regional Science Fair at the University of British Columbia in Vancouver.

The University of British Columbia's administration and staff offered excellent support, cooperation and assistance to the GVRSF Organizing Committee and provided a warm welcome to all of our students, volunteers, judges, and visitors.

This year GVRSF continued its fourth year running a Post-Secondary Workshop, available to Grade 11 and 12 students participating in the GVRSF, informing students of future prospects in academia. In addition, GVRSF continued to host a Teacher Meet-and-Greet session on the Friday of its fair to build a network of teachers interested in the Science Fair Movement. This year, we extended an invitation to parents to join the Teacher Meet-and-Greet session. Presentations and discussions at this session were on 'technology and website-use for science fair projects in the classroom', 'Smarter Science', and the 'Ethics Pre-Approval Process'.

In addition, GVRSF 2014 continued its CWSF Prep Program (formerly known as the CWSF Alumni Mentorship Program). This program was initiated in 2012 by alumni committee members with the goal of helping prepare those advancing to the Canada-Wide Science Fair with any improvements to their projects, project reports and presentations.

Chair's Message – Brian Le

I am honoured to have chaired the Greater Vancouver Regional Science Fair Organizing Committee since February 2012. Having served as a member of the committee since 2008 and been a part of the science fair movement since 2004, I am proud to be associated with a society that is focused on engaging our community's youth in science, technology, engineering and mathematics, through project-based science.

This year, the Greater Vancouver Regional Science Fair celebrated its 32nd annual fair. This has been made possible thanks to the continued support from our sponsors and the dedication of our hard-working volunteers and committee members.

As we look to the future, our committee is dedicated to support students so that Canada can benefit from the innovative science and technology contributions of its youth. To do this, we have implemented new aspects to our regional fair to appeal to youth and the general public. We are continuing our Facebook Page (www.facebook.com/gvrsf), Twitter (www.twitter.com/gvrsf) and blog (www.gvrsf.wordpress.com). This year, we launched our new website (www.gvrsf.ca) and hope it now provides for a central hub for students to go and get inspired and obtain all the information they need to conduct their projects. In addition to our new website, we launched a new registration system designed by one of our very own Committee members. With this, we also implemented a new Judging system and Ethics Preapproval/Screening system.

Leading into the 33rd Annual GVRSF 2015, we will be looking to have more of a presence within the Media to showcase the bright young students doing astonishing research. We will also continue to build our sponsorship base to help facilitate future changes to the fair and hopefully provide better support to our CWSF Finalists. For 2015, we will be moving to a brand new bigger venue – The Great Hall of the New UBC AMS Student Union Building.

Since the beginning of the fiscal year we have had nearly 10 new committee members, each bringing their own specialties, join last year alone. The GVRSF committee welcomes greater participation and appreciates further assistance from all backgrounds, disciplines and specialties. We encourage you, or any of your connections, to contact us (Chair@gvrsf.ca) if interested in helping the science fair movement in Vancouver, British Columbia, and Canada.

There is still much more progress to be made, and as we move forward with long-term visioning and planning, we are committed to enabling the youth of the Greater Vancouver Area to strive for success in science, technology, engineering and mathematics.

Brian Le, B.Sc. | Committee Chair

Science Fair Operation

The Greater Vancouver Regional Science Fair Society is a committee of over 40 volunteers, who meet 6 times per year, whose purpose is to plan, and discuss logistics for, the Greater Vancouver Regional Science Fair. This year's fair was held April 10th – 12th, 2014 at the University of British Columbia.

The University of British Columbia (UBC) hosted the 2014 Greater Vancouver Regional Science Fair (GVRSF), as it has since 1993, in the Student Union Building (SUB). The UBC Faculty of Science's generous annual donation to the Society includes, among other things, the cost of this venue. All participating Science Fair projects are displayed in the SUB Ballroom and Party Room, where adjudication takes place. School groups are invited to tour the exhibit on the Friday of the fair. Furthermore, the general public is invited for their viewing on the Saturday morning of the fair.

This year there were 324 student participants from 50 schools. Given our venue size, this is an ideal number of students to manage and supervise.

Project registration is done by the students, with help from their teachers and parents, through our website www.gvrsf.ca and http://reg.gvrsf.ca. The website and database are maintained by designated committee members. This year, we increased the registration fee of $40.00 to $50.00 for the first time in over 10 years to better cover inflation and growing expenses.

The Faculty of Science at UBC is the main coordinating on-campus body for the annual GVRSF. With their promotion and coordination efforts, up to 21 departments and research units across various UBC Faculties support the Science Fair. In addition, a choice of one out of 14 science laboratory tours was offered to each Science Fair student this year. The lab tours are led by university teachers and researchers, and last one hour each. Committee members, undergraduate volunteers and parents help chaperone students on the UBC campus. The range of subjects covered is diverse and includes many hands-on activities to engage students in a variety of scientific disciplines.

Science and Technology industry professionals along with faculty members and graduate students from UBC, SFU, and several local colleges act as the judges for this Regional Science Fair. This year the GVRSF adopted the CWSF Judging system which worked flawlessly.

Students' feedback about their judging experience was also positive. Students felt that the question and answer time with the judges was adequate and that they came away with good ideas and a better understanding of the scientific process.

2014 GVRSF Registration Statistics

	Students	Projects
Junior	148	102
Intermediate	129	84
Senior	47	31
Total	**324**	**217**

50 Schools had students in the 2014 Greater Vancouver Regional Science Fair.

Fair Highlights

Over **$35,000** in cash, prizes, trips, scholarships and participation awards.

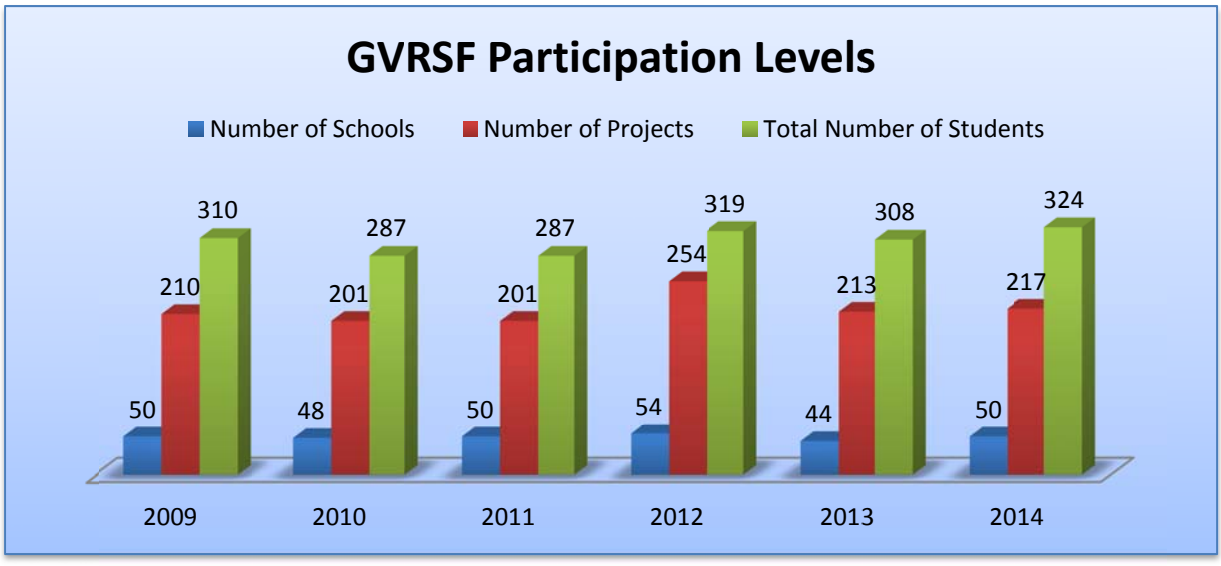
110 Projects received Merit Awards

40 special awards were awarded, totalling $4,225 cash plus $20,000 in scholarships

17 students won trips to compete in the 2014 Canada-Wide Science Fair held in Windsor, Ontario this year.

2 students advanced to the 2014 Intel International Science and Engineering fair in Los Angeles, California.

Science Magic Show
By Lon Mandrake
The Friday of GVRSF is an outreach event for both GVRSF participants and Grade 7 -12 students designed to create interest in Science and the GVRSF for future fairs. The day's activities consist of schools within the Greater Vancouver area coming in to tour the exhibit halls and near the end of that day this year, Lon Mandrake put on a Science Magic Show that captivated the minds of our participants.



GVRSF Committee Member Recognition

The Greater Vancouver Regional Science Fair Society has grown significantly in numbers over the past five years. With this growth, we see many science fair alumni returning and giving back to the community that offered them so much.

But, preceding and guiding the exciting new changes over the years are the committee members who have contributed so much time, thoughts and passion towards the Science Fair movement in BC and Canada throughout the past countless years. Many of these members were acknowledged at the 2014 GVRSF Awards Ceremonies.

Science Fair Foundation of BC's Certificates of Appreciation
The Science Fair Foundation of BC offered our region the opportunity to recognize our volunteer and committee members.
Framed certificates, with people's respective names on them, were given out to recognize the recipient's contributions to Science Fairs in the Province. This year the Greater Vancouver Regional Science Fair acknowledged the following members with the SFF BC Certificate of Appreciation: Kit Doan, Dennise Dombroski, David Grant, Brian Le, Ceddy Nash, Len Reimer, Devon Ross, & Clara Westwell-Roper.

Youth Science Canada's Distinguished Service Award
This award annually recognizes up to ten volunteers and staff who have made an outstanding contribution, through innovation, long service, or leadership, to the organization or its programs at any level. Nominations are submitted by any two volunteers or staff at any level (by January 31) and selection of the recipients is made by the National Science Fair Committee.

This year, we are proud to acknowledge that Devon Ross, past-GVRSF Chair and current Regional Coordinator is one of six nationwide recipients of the Youth Science Canada Distinguished Service Award. Congratulations, Devon and thank you!

Competition Results

Our top 17 students won a grand prize trip to the Canada Wide Science Fair (CWSF) in Windsor, Ontario to represent Team GVRSF and Team BC. This year, Team GVRSF brought back **$24,200 in cash and scholarships**!

National Competition Results – 2014 Canada-Wide Science Fair

Kevin Zhang (Grade 8, Hillcrest Middle School, Coquitlam) — Silver Medal $2,800 in cash and scholarships
Detecting cyber-bullying through data mining

Chloe Chen (Grade 8, West Point Grey Academy, Vancouver) — Silver Medal $2,300 in cash and scholarships
A Better Wind Turbine – The C Airfoil

Austin Wang (Grade 10, David Thompson Secondary, Vancouver) — Silver Medal $2,300 in cash and scholarships
Analyzing Changes in Bacterial Communities in Microbial Fuel Cells

William Bailey (Grade 11, Collingwood School, Vancouver) — Bronze Medal $4,600 in cash and scholarships
The Physics Of Curling

Kendra Fu & Joy Wang (Grade 10, York House School, Vancouver) — Bronze Medal $2,100 in cash and scholarships
Targeting Glycolysis in Prostate Cancer Using ASO against MCT4

Marissa Lee (Grade 11, York House School, Vancouver) — Bronze Medal $2,100 in cash and scholarships
Prevalence and Consequences of GNA13 Mutations in PMBCL

Else Mikkelsen (Grade 12, Sir Charles Tupper Secondary, Vancouver) — Bronze Medal $2,100 in cash and scholarships
Island Invaders

Rebecca Baron (Grade 8, Prince of Whales Secondary, Vancouver) — Bronze Medal $1,600 in cash and scholarships
Household Plants, the New Air Purifiers

Pearl Ayem & Ray Liu (Grade 10, R C Palmer Secondary, Richmond) — Bronze Medal $2,100 in cash and scholarships
Concentrated Photovoltaic Thermoelectric Hybrid Systems (C.P.T.H.)

Surat Singh (Grade 9, Burnaby South Secondary, Burnaby) — Bronze Medal $1,100 in cash and scholarships
Interactions Between Plant Hormones and Nutrients in Relation to Plant Growth

Raymond Wang (Grade 10, St George's School, Vanc.) — Bronze Medal $1,100 in cash and scholarships
Sustainable Smart Sanitizer

Competition Results (cont.)

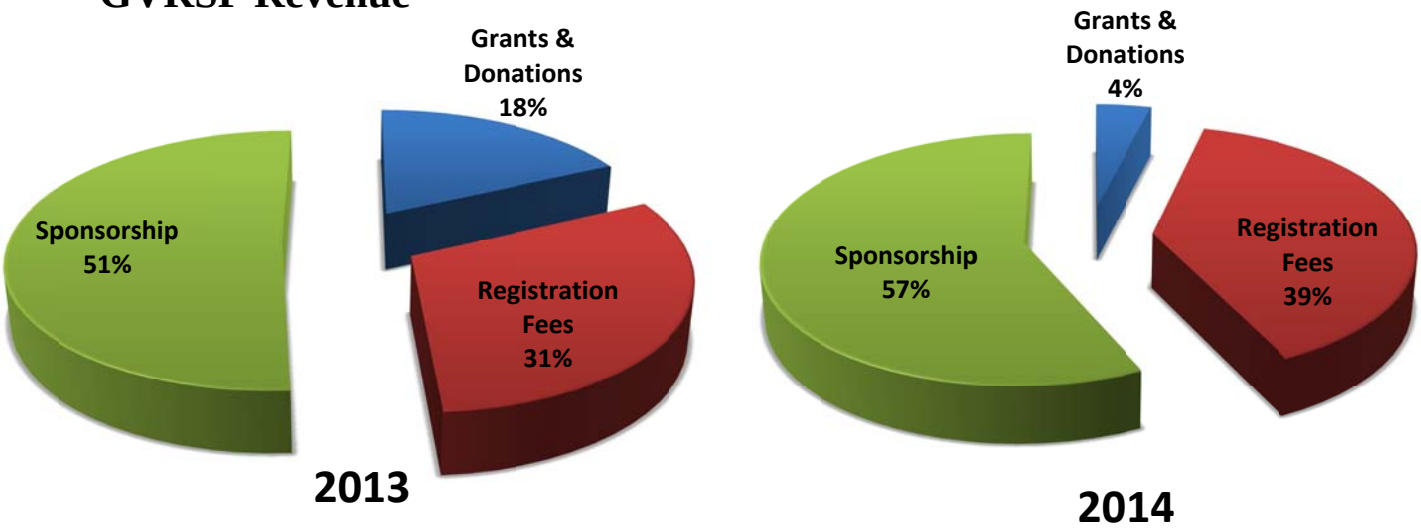
This year the Greater Vancouver Regional Science Fair had two students who were selected to join Team Canada at the 2014 Intel International Science and Engineering Fair held in Los Angeles, California.

International Competition Results – Intel International Science and Engineering Fair

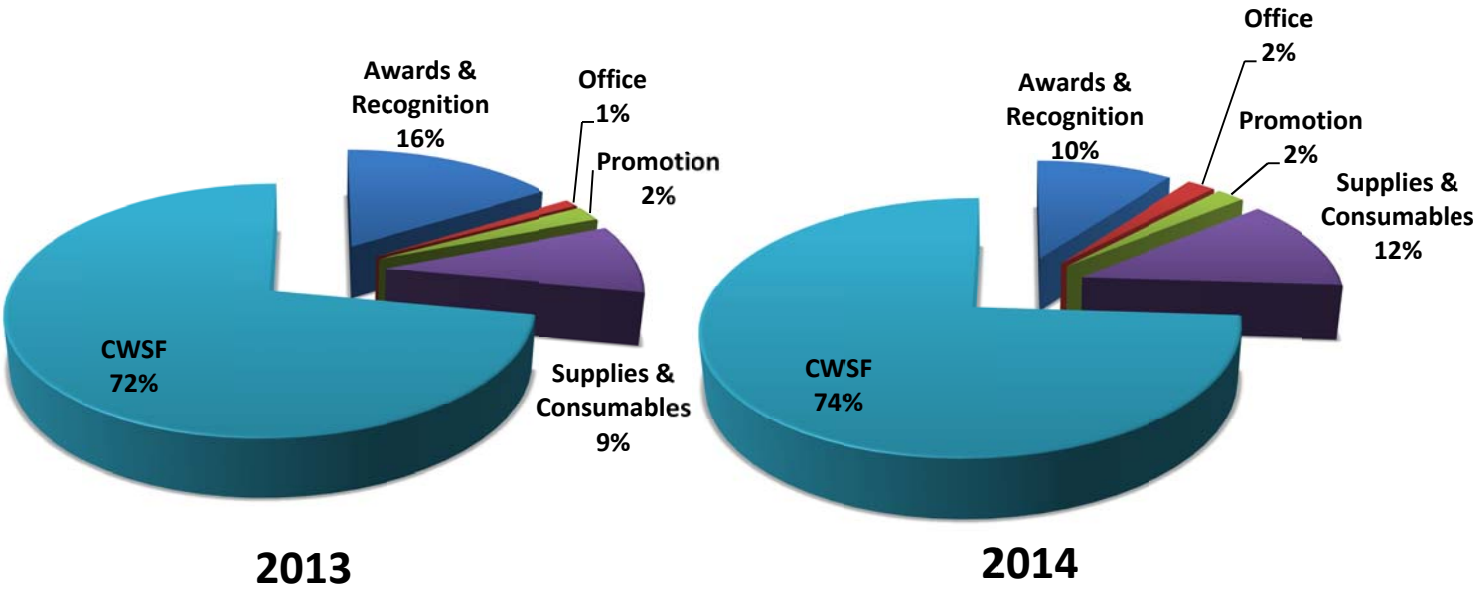
Duncan Bayard Stothers (16, St. George's School, Vancouver, Canada)	EE063 - *Nanofluid CPU Cooling: Novel Block Design*
• Engineering: Electrical and Mechanical	First Award of $3,000
Nicole Sabina Ticea (15, York House School, Vancouver, Canada)	ME079 - *Isothermal Nucleic Acid Amplification System for Point-of-Care HIV Diagnosis*
• Medicine and Health Sciences	Second Award of $1,500
• Fundació Víctor Grífols i Lucas – SpecialAward	First Award of $5,000

Financial Highlights – Statement of Operations

GVRSF Revenue



GVRSF Expenses



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Join us for the 33rd Annual Greater Vancouver Regional Science Fair 2015
Dates: April 9-11, 2015
Location: The University of British Columbia (New Student Union Building)

GREATER VANCOUVER REGIONAL SCIENCE FAIR

Greater Vancouver Regional Science Fair
c/o HR MacMillan Space Centre
1100 Chestnut Street
Vancouver, BC V6J 3J9

chair@gvrsf.ca www.gvrsf.ca

Science Fair Foundation BC

Executive Committee (Table Officers)

Brian Le (Electronic Arts/Avantheon), Chairman

Anne-Marie Simard, M.Sc. (Science Educator), Vice-Chair

Dr. Megan Barker (UBC), Treasurer

Arooj Hayat (UBC Undergraduate), Secretary

Dr. Leonard Foster (UBC), Chief Judge

Committee/Society members:

Dr. Andrew Blaber (SFU) – Associate Professor
Stephanie Chong (Vancouver Aquarium)
Edward Chu (Spartan Controls) – Engineer
Saloni Dholakia (Stratford Hall) – Teacher
Kit Doan – Retired Teacher
Val Dipasupil (SFF BC) – Administrative Assistant
Dennise Dombroski (York House School) – Teacher
Carol Dou (UBC AMS) – Student
Claire Edgcumbe (UBC Undergraduate) – Student
Philip Edgcumbe (UBC MD/PhD) – Student
Dr. Hamid Ghanbari (IRC Building Sciences Group) – APEGBC Representative
Dr. David Grant (Altera)
Kimberly Gulevich (UBC Undergraduate) – Student
Taneille Johnson (UBC Medicine) – Student
Jaclyn Ko (School District #36) – Teacher
Kristin Lee (Science World)
Patti Leigh O.B.C. (SFF BC) – Executive Director
Ianick Leroux (École Jules-Verne) – Teacher
Jeffrey Ma (UBC Undergraduate) – Student
Andrea Merson (Marketing Consultant)
Keltie Murdoch (UBC Undergraduate) – Student
Ceddy Nash (Science Educator)
Michael Peters (UBC Undergraduate) – Student
Len Reimer (YSC Board of Directors) – Educator
Devon Ross (School District #43) – Principal
Kevin Shi (UBC Undergraduate) – Student
Vanessa Tam (Stratford Hall) – Teacher
Ana Ver (Stratford Hall) – Teacher
Kenzo Vlasman (Canucks for Kids Fund) – Student
Tina Wang (UBC Undergraduate) – Student
Clara Westwell-Roper (UBC MD/PhD) – Candidate
Jieqing Xu (UBC Undergraduate) – Student
Robert Young (LightIntegra) – Engineer-in-training
Jessica Zhang (UBC Undergraduate) – Student