



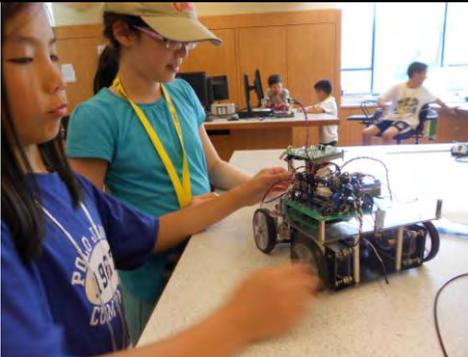
## GEERING Up!

UBC Engineering & Science  
for Kids



2011

## Final Report



GEERING Up! is a proud member of Actua.

Actua provides training, resources and support to a national network of local organizations offering science and technology education programs. Actua members reach over 200,000 youth per year.

A member organization of  
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**actua**<sup>TM</sup>

Learning for Change  
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### Vision

To provide all of the children and youth of British Columbia with the opportunity to investigate engineering, science, and technology in a fun, educational and safe environment.

### Mission

GEERING Up! UBC Engineering & Science for Kids is a non-profit, student-run organization dedicated to promoting science, engineering and technology to the children and youth of British Columbia through fun, innovative and hands-on experiments and projects. GEERING Up! also strives to reach all children and youth, regardless of gender, ethnicity, culture or socio-economic status, with special outreach for those groups traditionally underrepresented in the sciences. GEERING Up! provides valuable work experience to its employees, and enriches the University and community.

“ This week at camp, I learned that sound travels faster than cars! ”

- Camper (7 years old)



## A Word from the Directors

The 16<sup>th</sup> season of GEERing Up! is marked with new and continuing partnerships, outreach initiatives, outstanding sponsorship support, and new program content. As a result, this year's team has reached 5025 of children and youth in schools, outreach programs, community events, and summer camps.

As part of the Year of Science, GEERing Up! travelled to Northern British Columbia. Nineteen workshops were delivered to elementary school students in Prince George and Mackenzie. For the 2012 season, GEERing Up! will be partnering with UBC Engineering Recruitment to deliver workshops in Kelowna.

2011 saw a large increase in the Girls Only! programs. A workshop was developed specifically to meet the badge requirements for the Sparks, Brownies, and Guide units of the Girl Guides of Canada. Furthermore, all Girls Only! summer camps were offered during the same week, creating a truly all-female experience for participants.

Overall, the year was made a success thanks to the dedication and enthusiasm of the entire GEERing Up! team who were supported greatly by the local community, the Faculty of Applied Science and the University of British Columbia. We hope to nurture the partnerships of this year, both old and new, for the 2012 season. We are confident that the 17<sup>th</sup> anniversary of GEERing Up! will bring new and exciting opportunities for the children and youth of our community and our own team.

Claire Heymans and Stephanie Ryn  
Co-Directors

## Year in Review



### Workshops

In May and June, we delivered workshops to elementary schools, after school programs, and Girl Guide units across the Metro Vancouver area. Workshops reach the greatest number of participants of any GEERing Up! program. Workshops were aimed at promoting engineering and science to youth at a young age in hopes of sparking interest and generating excitement for each discipline.

Teachers, Guiders, and after school program leaders had the choice of four workshop topics:

- Living Green
- Does Matter, Matter?
- Race to the Finish!
- Amazing Engineers

With the help of our French-speaking Instructors, we offered French workshops to several Francophone and French-Immersion schools.

### Summer Day Camps

On-campus summer camps operate in July and August. We hosted 20 on-campus camps in 7 weeks for children and youth aged 6 to 16. Our weeklong programs were developed by our Instructors and covered a wide breadth of science and engineering topics. Some of the highlights this year included:

- Conductive dough circuits
- DNA extraction
- Model rockets
- Steam boats
- Lego Mindstorms and NXT Robots

In addition to projects, we also incorporated lab tours and special guest mentors into the camps. The tours and mentors allow campers to experience how the theories they are learning are applied to real life, and learn about careers in engineering and science. This year, the campers had the opportunity to visit many facilities at UBC: Wind Tunnel, Pulp and Paper Centre, TRIUMF, Beaty Biodiversity Museum, Pacific Museum of the Earth, Engineering Physics laboratory, and the Life Sciences Institute.

“ As a parent, I especially appreciated the daily email recaps from the leaders.

Thanks to the superior communications, I know that my daughter learned how to make a closed circuit, how fossils are made and how to pan for gold. ”

- Parent of a Girls Only! camper

**Girls Only!**

During May and June, 162 girls participated in a workshop specially designed for Sparks, Brownies and Guides units of Girls Guides of Canada. Our Instructors visited groups in the Metro Vancouver area and the Sunshine Coast leading activities related to their STEM (Science, Technology, Engineering, and Math) modules.

GEERING Up! fostered female representation in science, engineering and technology through Girls Only! camps this summer. The teaching materials and projects were very similar to the regular co-ed camps, but were taught in a Girls Only! environment. Studies have shown that girls are more likely to feel comfortable learning about engineering and science in an all-girls environment, which empowers them to explore their potential.

This year, we introduced the Girls Only! campers to many female mentors to promote gender equity in engineering and science, as well as to dispel the perception of males being more dominant in these fields. We want our girls to know that they can be outstanding scientists and engineers too!

**Special Needs Integration Support**

The Special Needs Integration Support (SNIS) Instructor's main role is to help integrate youth with exceptionalities into our regular camp program. Prior to the start of camp, the SNIS Instructor provided our entire team with the tools to adapt our camp programming to include campers of all types and abilities. These exceptionalities range from mild to severe and encompass challenges from learning disabilities, to ESL, to the Autism and Asperger's spectrum, to physical disabilities. The SNIS instructor provided support to campers with special needs during camps, working closely with parents, Instructors and Junior Instructors. GEERING Up! believes in providing fun and exciting camps to all of our campers, regardless of ability.

**By the Numbers**

- 2 Directors
- 7 Instructors
- 1 SNIS Instructor
- 47 Junior Instructors



- 3716 Workshop Participants
- 179 Workshops
- 4 Topics



- 510 Campers
- 251 Females
- 35 Aboriginal
- 22 Bursary recipients



- 7 Community Outreach Events
- 580 Youth

**Aboriginal Outreach**

GEERING Up! has a long history of visiting the K'omoks First Nations each year to bring our programs to their community. Two Instructors and one Co-Director visited Comox this summer, and were eager to make a lasting impression on the twenty-three participating First Nations youth.

In addition to the K'omoks First Nations, GEERING Up! continued to reach out to urban aboriginal youth. Through a strong partnership with CEDAR, GEERING Up! was able to engage twelve aboriginal youth in our program.

**At-Risk/Low-Income**

GEERING Up! strives to make our programs accessible to all youth, regardless of their family's financial status. Eighteen workshops were offered free-of-charge to Inner-City elementary schools. In addition, GEERING Up! also visited the Boys and Girls Clubs of Greater Vancouver.

This year, GEERING Up! offered almost \$4000 in bursaries to campers from low-income families. We look forward to offering more bursaries to expand our reach to youth who would be unable to attend our camps otherwise.

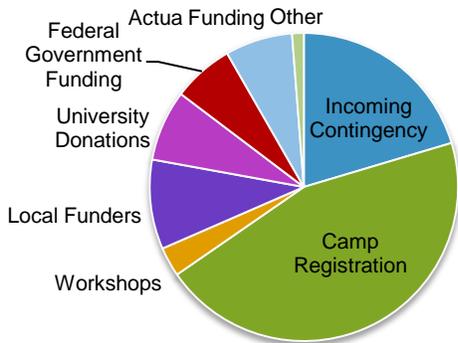
**Community Outreach Events**

We greatly increased our community presence during 2011. GEERING Up! hosted booths at APEGBC's E-Fest and Popsicle Bridge Contest. Euclid Math contest winners had the opportunity to participate in an engineering challenge led by GEERING Up! staff. During UBC's Alumni Weekend, GEERING Up! hosted more activities to promote science and engineering to youth.

In the fall, GEERING Up! will be partnering with UBC Engineering Recruitment to host a conference for high school students. GEERING Up! will also deliver a daylong program for the children of Creating Connections 2.0 attendees.

## Financial Highlights

2011 Revenue



2011 Expenses



The year 2011 saw a major increase in sponsorship funding, with an overall growth in funding of 48%. With this added revenue, GEERing Up! was able to make large capital upgrades. Most notably, GEERing Up! now owns a class set of digital cameras and laptops for participant use.

The camp registration date was pushed forward by two months. There was an average of 2.1 more children per camp compared to 2010. This resulted in an increase in camp registration revenue. Teacher, parent, and camper surveys reflected the high and enduring quality of GEERing Up! programming.

In addition to increased revenue, GEERing Up! formed relationships with many new partners. As a result, GEERing Up! will be partnering with UBC Engineering Recruitment to deliver workshops in Kelowna in 2012.

GEERing Up! is pleased to have achieved another successful and sustainable year, and believes that next year is well positioned to be even more prosperous.

2010 Actual	2011 Projected*	
<b>REVENUE</b>		
\$40,391.64	\$45,078.92	Incoming Contingency
\$84,850.01	\$94,566.40	Camp Registration
\$4,495.00	\$6,216.01	Workshops
\$10,165.00	\$18,930.00	Local Funders
\$2,791.13	\$15,000.00	University Donations
\$11,760.00	\$12,878.00	Federal Government Funds
\$6,750.00	\$14,215.00	Actua Funding
\$7,292.63	\$2,470.00	Other
<b>\$168,495.41</b>	<b>\$209,354.33</b>	<b>TOTAL REVENUE</b>
<b>EXPENSES</b>		
\$254.11	\$471.41	Administration
\$4,783.39	\$6,072.27	Promotion
\$14,942.47	\$28,998.44	Materials
\$1,886.60	\$7,537.49	Program Delivery Travel
\$97,807.34	\$102,404.19	Salary
\$2,369.49	\$4,019.19	Other Travel
\$0.00	\$20,154.88	Capital Upgrades
\$102.80	\$1,947.34	Awards and Recognition
\$1,270.29	\$0.00	Other
\$45,078.92	\$37,749.12	Forwarding Contingency
<b>\$168,495.41</b>	<b>\$209,354.33</b>	<b>TOTAL EXPENSES</b>

\* Includes actual revenue and expense to September 19, 2011 and anticipated revenue and expense to December 31, 2011.



“ The best part about camp was when we got to pan for gold. I learned that if it wasn't for mining, a lot of things would not exist. ”

- Camper (10 years old)



## Staff and Volunteers

### Instructors

We are thrilled to have hired eight amazing Instructors this year, including one Special Needs Integration Support Instructor and three French Integration Support Instructors. The diversity of their academic backgrounds provides more depth to the development of our workshops and camp curriculum. The creativity, dedication, and passion of our Instructors were evident at workshops and camps each and every day. We are very grateful to have assembled such a fantastic team!

*Francis Chan – Janine MacArthur – Maggie Lai  
Martha Talbot – René Chua-Oon Rinfret – Scott Gerun  
Sofia Moreno – Stephanie Mah*

### Junior Instructors

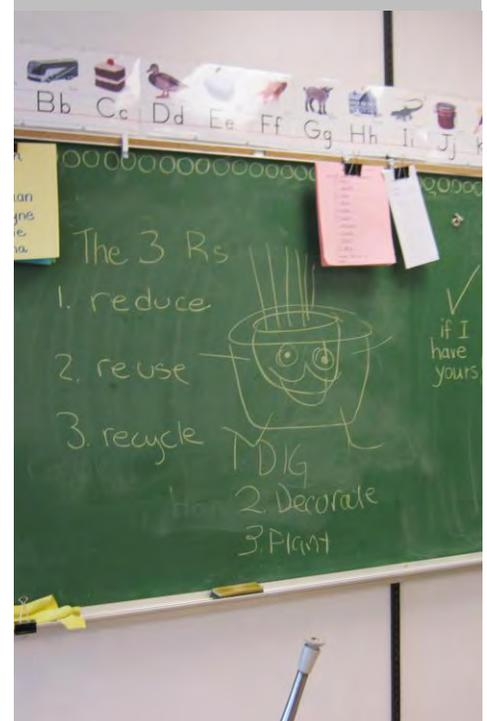
Each year, GEERing Up! invites high school students in grades 11 and 12, as well as university students to volunteer as Junior Instructors at our summer camps. This year, we had a total of 47 JIs, several of whom had already participated in GEERing Up! programs. We expanded on our pre-camp training program and restructured the JI volunteer schedule. This restructuring allowed the JIs to develop a sense of belonging to a camp group and provided campers with more stability. GEERing Up! would not have been able to function without their hard work, and so we would like to extend our gratitude to the students who volunteered this summer. Thank you!

### Board of Advisors

The GEERing Up! Board of Advisors is comprised of former directors and instructors. The Board provides long-term memory and ensures the ongoing success and quality of the programs. Furthermore, the Board also preserves the sustainability of the organization. A faculty and a staff advisor in the Faculty of Applied Science also support the directors.

“ We just thought everything was great! The slideshow at the end was very well done, and we were so impressed with the organization of the camp, the commitment of the instructors and volunteers, and the spirit of the camp, which was so friendly and inquisitive. Overall, a tremendous experience, and we can't wait to sign up again next year! ”

- Parent of a camper



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GET to Camp Fund

## 2011 Actua National Funders



imagination at work



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### A special thanks to the following individuals and organizations for their help and support this year:

Actua National Office and Members  
UBC Faculty of Applied Science  
UBC Classroom Services  
UBC Engineering Undergraduate Society  
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UBC Thunderbots  
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Jen Pelletier  
Sean Heisler



## GEERING Up!

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