

# 2016 ANNUAL REPORT

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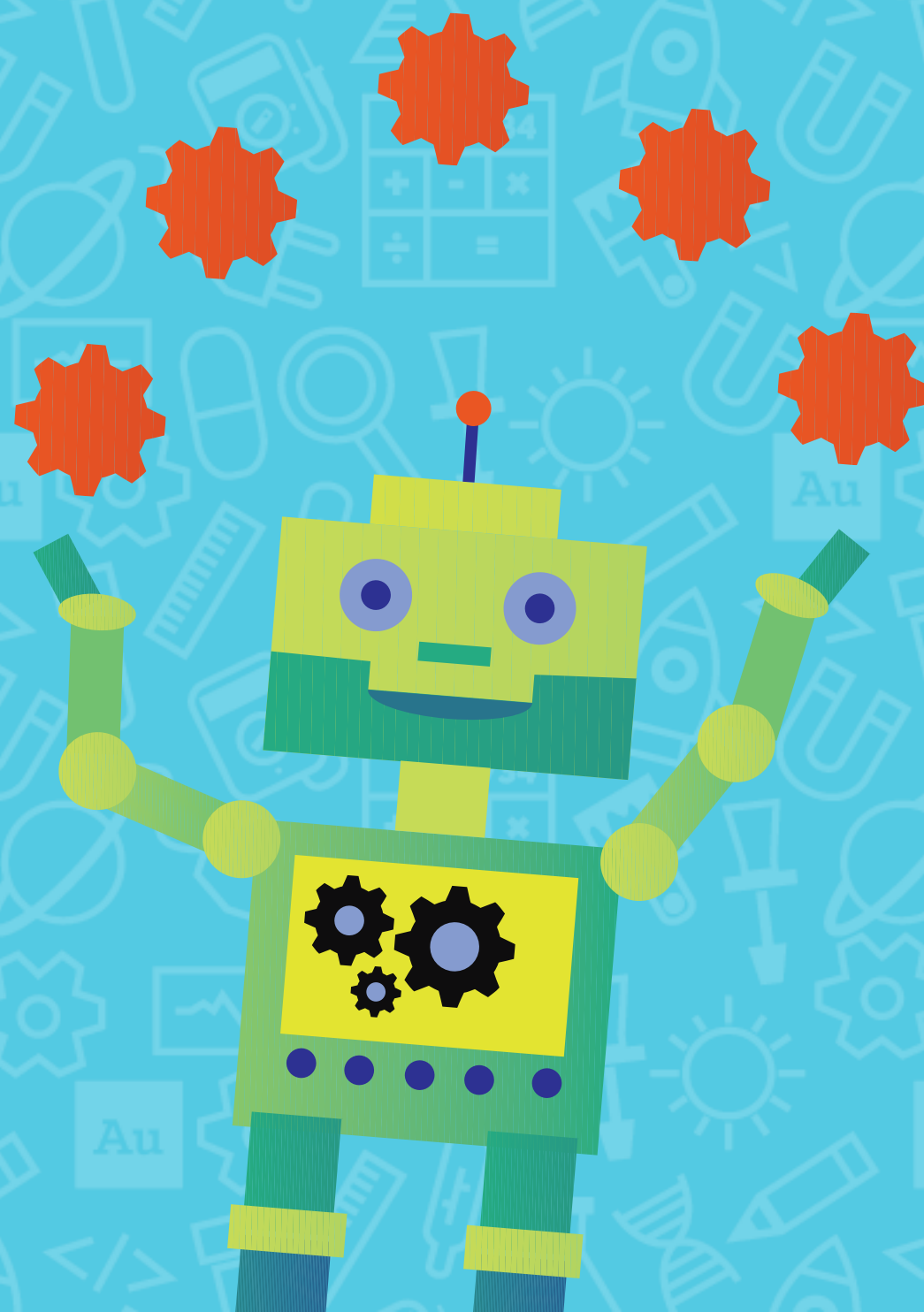
CELEBRATING  
ANOTHER YEAR OF  
STEM OUTREACH



**GEERING UP**  
UBC ENGINEERING & SCIENCE FOR KIDS



“My son is LOVE LOVE LOVING your camp. He keeps saying: “If only school were like this! I would love it too”. Bravo to you and your team for engaging my very energetic and inquisitive son to the point that he hasn’t been bored once! That is a great feat.”



## VISION

To provide 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 programs for those groups traditionally underrepresented in the sciences. Geering Up provides valuable work experience to its employees and volunteers, and enriches the University and community.

## STAFF

Geering Up's staff consists of 40 full-time summer employees who are also students at the University of British Columbia. Some staff also work part-time in addition to the summer months. An overseeing board of advisors and a full-time staff member provide transition and help us maintain our vision.

## NATIONAL NETWORK

Actua provides training, resources and support to its national network of members located at universities and colleges across Canada in the delivery of science, technology, engineering and mathematics (STEM) education outreach programming. Each year these members engage over 225,000 youth in 500 communities nationwide. Please visit Actua at [www.actua.ca](http://www.actua.ca).

A network  
member of  
[actua.ca](http://actua.ca)

**actua**  
Youth · STEM · Innovation



*“Both my kids had a fantastic time at Geering Up this year. I have to say—it is one of the best run camps we have been involved in. Keep up the excellent work and grow those scientists and engineers.”*

## A WORD FROM THE ADMIN TEAM: REBRANDING STEM. EMPOWERING BC YOUTH.

2016 was another year of empowerment and creativity at Geering Up. We would like to thank everyone whose thoughtfulness and generosity made our work possible.

Because of you, we saw a 63% growth in the number of BC youth Geering Up reached in 2016. This was accomplished while doubling the number of off-site outreach programs delivered and providing needs-based camp bursaries to a record 10% of campers. Through a team of 100 undergraduate students, we shared our message of ‘STEM for Everyone’ with 13,000 BC children and their families. A remarkable accomplishment, from a remarkable team and an amazing community of support.

2017 is poised to be just as busy. This year, the Faculty of Applied Science at UBC will launch their Reimagine Engineering campaign at [reimagine.engineering.ubc.ca](http://reimagine.engineering.ubc.ca). The focus of this expansion is clear: to encourage a diversity of brilliant young people to bring their skills to the field of engineering. It’s a message we firmly stand behind and look forward to carrying to each community we visit. We’ll be able to visit schools across the province and announce, “there is more room for you than ever before and many new ways to be an engineer”.

In the upcoming year, Geering Up also looks forward collaborating in a new longitudinal SSHRC study. This long-term project will study the effectiveness of STEM gender-gap interventions, such as the activities in our programs. Collaborating in this project will be a fantastic opportunity to give back, growing the base of research demonstrating the effectiveness of our work.

A new initiative we are already working on is our revamped high school workshop series. In the next 12 months, we will visit the classrooms of 4,000 high school students, providing hands-on STEM and CS experiences. This is on top of a plan to expand camp offerings in the Okanagan, and offer more community based camps in Metro Vancouver. Be sure to stay tuned for details; it’s going to be another amazing year!

Thank you,

Rebekah Glum, Louis Rivest, and Jakob Manning  
2016 Co-Directors and Program Manager  
Geering Up UBC Engineering & Science for Kids

# THE PILLARS OF GEERING UP

## IN-SCHOOL WORKSHOPS

In 2016, we reached 60% more youth in workshops across BC. These grade-specific workshops are aligned with the BC science curriculum and integrate engineering and technology wherever possible. We continued to offer bilingual workshops for French Immersion and Francophone schools. Next year, we plan to focus on offering workshops during lunch hours, after school, or on weekends; connecting workshops to UBC Engineering and Science experiences and anecdotes; and extending student learning beyond workshops. Last year, Geering Up was able to deliver workshops to 9,810 students where the demographic included 43% girls, 13% Aboriginal youth, and 34% inner-city students. Our goals in 2017 are to reach a minimum of 50% girls, and to offer 30% of our inner-city workshops to schools and Aboriginal communities for free.

- GR. K:** Ecosystems Everywhere

**GR. 1:** Molecules Matter

**GR. 2:** Crazy Chemistry

**GR. 3:** We are the World

**GR. 4:** Elementary Energy

**GR. 5:** Oh my Organs
- GR. 6:** Phenomenal Forces

**GR. 7:** Charge Up

**GR. 8-9:** Optics

**GR. 11-12:** Life is a Game

**GR. 8-12:** Electrifying Design, Dynamics and Design, Giant Biochemistry

## SUMMER CAMPS

Summer camps are the core of Geering Up. With up to twelve weeklong daycamps running concurrently each week for nine weeks, 3,400 youth participated in our summer programming. At camp, we launched rockets, made robots, and ate countless slices of pizza. Sunscreen was squirted, labs were visited, and many minds were shown the wonders of STEM. We know our participants have immeasurable potential—and we can't wait to see what they do next!

- GR. 1:** MiniMinds

**GR. 2-3:** Explorers A & B

**GR. 2-7:** STEAM (Girls Only)

**GR. 2-9:** CodeMakers

**GR. 4-5:** Imagineers A & B
- GR. 4-6:** Maker Camp

**GR. 6-7:** Discoverers A & B

**GR. 8-10:** Innovators

**GR. 8-12:** Community Builders (Girls Only)

**GR. 11-12:** MasterMinds

## AFTER-SCHOOL CLUBS

Our after-school clubs allow us to reach youth year-round, and provide opportunities to explore STEM in a creative environment outside of the classroom. This year, we are pleased to be able to offer seven concurrent after school clubs - five at UBC Vancouver, and two off-campus at inner-city elementary schools. Every Saturday morning, kids come explore STEM with us for an hour and a half. Code is created, slime is inspected, chemistry is observed, and curiosity is sated.

- GR. 1-3:** MiniGeers

**GR. 3-5:** GeerGals (Girls Only)

**GR. 4-5:** CodeMakers Jr
- GR. 6-8:** CodeMakers Sr

**GR. 4-7:** STEAM

**GR. 8-12:** MasterMinds



### WE REACHED:

9,810  
YOUTH IN WORKSHOPS

3,417  
YOUTH IN SUMMER CAMPS

432  
YOUTH IN CLUBS & SPECIAL EVENTS

13,659  
TOTAL YOUTH ACROSS BC IN 2016

# SPECIAL INITIATIVES



**5,639**  
GIRLS REACHED

**1,401**  
ABORIGINAL  
YOUTH REACHED

## HIGH SCHOOL

In 2016, we continued to expand our high school programming with a full camp season of CodeMakers, MasterMinds, and Community Builders for grades 8-12. We introduced three unique high school workshops this spring. In 2017, we are excited for opportunities to partner with outside organizations in providing overnight programming, off-site camps, and new workshops. We also provide volunteer experience for over 180 high school students every year.

## GIRLS ONLY

We plan on expanding our Girls Only programs in 2017 by providing all girls camps every week of the summer as well as a STEAM (Science, Technology, Engineering, Art, and Math) camp. 2016 saw our inaugural Makeathon for girls in grades 8-12, where they were introduced to computer science, learned from female mentors in STEM fields, and explored the social impacts of computer science and engineering, all in a supportive girls-only environment.

## CODEMAKERS

Last summer, we offered free computer science workshops in inner-city schools and developed four brand new tech-focused camps for grades 2-12. Next summer, we hope to provide new digital literacy camps for younger grades, add new themed CodeMakers camps in topics such as animation, robotics, and game design, and rebrand camps with skill-level based entry. Learning alongside other students with a similar background will provide the campers with a supportive environment to explore computer science with confidence.

## KELOWNA

In 2015, a satellite camp was established at the UBC Okanagan (UBC-O) campus. This year, our Kelowna team reached over 2,000 youth. We are excited to be offering new Girls Only and CodeMakers programming during the summer, in addition to in-class STEM workshops!

## ABORIGINAL OUTREACH

Geering Up visited 22 communities in 2016 through workshops and camps, including Hope, Coquitlam, Bowen Island, Abbotsford, Chilliwack, and Agassiz. 41% of our reach included Aboriginal communities such as Stó:lō Nation, Musqueam Indian Band, Sts'ailes Nation, Tsawwassen First Nation, Kwadacha Nation, and Ladner. With the generous support of our sponsors, we hope to continue reaching new regions in British Columbia and increase outreach to Aboriginal communities. Outreach will be one of our core focuses to achieve our goal of reaching 10% of all British Columbian youth.

## GO WHERE THE KIDS ARE

One of the largest barriers we face in Vancouver when engaging kids in STEM is simply geographical: our main location at the UBC Point Grey campus is hard to reach. This hits low-income families in particular, as time and transportation costs add up.



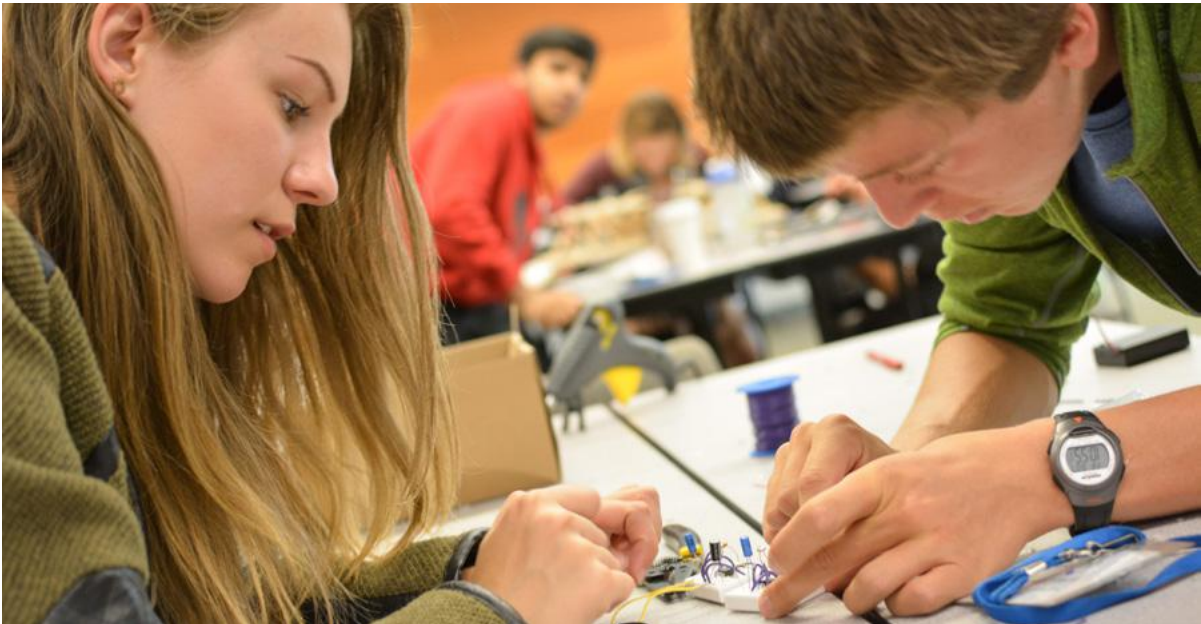
**139**

INNER CITY WORKSHOPS  
OFFERED FOR FREE

**3,266**

INNER CITY STUDENTS  
REACHED

This is one of the reasons we directly offer workshops in schools: it provides us a much broader reach. Our sponsors allowed us to offer free or discounted workshops to 139 classes in inner-city schools, a 74% increase from 2015! This year, Geering Up also partnered with the Vancouver School Board (VSB) and Surrey School Board to reach at-risk youth through summer day camps. At VSB, our engagement continues throughout the school year by providing after-school clubs similar to our Saturday clubs held at UBC.



# AREAS OF GROWTH

## VIDEO SERIES

Geering Up launched a YouTube Video Series this summer to celebrate STEM, with the support of Science Odyssey. The videos showcased our initiatives to bring science and engineering to everyone across British Columbia, including Outreach, Girls Only, and STEAM. The 20-part series gained more than 3,000 views, making STEM media more accessible through a flexible platform.

## CODEMAKERS

Geering Up offered 18 CodeMaker camps in 2016, doubling the number of youth reached. We even brought Computer Science camps along on Outreach! Geering Up has invested in new technology and curriculum, hiring a CodeMakers curriculum coordinator for 2017 to bring these life-changing camps to even more BC youth.

## GIRLS ONLY CAMPS

In 2016, we hosted Girls Only camps every week of the summer. We launched two new camps: our STEAM camps brought STEM and art together, while Community Builders focused on engineering as a helping profession. These camps featured elements of design, computer science, and teamwork, bringing the human side of engineering to life.

## MAKEATHON

The first annual Girls Only Makeathon was a success in 2016. The theme, “Tech for Health”, demonstrated the benefits of science and engineering to society. The creations from the Makeathon were showcased in the UBC Electrical Engineering building. The event connected girls with female role models from the tech industry, giving participants a taste of life as a female in STEM.

## OVERALL GROWTH

The number of participants in our summer camps increased from 8,000 to 13,000 in 2016. We doubled the number of outreach camps and workshops, reaching four times as many youth. Our team of staff has been growing every year. 2016 brought Geering Up’s first full-time staff member. In 2017, we will introduce three director positions, in addition to multiple new coordinator roles, helping support Geering Up during its rapid expansion.

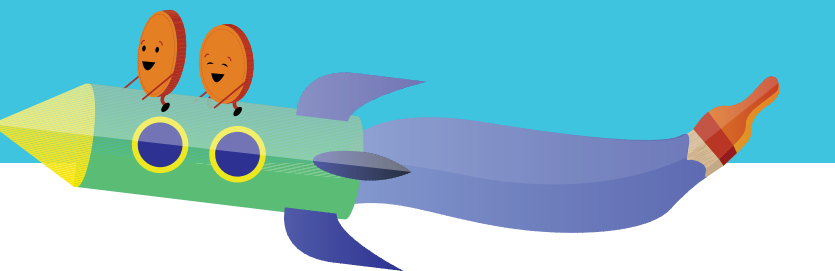


**56% MORE**  
YOUTH REACHED IN 2016 (FROM 2015)

FINANCES

2016 FINANCIAL HIGHLIGHTS

- Receiving a \$33,000 NSERC PromoScience Award for Outreach in Aboriginal Communities
- Moving to a model with a FULL-TIME ADMINISTRATOR
- DOUBLING of Okanagan Programming
- DOUBLING the number of rural outreach programs (camps and school workshops) we provided



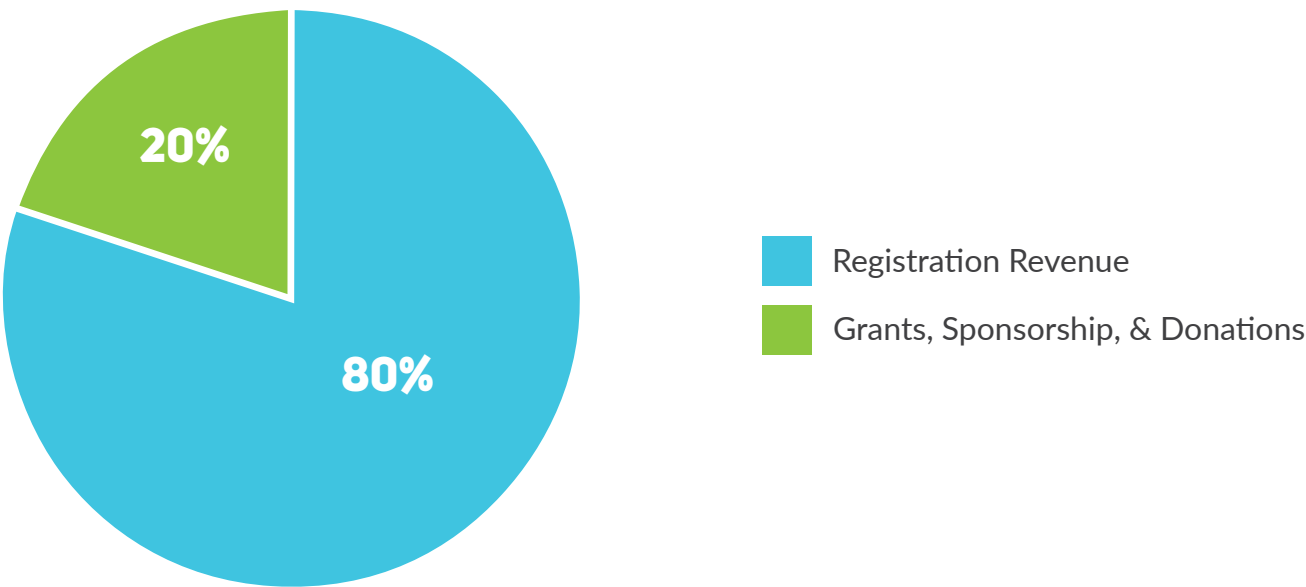
Our biggest story this financial year was the growth of our Kelowna programming. We are pleased to note that, with the help of federal funding, Kelowna programs doubled in size and became revenue neutral. This is a vital first step in making our Okanagan branch long-term sustainable.

In our Vancouver programs, revenue from ‘Sponsorship and Donations’ continued to grow, thanks to the compassion and vision of our many supporters. Much of this new funding was provided as directed sponsorship, helping our outreach program reach new BC communities in rural settings.

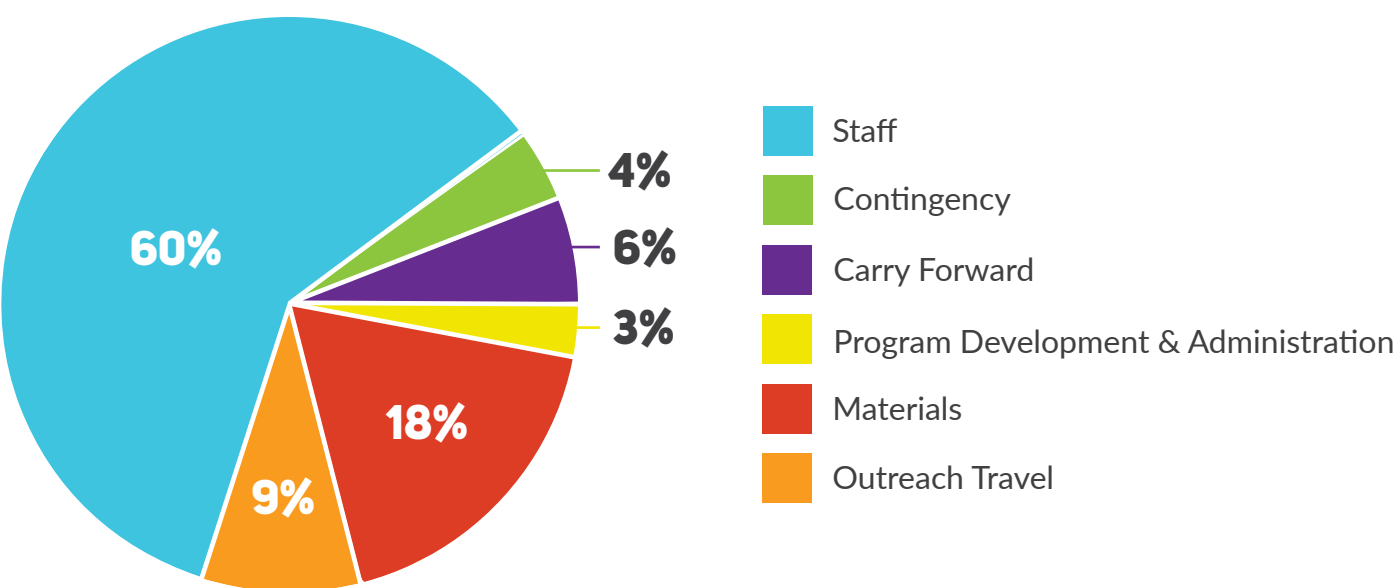
Last but not least, in 2016, Geering up transitioned into having a full-time admin staff. This gives our program the stability to invest in long-term projects, will save us time and capital in annual retraining, and enhances the quality of work experience we provide our many student staff.

For 2017, we have allocated funds to drastically expand the number of workshops we offer, our outreach program, and our Girls Only Programming. We have set ambitious sponsorship targets to make these expansions possible. We are optimistic that the community around us will continue to generously support our vital work rebranding STEM and sharing it across this province. Together with you, Geering Up looks forward to another fantastic year serving the youth of BC!

REVENUE



EXPENSES



## WHAT'S NEXT?

### MORE VIDEO

The success of our video content in 2016 has pushed us to expand our Youtube presence. 2017 will bring more educational videos, as well as a series focusing on diversity in STEM. With the support of our sponsors we hope to bring the White Paper reports by the Westcoast Women in Engineering, Science and Technology to life in a fun and engaging video series.

### MORE HIGH SCHOOL

Exposure to STEM in high school is an important indicator of continued education in these fields. To create new and exciting high school programming, Geering Up has hired a new high school camps coordinator. We look forward to new curriculum and programs, including more leadership and communication skills, in our camps content in summer 2017!

### OFF-SITE CAMPS

In 2017, Geering Up will expand the camps offered with the Vancouver and Surrey school boards, and help them grow independent. Our new off-site coordinator will be planning the strategic growth of these camps, and managing them during the busy summer months.

### WORKSHOP CURRICULUM

Geering Up workshops reflect changes in the BC Science curriculum and the STEM skills needed by today's students. Increased demand for computer science content has led us to create computer science workshops. Our new computer science curriculum coordinator is dedicated to bringing 21st-century technology skills to BC classrooms, helping us introduce coding workshops to Vancouver schools in 2017.

### YEAR-ROUND WORKSHOPS

For the first time, Geering Up will be offering in-class workshops during winter 2017! We are excited to expand our workshop season by hiring a coordinator and two full-time instructors to bring STEM content to more schools, all year round. Workshops have consistently been our widest-reaching programs. In addition to changes to the curriculum of our spring workshops, this initiative will go a long way to help us achieve our goal of reaching 10% of BC's youth!



# 100,000+

YOUTH REACHED ACROSS BRITISH COLUMBIA  
THROUGH 20 YEARS OF GEERING UP

## 2016 SUPPORTERS

To our generous sponsors, to our wonderful community partners, to our amazingly supportive faculty, to the university we call home, to the mentors who donate their time to visit us, to our tireless staff members, to our energetic volunteers, to the excited parents and teachers, and to our ever-curious, innovative, brilliant campers: **thank you.** This wouldn't be possible without you.

### PLATINUM SUPPORTERS



a place of mind  
THE UNIVERSITY OF BRITISH COLUMBIA  
Faculty of Applied Science

**FLUOR**



urban systems  
**FOUNDATION**

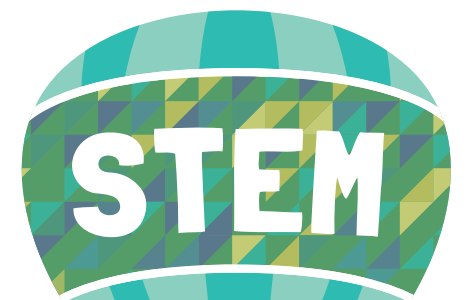
### GOLD SUPPORTERS



**FORTIS BC**



**Stantec**



### SILVER SUPPORTERS



**eng•cite**

### BRONZE SUPPORTERS

**MineralsEd**

**UBC Department of Chemistry**



### 2016 ACTUA NATIONAL FUNDERS

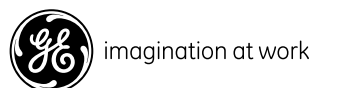
**Google**



**Canada**



SUNCOR  
ENERGY  
FOUNDATION





**THANKS FOR  
A GREAT YEAR.**  
**HERE'S TO MORE.**

**GEERING UP UBC ENGINEERING  
& SCIENCE FOR KIDS**

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