



Geering Up UBC Engineering & Science for Kids

Indigenous Outreach 3 Year Strategic Plan (2018 - 2021)





Vision and Values

Our vision is “to provide all indigenous youth in British Columbia with the opportunity to learn and investigate engineering, science, and technology in a fun, educational, and safe environment”.

Geering Up seeks to provide such opportunity as not only a means of exposure and inspiration, but to actively support BC teachers, to incorporate BC curriculum to help students master core competencies, and to allow students to grow as creative, inquisitive leaders. Geering Up provides support with a continuous and long-term commitment to each community. This allows students to be enabled to pursue STEM interests throughout elementary and high school, to have the opportunity to enter post-secondary education, and to have the ability to pursue careers in STEM fields.

This vision is supported by a value system that champions knowledgeable and respectful cultural engagement as the cornerstone to building trust and mutual success. Our values are inclusivity, honesty, social and personal responsibility, respect for the land and community, and to never stop learning and dreaming. By working with First Nation communities to create tailored programming that incorporates local indigenous knowledge and seeks to address the goals of each individual community, we will be able to make a meaningful and lasting impact on the youth we reach.

What is Geering Up?

Geering Up UBC Engineering & Science for Kids is a non-profit, student-run organization dedicated to promoting STEM to all BC children and youth through fun, innovative, hands-on experiments and projects. Geering Up held its first camp at the University of British Columbia in 1996, and has been expanding ever since. Geering Up now offers programming year-round across the province to meet the need for high quality youth STEM education. Last year, some of that programming included:

- 440 different age-specific workshops delivered in BC classrooms to 10,000 youth
- 8 after school clubs run at UBC Vancouver and UBC Okanagan
- Over 130 weeklong summer camps delivered, with 12 unique camps. These included,
 - 30 Girls Only camps
 - 8 Aboriginal Camps, delivered to, Tsawwassen, Squamish, Sto:lo, Lil'wat, Sts'ails, Seabird Island, and Musqueam communities

Geering Up is part of Actua, a national network whose members provide science camps to youth across Canada. In 2017, Actua members reached 250,000 youth across the country.



Strategic Model

The cornerstone of Geering Up's strategic model is **respectful community engagement**, carried out by highly trained staff.

What this practically looks like within each First Nation community is largely dependent on the level of engagement and partnership Geering Up has achieved with that nation. Broadly speaking, this strategy can be thought to occupy one of 3 main engagement levels: consultation, engagement, and partnership.



Level 1 – Consultation

This level encompasses **initial contact and establishing of communications**.

Educational programming involves the carrying out of 1 – 2 hour long workshops that involve interactive demonstrations, hands-on activities, and take-home projects. These workshops are typically carried out in a classroom or similarly structured environment. Workshops are usually done over a week period teams of instructors teaching in pairs. Workshops are available for grades K – 12.

Workshops are relatively inexpensive, low risk, and easily customizable. This allows Geering Up to accommodate teachers' concerns, complement their learning objectives, and include relevant local historical and cultural tie-ins. The workshops serve as a great tool to teach and excite youth about science, and to establish a face-to-face relationship between Geering Up and the community. Workshops are limited in depth by their timeframe, but allow Geering Up to reach many youth rapidly.



Level 2 – Engagement

This level is characterized by **meaningful engagement and participation** from members of the community.

At this level workshops are still carried out, but there is a focus on delivering week long camps where youth spend the whole day learning, playing, and participating in camp activities. These camps are engaged with the community - goals developed by the community are identified, and programming focused on addressing them is developed. While camps can be delivered at a school or other community location, emphasis is being placed on delivering a land-based camp model where youth camp outside overnight.

This model emphasizes a connectedness with the land, and an integration of cultural knowledge into STEM education. Elders are encouraged to provide input and participate. They may act as cultural teachers, wilderness guides, or judges in design competitions. Camp staff is a mix of instructors from Geering Up, and members of the community who may act as cooks, counselors, first aid attendants, etc.

Importance is placed on a greater continuity of programming and communication throughout the year. For example, camps and workshops may be offered more than once per year (summer and winter), after-school programs may be carried out, teaching lessons and materials can be mailed to school teachers remotely, and youth may be given a chance to travel to Vancouver with a guardian and participate in Geering Up camps at the UBC Vancouver campus.

Level 3 – Partnership

At this level, Geering Up has fully realized the core principals of its vision. The youth who have participated in Geering Up's programs over a period of years have been empowered, graduated, and are leading their own causes on behalf of their community. Some indicators of this success include graduating from high school, enrolling and graduating in post-secondary programs, or being employed by Geering Up or similar organizations to carry out more educational programming within their own communities.

A major ambition at this level is for the youth and community members who participated in Geering Up's programs to develop their own personal initiatives that target their community's needs. Geering Up will grow the capacity to support these highly specific and personal projects. This could include establishing a community farm, building a cultural knowledge database of traditional territory, or founding a platform for independent indigenous journalism. These kinds of projects will require the support of a larger network of supporters. Geering Up is currently working to build such a network at the University of British Columbia and with external organizations.



Training

Geering Up is highly dependent on having well-trained and capable staff to carry out its vision. Geering Up partners with the UBC Longhouse to provide customized cultural training for all staff members, which provides a cultural context for modern day First Nations in BC.

Additional cultural awareness training is given to outreach instructors. Training also includes personal safety and emergency preparedness for working with youth in rural locations, as well as risk assessment and management. Community specific training is given with respect to history and culture.

Mentorship is a key element of Geering Up training. Experienced, returning staff are partnered with new instructors to travel and deliver programming. More emphasis is being placed on signing instructors for multi-year contracts, and hiring year-round full time support staff.

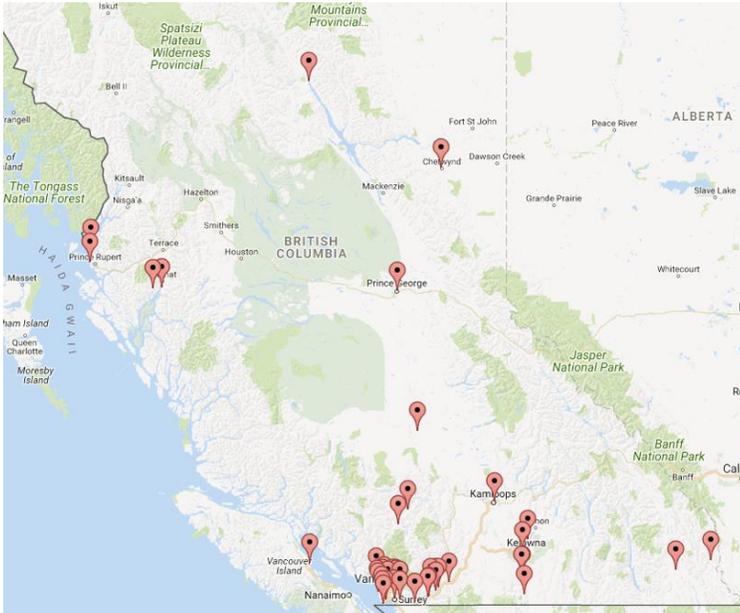
History and Impact of the Indigenous Outreach Program

Since 2000, Geering Up has included indigenous outreach as a branch of its core mission. From 1995 -2004 much of this was done in Vancouver through week long camps provided in partnership with UBC's CEDAR program and the Musqueam Nation in Point Grey. In 2005, our indigenous Outreach program expanded beyond the Vancouver area, with camps and workshops being carried out with the Nations of K'omoks, Lower Similakeen, and in Queen Charlotte City on Haida Gwaii. In 2017, we worked with 2,000 Indigenous youth from 20 communities.

The current Strategic Model was formed in 2015-2016, with flagship partnerships being formed between the Nations of Tsay Keh Dene and Kwadacha, who are roughly 500 and 570 km north of Prince George. In the summer of 2016, Geering Up provided fly-in STEM workshops to 200 Aboriginal youth in these nations, with the support of Fluor Canada. The trip was featured in our Science Odyssey YouTube video series, which can be found at the following link: goo.gl/bwqpNX.

In the summer of 2017, Geering Up returned to the nations of Tsay Keh Dene and Kwadacha to deliver another set of workshops, and an additional land-based camp which was available to students from both Tsay Keh Dene School and Aatse Davie School. The success of the land-based camp marked the first time Geering Up has entered into a Level 2 Engagement relationship with a community, as outlined in the Strategic Model. This trip was featured in another YouTube video series, which can be seen at the following link: youtu.be/AMnwc-R-wp0.

The summer of 2017 also saw incredible growth in the indigenous outreach program as a whole with our instructors reaching over 2000 indigenous youth. In total, we delivered 19 weeks of camps and 30 in-class workshops were delivered in 44 communities over a combined period of 14 weeks.



Map of 2017 Outreach Activities

Three Year Plan

Looking to the future, we are striving to maintain our incredible program growth while focusing on progressing our relationships with communities from consultation to engagement and, eventually, partnership. What this looks like in practice may vary significantly between communities, but this will always involve working collaboratively with members to provide more relevant and meaningful programming.

To achieve that greater level of engagement, Geering Up is inviting communities to become more involved in the creation of outreach curriculum, discussing ways in which programming can be made more relevant and incorporate traditional knowledge and values. The attendance of members of the community, elders, and knowledge keepers at our camps, along with the introduction of land-based activities, will enhance the quality and value of our InSTEM programming. Achieving this with our community partners is the primary objective of our outreach program, and this is reflected in our ambitious goals three year goals. In 2018, we intend to return to 90% of the communities we worked with last year, as this helps establish the concrete, long term relationship that enables progression to that second level of engagement. Beyond that, the introduction of a more diverse range of programming, both in nature and in time of year, further deepens those relationships



2018 Budget

We ask that supporters strongly consider making multi-year commitments so Geering Up may ensure consistency in the implementation of this three year strategic plan.

On average, the costs of outreach depend largely on location. Workshops and camps tend to run similar costs in terms of staff and materials, so one week of programming could be delivered as workshops or camps or other forms if desired by the community:

- **\$4,000/week:** accessible First Nations communities (ex. Vancouver, Kamloops)
- **\$7,000/week:** northern, rural communities (ex. Chetwynd, Kitimat, Prince Rupert)
- **\$9,000+/week:** remote fly-in access communities (ex. Tsay Keh Dene, Kwadacha)

Delivering multiple weeks of programming back to back in a community can dramatically drive these average costs down, due to savings on transportation.

Example Budget – 2 Week Outreach with fly-in access communities

Expense	Cost
Workshop & Camps Materials	\$1,180.00
Pay per 4 Staff	\$5,800.00
Program Set-Up	\$300.00
Elder's Stipend	\$250.00
Travel (per 4 staff)	
Prince George to Vancouver (Round Trip)	\$1,600.00
Prince George to Tsay Keh	\$2,620.00
Fort Ware to Prince George	\$1,800.00
Baggage	\$150.00
Food and Stay (for 2 weeks, per 4 staff)	
Meals	\$1,200.00
Hotel	\$2,100.00
Total	\$17,000



Contact US

If you wish to support this program, or would like to inquire about program delivery in your community, please contact:

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