

gener8 | navig8

**YOUTH ENERGY, CLIMATE AND
WATER LEADERSHIP SUMMIT**



SUMMARY REPORT



MARCH 16 - 19, 2023
CANMORE, ALBERTA



GENERATE | NAVIGATE 2023

Inside Education is proud to highlight our Generate/Navigate 2023: Youth Energy, Climate and Water Leadership Summit and the positive, lasting impacts of this experiential learning summit. Generate/Navigate was Inside Education's 12th and largest-ever Youth Leadership Summit and was the second in the 2022-23 school year—following our Cultivate Youth Agriculture Leadership Summit in October.

The Generate/Navigate Summit took place on Treaty 7 territory - on the traditional lands of Stoney Nakoda (Bears paw First Nation, Chiniki First Nation, and Goodstoney First Nation), the Tsuut'ina First Nation, the Blackfoot Confederacy comprised of the Siksika, Piikani, Kainai as well as Métis Nation of Alberta Region 3. We are humbled to live and learn on this land and are committed to building relationships in our communities and schools.



18 COMMUNITIES

20 HIGH SCHOOLS

120 STUDENTS

40 TEACHERS

70 EXPERT IDEA GENERATORS

20 SCHOOL-BASED PROJECTS

1 AMAZING EXPERIENCE



“A wonderful experience - a highlight for this year was definitely the hands-on wind turbine building workshop. My students are already talking about who could attend next year's summit!”

Wendy Ryan, Teacher
@ Sunchild School

Generate/Navigate 2023: Youth Energy, Climate and Water Leadership Summit brought together teams of six students and two teachers representing 20 high schools from across Alberta and Northeast British Columbia to learn about key energy, climate and water topics, discuss emerging issues and innovations, and explore their role as environmental leaders.

Throughout the Summit, the students and teachers met with world-class experts representing a diverse spectrum of ideas and perspectives. The high level of engagement demonstrated that youth are ready to address environmental issues, investigate new technologies and understand the role they have in ensuring an equitable and sustainable energy and water future.

After developing new knowledge and skills at the Summit, each team is challenged to return to their communities with a student-devised plan aimed at sharing their learning with the broader community through a project that will be implemented before the end of the school year.

“ I am so thankful for this opportunity! I have learned so much through all the speakers and hands-on projects that we have done. My favourite moments are learning about solar and wind power, and I hope to bring those ideas back to our school to create a more environmentally friendly planet.”

Justin, Student @ Brooks Composite High School, Brooks



THE PARTICIPANTS

Inside Education hosted 160 high school students and teachers from across Alberta and Fort St. John, BC. The teams travelled from as far north as Paddle Prairie and as far south as Piikani First Nation to gather in Canmore to learn about energy, climate and water, meet their peers from across two provinces, and begin work on their action projects. We were especially pleased to have participation from three First Nations schools—O’Chiese, Sunchild and Piikani First Nations—as well as First Nations and Métis students from Wabasca and Paddle Prairie, Alberta.



“ This conference was one of the greatest experiences I have been a part of. It was truly inspirational and motivated me to be an active participant in this field. It was a breath of fresh air that opened so many new doors and opportunities. ”

Gold, Student @
Father Patrick Mercredi
High School, Fort
McMurray



GENERATE / NAVIGATE 2023 TEAMS

Beaverlodge Regional High School

Beaverlodge, Alberta

Brooks Composite High School

Brooks, Alberta

Father Patrick Mercredi High School

Fort McMurray, Alberta

Harry Collinge High School

Hinton, Alberta

Holy Redeemer Jr/Sr Catholic High School

Edson, Alberta

Lethbridge Collegiate Institute

Lethbridge, Alberta

Medicine Hat High School

Medicine Hat, Alberta

New Myrnam School

Myrnam, Alberta

Mistassinii School

Wabasca, Alberta

North Peace Secondary School

Fort St. John, British Columbia

O’Chiese First Nation School

O’Chiese First Nation, Alberta

Old Scona Academic

Edmonton, Alberta

Paddle Prairie School

Paddle Prairie, Alberta

Piikani Nation Secondary School

Piikani First Nation, Alberta

Robert Thirsk High School

Calgary, Alberta

Ross Sheppard High School

Edmonton, Alberta

Rundle College

Calgary, Alberta

St. Francis Xavier High School

Edmonton, Alberta

St. Mary Catholic School

Westlock, Alberta

Sunchild School

Sunchild First Nation, Alberta

PROGRAM GOALS

YOUTH LEADERSHIP IN ENERGY, CLIMATE AND WATER

Engaging high school students in positive environmental leadership through connections with topic experts and supporting students to share and apply the knowledge and ideas gained at the Summit through their environmental action project.

EXPERIENTIAL LEARNING


Immersing students in Alberta's energy and water landscapes through tours, interactive workshops, roundtables and panel presentations at a professional summit experience.

CRITICAL THINKING

Exploring program themes through multiple perspectives while providing delegates with tools to develop understanding and form their own viewpoints.

CAREERS AND FUTURES

Promoting participation in energy and water futures through skill development and exposure to environmental and natural resource careers in energy and water sectors.



“ I really enjoyed learning about energy and I am going back home, inspired to make a change for the better. ”

Sharmell, Student @ O'Chiese First Nation School



THE PROGRAM

The Generate/Navigate 2023 Summit aimed to educate and engage high school students and teachers in the science, technology, issues and innovations related to energy, climate and water in Alberta, Canada and beyond.

The Summit provided a unique opportunity to bring together students, teachers, experts and stakeholders representing diverse perspectives. Inside Education is appreciative for the over 70 Generate/Navigate expert speakers and tour hosts, representing 45 unique organizations.

The multidimensional program included keynote speakers, panels, roundtables, team-building activities, project planning workshops, breakout discussions, a teacher resource workshop, an innovation gallery, off-site tours and social events.



Gathering youth together for a shared purpose is a transformative process, our young leaders are leaving as changed people, ready to become changemakers (Truly!).



André Morson, Teacher
@ Harry Collinge High School, Hinton



GENERATE YOUTH ENERGY & CLIMATE LEADERSHIP SUMMIT

The Generate 2023 program challenged participants to consider their role in our energy future while thinking critically about the environmental, social and economic challenges and opportunities related to energy use, development and the energy transition. We discussed a wide range of topics covering everything from oil sands production and hydrogen as a fuel source to small modular nuclear reactors and solar race cars.

The discussions started with a world-class panel of experts who spoke about how innovations are shaping the energy sector.

We got hands-on in the Innovation Gallery portion of the program doing demonstrations on battery storage, hydrogen fuels cells and environmental monitoring. A clear highlight was the hydroelectric facility tour where we saw how the electricity company was integrating recreational land use by connecting with Alberta's burgeoning surf community.

Overall, Generate 2023 offered participants a unique opportunity to connect with the energy sector and demonstrate how innovations, collaboration and critical thinking can support a sustainable energy future.

THEMES

- **Energy Sources:** Conventional, renewable and alternative sources of energy
- **Energy Transition:** Clean fuel technologies, decarbonization, battery storage and energy systems
- **Energy Futures:** Careers and socioeconomic considerations of energy development
- **Climate Change and the Environment:** Emission reductions and land/air/water/wildlife
- **Energy Efficiency and Conservation:** Personal action and stewardship



“ Thank you for driving me to be a leader. Every insight I received was an “Aha!” moment, every conversation inspiring, and every smile so special. Thank you for encouraging me to use my voice to usher in amazing changes we will see in the future. ”

Maya, Student @ Robert Thirsk High School, Calgary

IDEA GENERATORS

Alberta Innovates

Vanessa White

Alberta Municipalities

Trina Innes

AltaLink

David Huggill

Careers in Energy

Lisa Pollio

Cenovus

Trent Zacharias

CNRL

Catherine Mangan

ConocoPhillips Canada

Girls Talk Tech

Ducks Unlimited Canada

Jessica Needham

IUCN World Commission on Protected Areas

Erinn Drage

Eavor Geothermal

Vlad Zatonski

Efficiency Canada

Allison Mostowich

Energy Council of Canada

Jacob Irving

Enhance Energy

Candice Paton

ENMAX

Najmus Saltanat

Flint

Trina Clarke

GreenLearning Canada

Meghan Owen

Indian Resource Council

Winona Lafreniere

InnoTech

Bonnie Drozdowski,
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North American Young Generation for Nuclear

Matthew Mairinger

Pathways Alliance

Shafak Sajid

Pembina Pipeline

Mark Weiss

Relay Education

Victoria Dickinson

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Dr. Maureen Kolla

Southern Alberta Institute of Technology

Dr. Pablo Pina

TC Energy

Amit Saxena

TransAlta

Ron Zieber

Transition Accelerator

Dinara Millington

University of Alberta Future Energy Systems

University of Calgary Solar & Relectric Car Teams

University of Waterloo

Murdoch McKinnon

Vertex Resource Group

Lisa Dryden

Youth Climate Lab

Jasveen Brar



NAVIGATE 2023: YOUTH WATER & ENVIRONMENTAL LEADERSHIP SUMMIT

At Navigate 2023, participants were challenged to consider their role in water use and conservation by examining the connections between food, energy, the environment and water ecosystems. Considering water as an integral part of landscapes allowed for in-depth conversations and exploration of the environmental, social and economic issues related to water. Topics included water usage in energy production, species at risk, agriculture and irrigation and innovative solutions to water challenges.

The many hands-on learning opportunities were another highlight of Navigate 2023. Students had the opportunity to use water monitoring equipment with Living Lakes Canada and SAIT, and visit a long-term monitoring station in Kananaskis with Dr. John Pomeroy, as well as extract DNA from water samples with the University of Alberta. Technology was another important feature in the Summit program, with students exploring glaciers through VR with SAIT. Hands-on experiences provide participants with relevant tools and skills to take back with them to complete their school-based environmental action projects.

THEMES

- Water quality and quantity
- Watersheds and source water protection
- Water management and governance
- Water research - innovations to address upcoming challenges
- Aquatic ecosystems and cumulative effects
- Water and climate change





The Summit will definitely be one of my favourite moments from my whole high school career. Thank you for giving us the opportunity to meet so many great people and learn how I CAN impact the future of our country.



Destiny, Student @ St. Mary Catholic School, Westlock



IDEA GENERATORS

Alberta Geological Survey / Alberta Energy Regulator

Dr. Jessica Liggett

Alberta Innovates

Vicki Lightbown

Alberta Invasive Species Council

Paige Kuczumski

Alberta WaterPortal Society

Kaleigh Watson

Athabasca Watershed Council

Ashley Johnson

Bow River Irrigation District / Alberta Irrigation Districts Association

Richard Phillips

CNRL

Theo Paradis

Careers in Energy (Energy Safety Canada)

Lisa Pollio

ConocoPhillips Canada

Girls Talk Tech Team

Ducks Unlimited Canada

Jessica Needham

Future Energy Systems, University of Alberta

Dr. Valerie Miller

Alberta Environment and Protected Areas

Kate Rich, ADM

Alberta Environment and Protected Areas, Office of the Chief Scientist

Dr. Vanessa Swarbrick

Alberta Forestry, Parks and Tourism

Michael Wagner

GreenLearning Canada

Meghan Owen

InnoTech Alberta

Bonnie Drozdowski

International Union for Conservation of Nature - World Commission on Protected Areas

Erinn Drage

Keepers of the Water

Autumn EagleSpeaker

Living Lakes Canada

Camille LeBlanc, Emily Jerome, Trinda Cote

Northern Alberta Institute of Technology

Dr. Paolo Mussone

Nutrien

Mike Nemeth

Ontario Power Generation

Matthew Mairinger

Relay Education

Victoria Dickinson

Southern Alberta Institute of Technology

Dr. Pablo Pina, Dr. Pieter Aukes

Trout Unlimited Canada

Angela Ten

University of Alberta

Dr. Patrick Hanington, Ceilidh Welch

University of Lethbridge

David Hill

University of Saskatchewan

Dr. John Pomeroy, Terava Groff, Alex Cebulski

University of Waterloo

Murdoch McKinnon

Vertex Resource Group Ltd.

Lisa Dryden

WaterSMART Solutions

Kim Sturgess

Youth Climate Lab

Jasveen Brar



IMPACT

Inside Education uses a series of evaluation tools to assess the impact of our provincial youth summits. Pre- and post-Summit surveys were provided to all students and teachers to provide quantitative results. Qualitative impact was assessed through 'open letter' surveys at the conclusion of the Summit as well as the 20 student devised action plans that were developed through the program.

ACTION PLANS & PROJECTS

The ultimate outcome of Generate/Navigate is the action project where teams apply their Summit experiences into tangible school-based actions. These projects promote student leadership and active local engagement while extending the reach of the Summit beyond the teams of student and teacher participants.



The Gener8/Navig8 leadership conference was a great opportunity for the students of Medicine Hat High School. They were able to forge connections with others and to come out of their shells and grow as individuals.



Liam Gale, Teacher @Medicine Hat High School, Medicine Hat



PROJECT SAMPLES

PIIKANI NATION SECONDARY SCHOOL

Piikani Nation Secondary School is scaling up their substantial greenhouse infrastructure with significant energy upgrades - including heat budget upgrades and solar irrigation control.

HOLY REDEEMER CATHOLIC SCHOOL

Holy Redeemer Catholic High School, Edson is planning an outreach event for local Grade 4 students to share learnings from the Summit. This will include an Environmental Stewards slideshow and hands-on activities.

MISTASSINIY SCHOOL

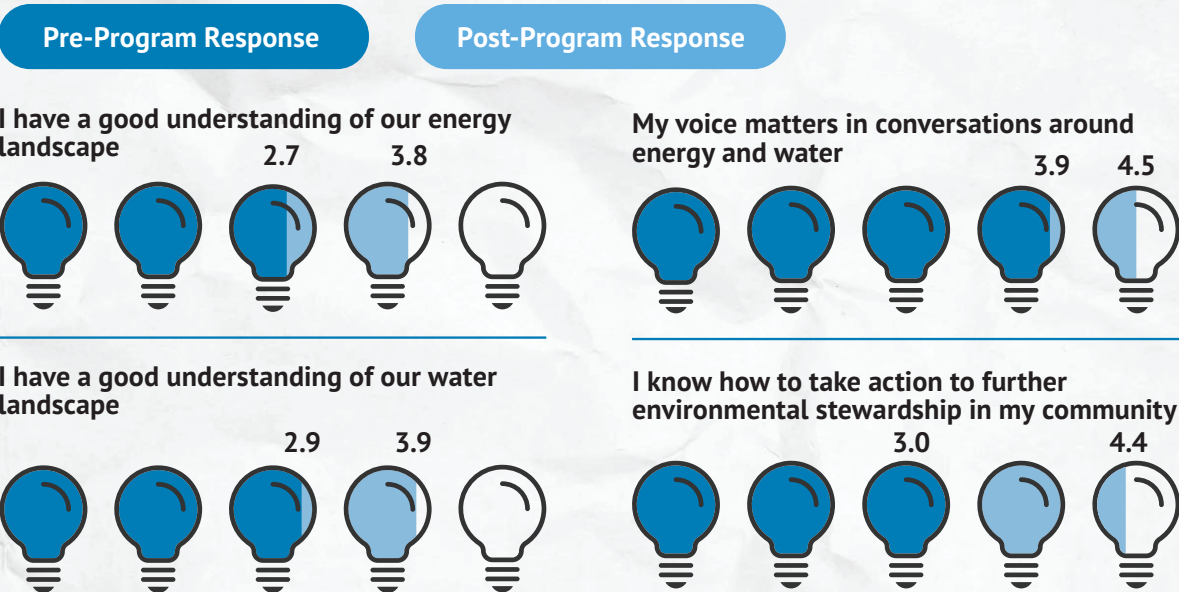
Mistassiniy School, Wabasca is creating a self-sustaining greenhouse and community garden for their new school. This will use rainwater to sustain the plants and solar energy to provide heat in the winter months.

HARRY COLLINGE HIGH SCHOOL

Harry Collinge High School, Hinton, will use 3D printers to explore renewable energy. Students will design their own blade and configuration for a model wind turbine. They will print their model blades using 3D printers and attach it to a generator, studying most efficient designs.

PROGRAM SURVEY RESULTS

Inside Education surveyed both the students and teachers before and after the program to determine overall understanding, topic engagement, and commitment to personal action. As this chart indicates, the Generate/Navigate Summit increased the participants' understanding of and engagement with energy and water in our province.



INSPIRING FUTURE GENERATIONS FULL CIRCLE IMPACT

Generate/Navigate 2023 was Inside Education's 12th in person provincial youth summit. This year's program clearly demonstrated the long term impact of these programs as there were **three Summit alumni** returning to the program as expert speakers! In addition, Inside Education's Mila Mezei, the Chair of the 2023 Generate Summit, was herself a Generate alumna from 2011.

It was exciting for this year's participants to discover how the Summit experience can shape future career directions and see such positive outcomes from previous Summits. We were thrilled to welcome back Jasveen Brar, Youth Climate Lab (Generate 2013 student), Murdoch McKinnon, UWaterloo (Navigate 2016 student) and Trina Clarke, Flint Corp. (Generate 2011 teacher).

“ I am so thankful for this opportunity! I have learned so much through all the speakers and hands-on projects that we have done. My favourite moments are learning about solar and wind power, and I hope to bring those ideas back to our school to create a more environmentally friendly planet.”

Justin, Student @ Brooks Composite High School, Brooks



OUR PARTNERS

Inside Education extends its appreciation to our program partners whose support made Generate/Navigate 2023 possible. By pairing each participating school with one of our partnering organizations, Inside Education aims to inspire a meaningful connection and encourage collaboration between schools and organizations who are committed to advancing energy, climate and water education in Alberta.



NEXT STEPS

Inside Education is eagerly anticipating seeing the school action plans come to fruition and supporting schools as they continue to share their knowledge, ideas, and experience. Our experiences at Generate/Navigate 2023 clearly illustrate that energy, climate and water are important areas of interest for young people.

We are already in the planning stages for our next provincial scale summit - Regenerate - Youth Forest and Wildlife Summit slated for March 2024.





Thank you for the amazing Summit. This gave our students the opportunity to expand their knowledge of energy and water in Alberta. I saw our students get out of their comfort zones, try new things, and be courageous.



Karyn Booy, Teacher @ O'Chiese First Nation School





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