A+ for Energy Professional Development Program
Energy Education Teacher Workshop Summary

Q. What are the biggest achievements in energy education for you, your school and community over the past few years?

- Community building through collaboration and idea sharing through networking with industry and other educators
- Cochrane High School was intricately involved in drafting Cochrane's Renewable Energy Framework to cover the installation and deployment of geothermal, wind and solar within Cochrane
- Me = This tour! Developing a deeper understanding of the interconnectedness of everything!
- Generate Youth Energy Summit (*Inside Education,* March 2023)
    - Collaboration with other teachers, schools, and students was invaluable. Many students are still collaborating with students from other schools they met at the summit.
- Successes at our school(s)
    - EV charger at school
    - Motion controlled lighting
    - Energy generating stationary bikes
    - Solar installations (PV and solar thermal hot water)
    - Taking pride in our community greenhouse, grow boxes, aquaponics
    - Envirothon
    - Awards (Emerald Award 2023)
- Personally
    - Solar panels at home
    - Bought an EV
    - A realization that it's not 'black and white' - there are opportunities oil and gas AND renewables

Q. In what ways can Inside Education support you in the coming year?

- Come celebrate our A+ for Energy project and have a student brainstorm session re: how that impact can be magnified.
- Connect us with other teachers to share ideas and collaborate with
- Interactive presentations and linking us with local experts
- Provide a list of networks/people willing to talk to my class (in person or Zoom) about the energy sector [many instances of this]
- Keep us accountable 🙂
- Connect us with experts who can help us with our projects

Q. How will you celebrate the success of your A+ for Energy Project?

- Social media/public school showcases
- School events/galas/assemblies/science fairs
- Connections with the School District newsletter and school council meetings
- Reaching out to local media outlets for coverage of school projects/events

- Share with faculty within the school and across our catchment area. Create a session at teacher's conference/convention.
- Develop an audio/video podcast with students (similar to *Science Us!* podcast)
- Sharing food grown (through the aquaponics project) at the school and beyond

Q. What challenges do you foresee implementing energy education at your school?

- **TIME!!**
- Communicating what I now know in a meaningful way
- Starting simple but being open to scaling up
- Visits/tours are the most inspiring. How will we bring the same level of inspiration to the classroom?
- Overwhelmed with new Grades 4-6 curriculum + school shifting to STEM focus (challenge is other considering STEM as an 'extra', not a mindset
- Getting other teachers to collaborate and 'buy in'
- Pushback from administration and school district
- Parental support for renewable energy in all economic and political areas of the province
- The high school curriculum is not responsive to a new energy landscape
- Many individual student projects on the go simultaneously
- Money budgeting

Note any possible solutions to the above:

- Actually check the curriculum - sometimes we 'over teach' without realizing it. This can free up time!
- Collaborate to make projects cross-curricular if at all possible
- Plan ahead - everything takes longer than you think! Pace yourself and delegate tasks to to others that are capable
- Make sure to give students enough info at the beginning to keep them inspired and engaged
- Make realistic timelines with specific deadlines, dates, and tasks; prioritizing tasks
- Reach out to organizations, apply for grants, and don't be afraid to ask!

Q. How will you leverage advancing energy education opportunities in your school and community to support your A+ Project? (if possible, be specific!)

- Bringing in/Partnering with experts who have been involved with major projects in the community
- Invite guest speakers to discuss real-world solutions
- Compare our solar use to a household impact or even a village like Stirling
- Bringing in parent/community support to assist in anyway possible
- Highlight learning at school events/assemblies and on social media to bring attention to projects and gain further support
- Find local community partners who want to partner with students/schools
    - Local restaurants for vegetable oil
    - Local contractors / builders for building resources

Q. What are your recommended energy materials/resources/field trips/project funding ideas that can support your project?

Inside Education 🙂

Field Trip to the Passive Solar Greenhouse	Field Trip
Global Energy Show	Field Trip
Alberta Emerald Foundation	Funding/Grants
Grant Writing	Funding/Grants
Local Support	Funding/Grants
Bottle Drives and other local ideas	Funding/Grants
APEGA Innovation in Education Awards	Funding/Grants
Learning for a Sustainable Future (LSF)	Funding/Grants
Callysto - Bring Data Science into Your Classroom!	Funding/Grants
Fortis Alberta	Funding/Grants
Best Buy School Tech Grants	Funding/Grants
Alberta Council for Enviornmental Education (ACEE) - A variety of grants for a variety of purposes and age levels	Funding/Grants
CanCODE - Government of Canada: Promoting innovation in science and economic development in Canada	Funding/Grants
Youth STEM – Canadian Government Grants for Developing the Next Generation of Innovators	Funding/Grants
Chevron Canada - Complex large scale grant proposal	Funding/Grants
Lockheed Martin - Promoting STEM Education	Funding/Grants
TD Friends of the Environment Foundation Grant - Funds Environmental projects across Canada	Funding/Grants
Alberta Ecotrust - Education Grants	Funding/Grants
Grants Availalable for STEM	Funding/Grants
Building materials	Materials/Resources
Power Readers / Measuring tool	Materials/Resources
Links to new elementary (Grade 6) science curriculum	Materials/Resources
List of places to find solar panels / solar heaters	Materials/Resources
Ali-Express	Materials/Resources
Princess Auto	Materials/Resources
Science Fair Materials	Materials/Resources
Dustin Bajer - Bees, aquaponics, composting	Misc Projects
Network of people that have experience putting together environmental projects	Networking
Connect with APEGA - connect with engineers and **Elders** to discuss impacts on Indigenous communities	Networking

Skills Alberta	Networking/Careers
Prototype! Start off small and go bigger afterwards!	Project Misc.
MyHeat Map - Edmonton, St. Albert & Airdrie only - Satellite (infrared) imagery showing heat loss from buildings	Simulations
KCVS Climate Simulator	Simulations
Alberta Tomorrow Simulator	Simulations
Canada Tomorrow Simulator	Simulations
AESO Live Electricity Data	Simulations
Careers in Energy VR - can order a class set of VR headsets at no cost!	Simulations
Join ATA Science Council and attend the conference in November!	Support Misc.
Tech support (i.e. projector, etc.)	Support Misc.
Microbits - InkSmith for microbit help	Technology
Makey Makey	Technology
Lego Robotics	Technology
Ozbots	Technology
Pedal Generators	Technology
Future Energy Systems - Canadian Renewable Energy Project map - can see projects that are operational and under construction (solar, wind, biomass, hydro)	Technology