

Advancing environmental, energy, and climate change education:

A Call to Action

October 2020



ACEE Alberta Council for
Environmental Education

ADVANCING ENVIRONMENTAL EDUCATION IN ALBERTA

Today's discussion

- We have a problem
- We have some solutions
- We've got a plan
- We seek your advice
- Can you help?

We have a problem

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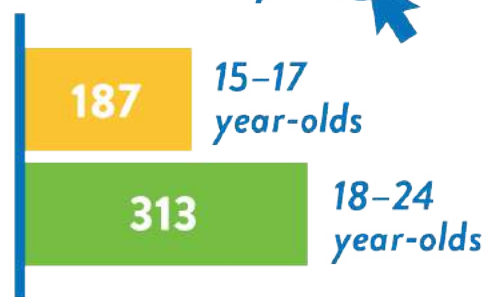
Exploring youth knowledge and attitudes in relation to environment, energy, and climate

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How we collected our evidence

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Online Surveys



one-hour
workshops

14

172

students in
grades 4-12

in **nine**
communities
across
Alberta



By the numbers

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We polled 500 Alberta youth in 2020, and our findings are clear: the majority of youth in Alberta are *concerned about climate change* but feel they lack the knowledge and ability to do anything about it.

9 in 10 youth
have a moderate to extreme
level of concern when
considering the environment
and climate change



70% of high school students
are worried about their
future as a result of
climate change

Feelings of Hopelessness

Energy literacy is low: for example,
only **2 in 10** youth
are aware that hydro-electric
generation is the main source of
electricity in the rest of Canada

When it comes to protecting
the environment, the top
barriers cited by youth include
**“I don’t know
what to do”**

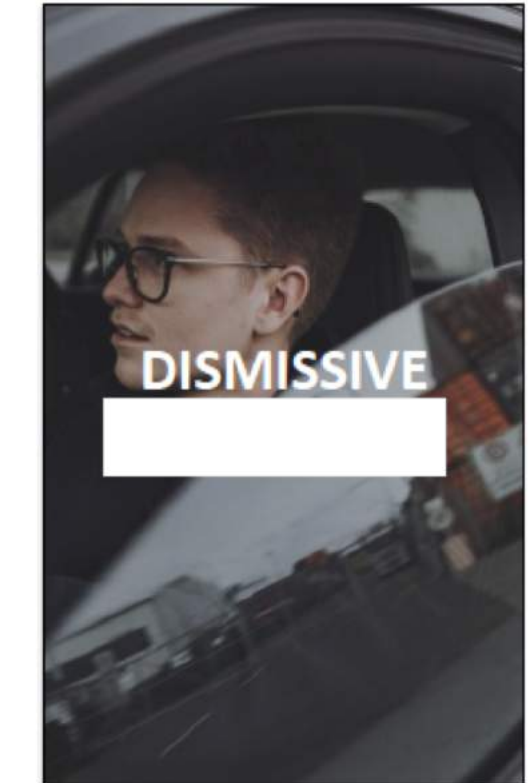
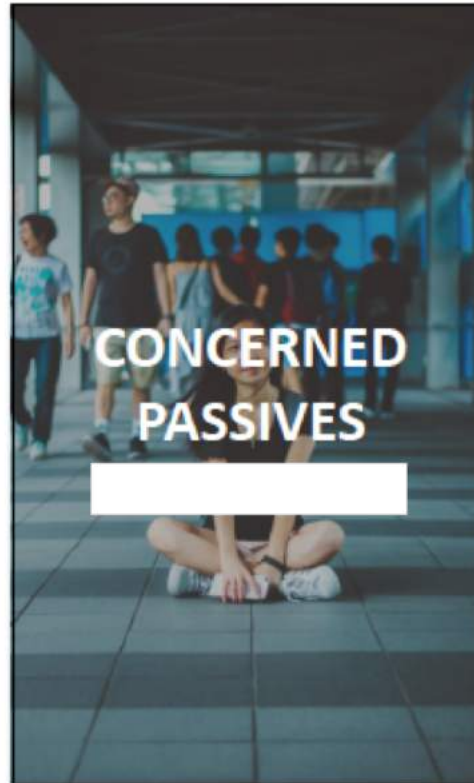
Over
two thirds
of youth

agree that educating students
about climate change should
be a high priority in schools.

Segmentation of Alberta youth by Leger



Highest belief in climate change
Most concerned
Most motivated



Lowest belief in climate change
Least concerned
Least motivated



What % of youth do you feel fall into each category?

Does this surprise you?



Highest belief in climate change
Most concerned
Most motivated



Lowest belief in climate change
Least concerned
Least motivated

What we heard

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Focus group results: what stands out for you in the next few slides?

Students in Alberta are struggling with key climate change concepts. Through focus groups, we spoke to 172 students in grades 4-12 from nine locations across Alberta and they had:

- Poor understanding of our energy system, especially energy sources, energy production, the relationship between fossil fuel use and climate change, and energy solutions.
- A desire to learn about the nitty-gritty of energy production, how climate change will impact them, and what they can do to make things better.
- Only a vague understanding of terms like “environment” and “pollution,” which seemed to mean everything and nothing to them at the same time.
- Concern about the loss of farmland, warmer winters and more unpredictable temperatures.

“... I want to learn about the engineering side, like what new technologies will we build to really stop it, or something like that. Like the small things are important but like the really big engineering things that will really make a difference.”
(Grade 11 student)

“I don't know much about climate. I don't know much about global warming. I don't know why... I'd like to learn more about that.” (Grade 7 student)

Students have drastically different experiences when it comes to acceptance of 'green' perspectives.

Some think Alberta is great because you have the freedom to voice different opinions, while others experience a very divided, politicized adult culture that is hostile towards people with green views. Students in Sherwood Park, for example, felt that having green opinions would put them in difficult situations.

“Literally anytime I go to a family reunion... all of my family is very conservative and I can't say a word. I would get in so much trouble...” (Grade 10-12 student)

“... like kids our age are trying to reduce our carbon footprint because of adults and adults before that sort of. Like they, they made the earth polluted and then like they’re relying on us to fix it. So this is the school strike and everything. It’s just to get the adults to have to help us cause you did this too.”

(Grade 7/8 student)

“I get worried about climate change on what the future will be... Like also with most of my family being farmers... the weather’s being messed up a lot, not a lot of my family has gotten their crops off the ground yet or my family’s friends. So like different livelihoods are being destroyed and stuff.”

(Grade 7 student)

Students are concerned about nature, wildlife, and their own future. Students across all age groups feel that the responsibility to fix the problem has fallen on them, and that other key actors such as governments are not playing their part.

We have a problem

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When it comes to teaching students how to balance the complexities of stewarding nature, meeting energy demand, reducing greenhouse gases, and creating prosperity—our K-12 education system gets a failing grade.

This year the Alberta Council for Environmental Education conducted youth polling and focus groups. We found that students have low levels of environmental and climate literacy, construct false and sometimes apocalyptic narratives to fill the knowledge vacuum, and experience high levels of eco-anxiety and fatalism about their future.

*We are very troubled by what we've found, and we will **present and share the evidence** we have gathered and **propose a path forward**. We invite education leaders and parents to support students with better education and opportunities to take well-informed action, as we give them the best gift possible: hope for the future.*

We have a big problem in Alberta: our young people lack environmental literacy, knowledge about climate, and hope for the future.

We have a problem

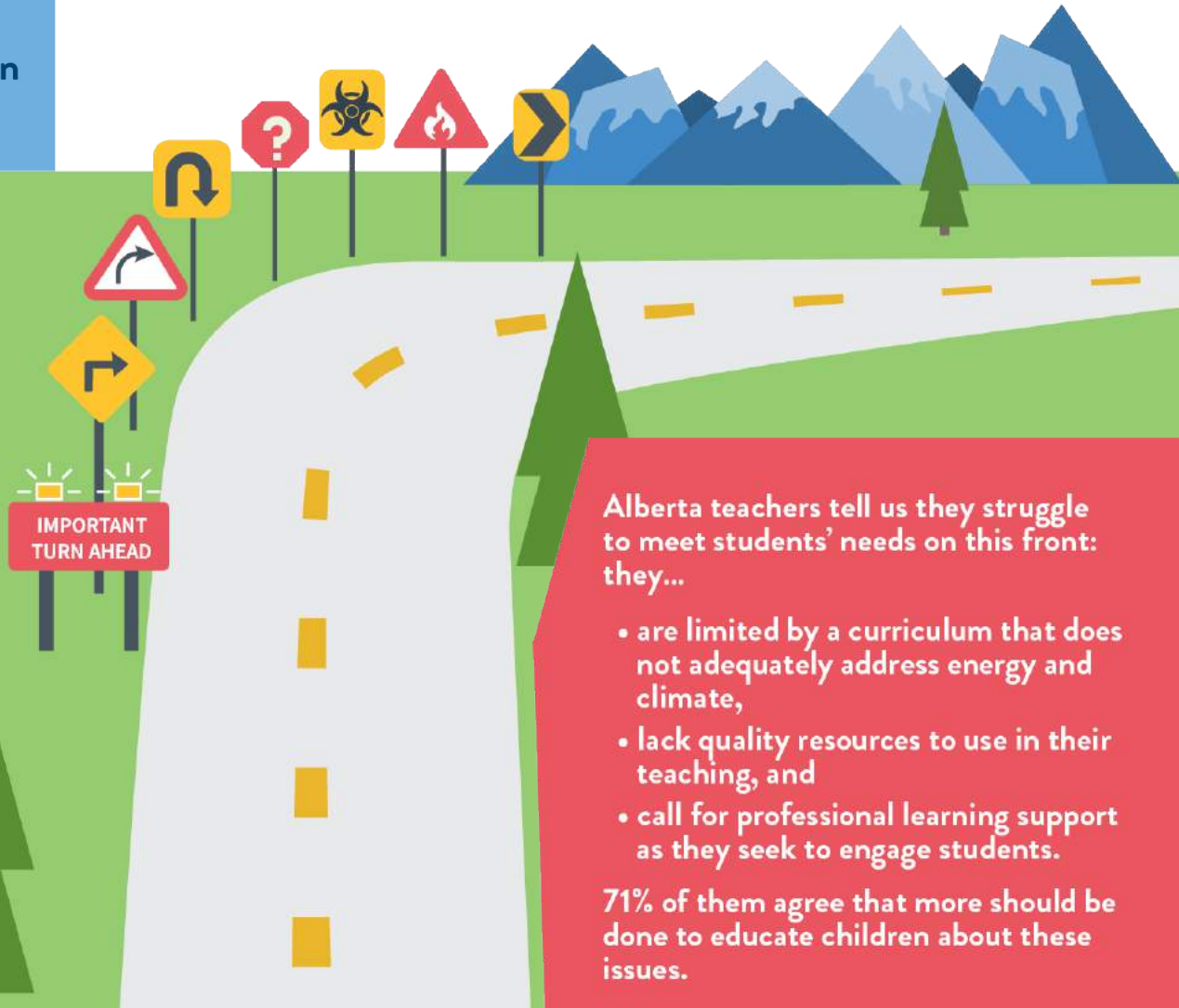
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We have a problem

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Alberta teachers tell us they struggle to meet students' needs on this front: they...

- are limited by a curriculum that does not adequately address energy and climate,
- lack quality resources to use in their teaching, and
- call for professional learning support as they seek to engage students.

71% of them agree that more should be done to educate children about these issues.

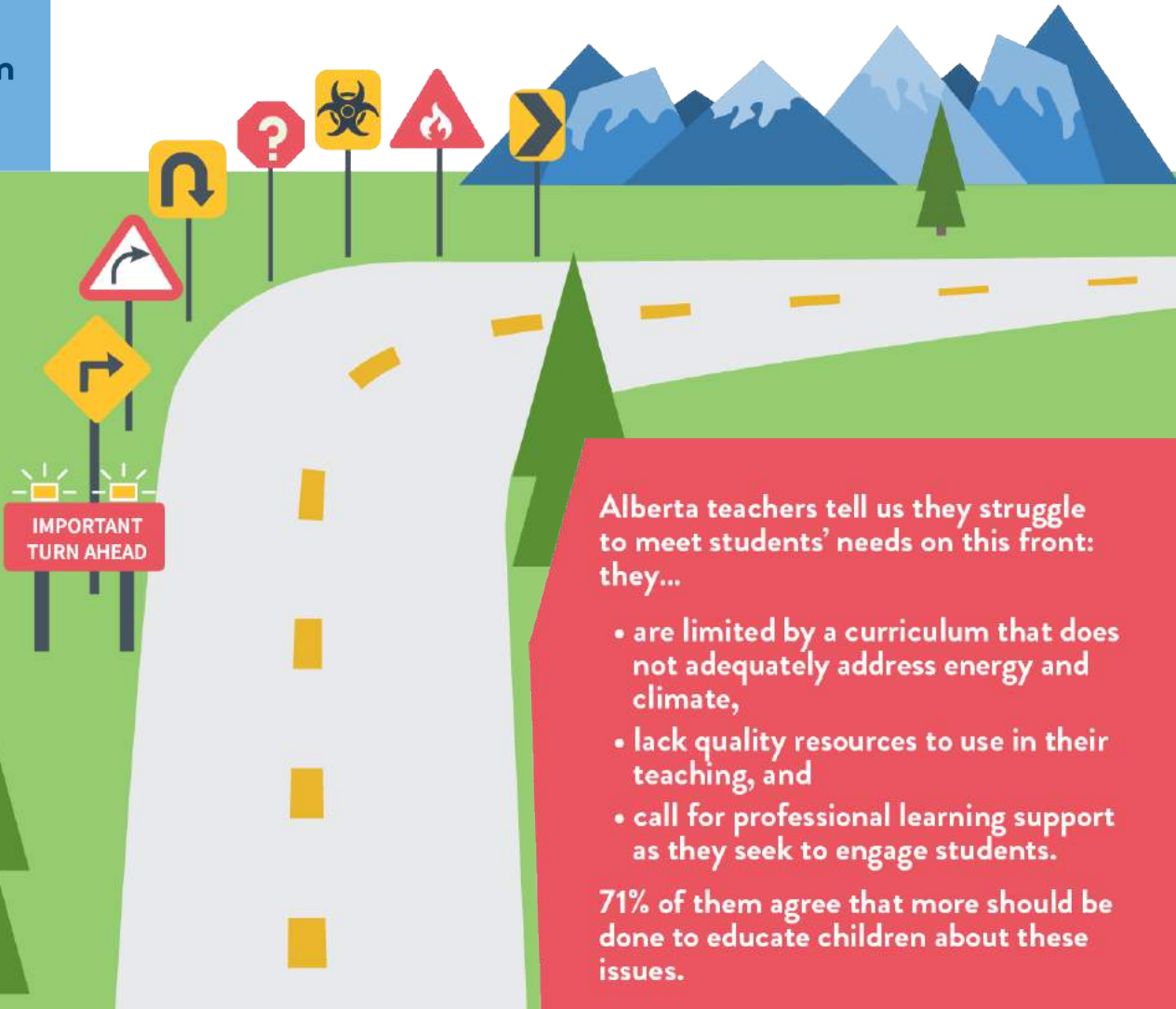


We have a problem

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Students feel helpless, abandoned and unsure of what to do in the face of predictions of catastrophic climate change they are being exposed to through social media, the news, and other youth.



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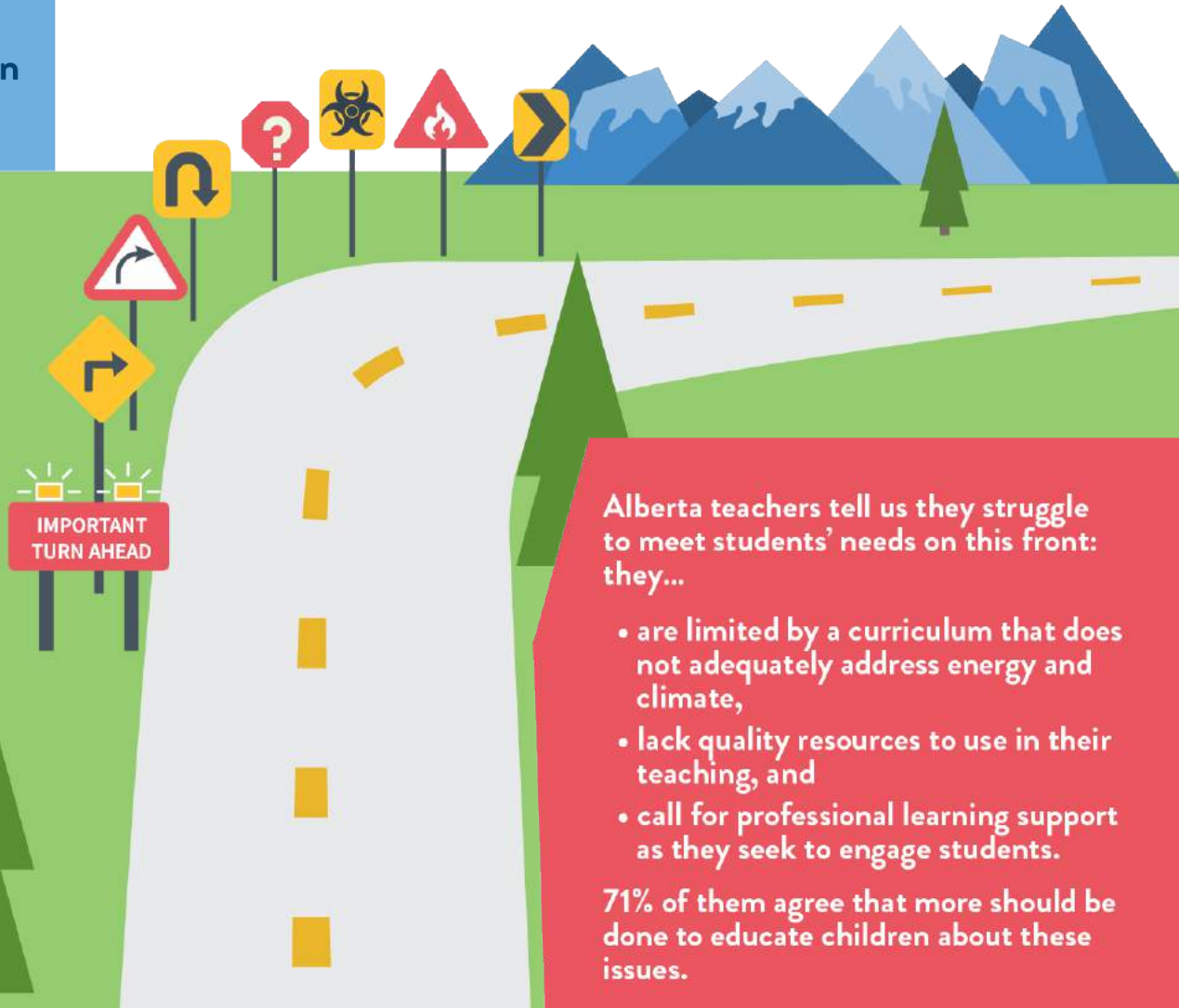
Advancing environmental, energy, and climate education

A call to Action

Students feel helpless, abandoned and unsure of what to do in the face of predictions of catastrophic climate change they are being exposed to through social media, the news, and other youth.

“I believe that currently in schools, there is not enough discussion about the environment, energy and climate change in classroom environments.”

Naima Hassan, Queen Elizabeth High School



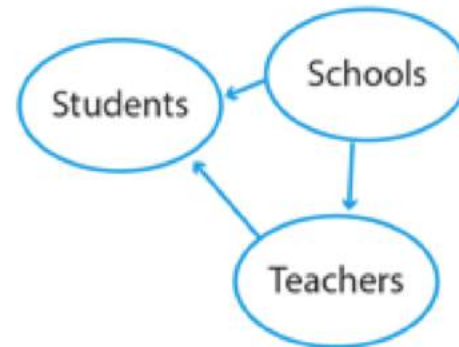
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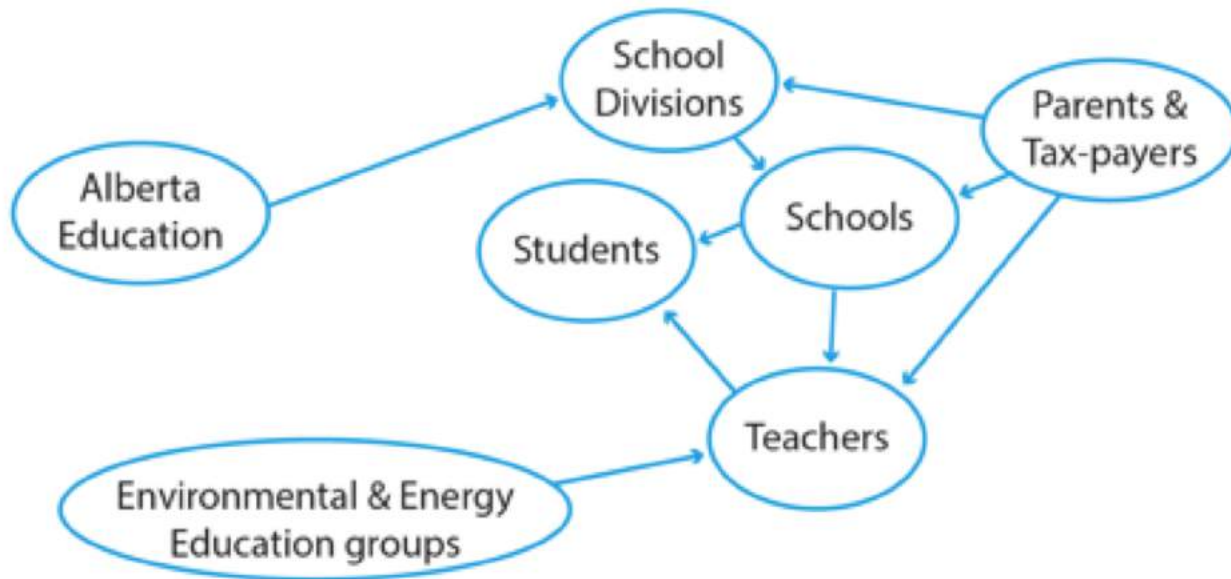
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What we plan to do about it....

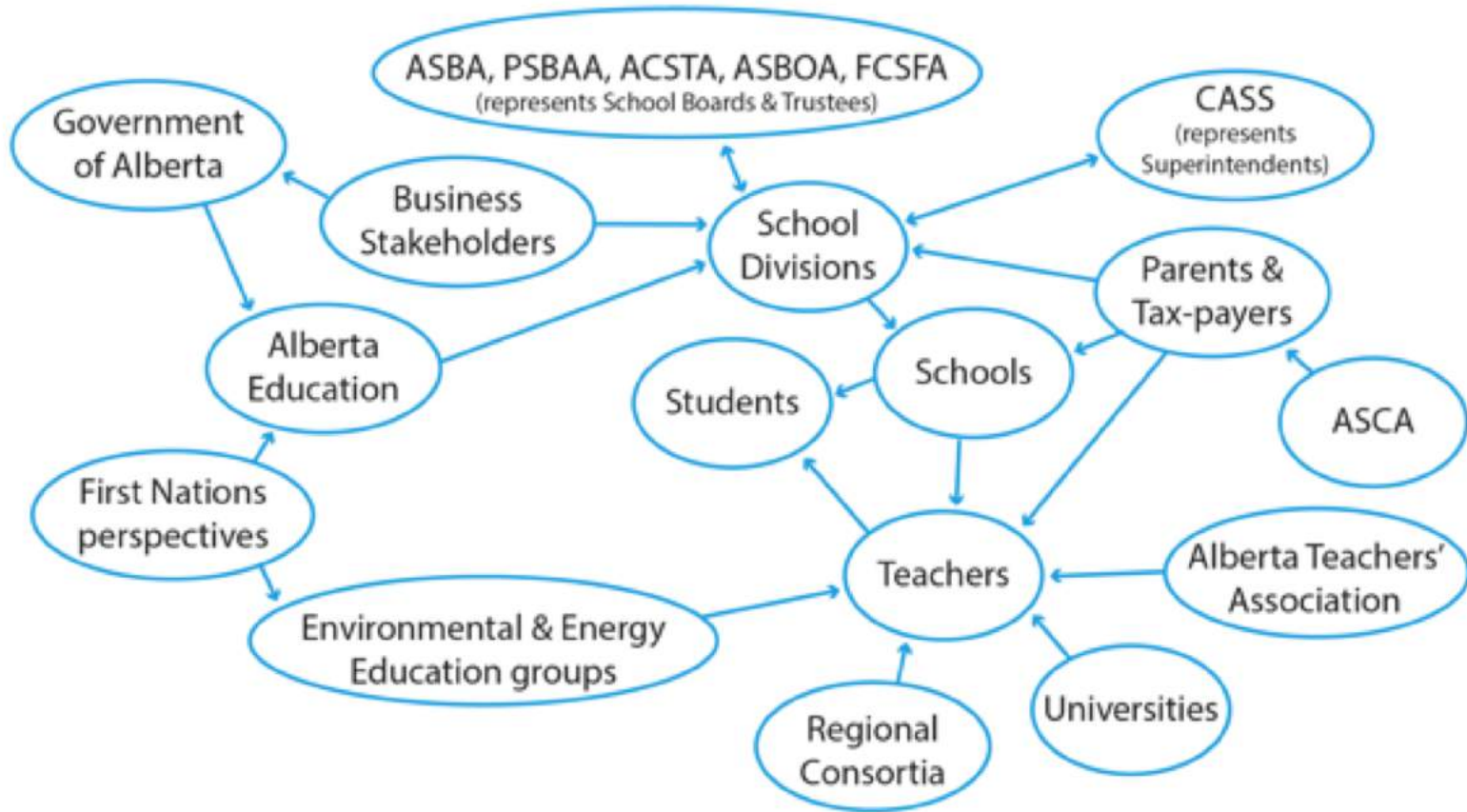
The K-12 education system in Alberta



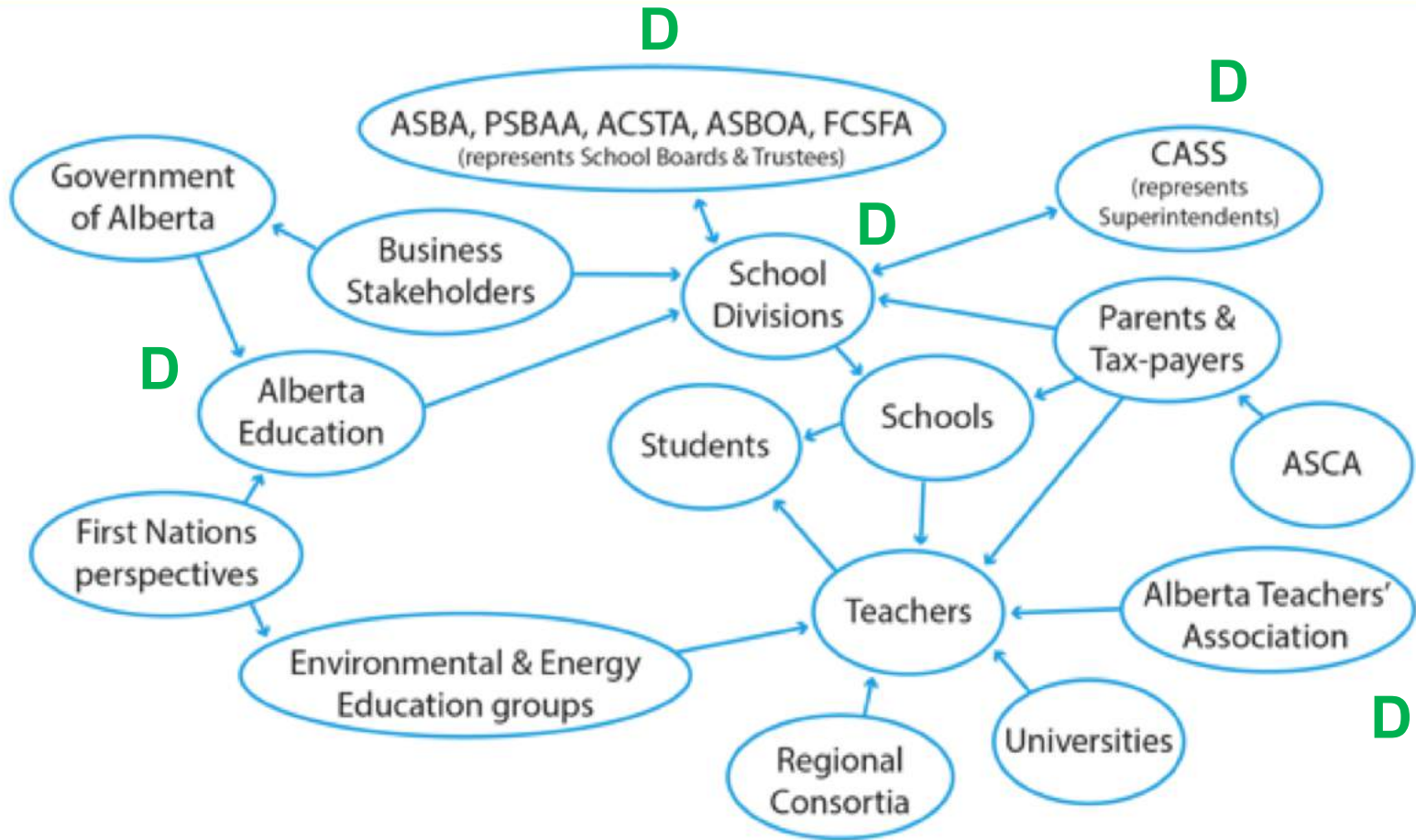
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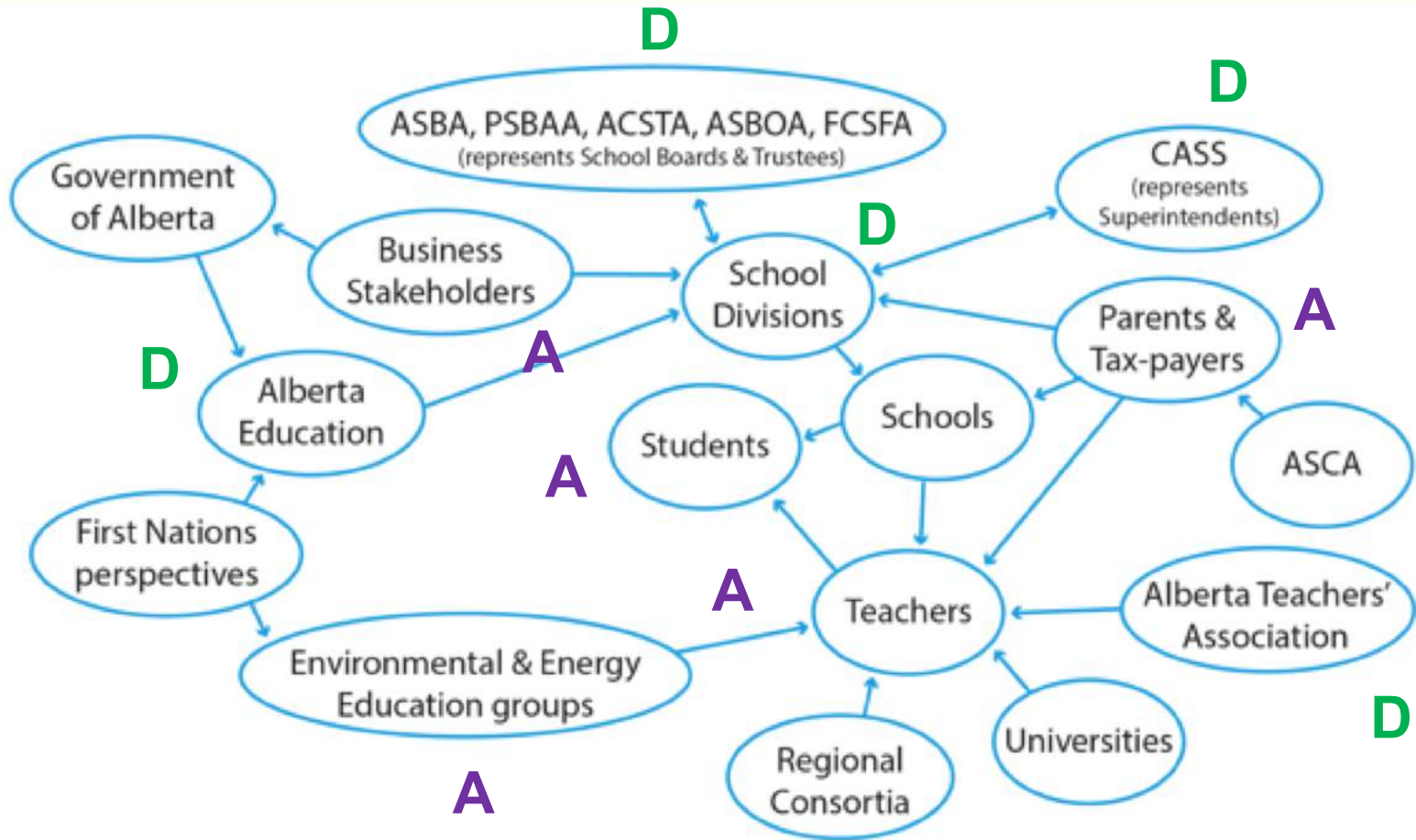


The complete system - leverage points



D = Decision-makers

The complete system - leverage points



D = Decision-makers
A = Allies

Our ask of education leaders....

- Together, we can solve this problem.
- Alberta students deserve more environmental education, helping them prepare for the future that they will inhabit, the jobs they'll create, and the society they'll build.
- By empowering students to become active citizens, environmental education gives them hope for the future.
- On behalf of Alberta's almost 750,000 K-12 students, we call upon Alberta's education leaders to create or enhance policies and plans that give students more environmental education...

We ask the Alberta government to...

- **Strengthen** the Alberta curriculum by incorporating the community's recommendations, captured in the Curriculum for a Sustainable Future
- **Support and fund** more relevant professional learning for practicing and pre-service teachers, helping them learn to foster students' sense of place and wellness through outdoor education, access quality resources offered by community education groups, and help students engage with controversial issues
- **Help** school boards implement more cost-saving energy efficiency and renewable energy solutions in schools - and link these to student learning

We ask the Alberta Teachers' Association to...

- **Enhance** relevant teacher professional learning, helping them better connect their curriculum to topics and controversial issues in the environment/energy/climate space, foster students' sense of place and wellness through outdoor education, access quality resources offered by community education groups, and support student action projects

We ask school board trustees and superintendents to 'take the next step' ...

- **Recognize and celebrate** best practices in this area by schools, teachers, and students
- **Promote and enhance** outdoor education, helping foster students' wellness and connection to community – and keeping them healthy during COVID-19
- **Emphasize** relevant teacher professional learning, as described above
- **Implement** more cost-saving energy efficiency and renewable energy solutions in schools - and link these to student learning
- **Create** student advisory groups to engage youth voice

Some tools to support this work

Some tools to support this work

- Recommendations from the community: “What should Alberta students learn about environment, energy, and climate?”

Curriculum for a Sustainable Future:



A proposal to increase environmental and energy literacy in Alberta students

As revised by the Secretariat
January 2020

Some tools to support this work

SUPPORTING LEADERSHIP IN ENVIRONMENTAL, ENERGY, AND CLIMATE EDUCATION IN ALBERTA SCHOOLS

Recommendations by Students for Alberta's Educational Leaders

September 2020



Some tools to support this work



ROADMAP TO Excellent Climate Change Education

Insights from the Alberta Council for Environmental Education

In late 2019 we spoke with more than 170 students from nine communities across Alberta and in early 2020 we conducted province-wide polling of over 500 Alberta youth ages 15 to 24. For today's students, climate change is not controversial; in fact, the vast majority agree that it should be taught in school and should be a high priority for grades 4-12. For Alberta youth, teachers are one of the most trusted sources of information about climate change.¹ When students are not taught about environment, energy and climate change, they construct their own meanings, which are commonly incorrect - and can create feelings of confusion and anxiety.² Here are six things we can all do on the 'road' to excellent climate change education!

"I think that's the problem, is that we don't know how we can help. And then everybody keeps putting it on us like "All right, figure it out". But we don't know how to figure it out because we haven't found that out yet."
(Grade 10, rural student)



- 1 Approach with empathy and curiosity**
- Acknowledge and accommodate anxiety. Avoid fear and blame.
 - Frame climate action as part of a positive, respectful narrative connected to our shared identity and pride in Alberta, and helping create the future kids want.
 - Empathize with your students' concerns. Listen to them!
 - Approach learning as a shared exploration, recognizing that, as educators, we aren't climate experts.
 - Remember that youth don't all feel the same about climate change. In Alberta, youth fall into three subgroups: Alarmed (55%), Concerned Passives (35%) and Dismissive (10%).

- 4 Develop critical thinking and problem-solving skills**
- Teach HOW to think, not what to think.
 - Create hands-on action projects that develop skills, inspired by student interests.
 - Consider different perspectives and weigh the relevant evidence.
 - Practice interdisciplinary, systems-level, and creative thinking.
 - Connect with experts and approaches that help students explore future career paths.

- 6 Inspire others to action**
- Evaluate and assess programs, teaching and action projects to demonstrate learning and impact.
 - Share successes to inspire others to action!

- 2 Connect to nature and place**
- Build a foundation of love and respect for nature by spending time outdoors and providing positive experiences in nature, which also benefit mental health.
 - Help students understand that we are part of nature.
 - Emphasize connectedness and interdependence with our environment.
 - Make learning local and relevant, to foster a sense of place.

Focus on 'Us, Here and Now' NOT 'Them, There and Then'

- 3 Build literacy of environment, energy and climate**
- Teach fundamental concepts, creating a deeper understanding of key concepts.
 - Use consistent language for better understanding of the differences between pollution, climate change, environment, and waste.
 - Use real data³ to ensure student learning is evidence-based.⁴
 - Explore both the scientific and social dimensions of climate change.

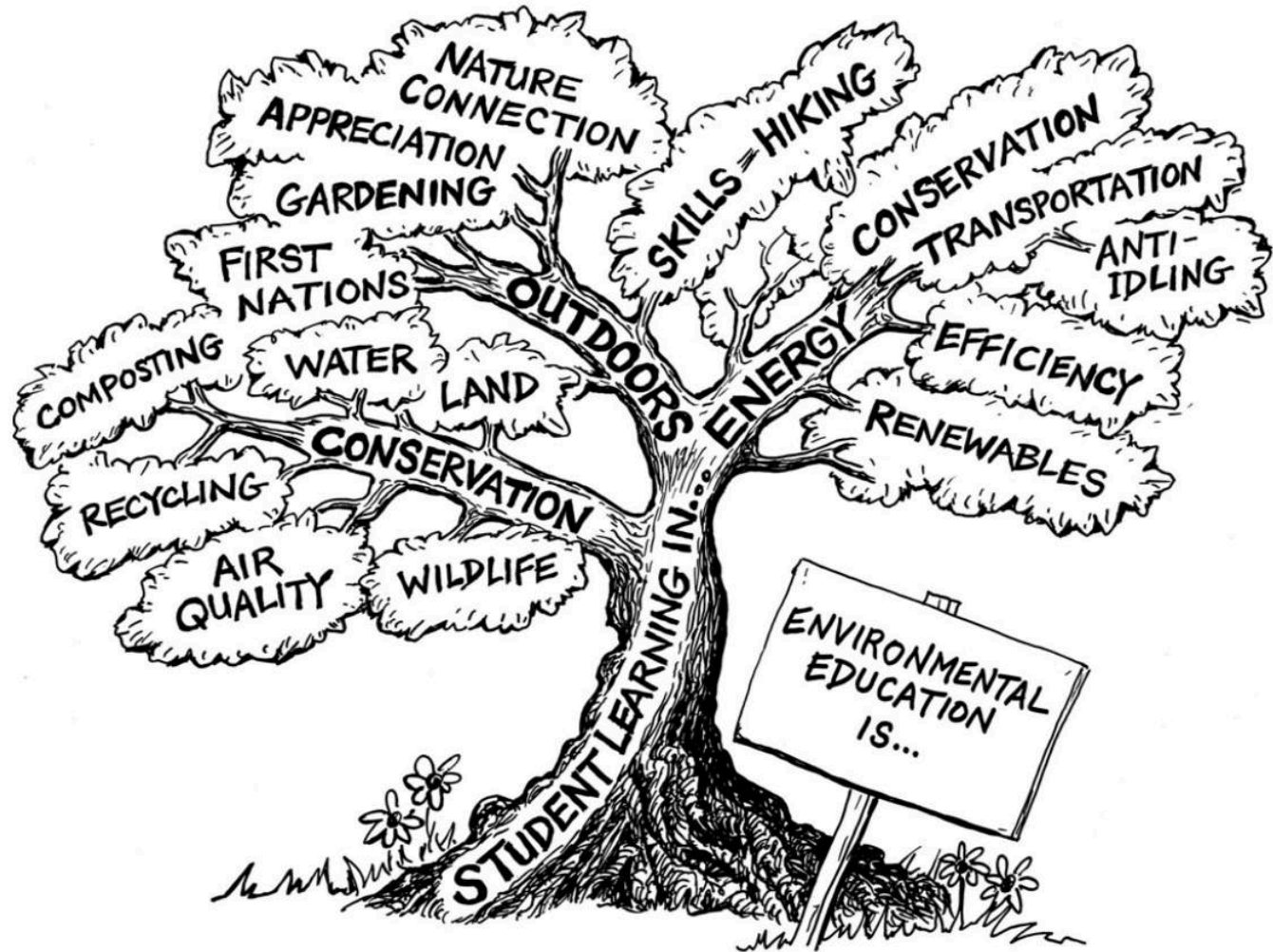
- 5 Create hope and agency by helping students be part of the solution**
- Spend more time in the 'solution space' than the 'problem space'.
 - Connect to real-world (e.g. municipal) action plans and strategies. Begin with climate actions that will have the greatest impact: Energy efficient buildings, Low carbon transportation, Fueled by renewables. Responsible individual and collective choices.
 - Help students imagine, prepare for, and explore to help create their sustainable future.

"Heading into an uncertain future, it is imperative that youth fully grasp the situation in front of them and have the skill required to prepare adequate solutions"
-Naima Hassan, High School Student.



To help you, we curate some great climate education resources from many sources and organizations:
<https://www.abcee.org/climate-education>
Alberta Youth Leaders for Environment and Energy Education (AYLEE)
<https://www.abcee.org/youth-led-100commmissions>

Environmental education curriculum links



Some encouraging developments by Education Leaders...

"BE IT RESOLVED... That the Alberta School Boards Association (ASBA) supports sustainable development... **all Alberta students must be provided access to an environmental education.**"

- ASBA Resolution, passed in 2016

"BE IT RESOLVED that the Association accept the scientific consensus that anthropogenic climate change is a real and critical challenge.. and supports the **inclusion of curriculum that explicitly addresses issues relating to anthropogenic climate change** in a manner that is subject and age appropriate."

- Resolutions 3-13 and 3-14, passed by the Alberta Teachers' Association in 2020

Some encouraging developments by Education Leaders...

“Students will demonstrate an understanding of economic development and entrepreneurship, and will recognize the responsibility we share for environmental stewardship and sustainability.”

- 2020 Ministerial Order on Student Learning, Government of Alberta

Our Plan

This month: Meet with the Minister of Education and senior staff; AND engage with our community (EFL and environmental education groups) – advice, and assist with campaign

Nov 5th - Media release: “Problem!”

Nov 17th - OpEd with youth and/or influencer

Nov 26th - Virtual gathering for media and education leaders – secure commitments

Dec and into 2021: Engage. Follow up. Support.

Can you help? We ask that YOU consider doing any or all of the following (DRAFT)

- Grab and use our 'Call to Action' slide deck and pdf file (will contain all the images shown here, and more)...
- Share this information with your colleagues
- Share this information with your audiences (parents!)
- Circulate our petition
- Share this information with your MLA – then make the ask of government, ask him/her to contact the Education Minister
- Share this information with your local school trustee (school board/superintendent/principal) – then make the ask of your local school board

Thanks!

- To you for attending – and for considering action!
- To our funders

