

Canadians' **Perspectives on** Climate Change & **Education BC Knowledge Mobilization** Session Post Session Report



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Welcome to our Knowledge Mobilization Session!

"Mobilizing research into action is important, complex, and there is a major need for more effective knowledge mobilization within and beyond education."

Quote and information below from:
The Sustainability and Education Policy Network (SEPN)
https://sepn.ca/knowledge-mobilization/

- Knowledge mobilization (KM) research into action is important, complex, and there is a major need for more effective KM within and beyond education.
- KM is more about engagement and learning, than dissemination and transfer
- KM reflects the concerns, interests, and needs of all audiences

We are happy that you could join us!

"Education is a critical agent in addressing the issue of climate change."

United Nations

Purpose of the Survey

The purpose of LSF's survey Canadians'

Perspectives on Climate Change & Education: 2022

was to assess Canadians' knowledge,
understanding and perceptions of climate change
and its risks, and to explore views on climate
change education, in order to provide
recommendations to move Canada toward
resiliency and adaptability for climate impacts
today and in the future.

AGENDA



Survey Background and Methods



Key Survey Findings

- Knowledge
- Impacts and Actions
- Role of Education



Next Steps

Survey Results: Reports and Infographics

www.LSF-LST.ca/research-policy/survey/

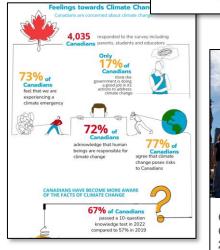
The highlights of the results for this presentation on Canadians' Perspectives on Climate Change & Education: 2022

were obtained from the following sources:

- British Columbia Provincial Report
- **Executive Summary**
- Infographics
- **Full National Report**

Canadians' Perspectives on Climate Change & Education: 2022 **British Columbia Provincial Report**





Canadians' Perspectives on **Climate Change & Education: 2022 Executive Summary**









Survey Background

Why Conduct this Survey?

 There are a number of surveys on Canadian perspectives on climate change but few on Canadian perspectives on climate change education

Survey Participant Groups

- The survey aimed to understand the views from across all regions of Canada from four groups:
 - general public
 - parents
 - students (7-12/cégep)
 - o educators (K-12/cégep teachers, P/VPs, curriculum leads, etc.)

Survey Composition

- Contained questions from the original 2019 survey (conducted by LSF, Leger & Lakehead University) for comparison purposes
- Added new questions on current, salient issues related to climate change:
 - mental health
 - Indigenous knowledge
 - impacts of COVID-19
 - youth engagement

Survey Methods

Data Collection and Analysis

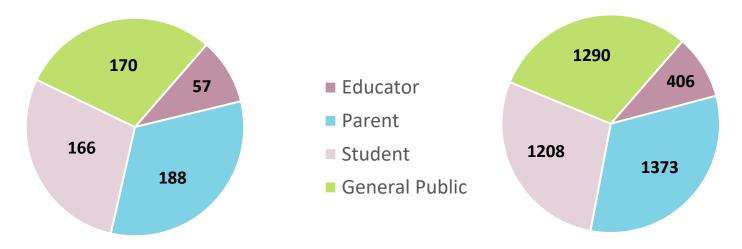
- Leger provided data collection using their online survey panel.
 - A total of 4,035 Canadians responded, which provided a robust sample size on which to base the national reporting.
 - This was a significant increase from 2019 (2,191 respondents), with better representation from all regions across Canada.
- In addition, 2,461 open-link responses were collected by LSF with support from numerous partners.
 - The data from the open-link 'educator' respondent groups in MB, SK and ATL was utilized in the provincial reports, due to insufficient sample sizes from Leger-panel educator data.

Survey Methods

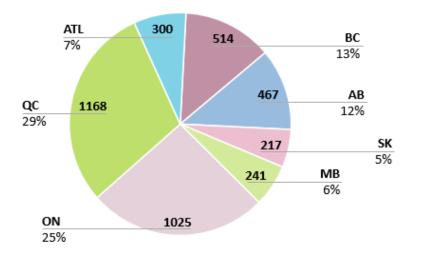
Demographics

British Columbia Respondent Groups

National Respondent Groups



National Respondents by Province/Region

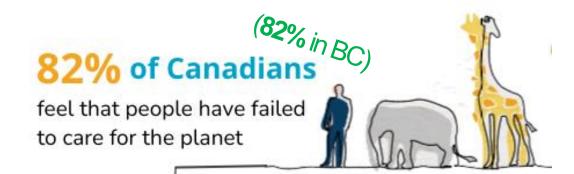


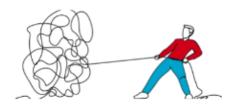


Overall, the great majority (81%) of Canadians (79% in BC) are certain that climate change is happening, and they are concerned:

73% of (77% in BC)

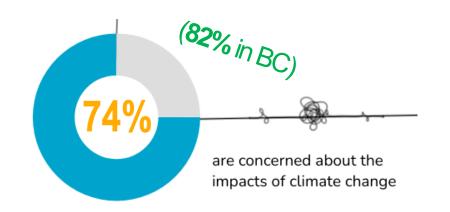
feel that we are experiencing a climate emergency





(79% in BC) 77% of Canadians agree that climate change poses risks

to Canadians



Key Survey Findings

- Knowledge
- ▶ Impacts
- Actions

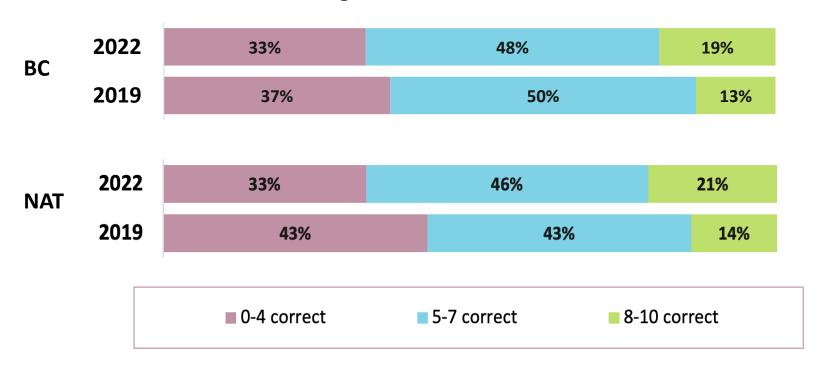


Canadians are becoming more knowledgeable about climate change

Based on the ten-question knowledge quiz in the survey:

67% in BC passed in 2022 vs 63% in 2019

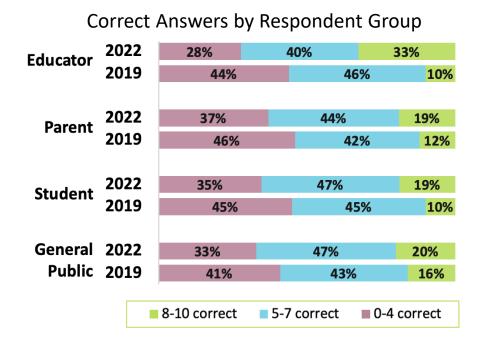
Total Correct Knowledge Questions 2022 vs 2019



Respondents' knowledge about climate change

In 2022, significantly more educators nationally answered 8-10 knowledge questions correctly than in 2019 and had the highest pass rate (73%).

Parents had the lowest pass rate (63%).



Regionally:

- QC maintained the highest pass rate (74%)
- While **AB** and **SK** greatly improved since 2019 (+20 % and +24% respectively) their scores remain lower than the rest of Canada (60% each).

Canadians still need to further improve their knowledge about climate change

Just over half (55%) of Canadians in 2022 answered correctly, that carbon dioxide and other greenhouse gases are the primary cause of climate change, vs 49% in 2019.

	Carbon Dioxide and other greenhouse gases (correct)					
Province	2019	2022	(+/-)			
ВС	52%	58%	+6			
АВ	44%	48%	+4			
SK	34%	52%	+18			
МВ	49%	60%	+11			
ON	48%	52%	+4			
QC	55%	64%	+9			
Atl.	49%	46%	-3			

While BC and all other regions (except for ATL) showed gains in their understanding of the cause of climate change, there is room for further improvement.

There remains a gap in Canadians' perceptions of their knowledge about climate change

- Over half of Canadians feel well-informed about climate change.
- But less than one quarter correctly answered 8-10 quiz questions.

The good news is that 80% of Canadians want more information

Students are the group wanting information the most (85%).

- Regionally, QC (85%) and SK (84%) want the most information
- BC is the less than the national average at 77%
- AB (76%) residents want the least.

Trusted Sources

Most Canadians (68%) (62% in BC), trust information given by scientists and academics, compared to government sources (23%) (23% in BC).

Age is a big factor in determining where Canadians get their climate change information

Sources of Information	Educators	Parents	Students	General Public
Television news programs	56%	44%	31%	54%
Newspaper and/or online news websites	56%	50%	33%	48%
Documentaries or movies	44%	44%	34%	42%
NET Social Media (Youtube, Facebook, Instagram, TikTok, and Twitter)	35%	36%	51%	33%
Conversations with friends and family	33%	34%	43%	34%
Radio news programs	32%	23%	13%	22%





Canadians' firm understanding that humans are responsible for climate change remains the same as in 2019

Canadians' views that humans are causing climate change has remained virtually unchanged.

70% in 2019

72% in 2022

Many Canadians also continue to be concerned that "humans could reduce climate change, but it's unclear whether we will do what's needed".

45% in 2019

44% in 2022

Advances in technology since 2019 have not changed Canadians perspectives as few agree that "new technologies can solve climate change **without** individuals having to make big changes in their lives".

28% in 2019

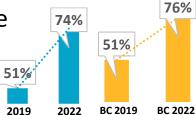
28% in 2022

Note: While students remained the most optimistic about new technologies (32%), the percentage had decreased since 2019 (38%).

Canadians' awareness of the significant impacts of climate change on Canada is growing

More Canadians believe:

- Climate change will harm coastal communities a great deal.
- Olimate change is already harming, or will cause harm in 5-10yrs.
- Canada, as an arctic nation, is particularly affected by climate change



2019

BC 2022

2022

BC 2019

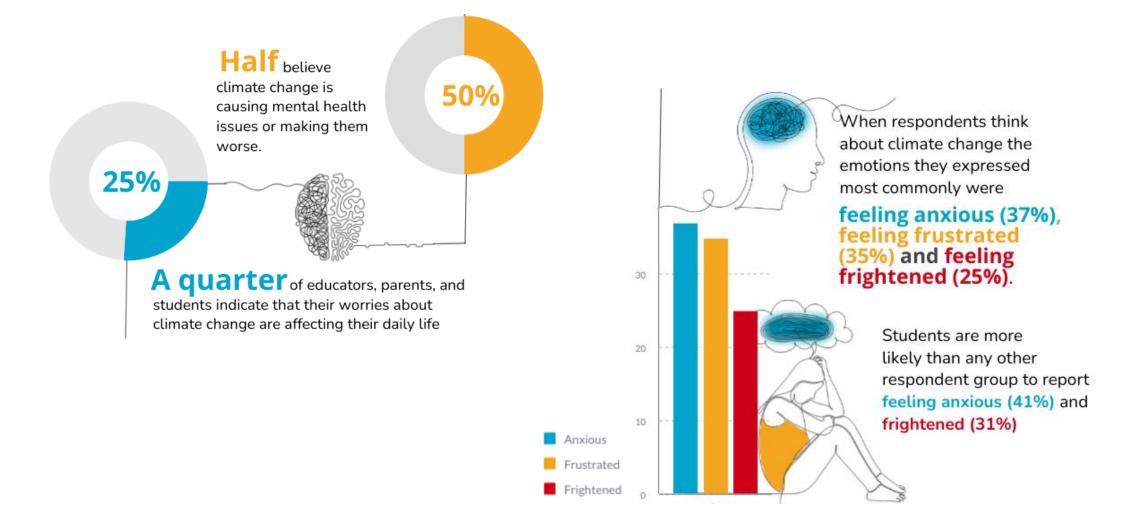
BC 2022

Regionally, there are differences in perceptions on how climate change is already causing and making glacier and sea ice melt, and making extreme weather or temperature events worse in Canada.

Percent Agree by Province/Region in 2022

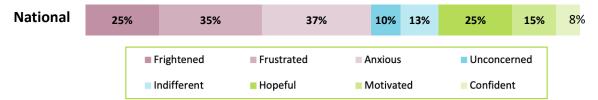
	ВС	АВ	SK	МВ	ON	QC	ATL
Glacier and sea ice melt	86%	78%	83%	86%	85%	88%	83%
Extreme weather events	80%	69%	69%	79%	82%	83%	83%
Extreme temperatures	82%	69%	74%	77%	77%	79%	74%

Canadians feel that climate change is impacting mental health and well-being

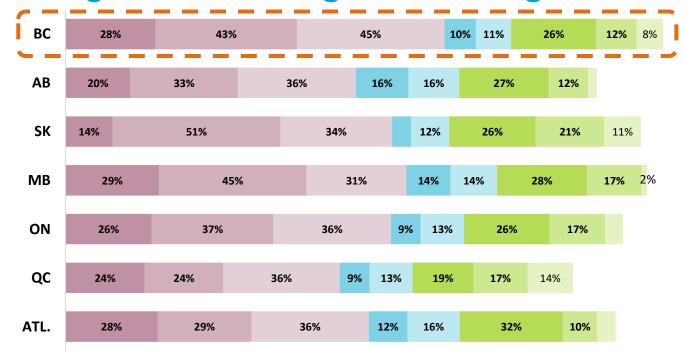


British Columbians feel that climate change is impacting mental health and well-being

Feelings on Climate Change - Nationally



Feelings on Climate Change – Province/Region



- BC had the highest levels of anxiety (45%) compared to the national average (37%).
- BC vs nationally were more likely to indicate feeling frustrated (43% vs. 35%).

- Regionally, BC were more frightened about climate change (28%) than the national average (25%).
- BC was the least likely to report being indifferent (11%).



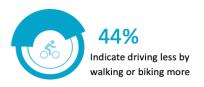
Canadians are taking action to reduce climate change

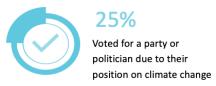
69% of Canadians take action to reduce their personal greenhouse gas emissions.











72% of Canadians would change "some" or "a lot" in their life (at school, work or home) to help reduce the effects of climate change. Educators were significantly more willing to change (83%), as were residents of QC (79%). BC (72%) showed the same willingness as the national average.

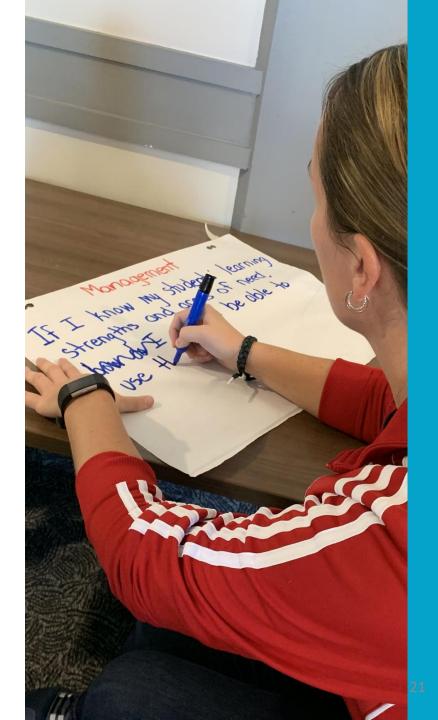
Canadians overwhelmingly believe government is not doing enough

78% of Canadians nationally, and 79% in BC, indicated that, while personal actions are important, systemic change is needed to address climate change.

Only 17% agree nationally, and 20% in BC, that the government is doing a good job in their actions to address climate change.

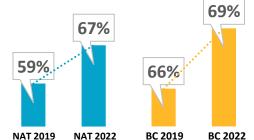
Key Survey Findings continued

- Perspectives on Climate Change Education
 - From the viewpoint of Canadians
 - From the viewpoint of educators



Climate change education must be prioritized

 Canadians increasingly think climate change education should be a high priority



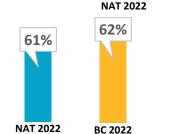
64%

62%

BC 2022

 Many Canadians believe that the education system should be doing "a lot more" to educate young people about climate change.

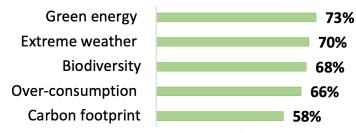
• Many Canadians feel climate change education should be the role of all teachers.



Teaching climate change in the early grades

Most felt climate change topics should be taught early, as only very few (nationally 15%; BC 13%) felt that climate change was too complex to be taught in the younger grades.

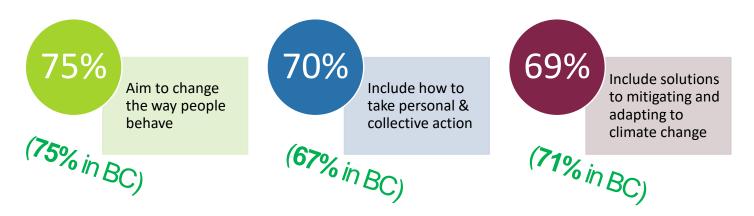
Topics that should be taught starting K-3



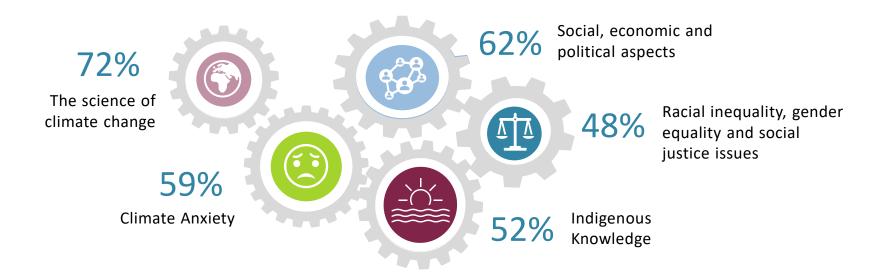
National educators who agree/strongly agree

Climate change education must address numerous, diverse topics

When teaching climate education in schools most Canadians agree that climate change education should:



Canadians feel that climate change education should address:



From the viewpoint of students

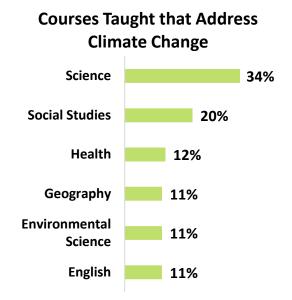
Students across Canada were asked the open-response question: "If you could decide what you would learn in school about climate change, what would you tell your teacher?"

Top 5 answers:

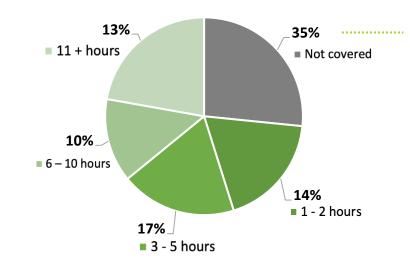
- 1 Offer solutions to the problem
 - (2) Explain scientific evidence
 - (3) Empower individuals so they can make a difference
 - 4 Highlight consequences of actions
- (5) More education in order to increase awareness

Teachers and climate change education:

Nationally, where taught, how much time spent, and what topics?



Hours in a Year/Semester Spent Covering Climate Change



35% of educators in 2022 did not cover climate change compared to 57% in 2019. However, the actual number of hours dedicated to climate change topics remains low.

When I teach about climate change	ВС	АВ	ON	QC	ATL*	SK*	MB*
I encourage students to take action as part of their learning	45%	30%	60%	50%	66%	66%	66%
I include solutions to climate change	40%	26%	42%	41%	56%	59%	58%
I primarily focus on teaching climate change science	25%	27%	38%	32%	42%	59%	36%
I include the social, economic & political elements of climate change	31%	28%	30%	29%	35%	38%	35%
I emphasize aspects of ethics and social justice within climate change	25%	16%	27%	22%	32%	34%	39%
I teach students strategies to cope with emotions that arise	12%	18%	24%	15%	19%	28%	23%
I include Indigenous traditional knowledge about climate change	13%	26%	20%	11%	19%	48%	29%

Supports that teachers need to address climate change

Only one-third of educators feel that they have the **knowledge and skills** needed to teach climate change.

32% in 2019

34% in 2022

A growing majority need **professional development** to learn about how to effectively teach this complex topic.

50% in 2019

64% in 2022

More teachers feel they don't have sufficient time within the course /grade to teach climate change.

39% in 2019

50% in 2022

Educators are looking for additional supports including:

56%

Climate change resources

49%

Updated curriculum documents that contain climate change topics

37%

Appropriate instructional strategies including how to extend classroom learning outdoors

36%

A school wide culture that promotes climate change education

More Educators need to encourage students to take action

Despite the importance of active, experiential learning in sustainability education to mitigate anxiety and empower students, only 51% of Canadian educators encourage students to take action as part of their learning.

Educators most frequently engage students in the following types of action:



65%

To make lifestyle or consumer choices



64%

To educate and inform others



43%
To undertake eco-projects

Regionally, there are differences in taking action in schools

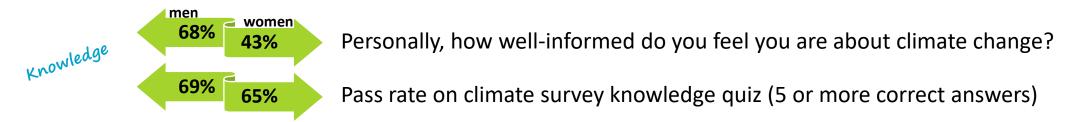
	ВС	АВ	ON	QC	ATL*	SK*	MB*
Making Lifestyle/Consumer Choices	71%	39%	70%	65%	76%	76%	82%
Educating & Informing	65%	48%	65%	65%	74%	86%	77%
Eco-Projects	37%	34%	46%	45%	56%	69%	62%
Engaging in Political/Legislative Action	24%	16%	24%	18%	24%	31%	34%
Peaceful Dissent	13%	11%	26%	14%	24%	31%	30%
Raising Funds	25%	13%	25%	10%	15%	10%	29%

Final Perceptions

- ▶ Gender Differences
- ▶ Pandemic Influences
- > Youth Empowerment



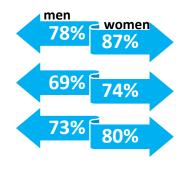
Climate change perceptions by gender

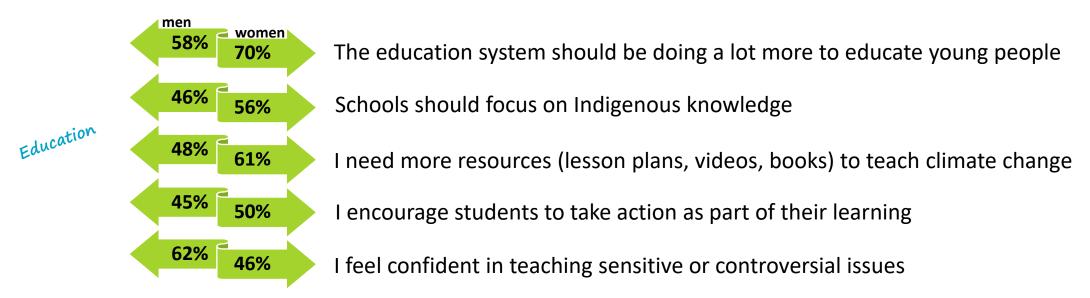


I am certain that climate change is happening Climate change (
is happening

Human beings are responsible for climate change

Climate change poses risks to Canadians





How have Canadians' views on climate change changed due to the pandemic?



Lessons from COVID-19 have influenced perspectives and increased awareness.

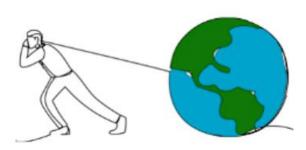
68% in BC Canadians agree the pandemic has helped them to recognize the importance of science to provide society with essential facts & evidence-based

knowledge.



(66% in BC)

60% felt more concerned about climate change, having seen the denial expressed by many when faced with an acute global threat.



74% in BC)
74% realize that no matter where we are in the world, we are all interconnected.

Canadians are inspired by youth

69% of Canadians (67% in BC) think the work and voices of young people can inspire important climate action.

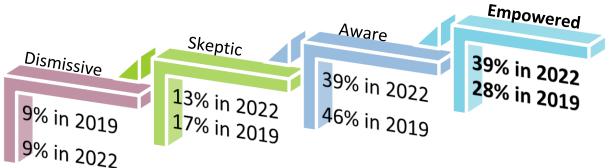
Not surprisingly, educators (76%) feel the most strongly about the inspiration provided by youth.

"Educators need to focus on HOPE. We need to foster feelings of hope in our youth in order to empower future climate activists." (survey respondent)

Canadian students showed growth in the 'Ladder of Engagement'

The ladder of engagement sorts individuals' answers into four audiences: dismissive, skeptics, aware, and empowered.

Three of the four groups (educators, parents and general public), showed little change since 2019. However, in 2022, the percentage of students feeling "empowered" increased significantly, meaning more students felt that: Human-caused climate change is happening, AND there are things we can do to change it.





Knowledge Mobilization Session Takeaways

The following slides synthesize the discussions and contributions of the British Columbians who joined LSF on April 12, 2023 for a Virtual Knowledge Mobilization Session. Participants who attended the session represented a wide variety of stakeholder groups.

During the session attendees were asked to participate in three, interactive activities. The results capture insights on the current reality of climate change education, priority actions, and next steps.

Note: The comments included in the following summary are direct contributions of the British Columbia stakeholders who participated in the April 12 Knowledge Mobilization Session and do not necessarily reflect the views of LSF.

Current Reality of Climate Education

In order to get a better picture of the current reality of climate change education in British Columbia, participants of the Knowledge Mobilization session responded to the following question:

What do you feel is helping or hindering you in your efforts to promote climate change education - both formal and informal?

The results of this 'sticky note' brainstorm activity have been synthesized on the following slides.

THEMES on what is HELPING to promote climate change education. (Results of the group brainstorm)

Quality Research & Resources

Research from
Frameworks institute on
communication and
interpretation framing
for these complex
issues

Prepared materials with good research citations

Climate Adaptation Competency Framework (CACF)

Ease of access to resources

Engagement and research efforts such as this that provide evidence to guide our actions moving forward

Education Policy/ Buy-in

Commitment of the Ministry of Education and other key partners to revisit climate in the K-12 Curriculum

Interested students who want to learn

Interest/willingness of educators to engage

Supportive Work Environment

Working for a naturebased organization

Work colleagues and personal network

Strong leadership at my organization on the climate file and a good baseline of knowledge to build on.

My workplace culture continues to emphasize the importance of climate change as a priority in the work we do

Growing Public Interest

Information and engagement with advocates

Global awareness that this is a concern

Chatting with others and sharing how we feel to not feel burnt out and anxious myself.

Greater interest /demand for climate change education

People realizing that this information is needed and important

Partnerships & Interconnection

Ongoing intersection/ interconnection (in policy, research and practice) of climate and other critical education priorities (e.g., Truth and Reconciliation, land-based learning, biodiversity, justice)

Alignment from other companies on importance of climate action

Community Partnerships

THEMES on what is HINDERING efforts to promote climate change education. (Results of the group brainstorm)

Competing Priorities/ Lack of Focus

Lack of focus and targeted actions. We tend to take on too much at once, yielding stress. Create movement with individuals all doing what we can....

Other climate-action related projects and priorities

"Ditto" the lack of focus

Lack of Funding/Resources

Lack of funding to build resources

The needs of educators are clear (and have been known for some time) - the funding and other resources to address these are needed

Lack of Teacher Confidence & Preparedness

Imposter syndrome: "Do I have the facts RIGHT ENOUGH to be teaching them?

Fear from staff or internal educators to name climate change for younger audiences. Lack of confidence to not cause more anxiety.

Teachers leaving the profession (knowledge keepers) due to COVID - losing bottom-up push

Stuck on 'Old Ways'/ Singular Solution Mindsets

"My one thing I am doing is making a difference" thinking. Hesitation to add new actions

Inertia in updating activities to align with information. "stuck on blue boxes"

Generational differences

Too much emphasis on technology as a solution at my organization

Access to Trustworthy Information Sources

Public trust in government, news media etc. continues to slowly decline, and more "unofficial" or "alternative" sources continue gaining traction on social media



Sector Action Planning

Participants were divided into breakout rooms according to their sector, to collaborate on the following question: What should your sector specifically be doing to support climate change education?

Individuals were given time to brainstorm and jot down ideas before discussing as a small group which actions should be identified as "priority actions".

The five sectors represented in the Atlantic were:

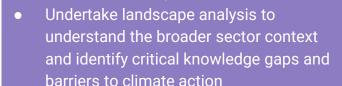
- NGOs
- Teachers/School Boards/Education Organizations
- Business/Foundations/Government
- Academia

The following slides illustrate the priority actions determined by each sector including supporting ideas and additional details related to these actions.

NGOs: Priority Actions

Priority 1:

Landscape and Gap Analysis



- Undertake gap analysis of your organization-what does your organization know and need?
- Engage youth/students for ideas on how your organization/sector should be addressing climate change / climate action

Priority 2:

Resources and Training



- Identify common needs and opportunities to engage youth/schools
- Provide resources for all types of educators not just science teachers
- Consider how climate change/action needs to be part of all programs
- Offer resources and training to staff and volunteers - they would then have the confidence to empower others

Priority 3:

Networking and Advocacy



- Accelerate individual and collective knowledge to understand what's working really well with peers
- Align actions and provide a unified message and movement to advocate with governments for enhanced education in sustainability
- Develop skills and networks as a group with indigenous knowledge, place-based learning, the arts, and emotional resilience

Additional Priorities:

- Include climate change actions in strategic planning
- Get political without getting political. Be truthful

Teachers/School Boards/Education Organizations: Priority Actions

Priority 1:

Cross-curricular approach



- Add climate change info to ALL aspects of the curriculum, not just in "sciences"
- Provide resources for early year educators
- Provide provocation resources for cross-curricular opportunities including math/numeracy
- Promote global actions including citizen science data collection

Priority 2:

Empower Students



- Empower students to make choices and decisions, spark curiosity and explore options
- Establish a hopeful approach to student actions
- Model action-oriented work
- Making speaking about the challenges of climate change education a normalized activity

Priority 3:

District-wide support



- Establish District policies on climate action
- Communicate programs are available to teachers to utilize in their subject area
- Act as a source for providing trusted resources and activities which minimizes teacher "work" in adapting curriculum linkages

Additional Priorities:

 Communicate the actions that are practical and "doable" for expanding classroom participation "beyond the blue box"

Boost organizations who already have good resources rather than needing

Business/Foundations/Government: Priority Actions

Priority 1:

Address public perception

- Humanize the communicator in order to humanize the message
- Work on public perception to ensure that good-quality resources (created by businesses) aren't overlooked due to concerns about bias
- Conduct research and translate consumer insights into actionable takeaways for climate change action/education
- Support community projects, initiatives and infrastructure changes

Priority 2:

Create a culture of climate change

- Grow a corporate culture around Climate Change
- Educate practitioners to enable integration of climate change considerations into business functions
- Liaise with Indigenous groups, help to create partnerships between School Districts and local groups
- Connect organizations with social/environmental mandates to nonprofits driving action in the space

Priority 3:

Support Educators

- Ensure that educators have access to professional development opportunities and resources that support teaching about Climate Change, leading to action
- Ensure that resources created by businesses are vetted by teachers to avoid concerns related to bias
- Fund programs and organizations designed to advance climate change policy and education
- Provide educators with examples of how climate change learning supports the Core Competencies

Additional Priorities:

- Find ways to turn climate anxiety into hopefulness through communication
- Develop workshops & professional development for preservice teachers

Academia: Priority Actions

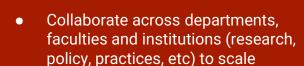
Priority 1:

Hold institutional leaders accountable

- Ask the hard questions! are they doing the right thing?
- Counteract status quo bias and resistance to change at all levels and in all disciplines
- Supporting student voice and action e.g., Climate Hub
- Walk the talk to reduce GHG emissions eg who gets to fly

Priority 2:

Empower change facilitation



- Integrate climate into every knowledge domain and discipline
- Address both the mitigation and adaptation including cleantech, GHG reduction and psycho-social
- Connect post-secondary institutions with efforts in K-12 and community re. mentorship, professional development, funding, partnerships

Priority 3:

Focus on targeted research



- Disseminate this research to raise specific research funds to investigate gaps and resistance to new ideas
- Document and share success stories of collaboration in research and practice
- Focus research on issue of rising distrust in government and perception that government needs to carry out better systems change

Additional Priorities:

- Fight for tuition-free post-secondary education. We need graduates who are not in extreme debt in order to empower them to adapt and mitigate
- Make federal and provincial governments aware that building capacity to address this polycrisis is not an option

Concluding Thoughts

Climate change mitigation and adaption will require **education**, support, and action at all levels of Canadian society.

The results of the climate change survey emphasized the need for enhanced climate change education to reduce climate change knowledge gaps, to support our educators, to empower our youth, and ultimately work towards the positive outcome of active citizenship for all Canadians.

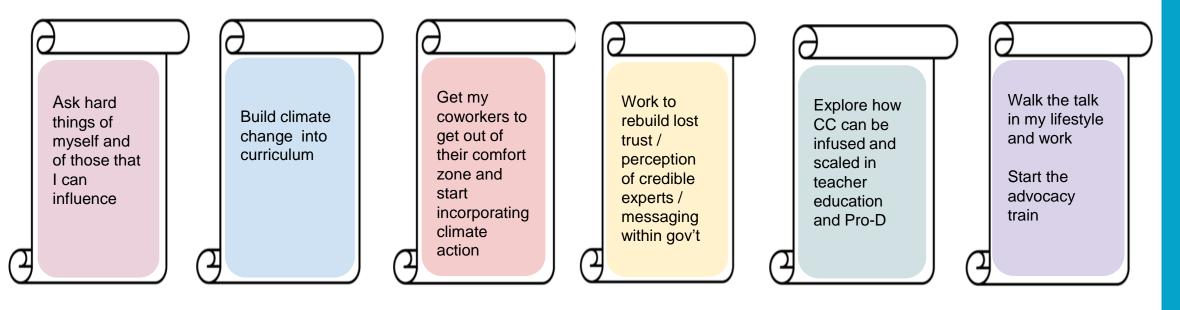
How can you support these goals?



Action Pledges

At the conclusion of the British Columbia Knowledge Mobilization Session, participants pledged to take an action to enhance climate change education.

Some of the actions include:



Advancing climate change education requires commitment and collaboration from all sectors. Thank you to the BC education, government, business, NGO and academia representatives who joined us to discuss this important work, and who pledged to takeaction on this issue.

Climate Change Resources for Educators 1/2 (Shared by participants)

	Resource Name	Website link
1	LSF Resources for Rethinking (database of over 1,700 teacher-reviewed, curriculum-based resources)	https://lsf-lst.ca/resources/database-resources-for-rethinking/
2	LSF Classroom Climate Guides " <i>Empowering Learners in a Warming World</i> " (K-2, Gr 3-6; Gr 7-12) (Guides with inquiry-based lessons, active learning strategies, and resources)	https://lsf-lst.ca/resources/empowering-learners-in-a-warming-world/
3	LSF Green Jobs "Adapting to our Changing Climate" Video Series	https://lsf-lst.ca/resources/green-jobs/
4	Climate Adaptation Competency Framework (2021) - Adaptation Learning Network, Royal Roads University	https://can-adapt.ca/sites/weadapt.org/files/aln-competencyframework_2021_1.pdf
5	Climate Adaptation Fundamentals Micro-credential Program - RRU	https://pcs.royalroads.ca/climate-adaptation-fundamentals-micro-credential
		https://mhcca.ca/resources
6	Mental Health and Climate Change Alliance	
		https://genaction.ca/
7	Science Spotlights / GenAction Canada	

Climate Change Resources for Educators 2/2(Shared by participants)

	F	Resource Name	Website link
	8	Master of Disaster: Youth emergency preparedness for grades 4-8 (FREE for educators to order and use)	https://www2.gov.bc.ca/gov/content?id=692FA74200AA4066BE8CD8719FFD7C64
	9	Frameworks Institute	https://www.frameworksinstitute.org/wp- content/uploads/2020/03/NNOCCI_flyer_02.pdf
1	10	GreenLearning Canada Foundation - free resources on energy transition, climate change and green economy for educators	https://greenlearning.ca/
1	11	Climate Change Atlas of Canada - (Interactive climate change map of Canada, great for geography teachers)	<u>ClimateAtlas.ca</u>
1	12	Project Drawdown (An extensive resource for climate solutions)	https://drawdown.org
1	13	Sustainability and Education Policy Network (SEPN) - an international network of researchers and organizations advancing sustainability in education policy and practice (look for their report: Responding to Climate Change: A Primer for K-12 Education)	https://sepn.ca/
1	14	Sustainable Development Goals – Resources/Activities page and information on each of the 17 goals	https://www.un.org/sustainabledevelopment/student-resources/

For full climate change survey results, visit: **Canadians' Perspectives on Climate Change & Education**

www.LSF-LST.ca/research-policy/survey/

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