



Canadians' Perspectives on Climate Change & Education: 2022 Ontario Provincial Report



Learning for a
Sustainable Future

LSF

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To view the National Report, visit:
LSF-LST.ca/research-policy/survey

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***Canadians' Perspectives on Climate Change &
Education: 2022***
Ontario Provincial Report
Section 1: Introduction

Climate Change and Education Context

Climate change is one of the most complex and wide-reaching challenges facing humankind today. According to a 2022 report published by the Intergovernmental Panel on Climate Change (IPCC), the planet has already passed a number of crucial tipping points, and some effects of climate change are already irreversible. Canada has seen a significant increase in climate-related disasters over the past decade and urgent action is necessary using the best data available to ensure that Canadians will successfully adapt and prosper.

Climate Change Education and Policy

The important contribution of the education sector in responding to climate change is recognized globally. According to UNESCO, 95 percent of the 194 reporting countries have included climate change education as part of their national action plans on climate change. However, this pledge has not yet resulted in subsequent curriculum change, as almost half of the curriculum frameworks from 100 countries contain no climate change content, and furthermore, implementation is not consistent. Across Canada, only 6 of 13 provinces and territories have included climate and sustainability in their curricular documents or education policy. In addition, provincial curriculum seldom emphasizes climate change's current and projected impact, mitigation and adaptation strategies, and the scientific consensus on climate science.

Impacts on Youth and the Significance of Youth Action

It is essential to provide youth with accurate scientific knowledge and strategies to address climate change to promote a sustainable mindset and build a climate-resilient socioeconomic system. Integrating climate education across subjects and tying together inequality, citizenship, Indigenous stewardship and discussions of systematic change will foster an informed citizenry and empower students to use their voices and advocate for change in their communities. Engaging youth in environmental issues within their communities is but one starting point to further encourage them to undertake collective action through policy, activism, and network building. Yet youth cannot tackle the climate crisis on their own – they require the commitment of previous generations to right cumulative wrongs and change the course of the future. Formal and informal education of all Canadians is key to achieving success in the fight against climate change.

Survey Background

As the effects of climate change become increasingly more severe, the sense of urgency to act to mitigate and adapt to climate change is also mounting. Moving Canada toward resiliency and adaptability for climate impacts today and in the future will require support, education, and action at all levels of Canadian society.

The report *Canadians' Perspectives on Climate Change & Education: 2022* provides results from a national climate change education survey undertaken by Learning for a Sustainable Future (LSF) and Leger Research Intelligence Group. The survey gathered data from across Canada on different groups' knowledge of climate change and its risks, and their views on the role of schools in climate change education.

This *Ontario Provincial Report* provides the highlights from the full national report and gives additional results based on further analysis of Ontario data. The findings presented here help to gain an understanding of trends over time and current perspectives of educators, students, parents and the general public in 2022. With this knowledge, recommendations based on evidence can be made to fill in gaps, promote strengths, and address misperceptions in order to implement the most effective strategies to support all Canadians in their efforts to combat climate change.

Acknowledgements

We recognize that the lands we live, work, teach and learn from are the traditional territories of Indigenous peoples and that all Canadians benefit from this land. We recognize the importance of Indigenous perspectives and connections to land and place as we work towards reconciliation to address the Calls to Action of the Truth and Reconciliation Commission.

This survey is a follow-up to a climate change education survey that was undertaken in 2019 by Dr. Ellen Field at Lakehead University (with funding from SSHRC), Learning for a Sustainable Future and Leger. The 2022 survey design and data analysis was led by Pamela Schwartzberg, Learning for a Sustainable Future President and CEO; Jennifer Stevens, LSF Manager of Learning, Research and Communication, and LSF consultants Dr. Karen Acton and Dr. Susan Elliott. Leger Research Intelligence Group provided data collection and analysis. Elaine Rubinoff, LSF Director of Programs, and Samantha Gawron, Manager of Programs, Engagement & Development provided survey promotion.

Thank you to the Canadian Teachers' Federation and many other teacher organizations, as well as LSF's communication partners for circulating the survey to their members. We would also like to thank the 406 educators, 1,373 parents, 1,208 students and 1,290 members of the general public who participated in the Leger panel, and the 1,237 educators, 462 parents, 586 students and 391 members of the general public who participated through the open survey link on the LSF site.

We would like to thank the Government of Canada for their financial support.



Methodology

Population Segmentation

For this survey, the following populations were identified:

- Educators – public and private K-12/cégep teachers, educational assistants, department heads, curriculum leads and curriculum consultants, vice-principals, principals, and district leaders
- Students – includes current students from grades 7 to 12/cégep
- Parents – includes parents of students in K-12/cégep
- General Public – includes participants who do not identify as educators, students, or parents.

Recruitment Procedures

Leger Research Intelligence Group provided data collection and analysis on behalf of Learning for a Sustainable Future (LSF). Leger panelists received an email invitation to complete the survey with a unique link for each respondent. All respondents from the Leger panel (LEO) are referred to as “panel”. From the Leger Web Survey, a total of 4,035 Canadians were surveyed in English and French. This report contains the results for the “panel” data.

Due to the limits of the LEO platform to survey the desired 1000 educators, the survey relied on a multi-sampling approach where additional responses were collected through convenience and snowball sampling through an open survey link hosted on LSF’s website. Many teacher affiliations and education-related organizations assisted with the promotion of the survey through their provincial and territorial networks.

Data Collection and Analysis

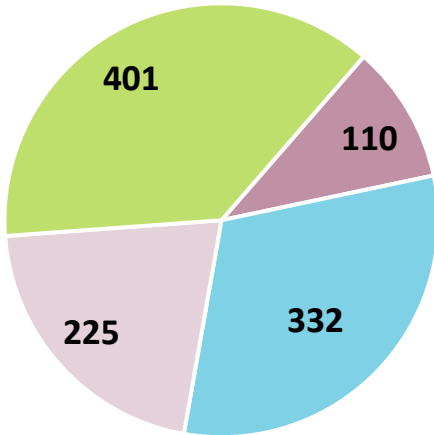
As part of the analysis process, the data are weighted by age, gender and province (based on Statistics Canada proportions) to ensure that data are representative of the Canadian public and reflective of Canadian opinion. Demographic data is presented in its unweighted form.

From the sample that was collected through the LSF open-link, a total of 2,461 completed surveys were received from November 9, 2021 to March 6, 2022. The supplemental open-link data was used where Leger panel data was insufficient, and was thus only needed to augment the educator respondent data for SK, MB and ATL in the provincial reports.

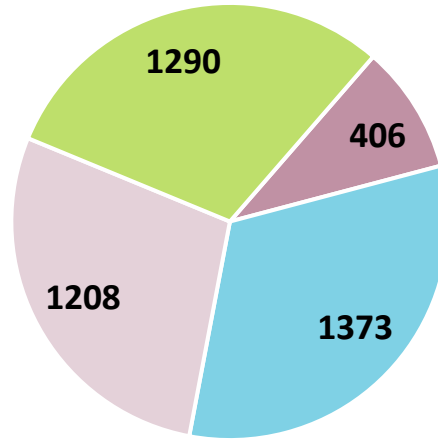
See the methodology section of the full national report for further details.

2022 Demographics

Ontario Respondent Groups

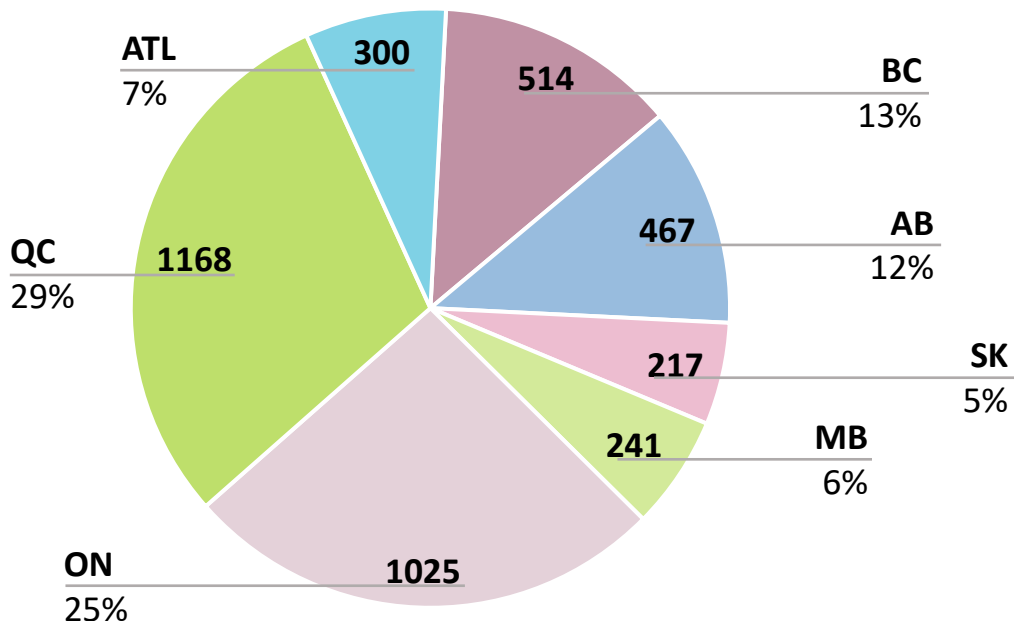


National Respondent Groups



■ Educator ■ Parent ■ Student ■ General Public

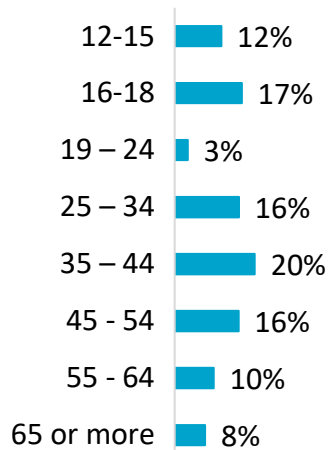
National Respondents by Province/Region



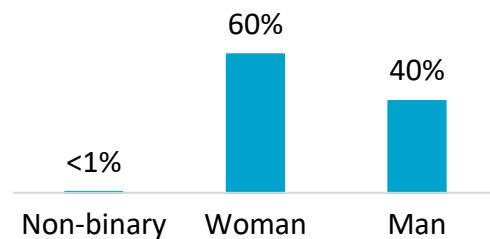
2022 Ontario Demographics

Ontario Total

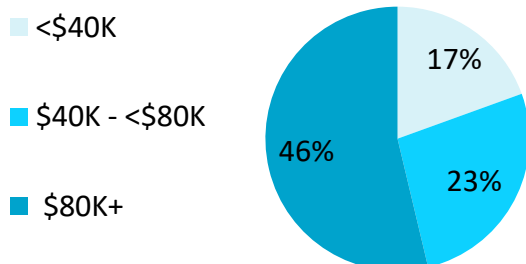
Age



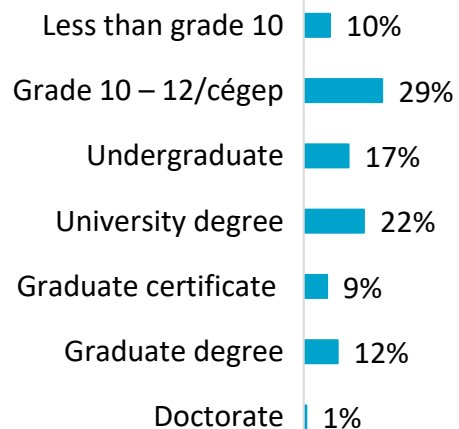
Gender



Household Income



Education Level





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Section 2: What has changed since 2019?

Overall Climate Change Knowledge

Respondents were asked 10 climate change questions early in the survey, to test their knowledge and understanding. Each question had a correct answer. The number of correct responses per respondent group and province/region are shown on the following slide, and responses from selected questions are shown on subsequent slides. Below are the 10 questions respondents were asked, with the answers in bold:

- B1. Do you think climate change is...
- Caused mostly by human activities**
 - Caused mostly by natural changes in the environment
 - About equally caused by both human activities and natural changes
 - Not happening
 - Don't know
 - Other (please specify)
- B2. Which comes closest to your own view?
- Most climate scientists think climate change is happening**
 - Most climate scientists do not think climate change is happening
 - There is a lot of disagreement among climate scientists about whether climate change is happening or not
 - Don't know enough to say
- B3. Climate change is caused by....
- Emissions from nuclear power plants
 - Thinning of the ozone layer
 - Particulate air pollution
 - Carbon dioxide and other greenhouse gases**
 - Industrial chemicals
 - Natural variability
 - Unsure
- B4. The main process behind climate change is...
- Letting more of the sun's heat into the Earth's atmosphere through a thinner ozone layer
 - An increase in gases in the Earth's atmosphere that trap heat**
 - An increase in solar activity
 - Particulate pollution in the air reflecting heat back to Earth
 - Unsure
- B5. Canada, as an Arctic nation, is particularly affected by the impacts of climate change
- True**
 - False
 - Unsure
- B6. Canada's average temperature has _____ since 1948.
- Decreased by 1 – 1.5 degrees Celsius
 - Decreased by 1 – 0.5 degrees Celsius
 - Decreased by 0.5 – 0 degrees Celsius
 - Stayed the same
 - Increased by 0 – 0.5 degrees Celsius
 - Increased by 0.5 – 1 degrees Celsius
 - Increased by 1 – 1.5 degrees Celsius**
 - Unsure
- B7. What sector is currently the largest greenhouse gas emitter in Canada?
- Agriculture
 - Heavy industry
 - Electricity
 - Buildings
 - Oil and gas**
 - Transportation**
 - Waste
 - Unsure
- B8. In the next 20 years, Canadian winters are predicted to be colder and to have more snow.
- True
 - False**
 - Unsure
- B9. At what minimum temperature change does scientific consensus predict global warming will result in major consequences to health, livelihoods, food security, water supply, and economic growth?
- 0 degrees Celsius
 - 0.5 degrees Celsius
 - 1 degree Celsius
 - 1.5 degrees Celsius**
 - 2 degrees Celsius
 - 2.5 degrees Celsius
 - Don't know
- B10. What do countries need to do in order to ensure temperatures stay within the range that the Earth system can tolerate?
- Significantly increase emissions
 - Moderately increase emissions
 - Do nothing
 - Moderately decrease emissions
 - Significantly decrease emissions**
 - Move to net zero emissions** Don't know

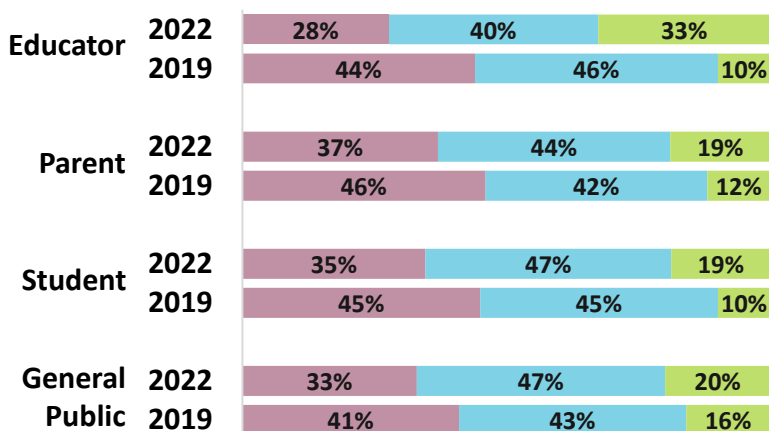
Overall Climate Change Knowledge

Total Correct Answers



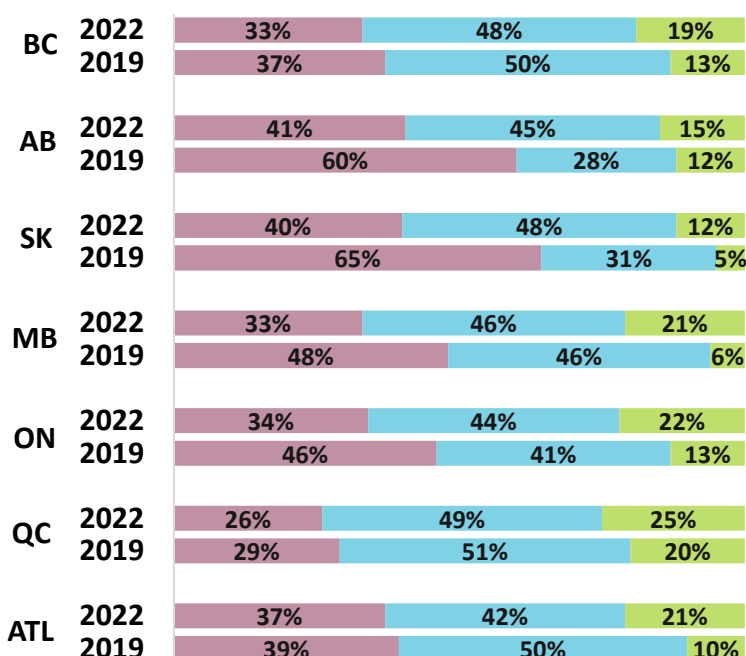
0-4 correct 5-7 correct 8-10 correct

Total Correct Answers – Respondent Group



2022: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
2019: n=2,191 (Educator=111, Parent=571, Student=486, General Public=908)

Total Correct Answers – Province/Region



2022: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)
2019: n=2,191 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

Overall climate change knowledge has increased since 2019, as more Canadians passed the 10 question climate change test embedded in the survey (67% passed in 2022 vs. 57% 2019).

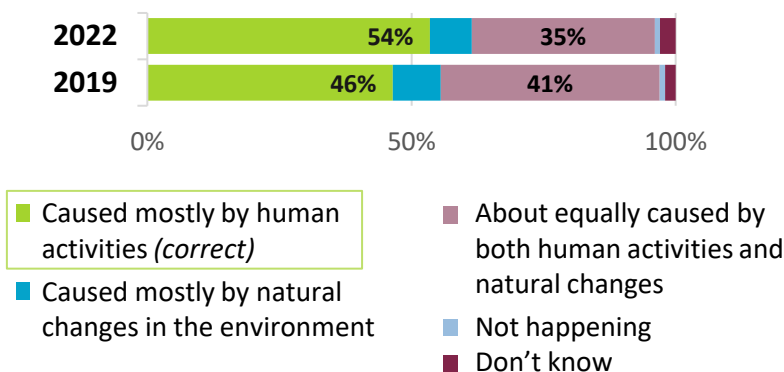
Furthermore, significantly more educators passed with over 80% in 2022 vs. 2019 (33% vs. 10%), as did parents (19% vs. 12%), students (19% vs. 10%), and the general public (20% vs. 16%).

Climate change knowledge has also increased regionally across Canada with the majority showing improvement on the climate change knowledge test. Significantly fewer failed in AB, SK, MB and ON.

Furthermore, significantly more respondents were able to answer 8 or more questions correctly in BC SK, MB, ON, QC and in ATL. While AB and SK have improved, their scores remain lower than the rest of Canada.

Do you think climate change is...

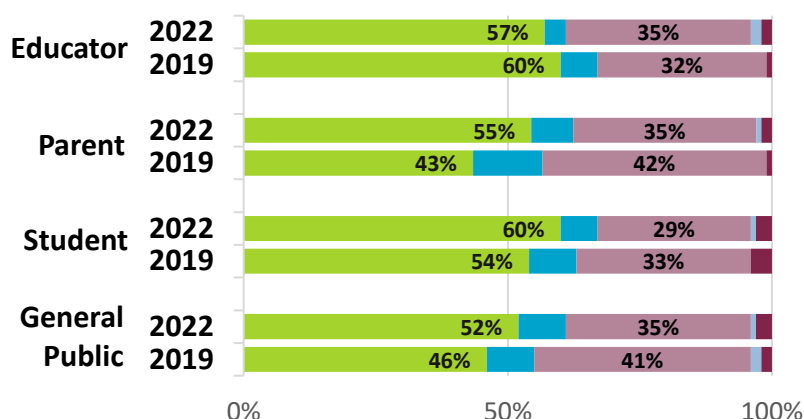
Total



A majority of respondents were correct in their thinking that climate change is caused mostly by human activities. More respondents in 2022 answered correctly (54%) than in 2019 (46%), which is fairly consistent across most respondent groups. Parents showed the largest gains (55% in 2022 vs. 43% in 2019). However, slightly fewer educators answered correctly in 2022 (57%) than in 2019 (60%).

Notably, a proportion (35%) still think climate change is equally caused by both human activities and natural changes, although this number has decreased since 2019 (41%).

Respondent Group



2022: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
 2019: n=2,188 (Educator=111, Parent=571, Student=484, General Public=907)

Caused mostly by human activities (correct)

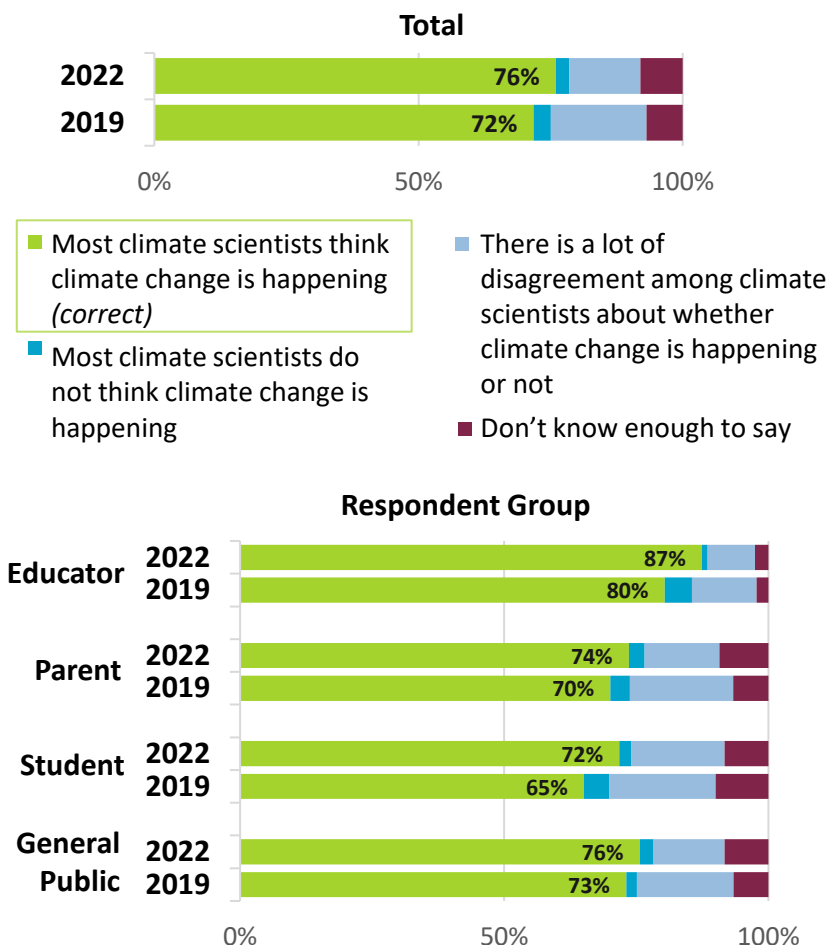
Province	2019	2022	(+/-)
BC	47%	59%	+12
AB	28%	40%	+12
SK	29%	41%	+12
MB	39%	50%	+11
ON	46%	55%	+9
QC	57%	60%	+3
ATL	51%	44%	-7

The percentage of respondents who were able to answer this question correctly in 2022 increased across all regions compared to 2019, other than in ATL.

Correct responses increased from +3 percentage points in QC to +12 percentage points in BC, AB, and SK between 2019 and 2022.

2022: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)
 2019: n=2,188 (BC=196, AB=160, SK=73, MB=70, ON=748, QC=812, ATL=118)

Which comes closest to your own view?



2022: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
 2019: n=2,189 (Educator=110, Parent=571, Student=486, General Public=907)

A majority of respondents hold the correct belief that most climate scientists think climate change is happening. Slightly more respondents hold this view in 2022 (76%) than did in 2019 (72%).

Similarly, more respondents from each respondent group in 2022 hold this view, than did in 2019. The largest increase in correct responses from 2019 to 2022 was seen in educators and students, with an increase of +7 percentage points.

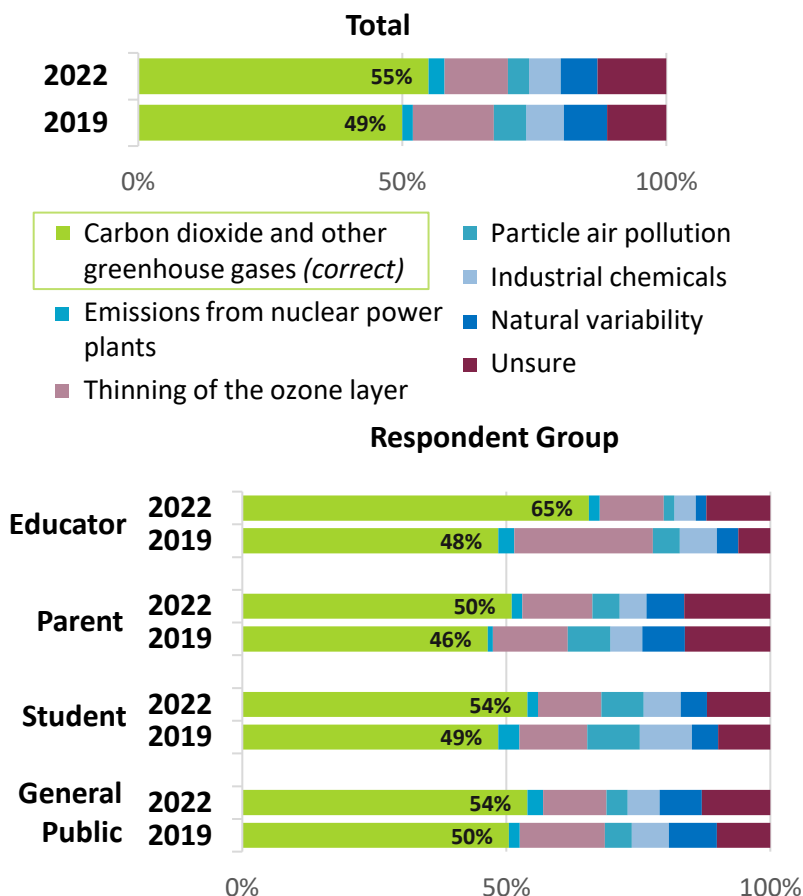
Most climate scientists think climate change is happening (correct)			
Province	2019	2022	(+/-)
BC	78%	79%	+1
AB	61%	73%	+12
SK	52%	73%	+21
MB	70%	70%	-
ON	70%	76%	+6
QC	81%	77%	-4
ATL	67%	77%	+10

2022: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)
 2019: n=2,188 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=812, ATL=118)

The percentage of respondents who were able to answer this question correctly in 2022 increased across all regions compared to 2019, except for QC, which decreased by 4 percentage points, and MB which stayed consistent with 2019 answers.

Correct responses increased from +1 percentage points in BC to +21 percentage points SK.

Climate change is caused by...



2022: $n=4,035$ (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
 2019: $n=2,191$ (Educator=111, Parent=571, Student=486, General Public=908)

In terms of understanding the scientific causes of climate change, just over half (55%) of respondents in 2022 answered correctly, that carbon dioxide and other greenhouse gases are the primary cause of climate change, compared with less than half (49%) in 2019.

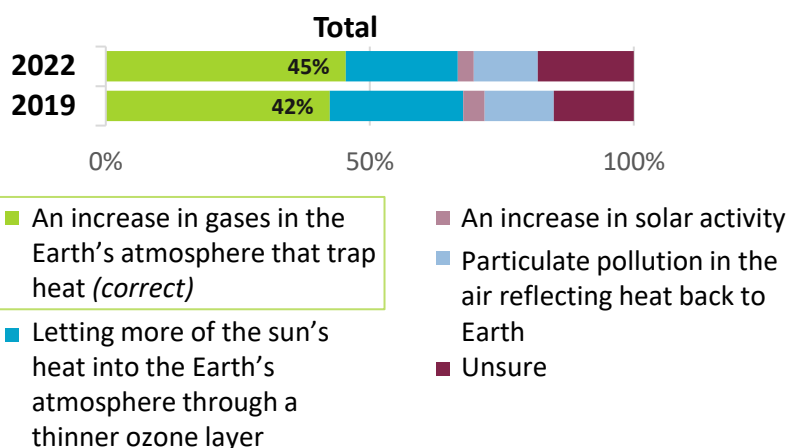
Educators showed the largest increase in correct answers to this question (65% vs. 48%). Parents remained the most 'unsure' with only half choosing the correct response.

Province	Carbon Dioxide and other greenhouse gases (correct)		
	2019	2022	(+/-)
BC	52%	58%	+6
AB	44%	48%	+4
SK	34%	52%	+18
MB	49%	60%	+11
ON	48%	52%	+4
QC	55%	64%	+9
ATL	49%	46%	-3

The percentage of correct answers to the cause of climate change increased for respondents in all provinces aside from those in ATL.

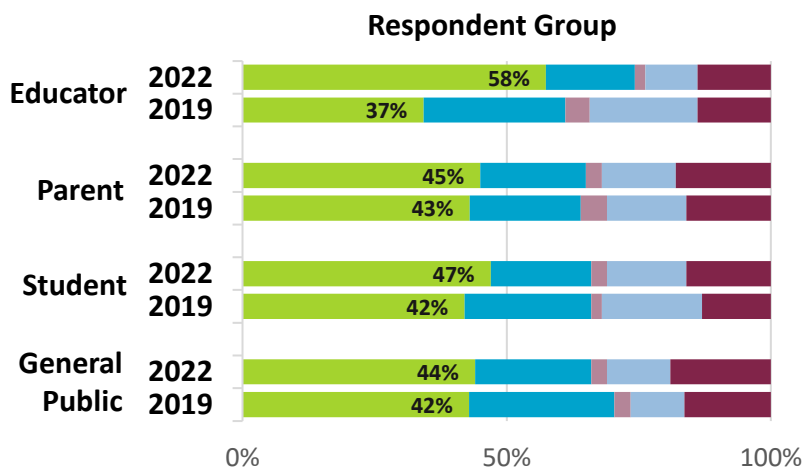
SK had the largest increase in correct responses from 2019 to 2022, with significantly more respondents in SK answering this question correctly in 2022 (52%) than in 2019 (34%).

The main process behind climate change is...



Less than half of all respondents were able to answer correctly that the main process behind climate change is an increase in gases in the Earth's atmosphere that trap heat. The percent of correct answers increased slightly from 2019 (42%) to 2022 (45%).

While all respondent groups showed gains in answering correctly in 2022, educators showed the most improvement in understanding the main process behind climate change (58% in 2022 vs. 37% in 2019).



2022: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
 2019: n=2,184 (Educator=110, Parent=571, Student=486, General Public=903)

An increase in gases in the Earth's atmosphere that trap heat (*correct*)

Province	2019	2022	(+/-)
BC	48%	45%	-3
AB	43%	45%	+2
SK	25%	38%	+13
MB	38%	43%	+5
ON	41%	44%	+3
QC	46%	51%	+5
ATL	39%	42%	+3

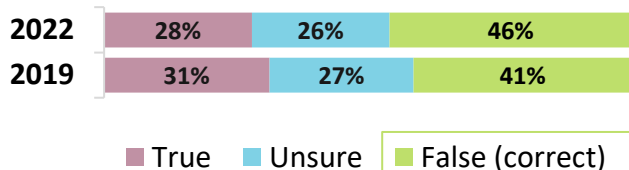
The percentage of respondents who answered this climate change question correctly increased for respondents in all provinces aside from those in BC.

Correct responses increased from +2 percentage points in AB to +13 percentage points in SK between 2019 and 2022.

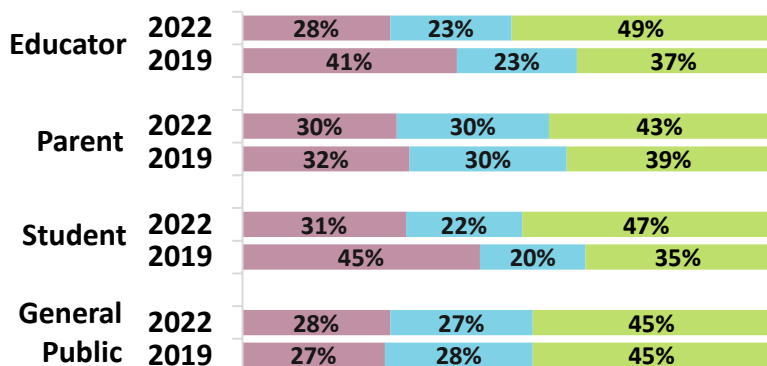
2022: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)
 2019: n=2,184 (BC=195, AB=160, SK=73, MB=69, ON=748, QC=810, ATL=118)

In the next 20 years, Canadian winters are predicted to be colder and to have more snow

Total



Respondent Group



2022: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
 2019: n=2,190 (Educator=111, Parent=571, Student=486, General Public=907)

When asked if in the next 20 years, Canadian winters are predicted to be colder and to have more snow, less than half of all respondents answered correctly that the statement was false. Slightly more respondents in 2022 (46%) answered correctly than did in 2019 (41%). Over one-quarter of all respondents remained unsure.

Correct responses increased across all respondent groups other than in the general public, where correct responses stayed consistent between 2022 and 2019 (45%). Significantly more students and educators correctly answered that this question in 2022 (both groups up by 12 percentage points).

False (correct)

Province	2019	2022	(+/-)
BC	38%	37%	-1
AB	43%	42%	-1
SK	37%	42%	+5
MB	35%	42%	+7
ON	41%	43%	+2
QC	45%	58%	+13
ATL	41%	48%	+7

2022: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)
 2019: n=2,187 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=813, ATL=118)

The percentage of correct responses increased across all regions other than BC and AB where correct responses in these two provinces each dropped by 1 percentage point from 2019 to 2022.

Correct responses increased from +2 percentage points in ON to +13 in QC from 2019 to 2022.

What do countries need to do in order to ensure temperatures stay within a tolerable range?

	Total		% Correct
2022	41%	34%	75%
2019	50%	36%	73%

- Significantly Decrease Emissions
 - Move to Net Zero Emissions
- % Correct** (Significantly decrease emissions **or** move to net zero emissions)

		Respondent Group		% Correct
Educator	2022	41%	38%	79%
	2019	53%	42%	76%
Parent	2022	45%	31%	76%
	2019	51%	36%	73%
Student	2022	45%	30%	76%
	2019	46%	31%	65%
General Public	2022	40%	34%	74%
	2019	51%	36%	74%

When asked what countries need to do to ensure temperatures stay within a tolerable range, about three-quarters of respondents were able to answer correctly, that countries should either significantly decrease emissions or move to net zero emissions. Responses were similar but slightly improved in 2022 (75%) compared to 2019 (73%).

Correct responses increased across all respondent groups other than the general public, where correct responses stayed consistent between 2022 and 2019 (74%). Students had the largest increase in correct responses from 2019 (65%) to 2022 (76%).

2022: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
2019: n=2,189 (Educator=111, Parent=571, Student=486, General Public=906)

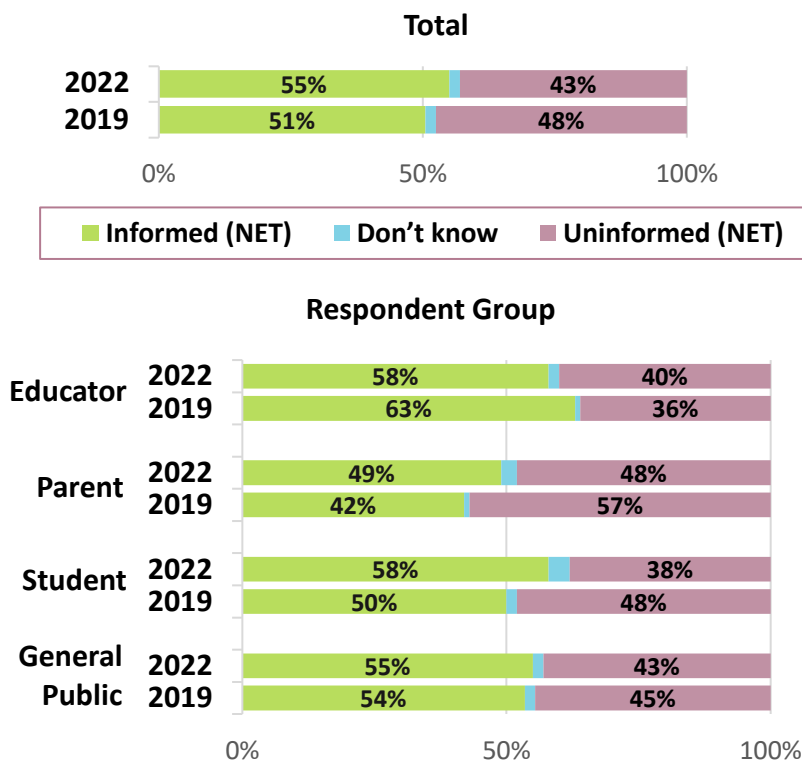
% Correct (Significantly decrease emissions or move to net zero emissions)			
Province	2019	2022	(+/-)
BC	71%	76%	+5
AB	64%	65%	+1
SK	60%	70%	+10
MB	74%	66%	-8
ON	74%	76%	+2
QC	82%	78%	-4
ATL	68%	75%	+7

The percentage of correct responses varied across all province/regions from 2019 to 2022. Most had an increase in correct responses, however in MB and QC correct responses decreased by -8 to -4 percentage points, respectively.

Correct responses increased from +1 percentage points in AB to +10 in SK from 2019 to 2022.

2022: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)
2019: n=2,188 (BC=196, AB=160, SK=73, MB=70, ON=748, QC=812, ATL=118)

How well-informed do you feel you are about climate change?

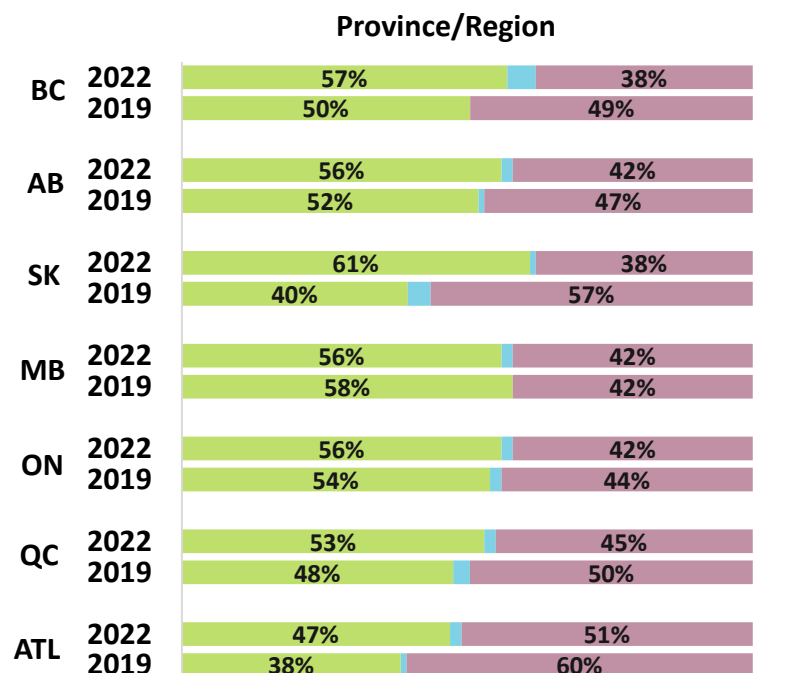


2022: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
 2019: n=2,188 (Educator=110, Parent=571, Student=485, General Public=907)

Most respondents (55%) in 2022 felt they were well-informed (very well-informed/fairly well-informed) about climate change, more than in 2019 (51%).

Parents (49%), students (58%), and the general public (55%) indicated feeling more well-informed in 2022 than in 2019 (42%, 50%, 54%, respectively).

Educators were the only group to feel less informed in 2022 than in 2019 (58% vs. 63% in 2019).



All respondents in provinces across Canada, other than in MB, indicated feeling more well-informed in 2022 than in 2019.

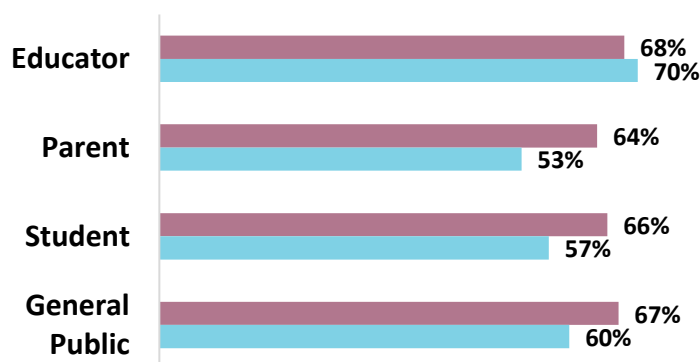
Those in SK felt the most well-informed (61%) in 2022, a significant increase from 2019 (40%). Residents in ATL felt the least well-informed (47%) in 2022, however still notably more than in 2019 (38%).

Climate change education should be a high priority for schooling

Agree (NET)– Total



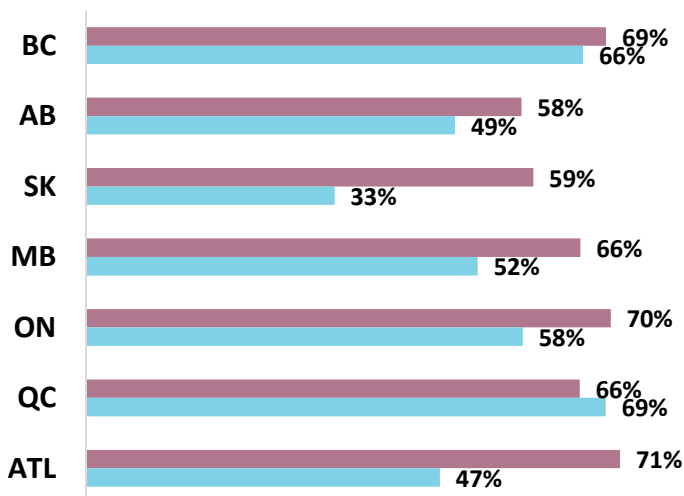
Agree (NET)– Respondent Group



2022: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
 2019: n=2,179 (Educator=111, Parent=570, Student=479, General Public=906)

Agree (NET)- Province/Region

■ 2022
 ■ 2019



2022: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)
 2019: n=2,179 (BC=196, AB=160, SK=73, MB=70, ON=743, QC=809, ATL=117)

Education is becoming a higher priority for Canadians. When asked if climate change should be a high priority for schooling, more respondents agreed in 2022 (67%) than in 2019 (59%).

Parents (64% vs. 53%), Students (66% vs. 57%) and the general public (67% vs. 60%) agreed significantly more in 2022 than they did in 2019.

Similarly, when asked if climate change education should be a high priority for schooling, a majority of respondents in 2022 across all regions in Canada agreed. Those in AB (58% vs. 49%), SK (59% vs. 33%), MB (66% vs. 52%), ON (70% vs. 58%), and those in ATL (71% vs. 47%) agreed significantly more than they did in 2019.

Notably, QC is the only region that decreased in agreement from 2019 to 2022.

In 2022, respondents in AB (58%) and SK (59%) agreed less than other provinces.



Section 3: What do Canadians think of Climate Change in 2022?

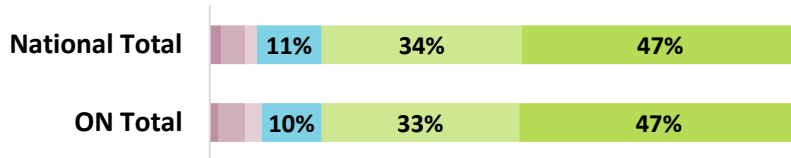
- **Part 1: Knowledge Questions**
- **Part 2: Effects and Action**
- **Part 3: Climate Change Education**
- **Part 4: Teaching Climate Change**



Part 1: Climate Change Perspectives and Knowledge

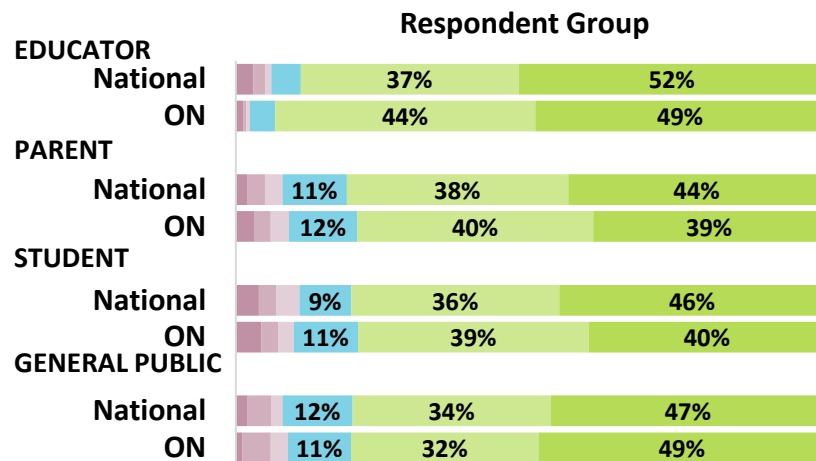
Part 1 assesses respondent knowledge, understanding, and perspectives on the cause, impact, and reality of climate change.

I am certain that climate change is happening.



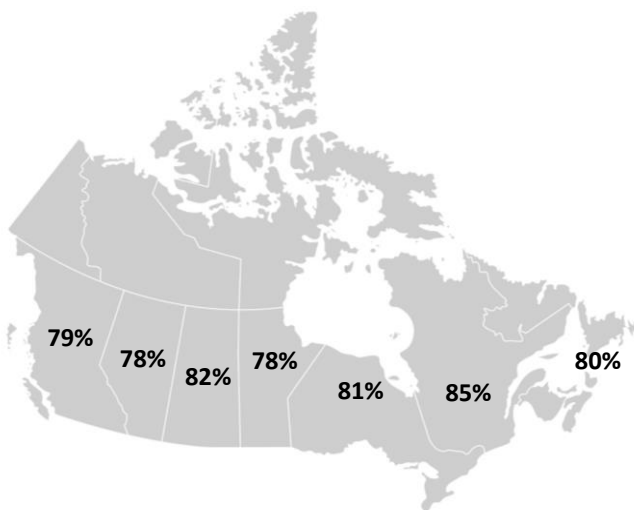
The overwhelming majority of Canadians acknowledge that climate change is a reality. When respondents were asked if they are certain that climate change is happening, 80% of respondents from ON agreed (strongly agree/agree) with this statement, which was consistent with national results (81%)

Educators nationally (89%) and even more so in ON (93%) were significantly more likely to agree than parents, students, and the general public.



National : n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
 ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)
 Responses 5% or less not labelled

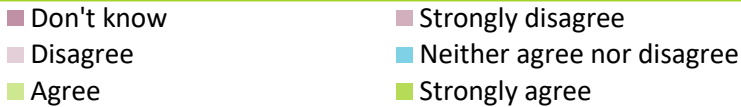
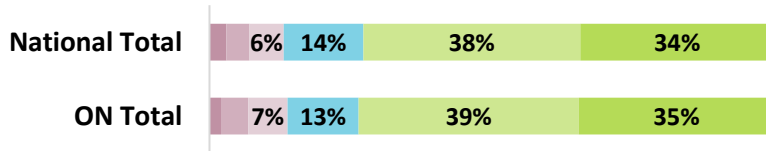
Province/Region - % Agree (Strongly Agree/Agree)



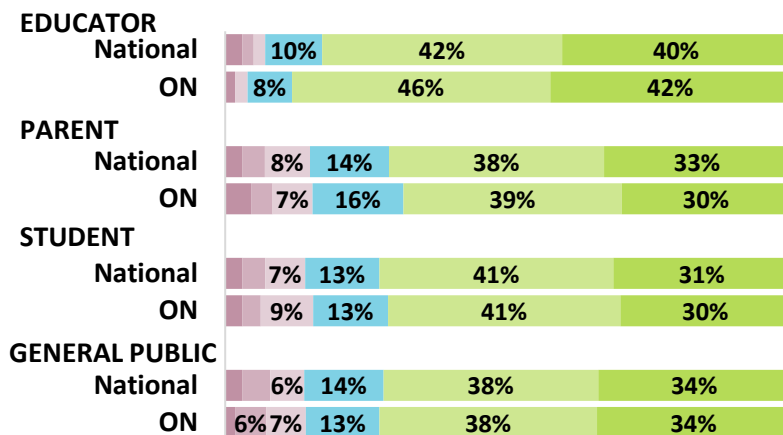
Provinces across Canada are in similar agreement, with a majority being certain that climate change is happening.

Regional agreement ranges from 85% in QC to 78% in AB and MB with ON falling directly in the middle at 81%.

We are experiencing a climate emergency

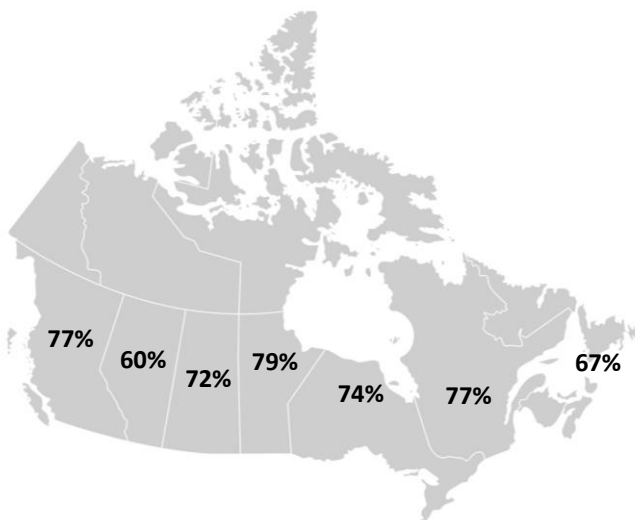


Respondent Group



National : n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
 ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)
 Responses 5% or less not labelled

Province/Region - % Agree (Strongly Agree/Agree)



National : n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)

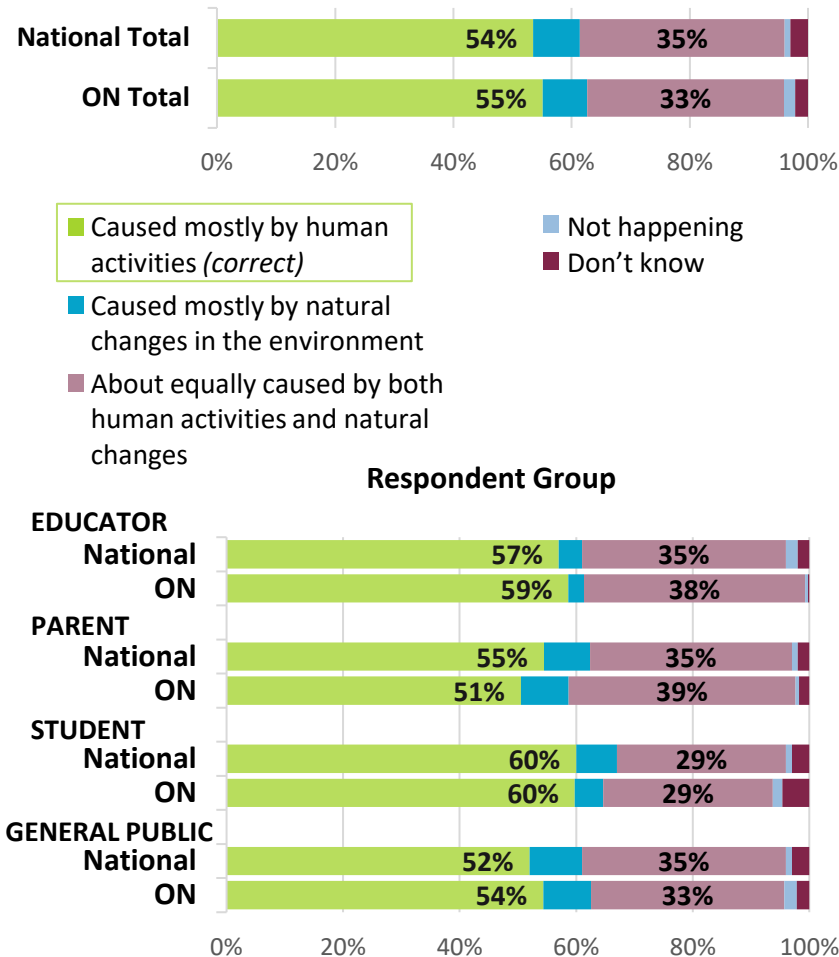
* Indicates rounding

A large majority of Canadians believe that the climate change situation we are facing is extremely urgent. Close to three quarters of respondents (73% nationally, 74% in ON) were in agreement that we are currently experiencing a climate emergency.

Responses among ON residents are consistent with national responses. Educators were most likely to agree with this statement, (82% nationally, 88% in ON) compared to parents (71% nationally, 69% in ON), students (72% nationally, 71% in ON), and the general public (72% for both).

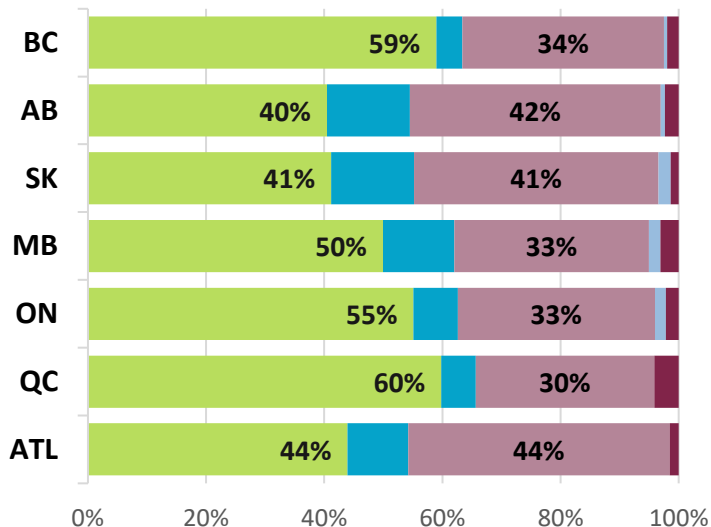
The level of agreement in ON (74%) is comparable to the rest of Canada. Respondents in BC (77%), MB (79%) and QC (77%) having slightly higher levels of agreement overall. AB (60%), SK (72%) and ATL (67%) were less likely to agree.

Do you think climate change is...



National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)

Province/Region



National: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)

When asked in the survey what causes climate change, 54% of respondents nationally, and 55% of ON respondents answered correctly that it is human-caused.

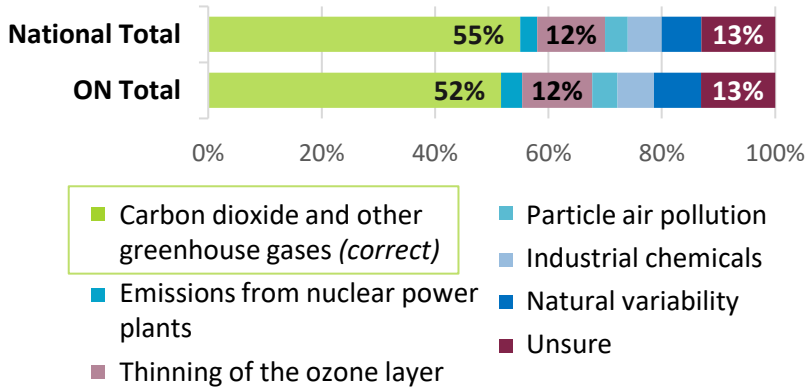
Around one-third however, believed that climate change is equally caused by both human activities and natural changes (35% nationally, 33% in ON).

Responses among ON residents are fairly consistent with national responses, however parents had a slightly lower level of agreement in ON (51%) compared to nationally (55%).

The understanding that climate change is human-caused varies across regions with ON right in the middle. Half or more in QC (60%), BC (59%), ON (55%), and MB (50%) agree that climate change is mostly caused by human activities. Less than half agree in AB (40%), SK (41%), ATL (44%).

Similarly, a notable percentage of respondents across all regions indicated that climate change is equally caused by both human activities and natural changes.

Climate change is caused by...

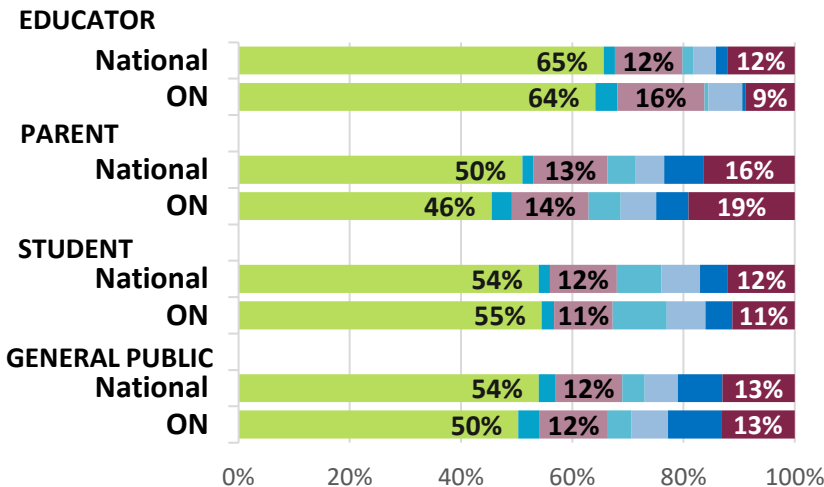


In terms of understanding the scientific causes of climate change, just over half of respondents nationally (55%) and in ON (52%) answered correctly, that carbon dioxide and other greenhouse gases are the primary cause of climate change.

However, a notable portion of respondents were 'unsure' of the cause of climate change (13%) or believed that climate change is caused by the thinning of the ozone layer (12%).

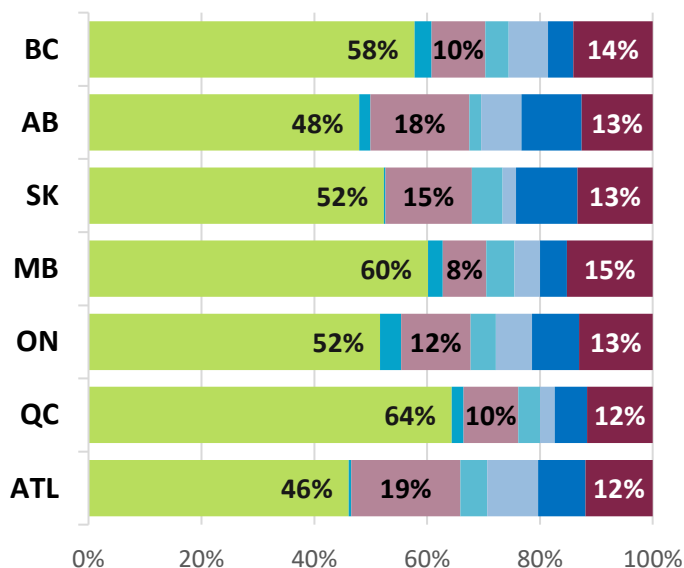
Responses from ON educators, students and the general public are consistent with national responses, however ON parents were less likely to respond correctly (50% nationally, 46% in ON), and more likely to be "unsure" (16% nationally, 19% in ON).

Respondent Group



National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
 ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)

Province/Region

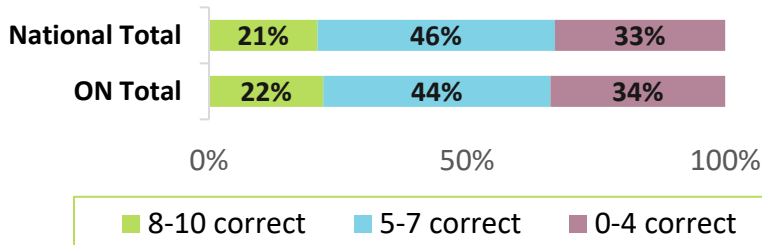


Across provinces, there is a variation in the knowledge that carbon dioxide and other greenhouse gases are the principal cause of climate change ranging from 46% in ATL up to 64% in QC. ON scored somewhat in the middle at 52%.

A notable portion of respondents on average, are unsure of the cause of climate change or responded that climate change is caused by the thinning of the ozone layer.

National: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)

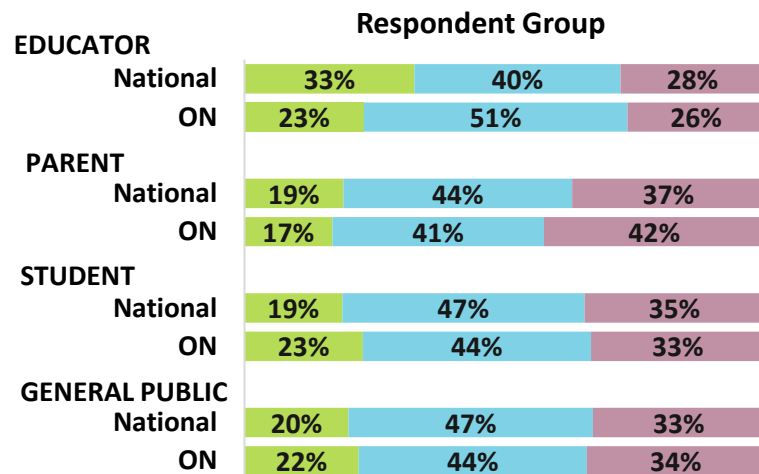
Number of correct answers to knowledge statements



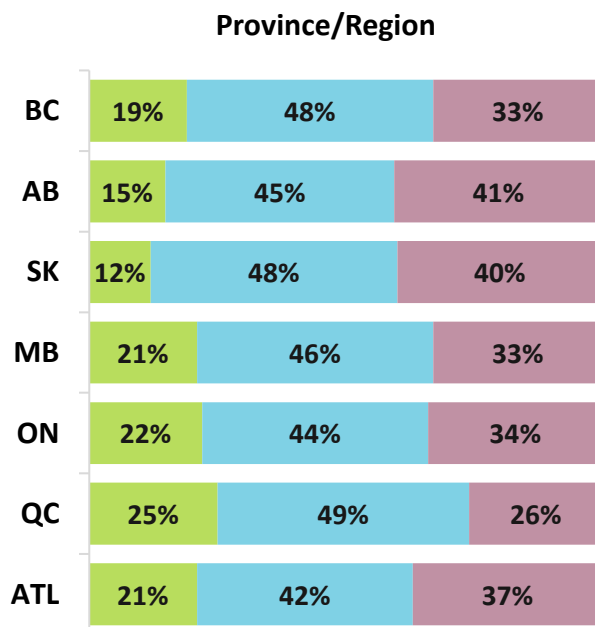
On average, 67% of respondents answered 5 or more of the knowledge questions correctly. ON scored very close to the average at 66%.

Nationally, educators were significantly more likely to answer 8 or more of the knowledge statements correctly (33%) yet ON educators scored significantly below average (23%).

However, ON students outperformed the national average (23% in ON, 19% nationally). Parents and the general public had similar responses in ON and nationally.



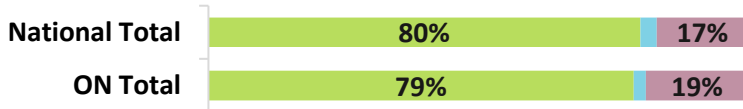
National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)



Provinces ranged between a 60% (AB and SK) to 74% (QC) success rate in answering 5 or more of the knowledge statements correctly. ON scored in the middle at 66%.

For the over 80% success rate, QC scored the highest with 25% of respondents getting 8 to 10 questions correct, followed closely by ON (22%). AB (15%) and SK (12%) had the fewest residents answering 8 or more questions correctly.

How much information do you feel you need about climate change to form an opinion?

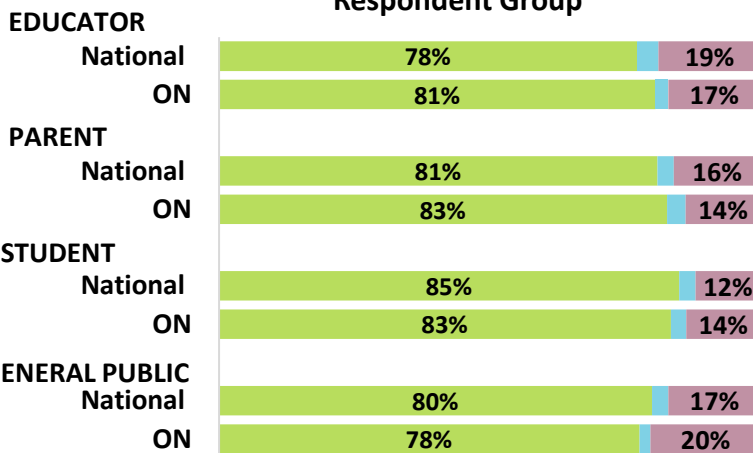


■ Need more information (NET)
■ Don't know
■ Do not need more information

A large majority of Canadians would like more information about climate change. 80% of respondents nationally indicate they feel they need more information (a lot more, some more, a little more) about climate change to form a firm opinion. Similarly, 79% of respondents in ON indicate they also need more information.

Responses among ON residents are consistent with national responses across all respondent groups.

Respondent Group

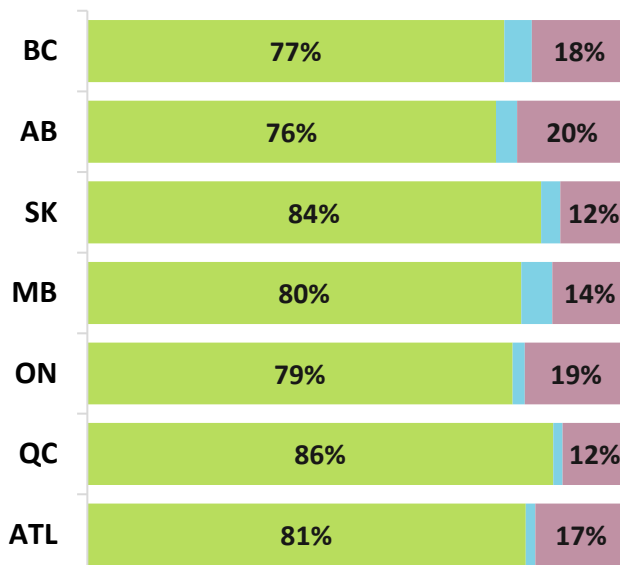


National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)

ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)

Responses 6% or less not labelled.

Province/Region



Provinces across Canada indicate they feel they need more information about climate change to form a firm opinion.

Respondents in QC are significantly more likely to indicate they need more information (86%), compared to respondents living in BC (77%), AB (76%), and ON (79%).

National: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)

Responses 6% or less not labelled.

Which of the following do you use to inform yourself about climate change?

2022 Total



Television News Programs

National: **51%**

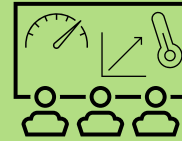
ON: **53%**



Newspaper/Online News Websites

National: **47%**

ON: **47%**



Documentaries or Movies

National: **42%**

ON: **40%**



NET Social Media (YouTube, Facebook, Instagram, TikTok, Twitter)

National: **35%**

ON: **36%**



Conversing with Friends/Family

National: **35%**

ON: **36%**



Radio News Programs

National: **22%**

ON: **19%**

When asked which sources respondents use most to inform themselves about climate change, 51% of respondents nationally and 53% in ON, indicated television news programs, 47% nationally and in ON indicated newspaper/online news websites, 42% nationally and 40% in ON indicated documentaries or movies, 35% indicated a variety of social media platforms, 35% indicated conversations with friends/family, and 22% indicated they listened to radio news programs.

Note: Respondent group and provincial data can be viewed on the following page

Nationally and in ON, students were most likely to use various social media platforms to inform themselves about climate change (51% nationally and 52% in ON) and have conversations with family or friends (more so nationally 43%, but also in ON 39%) compared to all other respondent groups. Regionally, using social media platforms was most common in BC (42%). Television news programs were more common in BC (51%), ON (53%), QC (58%) and ATL (52%) than in AB (36%). Using documentaries or movies were more common in BC (46%), and AB (44%) than in MB (28%).

Which of the following do you use to inform yourself about climate change? (continued)

Respondent Group

Sources of Information	Educators		Parents		Students		General Public	
	Nat.	ON	Nat.	ON	Nat.	ON	Nat.	ON
Television news programs	56%	58%	44%	41%	31%	28%	54%	56%
Newspaper and/or online news websites	56%	58%	50%	48%	33%	30%	48%	48%
Documentaries or movies	44%	40%	44%	44%	34%	30%	42%	40%
Conversations with friends and family	33%	38%	34%	32%	43%	39%	34%	36%
NET Social Media (YouTube, Facebook, Instagram, TikTok, and Twitter)	35%	36%	36%	38%	51%	52%	33%	35%
Radio news programs	32%	28%	23%	20%	13%	11%	22%	20%

National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)

ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)

Top 6 responses shown.

Province/Region

Sources of Information	BC	AB	SK	MB	ON	QC	ATL
Television news programs	51%	36%	46%	46%	53%	58%	52%
Newspaper and/or online news websites	49%	45%	53%	44%	47%	50%	38%
Documentaries or movies	46%	44%	40%	28%	40%	43%	43%
NET Social Media (YouTube, Facebook, Instagram, TikTok, and Twitter)	42%	32%	32%	33%	36%	32%	30%
Conversations with friends and family	38%	37%	42%	29%	36%	28%	38%
Radio news programs	19%	20%	22%	21%	19%	29%	20%

National: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)

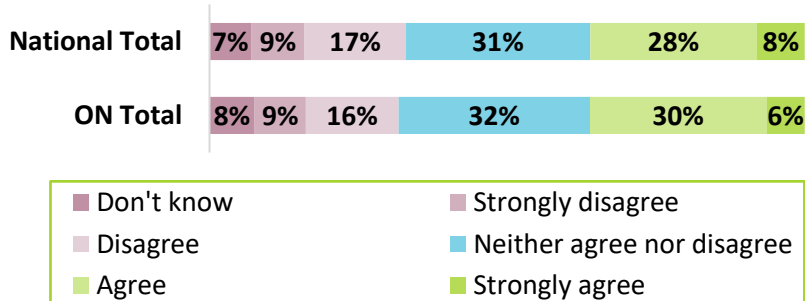
Top 6 responses shown.



Part 2: Climate Change Effects and Actions

Part 2 highlights respondent knowledge, understanding, and perspective on the impact of climate change and actions that can be taken.

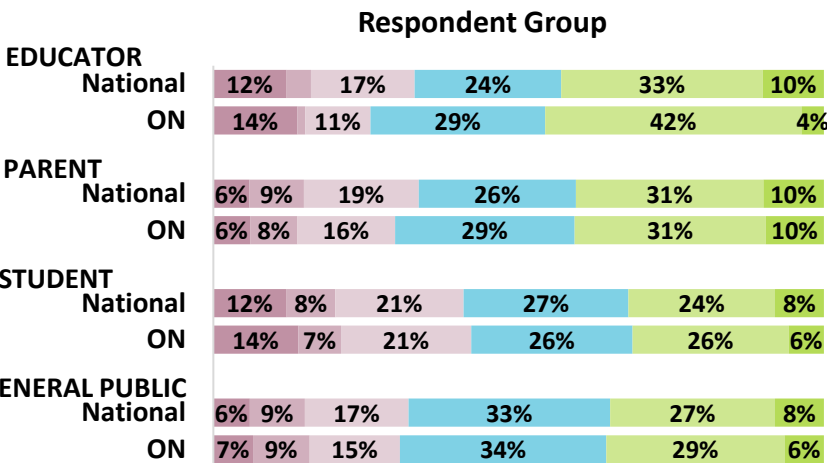
I have personally experienced the effects of climate change



Over one third (36%) of respondents nationally and in ON (36%) agree that they have personally experienced the effects of climate change, while one-quarter (26% nationally, 25% in ON) have not.

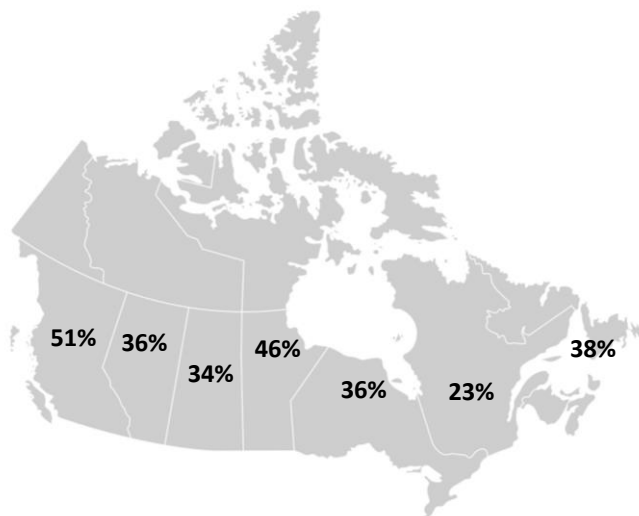
Educators (43% nationally and 46% in ON) and parents (40% for both) were significantly more likely to agree that they had experienced effects than students (32% nationally and 34% in ON).

Students were most likely to indicate they have not personally experienced effects (29% nationally, 28% in ON).



National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
 ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)
 Responses 4% or less not labelled.

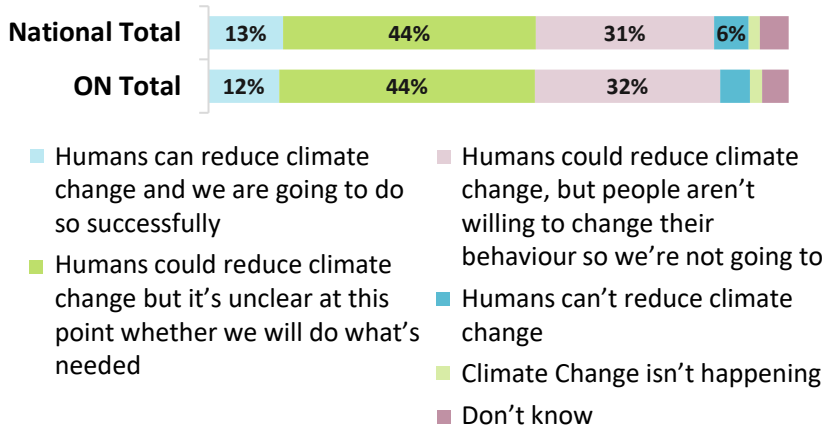
Province/Region - % Agree (Strongly Agree/Agree)



Regionally, with regards to having personally experienced the effects of climate change, just over one-third of Ontarians agree.

Respondents in BC (51%) agree the most. Those living in QC are less likely to agree (23%), especially compared to those in BC (51%), MB (46%), and ATL (38%).

Which of the following statements comes closest to your personal view?

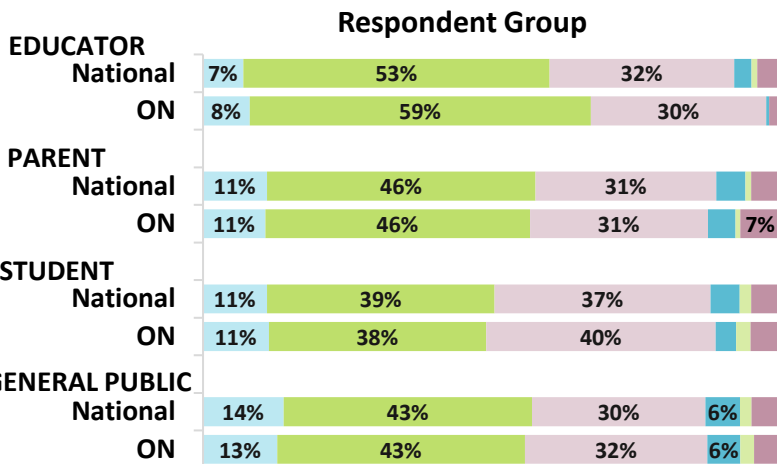


Over two-in-five (44%) respondents nationally, and in ON, have the personal view that humans could reduce climate change but that it is unclear at this point whether we will do what is needed. This personal view is followed by the view held by about one-third (31% nationally and 32% in ON) of respondents who believe that humans could reduce climate change, but that people aren't willing to change their behaviours so we aren't going to.

Responses among ON parents, students and the general public are consistent with national responses. Educators were significantly more likely to believe "humans could reduce climate change but it is unclear whether we will do what is needed," especially in ON (53% nationally, 59% in ON).

Those in MB (57%) are significantly more likely to believe that humans could reduce climate change but that it is unclear whether we will do what is needed than those in QC (40%).

Those in BC (34%), ON (32%), and QC (32%) are significantly more likely to believe than those in MB (19%), that humans could reduce climate change, but that people aren't willing to change their behaviours so we aren't going to.

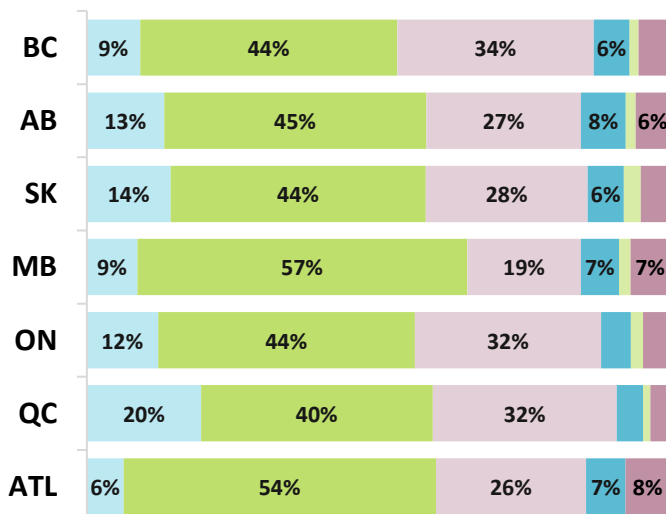


National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)

ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)

Responses 5% or less not labelled

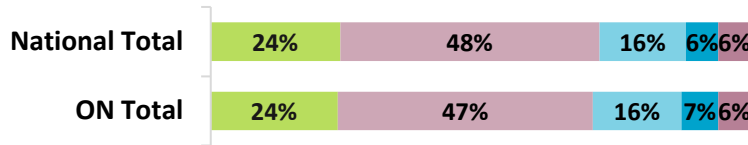
Province/Region



National: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)

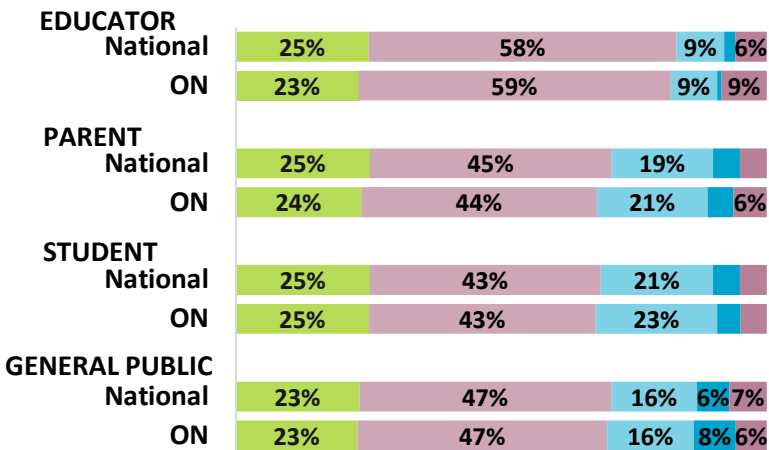
Responses 5% or less not labelled

Would you be willing to change your life to help reduce the effects of climate change?



■ A lot
 ■ Some
 ■ A little
 ■ Not at all
 ■ Don't know

Respondent Group

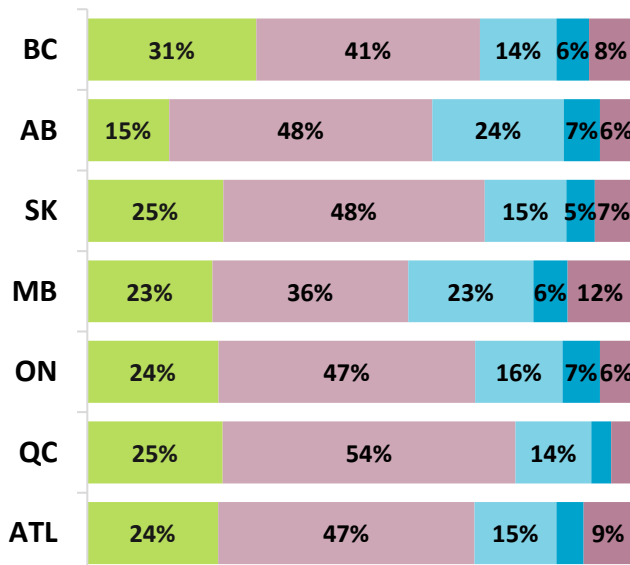


National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)

ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)

Responses 5% or less not labelled.

Province/Region



National: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)

Responses 5% or less not labelled.

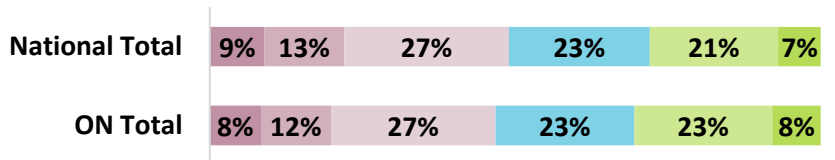
A large majority of respondents both nationally (72%) and in ON (71%) would be willing to change their life either "a lot" or "some" to help reduce the effects of climate change. Only 6% of respondents nationally and 7% in ON are not at all willing to change their life at school, work, or home.

Responses among ON residents are consistent with national responses across all respondent groups. Educators were significantly more willing to take "some" action (58% nationally, 59% in ON) while parents, students, and the general public were significantly more willing to take "a little" action (19%, 21%, 16%, respectively nationally and 21%, 23% and 16% in ON).

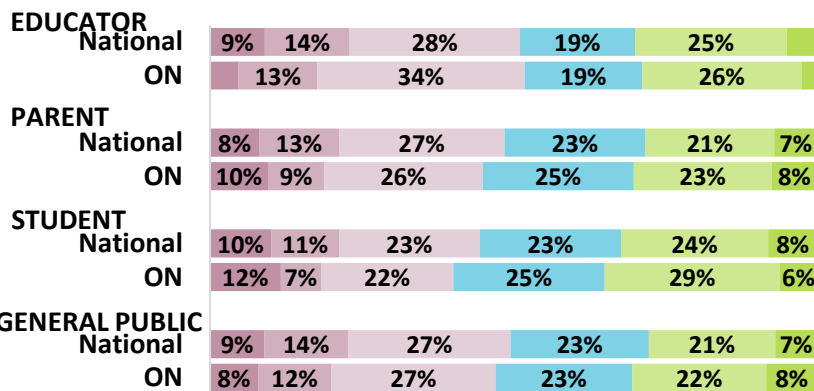
Respondents across the provinces in Canada were also willing to take "some" action to help reduce the effects of climate change, ranging from 54% in QC to 36% in MB.

Those in BC (31%), were more willing to take "a lot" of action than those in other provinces, especially compared to AB (15%).

New technologies can solve climate change without individuals having to make big changes in their lives



Respondent Group



National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)

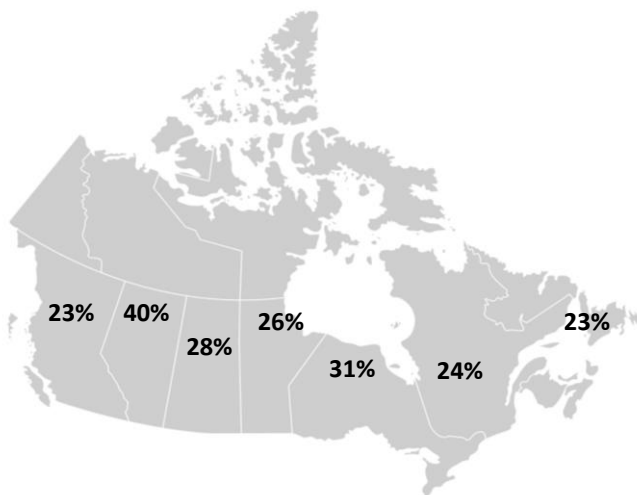
ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)

Responses 5% or less not labelled.

Few respondents nationally (28%) agreed that new technologies can solve climate change without individuals having to make big changes in their lives, slightly more respondents in ON also agree (31%).

Similar levels of agreement were seen across respondent groups nationally and in ON, with students being the most optimistic about the role of technology (32% nationally and 35% in ON).

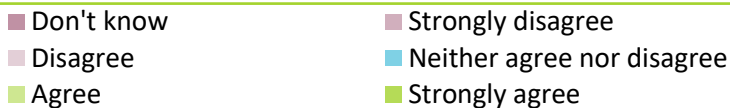
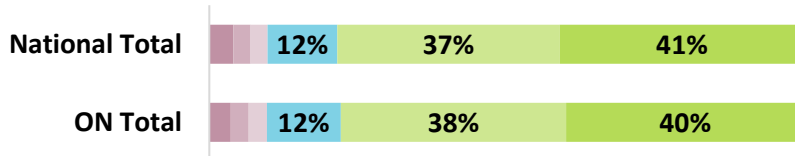
Province/Region - % Agree (Strongly Agree/Agree)



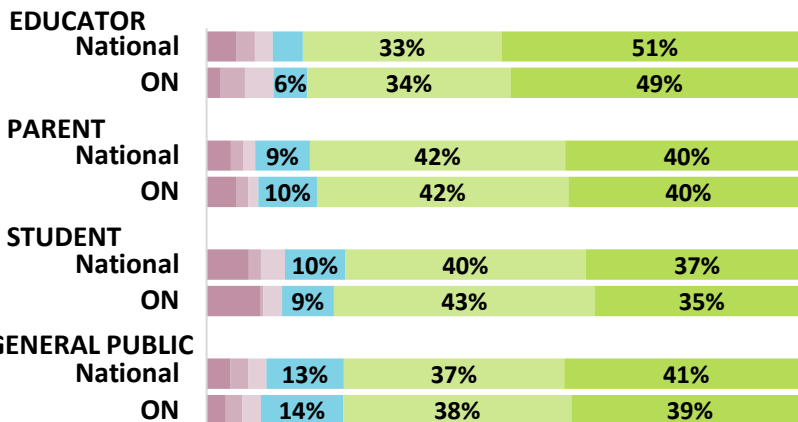
Regionally, respondents differed in their belief that new technologies can solve climate change.

Those living in AB (40%) were significantly more likely to believe in technology as a solution without sacrifices needing to be made, than those in BC (23%), ATL (23%), QC (24%), and MB (26%).

Personal actions are important, but systemic change is required to address climate challenges



Respondent Group



National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)

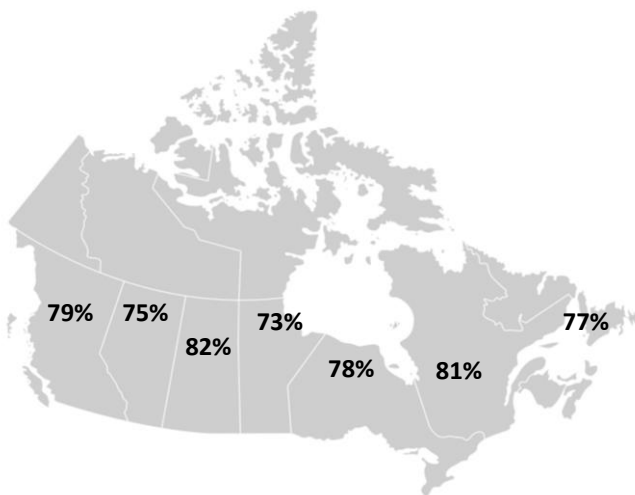
ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)

Responses 5% or less not labelled.

Most respondents feel individual efforts must be supported by a whole-system response to mitigate the effects of rising temperatures. A majority of respondents (78% nationally and in ON) agreed that while personal actions are important, systemic change is required to address climate challenges.

Responses among ON residents are consistent with national responses. Educators (84% nationally, 83% in ON) and parents (82%) were more likely to agree that systemic change is required to address climate change compared to students (77% nationally, 78% in ON) and the general public (78% nationally, 77% in ON).

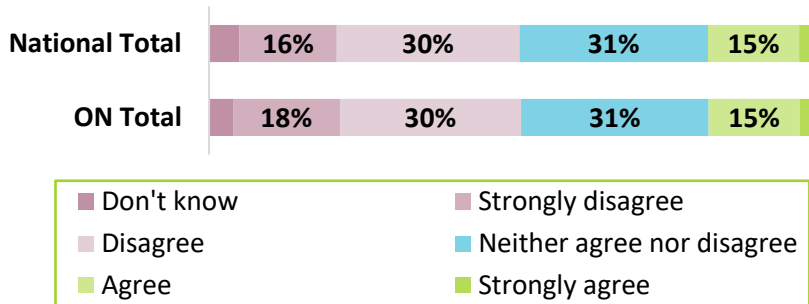
Province/Region - % Agree (Strongly Agree/Agree)



Similarly, respondents across the provinces in Canada agreed that systemic change is needed.

Agreement ranged from 82% in SK to 73% in MB with ON falling in the middle at 78%.

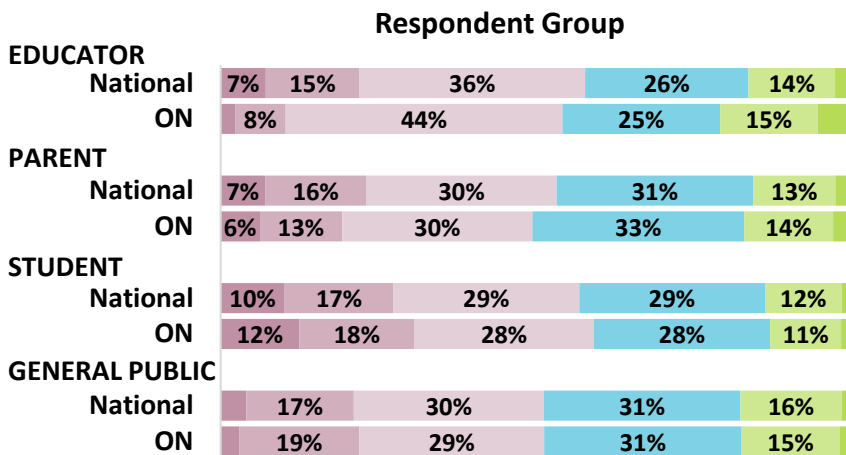
The government is doing a good job in their actions to address climate change



Ontarians, like most Canadians, are not satisfied with the actions the government is taking to mitigate the effects of a warming planet. Very few respondents (17%) agreed/strongly agreed that the government is doing a good job in their actions to address climate change.

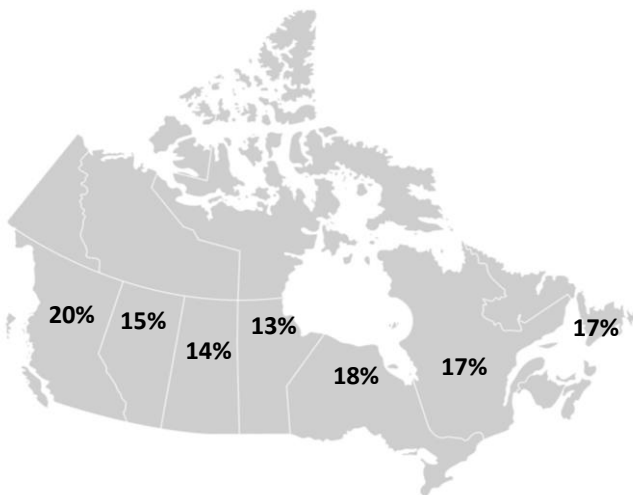
Dissatisfaction with the job the government is doing was fairly consistent across respondent groups. Students strongly agreed the least (12% nationally, 11% in ON) differing only slightly from the general public who had the highest agreement (16% nationally, 15% in ON).

Responses among ON residents are consistent with national responses across all respondent groups.



National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
 ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)
 Responses 5% or less not labelled.

Province/Region - % Agree (Strongly Agree/Agree)



Similarly, there are few respondents across Canada who agree the government is doing a good job. Regional responses range from 13% agreement in MB to 20% in BC, with ON slightly above the national average at 18%.

National: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)

* Indicates rounding

Please elaborate on what you feel needs to be done to address climate change

Survey respondents were given the opportunity to answer this open-ended question in their own words. Out of the survey population, 627 individuals from ON chose to answer this optional question.

The results were coded and grouped according to themes. The 6 most common themes are shown below, and indicate suggestions for government regulation, lifestyle changes to reduce carbon footprint, and cooperation from industries, among other suggestions to address climate change.

1

**Government
legislation/regulations/action**
22%

"The government needs to take more action with their country and truly make people realize how it is and is going to affect our society and ways of living. It's not something that can keep getting brushed aside. Something needs to be done!" (Member of the General Public)

2

**Reduce carbon footprint/lifestyle change to
become more environmentally friendly**
14%

"We need to significantly change our lifestyle if we are going to make any sort of difference in the world. We need to be less selfish and do extra things here and there to do our part." (Student)

4

Everybody must do their share
9%

"We should all do our part whether big or small to contribute to this. We are living here on earth and should help with waste management, gas emission, recycling, and conservation." (Parent)

3

**Cooperation/responsibility from
industries/companies**
11%

"Large corporations should take responsibility since they are responsible for the large majority of CO2 emissions." (Member of the General Public)

6

Adapt to green energy/renewable energy
9%

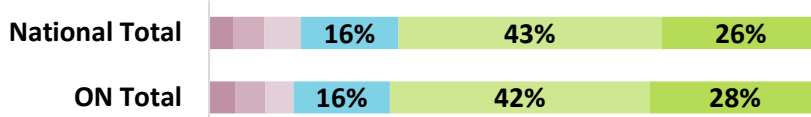
"We need to make large scale investments in renewable energy and environmental sciences. We need to use this to leverage the positive economic advantages and lead by example on the global consciousness." (Parent)

5

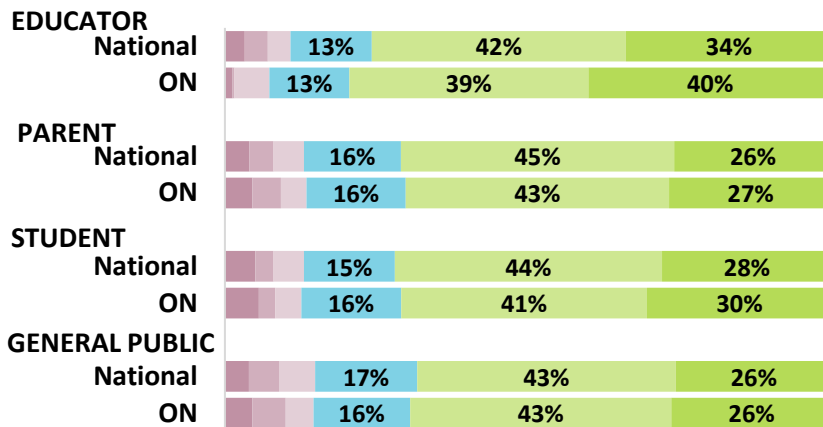
**Reduce greenhouse emissions/
pollution**
9%

"We need to work together and limit our footprints and our emissions; big factories need to find ways to operate without pollution." (Student)

The work and voices of young people can inspire important climate action

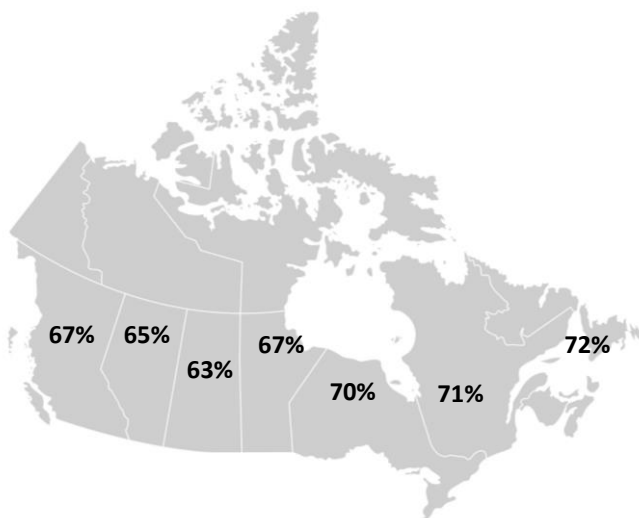


Respondent Group



National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
 ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)
 Responses 6% or less not labelled.

Province/Region - % Agree (Strongly Agree/Agree)



National: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)

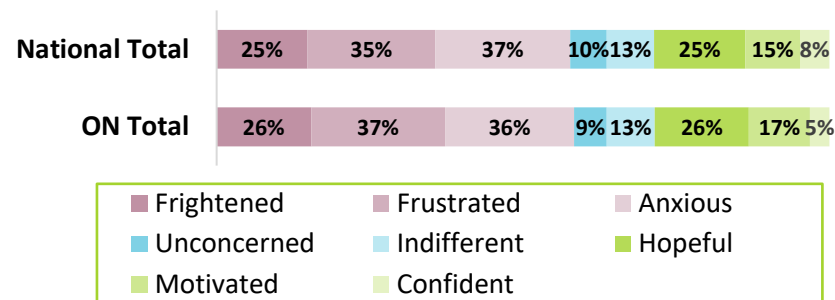
Many Canadians are counting on our youth to help win the fight against global warming. The majority (69%) of respondents nationally and in ON (70%) agreed that the work and voices of young people can inspire important climate action.

Educators (76% nationally and 79% in ON) were significantly more likely to agree that young people can inspire climate action compared to the general public (69% both nationally and in ON).

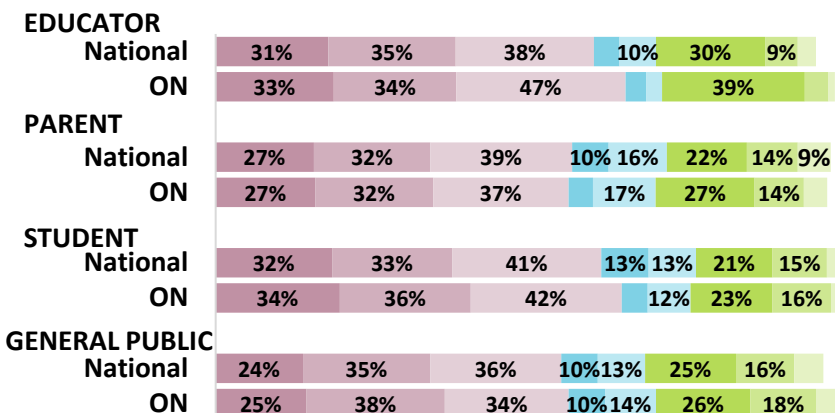
Responses among ON residents are consistent with national responses across all respondent groups.

A majority of respondents across various provinces in Canada, including ON, agree with this statement, ranging from 72% of those in ATL to 63% in SK.

When you think about climate change, what main emotions or feelings arise?



Respondent Group

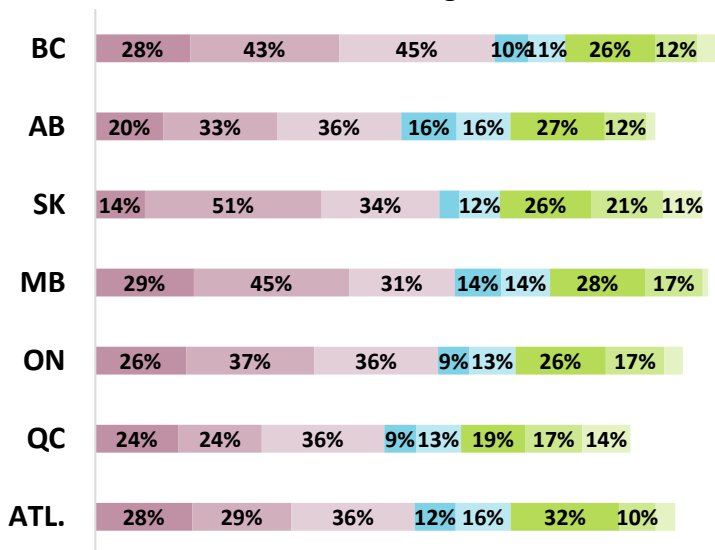


National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)

ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)

Responses 8% or less not labelled.

Province/Region



National: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL.=300)

Responses 8% or less not labelled

When ON respondents were asked to think about climate change and the emotions or feelings that arise when they do, frustration (37%) was the top response, followed by anxiety (36%) whereas nationally, these results were reversed (37% anxious, 35% frustrated). One quarter of respondents are feeling frightened (25% nationally, 26% in ON), but positively, the same percentage also feel hopeful (25% nationally, 26% in ON). Interestingly, ON respondents feel less confident compared to the national average (5% in ON vs. 8% nationally), although both are quite low.

In ON, anxiety is the top emotion felt by educators, parents, and students, however, members of the general public feel frustration as their top emotion. Educators in ON are more likely than educators nationally to feel hopeful (39% vs. 30%) as well as anxious (47% vs. 38%).

Respondents in ON were most likely to feel motivated (17%). BC respondents (45%) were more likely to feel anxious about climate change than those in other provinces, especially MB (31%). SK respondents were most likely to feel frustrated (51%). Residents in BC had the highest combined negative feelings while those in AB and QC had the lowest.

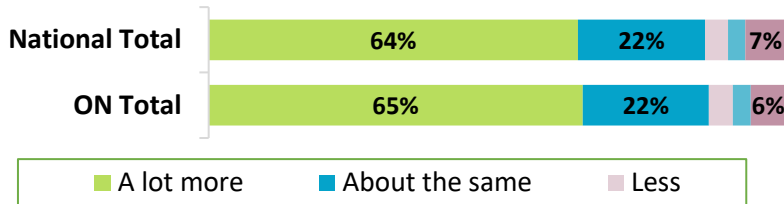
Those in QC (14%) were significantly more likely to feel confident about climate change. In AB, 16% of respondents felt unconcerned, which is significantly more than those in SK (6%), ON (9%), and QC (9%).



Part 3: Climate Change Education

Part 3 highlights respondent's opinions and perspectives of climate change education in schools.

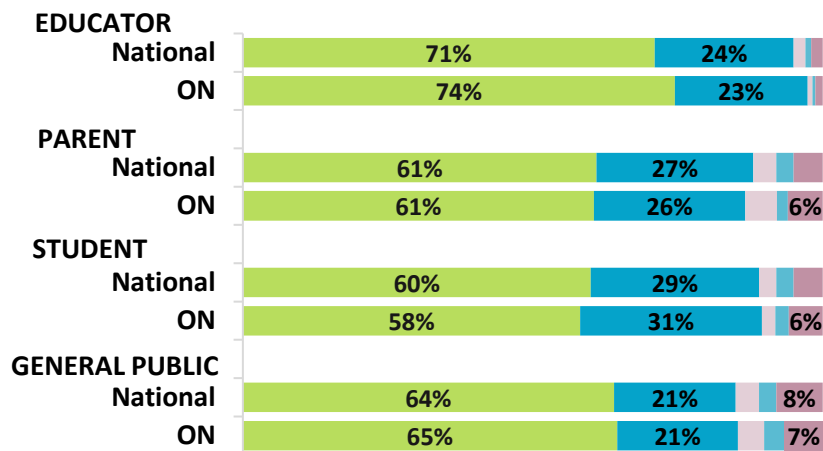
Should education systems do more, less, or about the same as now to educate young people about climate change?



Many Canadians understand the importance of education in the fight against climate change, as 64% nationally and 65% in ON indicated they think that 'a lot more' should be done to educate young people.

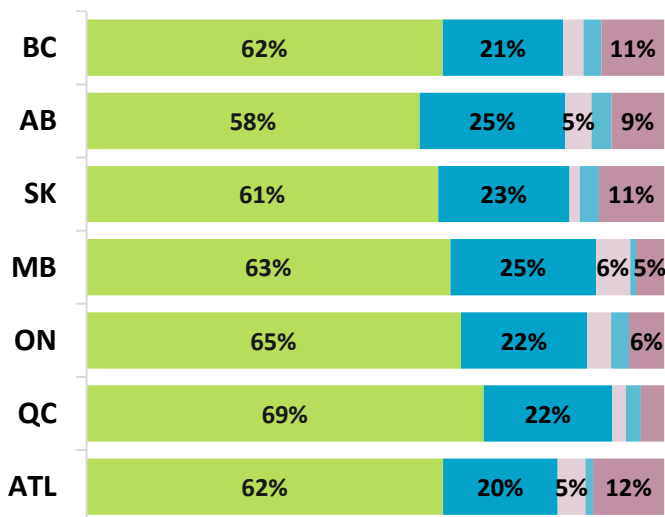
Responses among ON residents are consistent with national responses. Educators nationally (71%) and even more so in ON (74%) strongly believe that schools should be doing a lot more to teach students about climate change. The majority of parents (61% nationally and in ON), students (60% nationally and 58% in ON), and the general public (64% nationally and 65% in ON) share a similar belief.

Respondent Group



National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
 ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)
 Responses 5% or less not labelled.

Province/Region



Across Canada, the majority of respondents think the education system should be doing more to educate about climate change. ON responses fall in the upper half among the provinces at 65%. AB (58%) had the lowest levels of support for the schools doing more to educate young people about climate change, while QC had the highest (69%).

To what extent do you agree (or disagree) with the following on teaching climate change in schools?

% Agree (Strongly Agree/Agree)– Total

	National Total	ON Total
Climate change education should aim to change the way people behave.	75%	76%
Climate change education should be a high priority for schooling.	67%	70%
Climate change education should be the role of all teachers.	61%	65%
Only one 'side' of the climate change debate should be taught (it is happening, and humans are the cause).	31%	31%
It is not the role of schools to teach students about climate change.	13%	13%
The topic of climate change is too complex and should not be discussed in younger grades.	15%	15%

National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
 ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)

Most respondents agreed that climate change education should aim to change the way people behave (75% nationally and 76% in ON).

Very few Canadians and Ontarians (15%) agreed that the topic of climate change is too complex and should not be discussed in younger grades. Even less (13%) agreed that it is not the role of the school to teach students about climate change.

Perceptions of teaching climate change in schools varies regionally, ON had the second highest level of agreement that climate change should aim to change the way people behave (76%), and be a high priority for schooling (70%).

% Agree (Strongly Agree/Agree)– Province/Region

	BC	AB	SK	MB	ON	QC	ATL
Climate change education should aim to change the way people behave.	75%	67%	65%	68%	76%	78%	71%
Climate change education should be a high priority for schooling.	69%	58%	59%	66%	70%	66%	71%
Climate change education should be the role of all teachers.	62%	49%	52%	63%	65%	62%	57%
Only one 'side' of the climate change debate should be taught (it is happening, and humans are the cause).	38%	26%	26%	28%	31%	34%	23%
The topic of climate change is too complex and should not be discussed in younger grades.	13%	20%	21%	14%	15%	13%	15%
It is not the role of schools to teach students about climate change.	18%	15%	14%	15%	13%	12%	9%

National: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)

To what extent do you agree (or disagree) with the following on teaching climate change in schools? (continued)

Most respondents agree that climate change education should aim to change the way people behave, that it should be a high priority for schooling, and that climate change education should be the role of all teachers.

Educators especially agreed (78% nationally and even more so in ON, 81%) behaviour change was important. Parents (74% nationally, 75% in ON), students (72% both nationally and in ON) and the general public (75% nationally, 77% in ON) shared a similar belief.

Most disagree that the topic of climate change is too complex and should not be discussed in younger grades, and that it is not the role of the school to teach students about climate change.

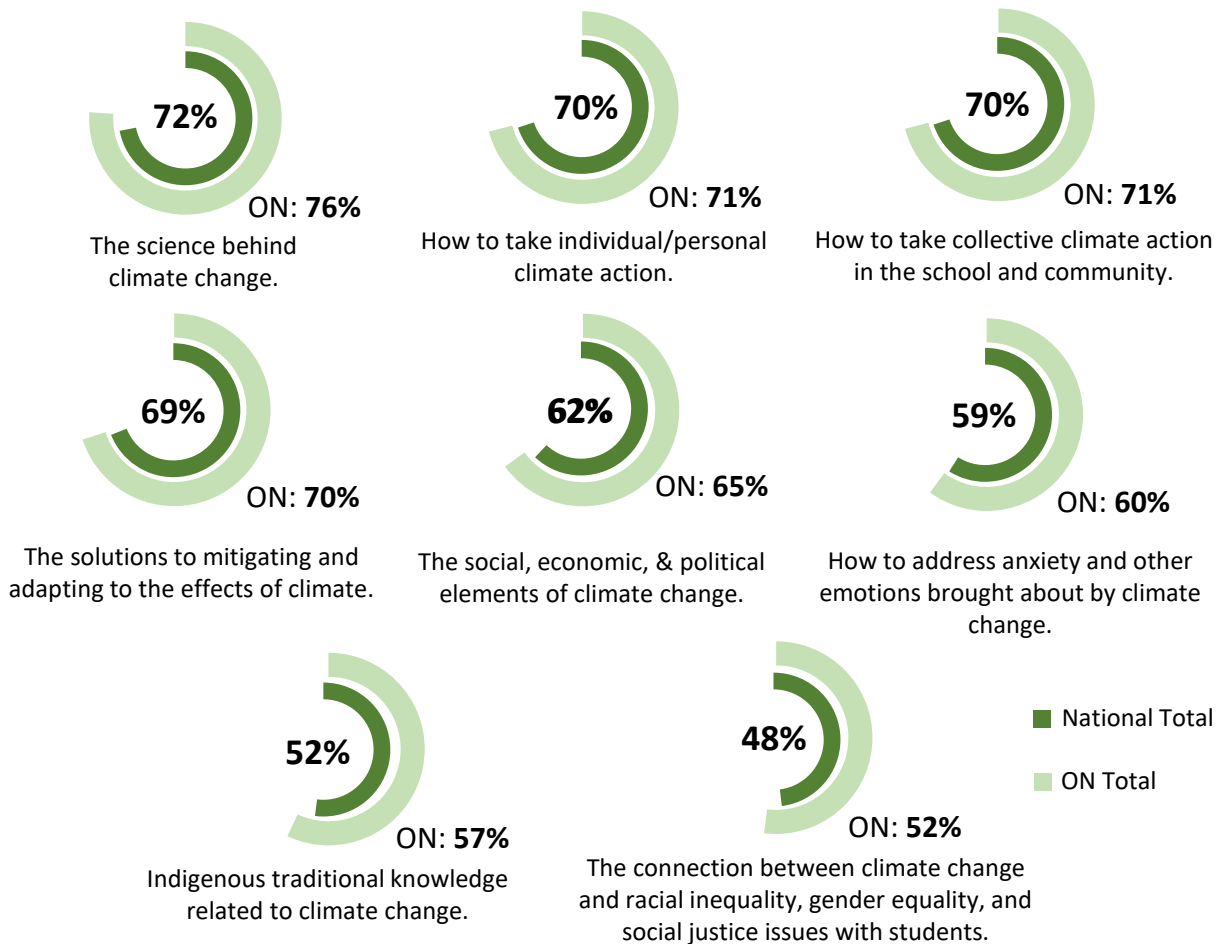
Educators in ON were much more likely (47%) to agree that only one side of the climate change debate should be taught (it is happening, and humans are the cause) compared to the national average (36%), whereas parents were less likely to agree in ON (27% in ON, 31% nationally).

% Agree	Educators		Parents		Students		General Public	
	Nat.	ON	Nat.	ON	Nat.	ON	Nat.	ON
Climate change education should aim to change the way people behave.	78%	81%	74%	75%	72%	72%	75%	77%
Climate change education should be a high priority for schooling.	68%	78%	64%	65%	66%	67%	67%	69%
Climate change education should be the role of all teachers.	61%	70%	60%	61%	61%	67%	61%	65%
Only one 'side' of the climate change debate should be taught (it is happening, and humans are the cause).	36%	47%	31%	27%	30%	34%	31%	30%
The topic of climate change is too complex and should not be discussed in younger grades	12%	13%	17%	15%	16%	16%	15%	15%
It is not the role of schools to teach students about climate change.	10%	9%	15%	13%	14%	12%	14%	14%

National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)
 ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)

To what extent do you feel that the Kindergarten to Grade 12 classes should focus on the following?

% Agree (Somewhat more/A lot more)



On average, ON respondents were more likely to agree with the inclusion of all suggested climate-change related topics into K-12 classes compared to nationally. Most educators (76% nationally, 79% in ON) agreed that Kindergarten to Grade 12 classes should focus on the science behind the climate change. Educators were significantly more likely to agree that classes should focus on how to take individual/personal climate action (74% nationally, 77% in ON), how to take collective climate action in the school and community (73% nationally, 75% in ON), and the solutions to mitigating and adapting to the effects of climate (73% nationally and 71% in ON), compared to students in these categories (69%, 68% and 63% nationally and slightly higher in ON at 70%, 72% and 62% respectively).

Note: Respondent group and provincial data can be viewed on the following page. Across Canada, the province that most strongly believed that school should focus on the science of climate change was ON (76%). The regions that were the least likely to believe in a focus on the social, economic, & political elements of climate change were QC (58%) and ATL (56%).

To what extent do you feel that the Kindergarten to Grade 12 classes should focus on the following? (continued)

Respondent Group

% Somewhat more/A lot more

	Educators		Parents		Students		General Public	
	Nat.	ON	Nat.	ON	Nat.	ON	Nat.	ON
The science behind climate change	76%	79%	72%	74%	70%	76%	72%	76%
How to take individual/personal climate action	74%	77%	70%	71%	69%	70%	70%	70%
How to take collective climate action in the school and community	73%	75%	68%	72%	68%	72%	70%	70%
The solutions to mitigating and adapting to the effects of climate	73%	71%	69%	73%	63%	62%	69%	70%
The social, economic, & political elements of climate change	66%	65%	61%	67%	61%	63%	62%	64%
How to address anxiety and other emotions brought about by climate change	62%	63%	58%	60%	57%	59%	59%	60%
Indigenous traditional knowledge related to climate change	51%	50%	50%	56%	48%	54%	52%	58%
The connection between climate change and racial inequality, gender equality, and social justice issues with students	55%	53%	46%	48%	47%	47%	48%	53%

National: n=4,035 (Educator=406, Parent=1,373, Student=1,208, General Public=1,290)

ON: n=1,025 (Educator=110, Parent=332, Student=225, General Public=401)

Province/Region

% Somewhat more/A lot more

	BC	AB	SK	MB	ON	QC	ATL
The science behind climate change	71%	72%	71%	67%	76%	69%	69%
How to take individual/personal climate action	67%	67%	66%	72%	71%	73%	70%
How to take collective climate action in the school and community	66%	66%	68%	68%	71%	72%	68%
The solutions to mitigating and adapting to the effects of climate	71%	64%	70%	65%	70%	69%	69%
The social, economic, & political elements of climate change	66%	62%	63%	66%	65%	58%	56%
How to address anxiety and other emotions brought about by climate change	57%	57%	60%	55%	60%	57%	60%
Indigenous traditional knowledge related to climate change	48%	46%	51%	52%	57%	48%	52%
The connection between climate change and racial inequality, gender equality, and social justice issues with students	49%	45%	51%	44%	52%	46%	40%

National: n=4,035 (BC=514, AB=467, SK=217, MB=241, ON=1,025, QC=1,168, ATL=300)

How do you think education systems should further contribute to climate change education?

Survey respondents were given the opportunity to answer this open-ended question in their own words. Out of the survey population, 571 individuals from ON chose to answer this optional question.

The results were coded and grouped according to themes. The 7 most common themes are shown below, and indicate suggestions for an enhanced curriculum, increased awareness, and explanation of scientific evidence.

1

Include with curriculum in school
37%

"There should be courses and curriculum addressing this issue starting in public schools."
(Member of the General Public)

2

Offer solutions to the problem (e.g., reduce your carbon footprint, less pollution)
20%

"Instead of teaching about climate change develop ways that students can actually participate in solutions that help with climate change." (Parent)

3

Explain scientific evidence of what causes climate change
13%

"Improve science education and critical thinking so that they can make evidence based informed decisions moving forward" (Member of the General Public)

4

Make people aware of consequences to their actions
13%

"Students should be taught about the consequences of their action on the planet and how to reduce their carbon emissions." (Member of the General Public)

5

Empower individuals so they feel they can make a difference
10%

"In the classroom, young people can be taught the impact of global warming and learn how to adapt to climate change. Education empowers all people, but especially motivates the young to take action." (Educator)

6

Start teaching them at a young age
8%

"We need to be taught from a young age about why this is happening and what are the effects" (Student)

7

Educate people more/ Increase awareness
7%

"By increasing awareness of climate change and it's never too early to get involved." (Parent)

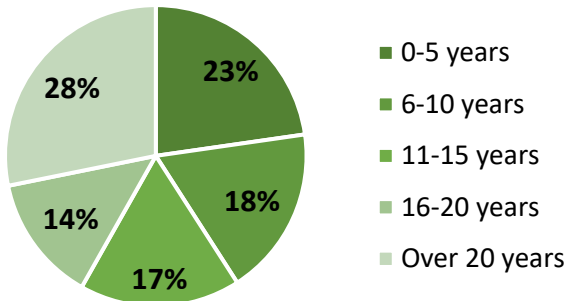


Part 4: Teaching Climate Change

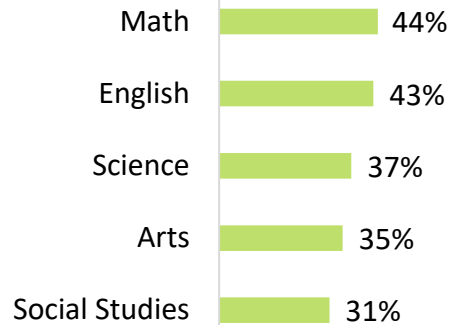
Part 4 highlights the results from the portion of the survey **designed exclusively for educators**. This section includes their perspectives on the issues that impact the teaching of climate change. 406 Educators responded to the survey with representation from each province across Canada.

Ontario Educator Demographics

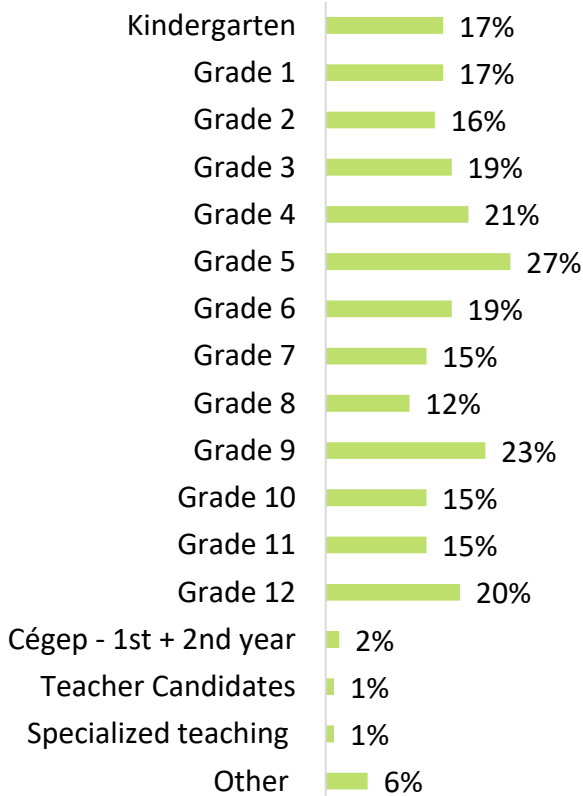
Years of Teaching Experience*



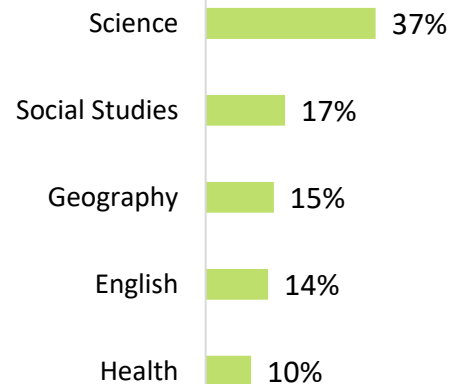
Subjects Taught



Grades Taught

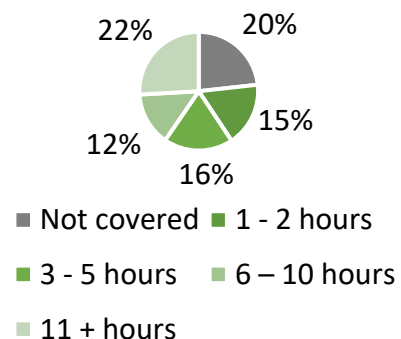


Courses Taught that Address Climate Change



27% do not cover climate change topics in any subjects they teach

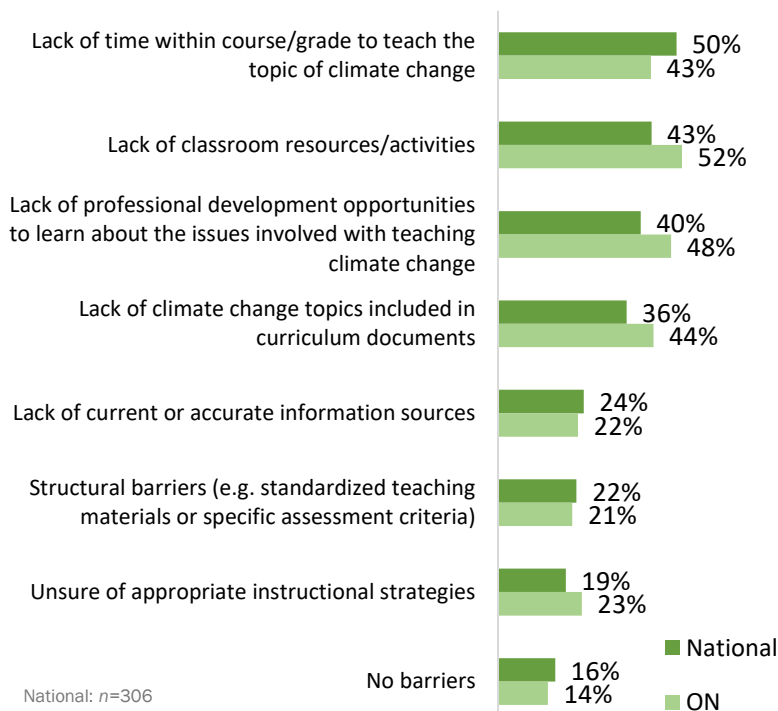
Hours in a School Year Spent Covering Climate Change



40%* feel students are developmentally ready to learn about the concept of climate change and its impacts starting in Junior Kindergarten/Kindergarten

What barriers have you experienced when attempting to include climate change education within your classroom?

Barriers when attempting to include climate change education within the classroom



Nationally, the highest percentage of educators (50%) agreed that a lack of time within their course/grade to teach the topic of climate change is a barrier whereas in ON the highest percentage of educators (52%) selected a lack of classroom resources as a barrier when attempting to include climate change education within the curriculum.

Comparing regional responses, ON agreed the least often that lack of time was a barrier (43%). ON educators fall in the middle of responses provincially for most other responses. BC and ATL have the highest agreement overall, and QC and AB have the lowest.

Province/Region

	BC	AB	ON	QC	ATL*	SK*	MB*
Lack of time within course/grade to teach the topic of climate change	69%	57%	43%	48%	62%	55%	55%
Lack of classroom resources/activities	53%	34%	52%	38%	59%	62%	54%
Lack of professional development opportunities to learn about the issues involved with teaching climate change	59%	42%	48%	28%	56%	45%	49%
Lack of climate change topics included in curriculum documents	48%	42%	44%	28%	60%	59%	51%
Lack of current or accurate information sources	48%	32%	22%	19%	31%	45%	36%
Structural barriers (e.g. standardized teaching materials or specific assessment criteria)	18%	27%	21%	24%	33%	31%	25%
Unsure of appropriate instructional strategies	14%	30%	23%	13%	24%	21%	25%
No barriers	8%	18%	14%	17%	12%	-	10%

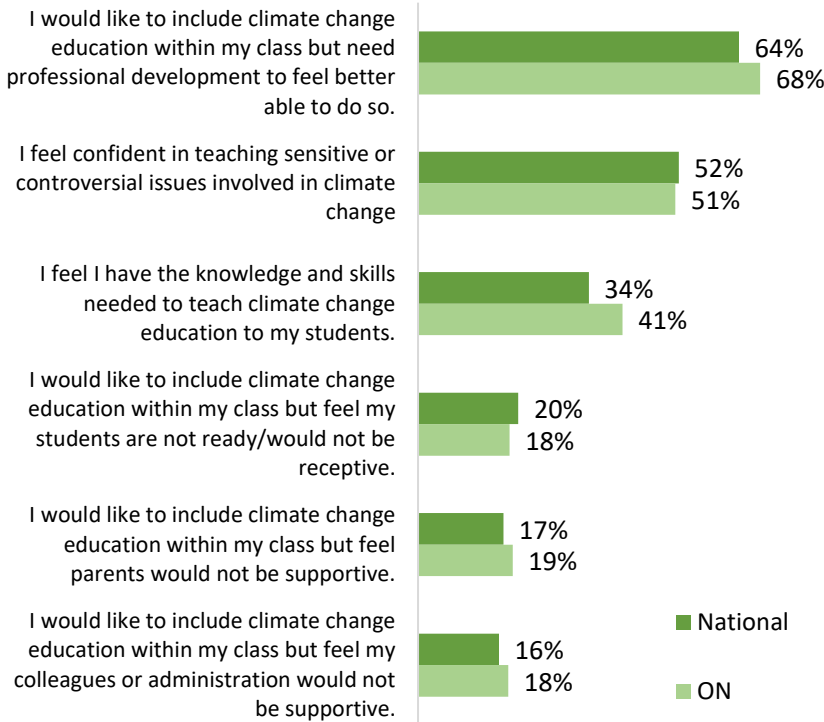
National: Educators (BC=40, AB=35, SK=29, MB=175, ON=81, QC=109, ATL=156)

Total National Responses less than 10% not shown.

* Indicates open-link data: regional data has been grouped according to the method of sampling in the tables for comparison purposes.

To what extent do you agree/disagree with the following statements?

% Agree (Strongly Agree/Agree)



National: n=306
ON: n=81

Educators expressed the need for professional development (64% nationally and even more in ON, 68%) to feel comfortable teaching climate change but over half (52% nationally, 51% in ON) did express confidence teaching the controversial issues involved in this subject matter. Nationally, only one-third (34%) agreed that they had the knowledge and skills to teach climate change education to their students. Teachers in ON feel more equipped at 41%.

Educators in BC varied in their perceptions of climate change education compared to their counterparts in AB, especially in their need for PD (89% in BC vs. 40% in AB) and confidence in teaching sensitive issues (65% in BC vs. 34% in AB). ON responses fell in the middle of the provincial variation for each statement.

% Agree - Province/Region

	BC	AB	ON	QC	ATL*	SK*	MB*
I would like to include climate change education within my class but need professional development to feel better able to do so.	89%	40%	68%	63%	63%	52%	61%
I feel confident in teaching sensitive or controversial issues involved in climate change	59%	34%	51%	51%	62%	83%	65%
I feel I have the knowledge and skills needed to teach climate change education to my students.	41%	30%	41%	25%	53%	86%	54%
I would like to include climate change education within my class but feel my students are not ready/would not be receptive.	16%	13%	18%	24%	9%	17%	9%
I would like to include climate change education within my class but feel parents would not be supportive.	14%	17%	19%	16%	8%	41%	9%
I would like to include climate change education within my class but feel my colleagues or administration would not be supportive.	20%	7%	18%	15%	8%	24%	6%

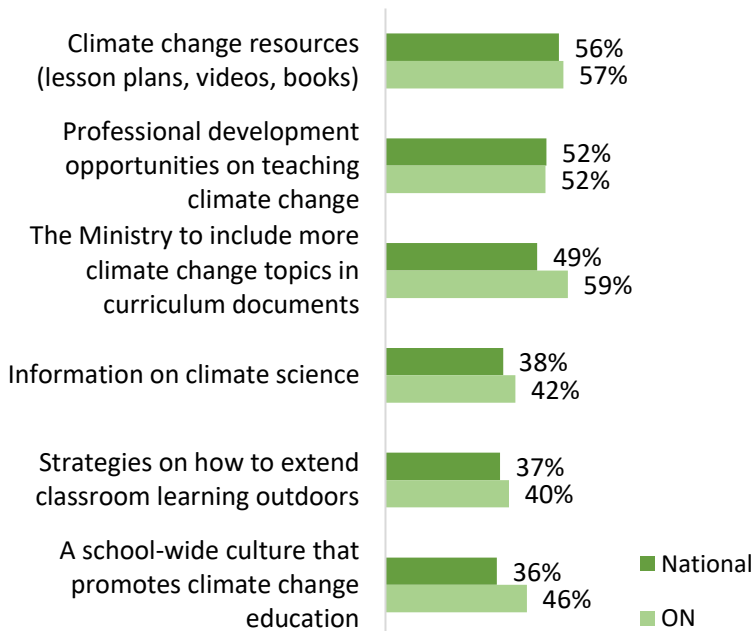
National: Educators (BC=40, AB=35, SK=29, MB=175, ON=81, QC=109, ATL=156)

Indicates open-link data

* Indicates open-link data: regional data has been grouped according to the method of sampling in the tables for comparison purposes.

What support do you need to teach climate change?

Top 6 “Things” Needed to Teach Climate Change



National: n=306
ON: n=81
Top 6 Responses Shown.

Some survey topics were included in different questions to confirm findings.

Again, educators substantiated that some of the most needed items were climate change resources (56% nationally, 57% in ON) and professional development opportunities on teaching climate change (52% both nationally and in ON)

Similar to previous questions, ON educators fall fairly close to the middle on each statement, although they were the second least likely to request professional development opportunities (52%) just ahead of QC. BC educators were most likely to request a school wide culture to support climate change (50%), and ON was most likely to want strategies on outdoor learning (40%).

Province/Region

	BC	AB	ON	QC		ATL*	SK*	MB*
Climate change resources (lesson plans, videos, books)	61%	39%	57%	54%		72%	72%	75%
Professional development opportunities on teaching climate change	83%	58%	52%	42%		69%	55%	78%
The Ministry to include more climate change topics in curriculum documents	43%	48%	59%	40%		60%	76%	63%
Information on climate science	38%	39%	42%	34%		60%	48%	57%
Strategies on how to extend classroom learning outdoors	36%	38%	40%	33%		56%	45%	58%
A school-wide culture that promotes climate change education	50%	32%	46%	23%		61%	69%	65%

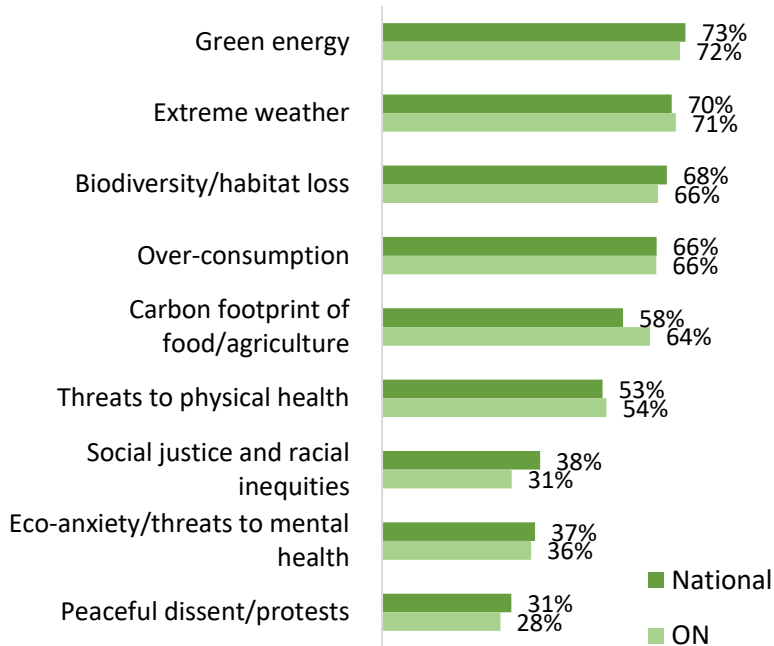
National: Educators (BC=40, AB=35, SK=29, MB=175, ON=81, QC=109, ATL=156)

National Total Responses less than 10% not shown.

Top 6 responses shown. * Indicates open-link data: regional data has been grouped according to the method of sampling in the tables for comparison purposes.

To what extent do you agree (or disagree) that climate change should be addressed in grades Kindergarten to Grade 3?

% Agree (Strongly Agree/Agree)



National: n=406
ON: n=110

Educators highly agreed that green energy (73% nationally, 71% in ON) and extreme weather (70% nationally, 71% in ON) should be addressed in Kindergarten to Grade 3.

There was lower agreement for the inclusion of topics like social and racial inequities (38% nationally, 31% in ON), eco-anxiety/threats to mental health (37% nationally, 36% in ON), and peaceful dissent/protests (31% nationally, 28% in ON) should be addressed in K to Gr 3. ON agreement was lower than the national average for each one of these statements

ON (72%) ranked teaching green energy highest in K to Gr 3. AB (70%) ranked biodiversity highest, and QC (77%) ranked over-consumption highest.

Province/Region

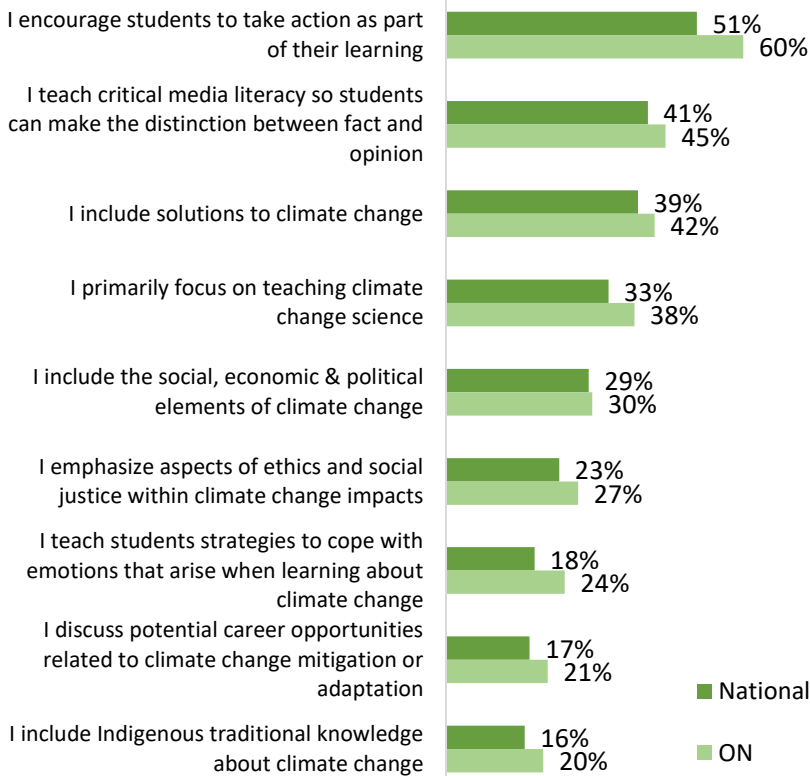
	BC	AB	ON	QC	ATL*	SK*	MB*
Green energy	67%	63%	72%	75%	85%	82%	82%
Extreme weather	65%	62%	71%	72%	73%	74%	79%
Biodiversity/habitat loss	64%	70%	66%	63%	84%	85%	85%
Over-consumption	48%	66%	66%	77%	86%	79%	81%
Carbon footprint of food/agriculture	59%	60%	64%	53%	75%	72%	72%
Threats to physical health	59%	38%	54%	53%	48%	51%	61%
Social justice and racial inequities	26%	38%	31%	42%	53%	59%	58%
Eco-anxiety/threats to mental health	21%	19%	36%	43%	42%	46%	49%
Peaceful dissent/protests	19%	21%	28%	34%	39%	28%	44%

National: Educators (BC=57, AB=41, SK=39, MB=257, ON=110, QC=130, ATL=219)

* Indicates open-link data: regional data has been grouped according to the method of sampling in the tables for comparison purposes.

When I teach about climate change...

A Great Deal/ A Moderate Amount



National: n=306

ON: n=81

Half (51%) of educators nationally and three-in-five educators (60%) in ON encourage students to take action as part of their learning when teaching about climate change. Many (41% nationally, 45% in ON) also taught media literacy.

Educators from ON were the most likely to adopt many of the listed actions and AB was the least likely. Educators from QC (11%) were the least likely to include Indigenous traditional knowledge about climate change when teaching climate change, as compared to their counterparts in AB (26%) who were the most likely.

Province/Region

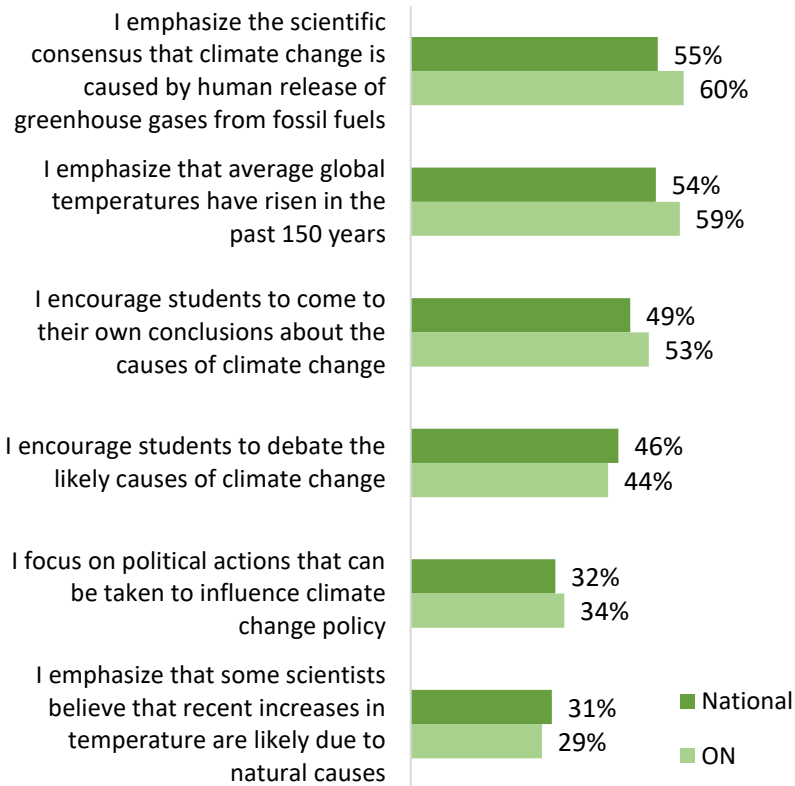
	BC	AB	ON	QC	ATL*	SK*	MB*
I encourage students to take action as part of their learning	45%	30%	60%	50%	66%	66%	66%
I teach critical media literacy so students can make the distinction between fact and opinion	41%	26%	45%	45%	45%	66%	42%
I include solutions to climate change	40%	26%	42%	41%	56%	59%	58%
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 impacts	25%	16%	27%	22%	32%	34%	39%
I teach students strategies to cope with emotions that arise when learning about climate change	12%	18%	24%	15%	19%	28%	23%
I discuss potential career opportunities related to climate change mitigation or adaptation	23%	16%	21%	12%	27%	28%	13%
I include Indigenous traditional knowledge about climate change	13%	26%	20%	11%	19%	48%	29%

National: Educators (BC=40, AB=35, SK=29, MB=175, ON=81, QC=109, ATL=156)

* Indicates open-link data: regional data has been grouped according to the method of sampling in the tables for comparison purposes.

In my classes...

% Agree (Strongly Agree/Agree)



Over half of educators agreed that they emphasize the scientific consensus that climate change is caused by human release of greenhouse gases from fossil fuels (55% nationally and even more in ON at 60%). Educators also emphasize that the average global temperatures have risen in the past 150 years (54% nationally, 59% in ON).

ON responses fell in the middle of the regional variation for most statements. ON educators were most likely to report encouraging students to come to their own conclusions about the causes of climate change (53%).

National: n=306
ON: n=81

Province/Region

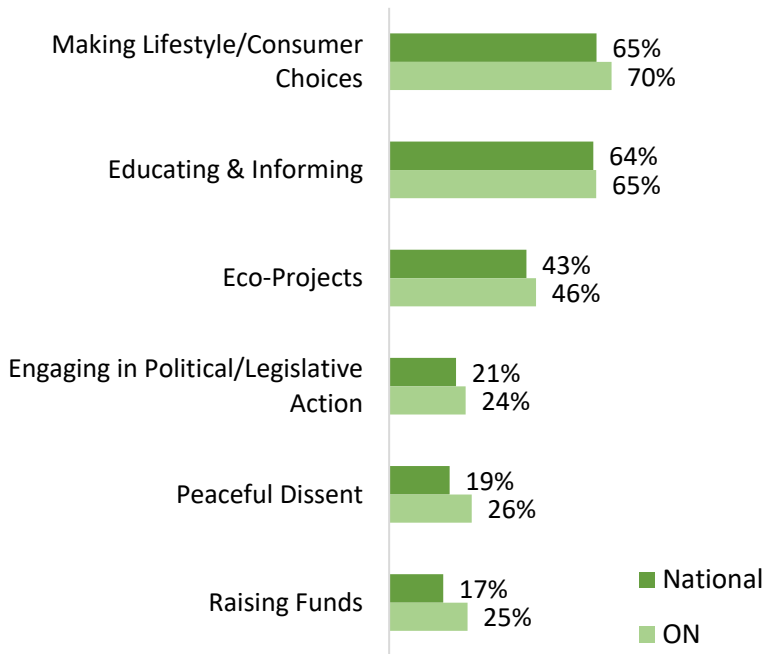
	BC	AB	ON	QC	ATL*	SK*	MB*
I emphasize the scientific consensus that climate change is caused by human release of greenhouse gases from fossil fuels	73%	37%	60%	50%	69%	79%	67%
I emphasize that average global temperatures have risen in the past 150 years	71%	39%	59%	48%	64%	79%	63%
I encourage students to come to their own conclusions about the causes of climate change	37%	39%	53%	46%	39%	34%	41%
I encourage students to debate the likely causes of climate change	50%	34%	44%	48%	33%	45%	43%
I focus on political actions that can be taken to influence climate change policy	43%	16%	34%	32%	42%	52%	40%
I emphasize that some scientists believe that recent increases in temperature are likely due to natural causes	34%	37%	29%	27%	16%	24%	23%

National: Educators (BC=40, AB=35, SK=29, MB=175, ON=81, QC=109, ATL=156)

* Indicates open-link data: regional data has been grouped according to the method of sampling in the tables for comparison purposes.

How frequently do you engage students in taking the following types of actions to address climate change?

Frequently / Occasionally



National: n=306
ON: n=81

Educators most frequently engaged students in actions to make lifestyle/consumer choices (65% nationally), even more often in ON (70%) and to educate and inform others (64% nationally, 65% in ON).

ON educators were more likely to engage in peaceful dissent compared to the national average (19% nationally, 26% in ON) or raising funds (17% nationally, 25% in ON).

Educators from AB less frequently engage students in all actions that address climate change than those from BC, ON or QC.

Educators in BC (71%) and ON (70%) are the most likely to engage students in making lifestyle/consumer choices. ON educators fell in the middle for most other actions.

Province/Region

	BC	AB	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%

National: Educators (BC=40, AB=35, SK=29, MB=175, ON=81, QC=109, ATL=156)

* Indicates open-link data: regional data has been grouped according to the method of sampling in the tables for comparison purposes.



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Section 4: Climate Audiences

Ladder of Engagement

The group EcoAnalytics has been mapping Canadian public opinion on climate change since 2016. As well, they have been providing additional analysis on specific segmented audiences in order to provide insights for communicators, educators, and policymakers for better targeting and engagement. Within this body of work, EcoAnalytics has put forward a Canadian ladder of engagement, which is a conceptual map to help groups engage audiences with more success (LaChappelle, Mahéo, & Nadeau, 2016).

The four audiences are broadly categorized and paraphrased from the EcoAnalytics report as:

- **Dismissive** - disagree that climate change is happening
- **Sceptic** - agree that climate change is happening and do not think it's caused by humans OR, neither agree nor disagree that climate change is happening
- **Aware** - agree that climate change is happening and do think it's caused by humans AND indicated that there is nothing that we can do to change it
- **Empowered** - agree that climate change is happening and do think it's caused by humans AND indicated that there are things we can do to change it

Below is a comparison of the ON Ladder of Engagement Results to the National Results:

National	41%	36%	15%	8%
ON	41%	36%	15%	9%

■ Empowered
 ■ Aware
 ■ Sceptic
 ■ Dismissive

The majority of respondents are either Empowered or Aware, meaning they do agree that climate change is happening and that it is caused by humans.

More educators are empowered about climate change in ON (54%) than nationally (47%).

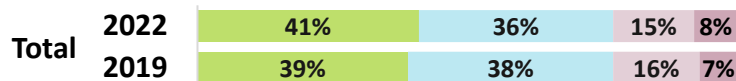
Respondent Group

EDUCATOR					
National	47%	40%	8%	6%	
ON	54%	38%	6%		
PARENT					
National	38%	39%	15%	8%	
ON	36%	40%	16%	9%	
STUDENT					
National	39%	39%	13%	9%	
ON	40%	35%	15%	10%	
GENERAL PUBLIC					
National	41%	34%	17%	8%	
ON	40%	36%	15%	9%	

National: n=4,025 (Educator=404, Parent=1,368, Student=1,207, General Public=1,288)
 ON: n=1021 (Educator=109, Parent=331, Student=225, General Public=399)

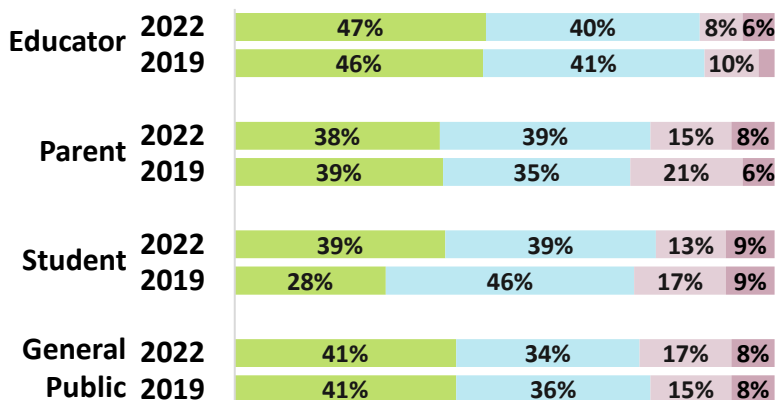
**Ten respondents were excluded from reporting as they belonged to both the Dismissive and the Sceptic category, their responses were not consistent with their views towards climate change.*

Ladder of Engagement 2022 vs. 2019



■ Empowered
 ■ Aware
 ■ Skeptic
 ■ Dismissive

Respondent Group



2022: n=4,025 (Educator=404, Parent=1,368, Student=1,207, General Public=1,288)

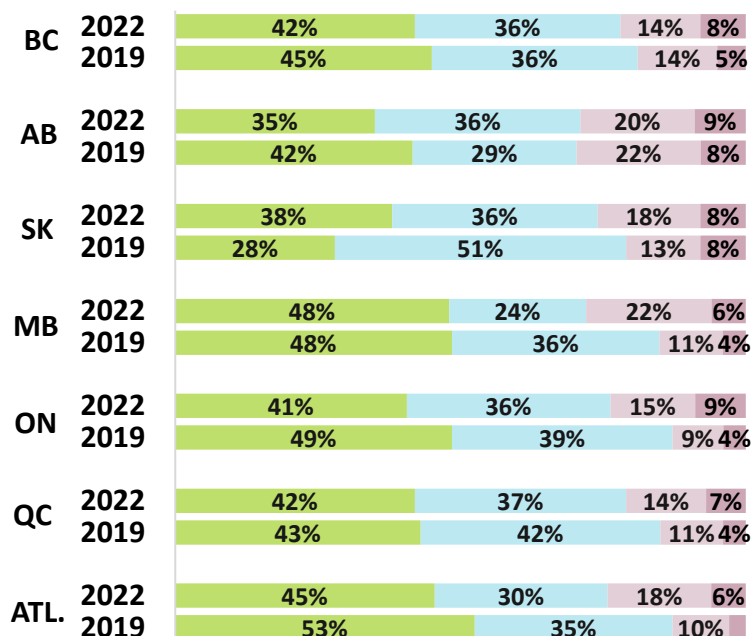
2019: n=3,196 (Educator=111, Parents=571, Student=486, General Public=908)

Responses less than 4% not labelled.

In three of the four participant groups (educators, parents and general public), there was little change in the ladder of engagement in 2022 vs. 2019, with educators remaining the most empowered (47% vs. 46%) and parents feeling the least empowered (39% vs 38%).

This lack of movement in other groups made the change in the student results much more significant. The percentage of students feeling “empowered” in 2019 was 28%. However, this number rose to 39% in 2022, meaning more students felt that human-caused climate change is happening, and that there are things we can do to change it.

Province/Region



When the ladder of engagement is applied regionally, most provinces are largely either empowered and aware. In 2022 in some regions (BC, AB, ON, QC, and ATL) there were fewer respondents in the empowered group than in 2019. SK, however, showed significant gains in the empowered group in 2022 vs. 2019 (38% vs. 28%).

2022: n=4,025 (BC=513, AB=464, SK=217, MB=240, ON=1,021, QC=1,168, ATL=299)

2019: n=2,180 (BC=196, AB=160, SK=73, MB=70, ON=749, QC=814, ATL=118)

Responses 4% or less not labelled.



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Section 5: Recommendations

Recommendations

The analysis of the survey data revealed a series of opportunities to strengthen climate change education in Canada, both in formal and informal education settings. Overall, Canadians wish to be better informed about climate change. In addition, educators call for enhanced professional learning and resources.

The following recommendations provide a roadmap for governments, policymakers, universities, school boards, teachers' unions, community organizations, corporations, educators, and youth to address the importance of climate change education and recognize the urgency of acting now.

Formal Education

- Ministries of Education should revise curricula to incorporate climate change expectations across all subjects and in all grades, from kindergarten to grade 12 and seek input from:
 - youth
 - Indigenous educators
 - marginalized communities
- Curriculum expectations should include: scientific consensus that climate change is human caused, the social, economic, and political aspects of climate change, Indigenous knowledge, and social justice issues.
- Ministries of Education, school boards, and teachers' unions should provide professional development and resources to enhance teacher knowledge, skills, and confidence in teaching climate change. and should include transformative pedagogies such as inquiry, active learning, and hands-on, experiential learning.
- Teachers must be supported to include solutions to mitigating and adapting to the effects of climate change, and promote student action to foster feelings of hope and empowerment and ameliorate emotions brought about by climate change.
- Faculties of Education, in implementing the *Accord on Education for a Sustainable Future* adopted by the Association of Canadian Deans of Education in 2022 should highlight the urgency of climate change education. They must ensure that climate change education is a central and required component of course offerings in pre-service, in-service, and graduate-level teacher education curricula

Recommendations

Informal and Non-Formal Education

- Canadians should be provided with information, from trusted sources including scientists and academics, about the process and causes of climate change, opportunities for mitigation and adaptation, and personal, higher-impact actions.
- Sources of information about climate change need to target different population groups more purposefully and effectively.
- Informal education sources should provide resources and strategies to help parents, grandparents, children, and youth cope with emotions that arise when learning about climate change, with a focus on solutions, actions, and hope.
- Canadians should hear positive stories of climate action and learn about collaborative approaches that create systemic change.
- Informal education sources should provide resources and professional learning for teachers on current national/provincial climate data, information on green jobs, and locally relevant climate change classroom resources.

In summary, the results of the climate change survey emphasized the need for enhanced climate change education, both in the formal school setting, as well as through informal education channels. Using this two-pronged, targeted approach will help to reduce climate change knowledge gaps and work towards the positive outcome of active citizenship for all Canadians.

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



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