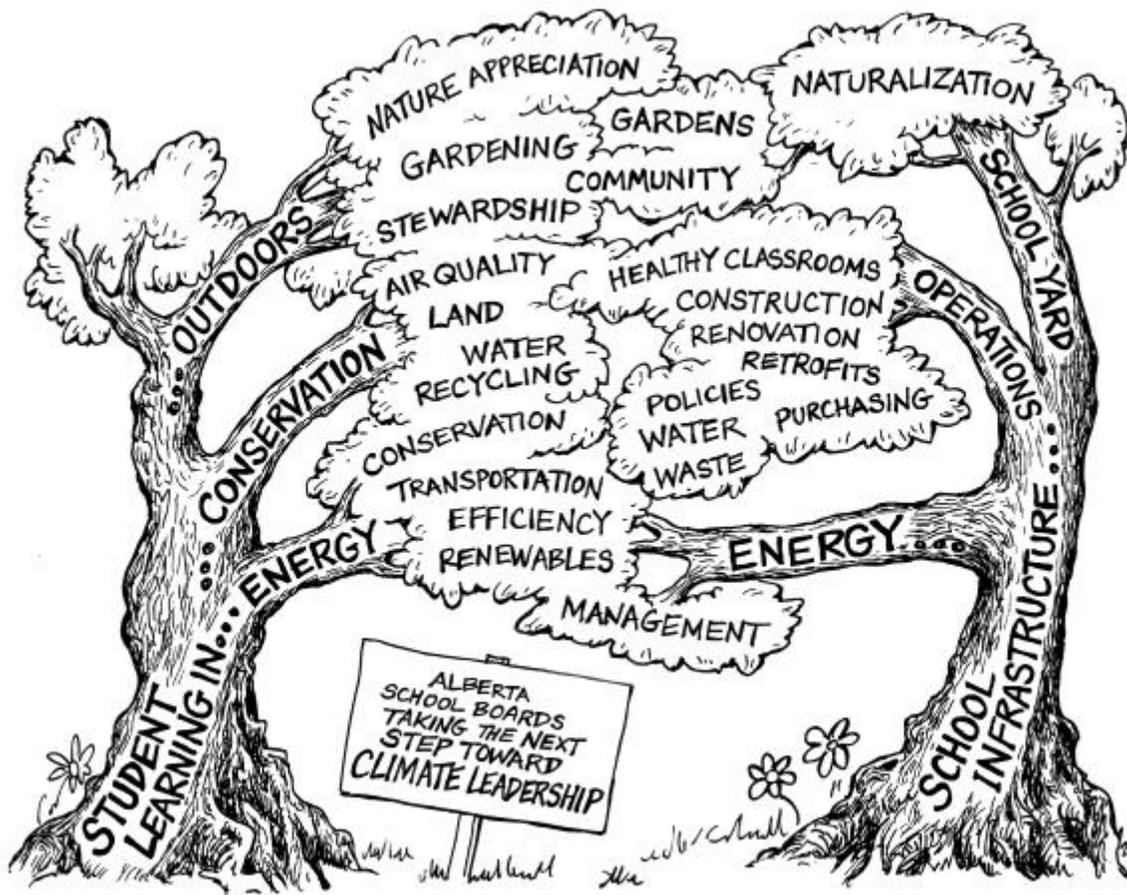


# Taking the Next Steps towards Climate Leadership in Alberta Schools



Dialogue Guide to initiate student-led conversations within schools and school divisions

Created by

The Alberta Climate Leadership Youth Network (ACLYN) April 2017

With support from



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## Section 1 – Introduction

**Who we are.** We are high school students from nine high schools from across Alberta, and our group – the Alberta Climate Leadership Youth Network (ACLYN) – was established in 2016 to:

- ❖ Engage senior high school students to demonstrate the need and opportunities for climate leadership in Alberta schools;
- ❖ Help Alberta’s educational leaders ‘take the next step’ toward climate leadership;
- ❖ Present to key audiences and decision-making bodies in Alberta; and
- ❖ Continue to support the recommendations in the “Supporting Climate Leadership in Alberta Schools” report: <http://www.abcee.org/recommendations>

We’re from across Alberta, at the following high schools:

- ❖ Career & Technology Centre, Calgary
- ❖ Ecole Notre Dame High School, Bonnyville
- ❖ Grande Cache High School, Grande Cache
- ❖ Jasper Place High School, Edmonton
- ❖ Penhold Crossing Secondary School, Penhold
- ❖ Queen Elizabeth, Edmonton
- ❖ Robert Thirsk High School, Calgary
- ❖ Ross Sheppard High School, Edmonton
- ❖ Westwood Community High School, Fort McMurray



**Our work.** We meet virtually on a bi-weekly basis and spent a weekend in a face to face retreat. We're working on:

- ❖ This Dialogue Guide.
- ❖ A provincial campaign designed to demonstrate the need and opportunities for climate leadership in Alberta schools – #learnabout #climateleader #teachme
- ❖ Engaging in conversations and presentations with key audiences, stakeholders and education decision-makers.



**What 'climate leadership' means to us.** We believe that climate leadership is collectively taking action to achieve goals that are needed to reduce climate change. Climate leadership includes student learning about energy, and actions to reduce greenhouse gases – but climate leadership also means going outdoors to connect to nature, and learning about the conservation of wildlife, land, air, and water (as illustrated in the cover image).

We also know that the conservation of energy and water can result in substantial cost savings for schools and school divisions as utility bills decrease, greenhouse gas emissions decrease, and carbon levy payments decrease – and we are excited about the potential of keeping all that money moving those funds back into the classroom where they belong. The next version of this Guide will include examples from Alberta school boards such as the Calgary School Board that have seen already seen modest savings in their schools.



**About this Guide.** Since November 2016 we've worked with the Alberta Council for Environmental Education (ACEE) and the Centre for Global Education (CGE) to create the Dialogue Guide to help students, teachers and school division leadership to:

- ❖ Engage in conversations and work together to create connections between student learning and school infrastructure. See Appendix B – Taking the Next Step diagram and overview.
- ❖ Gather information to better understand the opportunities and challenges for taking the next steps toward climate leadership in Alberta schools.
- ❖ Use this information to further develop plans and strategies to help schools take the next steps toward climate leadership and climate literacy.

This Dialogue Guide is divided into five sections:

- ❖ Section 1 – Introduction
- ❖ Section 2 – Using this Dialogue Guide
- ❖ Section 3 – School level and school division questions
- ❖ Section 4 – Recommendations and next steps
- ❖ Appendices – Terminology, Taking the Next Step Diagram and Sample School and School Division Survey Questions

**Who is the guide for?** We've written this as a tool to support the work of our fellow students in Alberta as they seek to work with teachers, principals, superintendents, and school board trustees.



## Section 2 – Using the Dialogue Guide

The dialogue guide provides an avenue for students to begin conversations aimed at creating opportunities to discuss climate leadership starting at the school level. These discussions can also help engage school divisions to take the next steps toward climate leadership. Engaging school leadership, school administration, school facilities staff, students and teaching staff in these discussions will help build support and interest as initiate climate actions in your school. These actions may take time to implement but by working together, schools can show climate leadership in a variety of ways.

### Three categories to focus your discussions:

The questions in this guide are divided into three categories (to match the large branches on the tree) and Appendix A explains some of the terminology used in the questions:

- ❖ Energy
- ❖ Operations and Conservation
- ❖ Outdoors/Schoolyard and Nature connections

These categories cover a broad range of topics/areas and as you use the guide you may find your efforts narrowing to focus on only a few areas (e.g. maybe only certain aspects of energy, conservation or nature connections). Treat this Guide as a flexible document to focus or refocus climate leadership projects in schools.

### Suggestions for using the dialogue guide:

- ❖ Asking questions is one of the best ways to gather information and it allows you to work with others in a more collaborative and collegial manner.
- ❖ Use a less formal meeting arrangement to create an open conversational atmosphere (e.g. a walking tour of the school, a meeting outside of the school – coffee shop, in a nice outdoor/park setting).
- ❖ The dialogue guide provides questions that can be tailored for school administrators, school division leaders, school facilities staff and school teaching staff and students. You can ask questions from all three categories or you may decide to focus on just one area.
- ❖ Expect this work to occur over a period of time – you may need to plan for multiple meetings. A sample process for potential meetings could look like:
  - First meeting: explain the purpose and importance of your work using the image on the cover (and information in Appendix A) and provide clear ideas on how your work will demonstrate climate leadership, help save the school money, or improve climate literacy in one or more areas. This discussion should outline your overall goals of helping your school show climate leadership.



- Second meeting: ask your initial questions and begin gathering information. Explain that this information will be used to create a plan of action to share with them at a future meeting.
  - Third meeting: outline your recommendations, a viable action plan with timelines and initial budget. This meeting should seek support and discuss revisions and outline first steps.
  - Future meetings: as necessary to discuss progress, revisions and plan a future celebration to share the results of the climate leadership initiative.
- ❖ The information required to address some of the questions may require the use of a survey. This provides a quick method to identify potential topics to pursue and research. Appendix B provides a variety of questions that you could use to create a survey. You will have to analyze the data and summarize the results.
  - ❖ Compare and review what you've learned from this information to determine climate actions you could help initiate at your school and ideas that could be shared/implemented at the school division level. Use this information to develop an implementation plan that includes timelines and a budget (including ideas on where you may secure funds).



## Section 3 – Questions for school leaders and school division administrators

Listed below are questions you can ask at your school or with the school division. The school questions could be conducted during a walk-through of the building. Remember this is about gathering information and it is not meant to challenge or ask ‘why aren’t we doing more?’. Your ideas for action will come after you’ve gathered much more information.

The questions are divided into three categories – energy, operations and outdoor connections. There are many questions below! We have divided them into **key questions, which appear in bold**, and supplementary questions, which appear in normal font.

### Energy

#### General

1. **What are the biggest energy users in the school? School division?**
2. **What are the biggest challenges for reducing energy use in our school? School division?**
3. **What activities would you suggest for staff and students to reduce energy use?**
4. **What role can students play in supporting and enhancing energy conservation activities in our school?**
5. For our school, how much do we spend on energy for heating/cooling and electricity per month? Per year? For our school division?
6. Are there any programs that combine student learning with energy conservation? Would there be support for such programs?

#### Heating and Room Temperatures

7. **What heating sources does our school use?**
8. **What type of automated systems do we use to control electricity usage? Ventilation fans, lighting, computers?**
9. Are windows and doors regularly closed in the winter to reduce heat loss in cooler classrooms? (Yes, Sometimes, No, Other: \_\_\_\_\_)
10. Who controls our school’s ambient temperature?
  - a. (Teachers, Admin, District, Other: \_\_\_\_\_)
11. How does our school keep cool in warm weather?
  - b. (Open Windows, Air Conditioning, Both, Other: \_\_\_\_\_)



## Transportation and renewable energy

12. **What are the biggest challenges related to transportation energy use? Parking, emissions, busing, safety, costs for winter car plug-ins?**
13. **Are there any plans to incorporate renewable energy at our school? School division?**
14. **What type of new technologies are you aware of that help reduce energy use? How are these being considered for our school? School division?**

## School Building Design

15. How are decisions made to retrofit buildings? How much emphasis is placed on energy efficiency when retrofitting buildings?
16. When new schools are being built, what are the policies to make them more sustainable?

## Operations and Conservation

### Water

1. **What are the biggest water uses in our school? School division?**
2. **What are the biggest challenges when it comes to reducing water use?**
3. **What role can students play in supporting and enhancing water conservation activities in our school?**
4. Are there any programs that combine student learning with water conservation? Would there be support for such programs?
5. What type of water reduction systems are in place?  
(Y/N) Automated taps? (Y/N) Urinal flush timers? (\_\_\_ LITER) Amount of water used for flushing toilets? (Y/N) Pressure-assisted toilet?  
(Y/N) Dual-flush toilet?
6. How often are taps and toilets checked for leaks?

### Product Use and Waste

7. **What produces the most amount of waste in our school? School division?**
8. **What are the biggest challenges when it comes to reducing waste?**
9. **What role can students play in supporting and enhancing waste reduction activities in our school?**
10. In our school, how much does it cost for waste removal? Per month? Per year? In our school division?
11. **What are the biggest challenges for reducing food waste and purchasing local food (for schools with cafeterias)?**
12. Are there any programs that combine student learning with waste reduction? Would there be support for such programs?
13. How does recycling reduce these costs?



14. **What type of waste reduction systems do we have in place? Recycling, composting, Other?**
15. **How well are these programs working?**
16. **What type of product purchasing decisions are made at the school level vs the school board level?**
17. How many rolls of paper towel do we go through on a weekly or monthly basis, in the labs, washrooms, kitchens? Are they made from recycled content or meet any forest certification standards?
18. How many boxes of paper tissues do we use on a weekly or monthly basis? Do they come from recycled sources?
19. **How much paper do we use on a yearly basis? What type of paper is used?**
20. **How are we reducing the waste from disposables – styrofoam or plastic dishes, bottles, etc.?**
21. **How do we handle hazardous wastes in our school? School division?**
22. How do we teach students about hazardous wastes?
23. How many vending machines do we operate? Is it possible to reduce the machines that sell disposable bottles?
24. How much food is wasted in the cafeteria on a daily basis?
25. How much food do we grow for use in the school?

## Outdoors/Schoolyard and Nature Connections

1. **What type of outdoor spaces do we have for students and staff to use in our school? School division?**
2. **What are the biggest challenges for students to spend more time learning outdoors at our school? School division?**
3. **What are the policies to support creating more natural/outdoor learning spaces for students?**
4. **How could we increase the amount of outdoor spaces and learning outdoors in our school? School division?**
5. Who maintains the school grounds?
6. How many indoor plants do we have in the school?
7. How could we use outdoor spaces to grow more food?
8. How could students utilize outdoor spaces for more creative work (e.g. fine arts, language arts)?
9. What could be done to increase students' environmental stewardship?
10. How could physical education incorporate more outdoor activities?
11. How could we connect First Nations, Métis and Inuit cultural connections with the land to environmental education?



## Section 4 – Recommendations and Next Steps

Now that you have gathered information from students, staff, school administrators, school division leadership and facilities personnel, it is time to create an action plan. What are you going to do at your school? How long will this take? Who will do what tasks? What is the budget and where will you get funding?

You may want to group your ideas according to:

- ❖ Easy to implement – student and staff are on board – not a lot of costs to implement
- ❖ Short-term goals – ideas that will take more planning and may require funding
- ❖ Long-term goals – ideas that require more approvals, significant planning and may require substantial funding.

	<u>In your School</u>	<u>Throughout your School Division</u>
<b>Easy to implement</b>		
<b>Short-term goals</b>		
<b>Long-term goals</b>		

From the list above, select the activities you will work on and create a planning document outlining each of the actions, who will lead the activity, timelines, budget with ideas on how you'll access or raise funds for implementation and how you will measure, celebrate and share your achievements/results.



<b>Activity and Goal</b>		
<b>Tasks</b>		
<b>Who will take the lead?</b>		
<b>Timeline</b>		
<b>Budget and funding sources</b>		
<b>Measuring, sharing and celebrating results</b>		

This planning document is what you will share back with school administrators, facilities staff, teaching staff and school division leadership. They may be able to help you with ideas and accessing funds.

Keep track of your progress and celebrate successes along the way. Ensure you capture photos of the steps along the way, and capture what has changed as a result of your work (this can be interviews with people, pictures, data) so that you can demonstrate what you have accomplished. Use these photos and tell your story so you can share it with your school, school division, community and local media. Don't keep your awesome work a secret!!!



## Appendix A – Terminology

Below are some terms that you may wish to be familiar with before you arrange meetings to use the Dialogue Guide.

- ❖ Automated systems – a system that allows the automation or central control of devices such as heating, cooling, ventilation, and water
- ❖ Carbon capture – process to capture and store waste carbon dioxide from large point sources, transporting and depositing it in an underground storage site
- ❖ Carbon levy – a tax levied on the fuel supply chain of all carbon-emitting fuels
- ❖ Climate leadership – collectively taking action to achieve goals that are needed to reduce climate change. Climate leadership includes student learning about energy, and actions to reduce greenhouse gases – but climate leadership also means going outdoors to connect to nature, and learning about the conservation of wildlife, land, air, and water
- ❖ Climate literacy – understanding the principles of Earth’s climate system, knowing how to access scientifically credible information, making informed and responsible decisions to create climate solutions
- ❖ Composting – process of decomposing organic materials into rich soil or compost
- ❖ Energy conservation – changing behaviours to reduce the amount of energy (e.g. turning off lights)
- ❖ Energy efficiency – using less energy to provide the same service (e.g. creating a refrigerator that uses less energy but still provides the same function and features)
- ❖ Energy utilities – companies that provide electricity and natural gas to consumers
- ❖ Retrofit – modifications to existing buildings to improve energy efficiency or decrease energy use
- ❖ Forest Stewardship Council (FSC) Certified paper – forest products like paper and wood that have been sourced in an environmentally-friendly, socially responsible and economically viable manner
- ❖ Hazardous waste – waste that includes substantial properties that are harmful to humans or the environment
- ❖ Kilowatt Hours (kWh) – unit of energy measurement – one kilowatt (1000 watts) of power used for one hour of time
- ❖ LEED Certification – provides independent, third-party verification that a building, home or community was designed and build using strategies aimed at achieving high performance in key areas of human and environmental health
- ❖ Naturalization
- ❖ Radiant Heating/Cooling – a system to heat and cool buildings that relies on radiation heat transfer of controlled surfaces that exchange heat with the surrounding air
- ❖ Recycling – process of converting waste materials into new materials or objects
- ❖ Renewable energy – an energy resource that is replaced rapidly by a natural process



- ❖ Solar panels – a panel designed to absorb the sun’s rays as a source of energy for generating electricity or heat
- ❖ Sustainability – there are many definitions but they usually include: living within limits; connections between environment, economy and society; and equitable distribution of resources and opportunities

## Appendix B – Helping Alberta school boards ‘take the next step’ toward climate leadership



### About this diagram: Alberta school boards ‘Taking the Next Step’

Alberta’s school board trustees and superintendents strive to support both student learning (the tree on the left) AND school infrastructure (the tree on the right). Both ‘trees’ have tremendous potential to support climate leadership and reduce costs, and some wonderful synergies can emerge when school initiatives support BOTH student learning and school infrastructure – the branches found in between the two trees. For every branch and twig of this tree there are resources to support climate leadership. The Alberta Council for Environmental Education plans to develop the Climate Leadership Clearinghouse, a knowledge centre hub that describes resources, suppliers, best practices, stories, and contact information for trustees and superintendents. We’ve already done some of this work, leveraging our existing database of energy and environmental education resources, at <http://www.abcee.org/eerc>; and our list of grants, at <http://www.abcee.org/grants-contests-awards>.



## Appendix C – Staff and Student survey questions

We've provided some example questions you could ask on a staff and student survey to determine the level of awareness, interest and commitment for various activities you may be considering. There are many questions and you only want people to spend a few minutes completing the survey. **From the list, pick the questions that align with actions you are considering for your school.**

There are many online formats that can help you create and gather survey results – google forms and survey monkey are easy to use.

Once you've conducted the survey, compile and analyze the results and create a report that summarizes your findings. You can use this information to take back and share with your school leaders and in your meeting with school division leadership.

### Energy questions

1. What are your biggest challenges with getting to and from school?
2. What are your concerns with energy use related to transportation?
3. How do you travel to school?
  - a. Private vehicle with single occupant
  - b. Carpool – with at least two people
  - c. Get a ride and dropped off
  - d. Public transportation
  - e. Walk
  - f. Bike
4. Other How often do you turn off lights if a room is unoccupied?
  - a. Never
  - b. Occasionally
  - c. All the time
5. How often is natural light in a classroom used instead of overhead electric lighting?
  - a. Never
  - b. Occasionally
  - c. All the time
6. How often do you find classrooms or spaces too hot?
7. How often do you find classrooms or spaces too cold?
8. How often are windows used to cool rooms during cold weather?
9. How often do you use space heaters or electric fans?
10. How often do you turn off the following when not in use?
  - a. Computers – never, occasionally, all the time
  - b. Whiteboards – never, occasionally, all the time



11. How often do you charge electronic devices? It could also ask how many devices.
  - a. Multiple times per day
  - b. Daily
  - c. Every other day
  - d. Once per week
12. What other items in classrooms use electricity?

## Water questions

1. How many taps have you seen that continue to drip after being turned off?
2. How many toilets/urinals do you see that continually flush?
3. Do you use a refillable water bottle?
4. What would encourage you to use a refillable water bottle?

## Product Use and Waste

1. How often do you use the recycle containers?
  - a. Never
  - b. Occasionally
  - c. All the time
2. Do you use encourage the use of scrap paper?
3. How many printed handouts do you use/receive in one week?
4. How many assignments do you do electronically in one week?
5. For lunch, how often do you use dishes or re-useable containers?
  - a. Never
  - b. Occasionally
  - c. All the time
6. What is your biggest concern about the amount of waste in the school?

## Natural and Outdoor Spaces – Environmental stewardship

1. What type of natural spaces are available in your school? Or What natural spaces in your school do you use and enjoy the most?
2. In a school year, how many classes do you teach/or received that have environmental content?
  - a. 0
  - b. 1 to 3
  - c. 4 to 6
3. How important or worthwhile do you think it is to learn about climate change and environmental education?
  - a. Not important
  - b. Somewhat important



- c. Very important
- 4. How important is it to you to have classes that spend time outdoors?
  - a. Not important
  - b. Somewhat important
  - c. Very important
- 5. What would you like to see to make your schoolyard spaces better for students to spend time outdoors?
- 6. What issues within your school community affect the environment?
- 7. What natural spaces or wetlands are located close to the school?

