Generation Green

YOUTH UN-CONFERENCE

TOOLKIT

Prepared by

Halton Climate Collective

City of Burlington · Conservation Halton · Halton Catholic District School Board · Halton District School Board · Halton Environmental Network · Town of Halton Hills · Halton Region · Milton · Oakville · University of Waterloo

Acknowledgement of the land and territory

As a community, we have the responsibility to honour, care for, and respect all the Creation gives to provide us with life. This includes the land, water, air, fire, animals, plants and our ancestors. We acknowledge that the land upon we which we meet for the Generation Green Youth Un-conference is on Treaty 22 of the Mississaugas of the Credit First Nation. The Aanishinaabek Peoples have utilized this land for millennia and we would like to acknowledge their direct descendants, the Mississaugas of the Credit First Nation, as the rightful caretakers and titleholders of this land, upon which we live, work and conduct ourselves. We acknowledge our treaty relationship and responsibilities to both the land and these original peoples.

We also recognize that this land is rich in pre-contact history and customs, which includes the Aanishinaabek and Haudenosaunee, and since European contact, has and continues to become home for Indigenous and non-Indigenous peoples. It is in the spirit and intent of the Dish With One Spoon, wampum agreement whereby we will collectively care for and respect the land, water, animals and each other in the interests of peace and friendship, and for the benefit not only of ourselves but our future descendants.

Acknowledgements

Many thanks to the Ontario Trillium Foundation for their support of the Halton Climate Collective. It is thanks to their generous support that the Halton Climate Collective is able to continue their work in community, and focus on collectively transforming the community of Halton into a low-carbon, climate-resilient community.

Thank you to the Lieutenant Governor of Ontario, Her Honour Elizabeth Dowdeswell, for generously donating her publication, Awakening, and to lululemon for their donation of grab bags.

Thank you to Plum Catering for providing entirely waste-free and vegetarian breakfast, lunch, and snack, and to Starbucks for providing waste-free, fair-trade coffee. Your support has helped make this event as sustainable as possible, and for that we are thankful.

To our panelists, your knowledge, expertise, and insight into how we can all take action in our everyday lives to make our planet more sustainable for future generations is truly appreciated, and has surely inspired the young minds into making every action count.

To our workshop facilitators, the skills, tools, and resources that you have given the students have equipped them to take action in community, and will be valued by the students in years to come as they embark on their mission to reduce their communities' greenhouse gas emissions.

Last but not least, thank you to all of the volunteers and youth stakeholders who made this event possible. It is thanks to your efforts that the youth will leave the event feeling inspired, empowered, and equipped to make an impact in their communities. Your contribution to your community is greatly appreciated.

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Milton

Oakville

Optimist International – Optimist Club of Oakville

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Preface

Welcome to the Generation Green Youth Un-conference! This 'Un-conference' is not like every other conference. It was designed **by youth for youth** to engage students in climate action leadership and support them in their mission to reduce greenhouse gas emissions in their communities. Rather than *listening* to a series of speakers, students will *engage* in climate action and *participate* in a series of hands-on workshops. The end goal is for every student participant to implement their very own greenhouse gas emission reduction initiative, and measure, track, and report back on their impact.

Throughout the day, students will be given the skills, tools, resources, and inspiration to implement their initiatives. The contents of this toolkit have been designed to reinforce what was learned throughout the day, and to provide additional support beyond the day of the event. Throughout this toolkit, you will find summaries of all the workshops that were offered at the event, as well as additional resources and information regarding climate change, greenhouse gases, and what you can do to help transform Halton into a low-carbon, climate-resilient community. Look for the following symbols to help you along the different parts of the process of implementing your community initiatives.

Look for this symbol for resources to help you **brainstorm**.

Look for this symbol for resources to help you **plan**.

Look for this symbol for resources to help you **execute**.

Look for this symbol for resources to help you **measure**.

Executive Summary

In recent years, the effects of climate change have become more and more apparent, with many communities all around the world experiencing wetter, windier, and wilder weather, which can only be explained by increased concentrations of greenhouse gases in the atmosphere caused by human activity. Recently, the Halton Region and all of its constituent municipalities, have all declared a climate emergency, officially recognizing and acknowledging the true climate crisis we are facing today. As such, we must each take action now and work towards a healthier, more sustainable future for our generation and the generations to come.

Generation Green Youth Un-conference

On November 22, 2019, the Halton Climate Collective Youth Stakeholders are hosting the Generation Green Youth Un-conference, an event designed **by youth for youth**, where students are given the **tools**, **resources**, and **inspiration** to empower them to reduce their greenhouse gas emissions in order to drive change and action in their communities. Throughout the day, students will hear from keynote speaker, The Honourable Elizabeth Dowdeswell, Panel speakers Chief R. Stacey Laforme, Dr. Dan Scott, and Frances Edmonds, and several other community leaders, engagers, and experts in the students' choice of 14 different workshops!

Your Mission

At the end of the day, the students will go back to their communities to implement a community initiative that will reduce their greenhouse gas emissions. Their mission is to **brainstorm**, **plan**, and **execute** a greenhouse gas emission reduction program in their communities, and **measure** their impact using the skills and tools learned at the Generation Green Youth Un-Conference and in this toolkit. On March 24, 2020, students will return following the completion of their projects to share their results with their peers at the Generation Green Wrap-up event, where we will reveal the collective impact that the students of Generation Green have made across the community of Halton.

Additional Support

The Halton Climate Collective is committed to providing students with guidance and support throughout the implementation of their community projects. Not only will students have access to this toolkit, including detailed workshop summaries, but they will also have access to bi-weekly support webinars with a Q&A period, and an opportunity for 1-on-1 meetings with HCC staff for additional support. For any questions, comments, or concerns, students are encouraged to contact Alana Wong at alana@haltonenvironment.ca or Afreen Ghouse at afreen@haltonenvironment.ca.

Stay Connected

Stay up to date on the webinar series and Spring wrap-up event! Be sure to regularly check your email, and stay in touch with us on Social Media:

@HaltonClimate
@HaltonClimateCollective
Email: info@climatecollective.ca
Website: www.climatecollective.ca

This toolkit along with all other Generation Green resources will be posted to the Halton Climate Collective's website, www.climatecollective.ca.

Introduction

Climate change and greenhouse gases

In recent years, the effects of climate change have become more and more apparent, with many communities all around the world experiencing wetter, windier, and wilder weather. Since the mid-1900's, we have seen an increase in global temperatures that is much faster than ever before. Despite the natural forces that have historically led to changes in the Earth's climate, none of them can explain the rapid temperature increase that we are experiencing today. Evidence shows that only increased concentrations of greenhouse gases in the atmosphere can explain Earth's observed warming trend.

Greenhouse gases (GHGs) are compounds that, when emitted, trap heat in the atmosphere, leading to the greenhouse effect. There are seven greenhouse gases, which are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulphur hexafluoride (SF_6), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs) and nitrogen trifluoride (NF_3). Each of these GHGs have a different Global Warming Potential (GWP), meaning that an equal mass of each of these gases will contribute different amounts of global warming effects. This toolkit will focus on the three primary GHGs with the highest GWP: carbon dioxide, methane, and nitrous oxide.

Since the mid 1990's, concentrations of carbon dioxide and other GHGs in the Earth's atmosphere have drastically increased, with only one explanation: human activity. Common sources of GHG emissions through human activities include, but are not limited to, the burning of fossil fuels (for example, for energy and gas-powered vehicles), food waste, deforestation, and intensive livestock farming.

Recently, the Halton Region and all of its constituent municipalities, including the City of Burlington, Town of Halton Hills, Town of Milton, and Town of Oakville, have all declared a climate emergency. With this acknowledgement and recognition of the true climate crisis we are facing today, we must each do our part to help save and protect the Earth for our generation and the generations to come. We must each take action now and work towards a healthier, more sustainable future.

Who is the Halton Climate Collective?

The Halton Climate Collective (HCC) is a group of organizations focused on collectively transforming the community of Halton into a low-carbon, climate-resilient community. The HCC aims to drive local collective change by tackling the challenge of climate change, and ensuring successful greenhouse gas mitigation strategies for the community of Halton.

The Leadership Team of the Halton Climate Collective (HCC) is comprised of environmental leaders and engagers from: Conservation Halton, Halton Region, Town of Oakville, Town of Halton Hills, Town of Milton, City of Burlington, Halton District School Board, Halton Catholic District School Board, University of Waterloo, and the Halton Environmental Network.

The power of aligning our organizations is to leverage expertise, secure new funding opportunities, promote our organizational initiatives and support local action. The Leaders of the HCC will work together to respond to the challenge of climate change and drive successful greenhouse gas mitigation and adaptation in the Halton community.

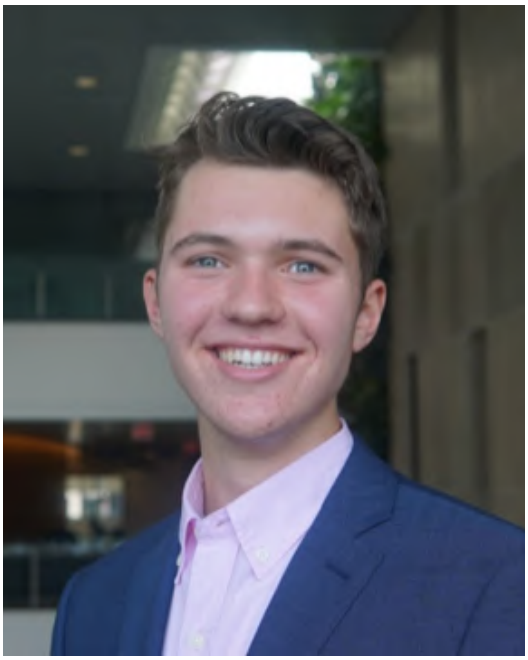
What is the Generation Green Youth Un-conference?

The Generation Green Youth Un-conference is an event designed by youth for youth, with the goal of engaging Halton students in grades 7-12 in climate action leadership, and supporting them in their commitment to greenhouse gas emission reductions in order to drive change and action in their communities.

The conference will take place on November 22, 2019 at Sheridan College, and will consist of a panel session in the morning, followed by four breakout sessions throughout the day. At the end of the day, the students will go back to their communities and use the tools and skills that they learned to implement a program that will reduce their greenhouse gas emissions. They will then be asked to track and measure their impact, and report back in March 2020 with their results.

Who are the HCC Youth Stakeholders?

Andrei Adams



Hi, I'm Andrei Adam. I'm in grade 12 at Abbey Park in Oakville and I'm passionate about advocating for my community. When I was 10, I successfully lobbied my municipality to build a basketball court in my neighbourhood which made me realize the impact speaking up can have. The latest IPCC report moved me to take climate action myself. I started a petition urging Oakville to declare a climate change emergency. After amassing thousands of signatures and delivering a speech to Council, the motion unanimously passed. Getting involved with the HCC this summer through a co-op at the Halton Environmental Network was a way to continue my advocacy for our global community, and I'm excited for the work to be done! Some of my other initiatives includes running a carbon-neutral tutoring business, representing Oakville to the Student Senate, volunteering with the Optimist Club and playing elite-level basketball.

Kayne Boyall

Hi, I'm Kayne. I'm an 18-year-old environmentalist who has been working with the HCC since January 2018. After being so warmly accepted after my move from South Africa in late 2016, I wanted to give back to my community in the best way I could. I threw myself into helping with something I was passionate about and that was a dire issue in today's world: the anthropogenic climate crisis. Among other volunteer capacities throughout my Canadian high school career, I have worked with groups like OakvilleGreen Conservation Association, iMatter Youth, Halton Environmental Network as well as kickstarting numerous initiatives as president of T.A. Blakelock High School's Eco Club. While I am pursuing a BSc in environmental science at the University of Guelph, I hope to continue working closely with the Halton Climate Collective, where we hope to empower local students to actively bring down the carbon footprint of the community and set a precedent for drastic, holistic change towards a sustainable society. We are the first generation to really feel the effects of climate change, but the last who can definitively stop it. And that's exactly what we're going to do.

Andrew de Souza

Hey, I'm Andrew. I'm a sophomore at Harvard planning on majoring in Environmental Engineering. Ever since my parents took me to endangered locations around the world, I have had a passion for protecting the environment. I enjoy hanging out with friends, watching movies, and playing sports – mainly rugby. This summer I have been volunteering with the Halton Climate Collective in preparation for the Generation Green Un-Conference; I have been working to raise funding as well as track the impact of youth after the Un-Conference. I have loved working with this team, and can't wait to see the event!

Ishan Dey

Hi, I'm Ishan. I am a Grade 12 student at Jean Vanier in Milton, who is a member of the Halton Climate Collective, currently working towards a greener future by empowering others to reduce Greenhouse gas emissions. I love giving back to my community, shown through my volunteer experiences with the Big Brothers and Big Sisters of Halton, the Salvation Army, as well as having the pleasure of being an executive for my schools HOSA club. Alongside this, I love to plan events in my community, most notably being a member of the council responsible for the highly successful Milton MS Walk of 2019. I look forward to continued learning about what we as a community can do to motivate not only ourselves, but each other, to reduce our Greenhouse gas emissions so we can get our planet back on track to a successful future for us all.

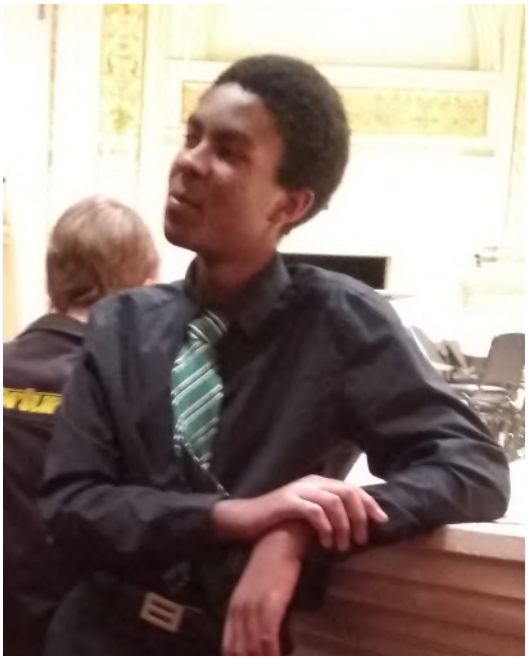
Suha Khan

Hello, I'm Suha Khan! I am an 18-year-old environmental activist. I attend the University of Guelph and am pursuing environmental science. I am a youth stakeholder for the Halton Climate Collective. Through the HCC I have had the privilege to partake in numerous opportunities such as facilitate youth-led charrettes for MP Damoff's Youth Council as well as help plan the Generation Green Youth Un-conference. Outside of this, I have planned community wide food and clothing drives for my school and surrounding neighbourhoods and have held an executive position in my high school's Youth In Action club, planning and executing fundraising and awareness campaigns during my presidency. By also completing Garth Webb S.S' Environment SHSM, working with HEN and through a variety of volunteering initiatives, I am motivated to not only learn about the current climate crisis but to also take action to drive change in society in order to preserve our planet. I hope that today's youth are as inspired as I am to implement innovative ideas to reduce our ecological footprint and save the world!

Uzair Khokhar

Hi, I am a 17-year-old environment activist who wants youngsters like me to step up and make this pivotal project successful with far-reaching results. I am currently in Gr 12 at Maclachlan College, Oakville. I am originally from Pakistan and shifted to Canada last year. I intern with the Sparkle Foundation in Malawi as an ambassador in Canada, Canadian Blood Services, WWF (Pakistan), and JOI Oakville as a volunteer. I believe that everyone plans and helps themselves but doing this for the world is what makes one extraordinary. I have a keen interest in debating and have participated at several levels like Fulford League and MUN. Lastly, whatever I do, I always give my best and bring my A-game to every place with lots of energy.

Dorian Knight

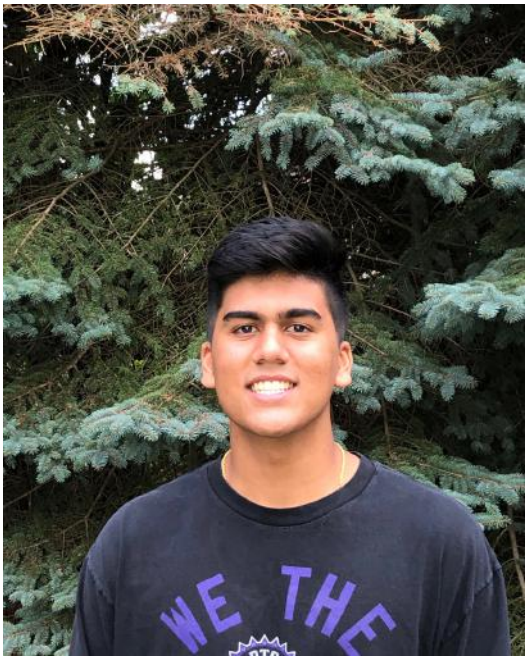


Greetings, my name is Dorian Knight I'm 17 and I'm a boy with a dream. Cheesy? Yes. My goal is to become a neurosurgeon. While working on that goal I've been involved in my community inside and outside of the school system. Inside school, I'm T.A. Blakelock High School's Co-Prime Minister, Co-president of both Blakelock's TU20 chapter and DECA chapter, Blakelock's representative on Stephen Crawford's youth council, head chair of the club council, active member of Blakelock's eco club and part of both Senior band and Jazz band. Outside of school I'm a youth stakeholder on the Halton Environmental Network, part of junior optimist, FIRST robotics, the YMCA's Young Leader's Initiative and am the account executive for TU20. Volunteering has always been a staple of my high school life as I spend most of my summers volunteering for Safety Net and by being a volunteer camp counselor for the town of Oakville and the YMCA amassing nearly 1000 volunteer hours over my three years of high school. Through the HCC I hope to give back to my community and be a part of the solution to the daunting problem of climate change. I'm elated to be part of this amazing project that will serve as a catalyst for youth climate change action.

Emily Perrino

Hi, I am 18 years old and I am currently in my first year at Queen's University for a Bachelor of Science. I have been passionate about the environment since I was very young. I am ecstatic to be a member of the Halton Climate Collective and to be helping to bring Generation Green to fruition. I was the president of both Notre Dame high school's Environmental and Social Justice clubs where we organized numerous waste clean ups and initiatives. I lifeguard for the City of Burlington and Movati Athletic. Whenever I go on walks, I make sure to pick up litter wherever I see it and my friends can always count on me to tell them what bin their trash belongs in! The youth leaders behind Generation Green are incredibly inspiring, and I am so lucky to be given this chance to make the world a better (and *greener*) place.

Kabir Sathe



Hi, I'm Kabir Sathe! I am a youth stakeholder on the Generation Green Conference committee. I am an outgoing, passionate individual who enjoys getting involved in his community. Currently, I am in Grade 11 at Georgetown District H.S. I am a strong believer in the fact that there is no limit to what we can accomplish when working together. I spend my free time playing basketball, hanging out with friends and volunteering in my community. I am truly honoured to be a part of this excellent group of people to help spread awareness about climate change and what we can do to preserve our planet.

Haya Shahrori

Hi, I am Haya Shahrori. I am in Grade 10. I am a part of the HCC and the Generation Green Youth committee. I have delegated to the Milton council and with many other individuals help convinced them to pass the climate emergency motion. I love to make art, any kind of art. I love to help out with a variety of things. I am very passionate about Climate Change. I believe that if we all work together, we can achieve something great. I love to work hard and then play hard! Some key strengths I have are communicating, public speaking, I am understanding, hard-working, and passionate.

Luka Simeunovic

Hi, my name is Luka Simeunovic. I'm a Junior at Garth Webb secondary school. I've had an interest in student voice and the environment since elementary school. In grade eight I joined the student senate which made me realize how I could help my peers and foster youth involvement in the community. Ever since then I've been very involved in student government and representation. I have been in the student senate for 3 years and I have really enjoyed it. I was part of the Minister's Student Advisory Council where 60 kids from all across the province were selected to meet for a week with the Minister of Education and the Premier. We had to write a report about something we were passionate about. I used this opportunity to explain how we need to be teaching kids about environmental challenges now more than ever. I am very passionate about environmental sustainability, I hope to become an environmental scientist and help the planet one step at a time.

Isabela Sipos

Hey, my name is Isabela Sipos and I am a 16-year-old environmental activist and youth stakeholder for the Halton Climate Collective (HCC). Currently, I am a grade 12 student at Garth Webb Secondary School in Oakville. I consider myself a very creative, outgoing and driven leader who is determined to make a positive impact on our planet as we work towards a greener future. My passion for environmental preservation and sustainability began at a young age, only to grow as I entered high school and joined the Environment SHSM (Specialist High Skills Major) program in grade 11. Through this SHSM, I was able to complete a summer co-op with the Halton Environmental Network, along with the HCC, to learn more about what is currently being done about the climate crisis, and what we can do in the future to solve it. I love exploring the great outdoors, and I regularly enjoy supporting community events and park cleanups through volunteering. I actively engage in my school community as an executive member for our Student Activities Council, Student Voice Committee, Youth in Action club, and many more. I believe that youth have the skills, mindsets, and abilities to accomplish incredible things in this world. We can and we will make a difference.

Your Mission

Your mission is to **brainstorm**, **plan**, and **execute** a greenhouse gas emission reduction program in your community, and **measure** your impact using the skills and tools learned at the Generation Green Youth Un-Conference and in this toolkit. Although you will attend only four workshops during the day, you are encouraged to use all of the information, tools, and workshop summaries that are provided in this toolkit, and to take advantage of the additional support that is offered. Some additional research may be required.

Brainstorm

Your first step will be to brainstorm how you would like to reduce your community's greenhouse gas emissions. Start by identifying some of the major sources of greenhouse gas emissions in your community, and then think of some ways that you can reduce these emissions. Throughout the day, you will learn many ways by which this can be achieved, and you will find the inspiration to make one of these ideas your own. Think of the impact that each strategy could have on your community, including both pros and cons.

 Look for this symbol for resources to help you brainstorm.

Plan

Now that you have identified some sources of emissions and ways to reduce these emissions, choose an option that interests you and that you will be able to implement in your community. Plan how you will fund, market, and brand your initiative, how you will coordinate community members' participation, and how you will put your ideas into action. Ensure that whatever you choose, you are able to measure the emissions.

 Look for this symbol for resources to help you plan.

Execute

Now it's time to execute your plan! Whether it be through your school, club, neighbourhood, sports team, family, faith group, or any other community group, ensure that you and your community members are following through with their commitment and making every action count.

 Look for this symbol for resources to help you execute.

Measure

Finally, measure, track, and report your impact. You will need to measure the emissions before and after the implementation of your program in order to track the difference and record the reduction. Upon completion, you will be asked to report back to the Halton Climate Collective with your results, and we will determine the collective impact that the youth have made in their communities.

 Look for this symbol for resources to help you measure.

Schedule

SESSION	ACTIVITY	
8:00 – 8:30 am	Students arrive, register, and have breakfast	
8:30 – 9:00 am	Welcome and Introduction	
9:00 – 10:00 am	Panel Discussion	
10:00 – 10:45 am	Session 1	Hall A/B: Share Your Climate Story Through Film Hall C: The 5R's of Waste Management Hall D: Building Smart Cities Hall E: How to Measure, Track, and Report Your Impact Outdoor (front): Electrified Transportation - Charging Forward on Climate Action Outdoor (back): Put A LID (Low Impact Development) On It
10:45 – 11:00 am	Break	
11:00 – 11:45 am	Session 2	Hall A/B: Environmental Technology with TU20 Hall C: Behaviour Change and Climate Change Hall D: Building Smart Cities Hall E: How to Measure, Track, and Report Your Impact Outdoor (front): Electrified Transportation - Charging Forward on Climate Action Ourdoor (back): Put A LID (Low Impact Development) On It
11:45 – 12:15 pm	Networking Lunch 1	Group A: Lunch Group B: Networking
12:15 – 12:45 pm	Networking Lunch 2	Group A: Networking Group B: Lunch
12:45 – 1:15 pm	Keynote Speaker	
1:15 – 2:00 pm	Session 3	Hall A/B: Action Projects to Change the World: A How-To Guide Hall C: How to Lobby Politicians to Reduce GHG Emissions Hall D: Creating a Youth Movement: How to Fund, Market, and Brand Hall E: How to Measure, Track, and Report Your Impact Outdoor (front): Sheridan District Energy System Tour Outdoor (back): Citytrees, Urban Forestry, and Climate Action
2:00 – 2:15 pm	Break	
2:15 – 3:00 pm	Session 4	Hall A/B: Action Projects to Change the World: A How-To Guide Hall C: Communication Matters! Strategies for Authentic Climate Conversations Hall D: Creating a Youth Movement: How to Fund, Market, and Brand Hall E: How to Measure, Track, and Report Your Impact Outdoor (front): Sheridan District Energy System Tour Outdoor (back): Citytrees, Urban Forestry, and Climate Action
3:00 – 3:30 pm	Closing Remarks and Students Depart	

Keynote speaker

The Honourable Elizabeth Dowdeswell
www.lgontario.ca

The Honourable Elizabeth Dowdeswell was invested as Ontario's 29th Lieutenant Governor on September 23, 2014. Her eclectic public service career has spanned provincial, federal, and international borders, and has transcended disciplinary and sectoral lines.

Ms. Dowdeswell began her professional career as a teacher and university lecturer. After serving as the Deputy Minister of Culture and Youth for the Government of Saskatchewan, she held increasingly senior positions in the Canadian public service, most notably as head of the Atmospheric Environment Service. Throughout this period, she managed several public inquiries and royal commissions.

Her international negotiating experiences prefaced her election in 1992 as Executive Director of the United Nations Environment Programme and Under-Secretary-General of the United Nations, headquartered in Nairobi, Kenya. Upon returning to Canada in 1998, she established an international consulting practice and became the founding President and CEO of the Nuclear Waste Management Organization. Immediately prior to her appointment as Lieutenant Governor, Ms. Dowdeswell was the President and CEO of the Council of Canadian Academies. She has also served on numerous boards of corporate and non-profit organizations.

Ms. Dowdeswell was born in Northern Ireland and immigrated to rural Saskatchewan with her parents in 1947. She earned a Bachelor of Science in home economics and teaching certificate from the University of Saskatchewan (1966) and a Master of Science in behavioural sciences from Utah State University (1972). An Officer of the Order of Canada, Ms. Dowdeswell holds 11 honorary degrees.

Panelists

Chief R. Stacey LaForme
www.mncfn.ca

R. Stacey LaForme is the elected Chief of the Mississaugas of the Credit First Nation (MCFN). Born and raised on MCFN, Chief LaForme has served his community for over eighteen years being first elected to council in 1999. Chief LaForme is committed to increasing involvement and communication between Elected Council and both on and off-reserve membership. He is very active throughout MCFN's traditional territory which encompasses 3.9 million acres of Southern Ontario, not only as a Chief, but as a notable storyteller and poet. Chief R. Stacey LaForme exemplifies significant and continuous service to our community by demonstrating integrity, generosity of spirit, humility, courage, collaboration, "The Good Mind", and traditional ways of knowing and being.

Dr. Daniel Scott
daniel.scott@uwaterloo.ca

Dr. Scott is a University Research Chair and Executive Director of the Climate Change Centre at the University of Waterloo. He has done research on climate change for over 20 years and been a contributing author to the United Nations Intergovernmental Panel on Climate Change Third, Fourth and Fifth Assessment Reports. His research has been featured in many leading media outlets, including The Economist, New York Times, Washington Post, Wall Street Journal, BBC, Time, Scientific American, and National Geographic.

Frances Edmonds
www.linkedin.com/in/franceshp

Frances is Head of Sustainable Impact for HP Canada – Canada's most sustainable technology company (www.hp.ca/sustainableimpact.com). She is responsible for HP's wide suite of programs including non-profit partnerships and an industry leading volunteer program. Being passionate about sustainability education, she is on the board of LSF - Learning for a sustainable Future & the Schulich Centre for Responsible Business Advisory Board.

Workshops

At the Generation Green Youth Un-conference, students will attend four workshops throughout the day – one mandatory and three of their choice. The workshops at the event cover a wide variety of topics surrounding climate change and implementing community initiatives, and will each teach the students a tool or skill that can be used to help them reduce their community's greenhouse gas emissions.

Workshop Descriptions (pp. 15 – 23)

In this section, a brief description of each workshop and the facilitator's information are provided. These descriptions were provided to students during workshop registration, in order to tell them what they should expect to learn from each workshop, and to help them select their preferred workshops.

Workshop Summaries (pp. 24 – 41)

In the following section, a summary of each workshop is provided for the students' reference. Students are encouraged to refer back to the toolkit and these references throughout the implementation of their community initiatives and beyond. Although students will attend only four workshops during the day, they are encouraged to refer to all of the workshop summaries and use all of the tools and resources provided.

Mandatory Workshop (pp. 34 – 37)

You can't manage what you don't measure! **Each student MUST attend "How to Measure, Track, and Report Your Impact"** as this is a key component of the follow-up. By measuring, tracking, and reporting back with their results, the students will be able to see the precise impact that they've made in their communities.

Workshop Descriptions

ACTION PROJECTS TO CHANGE THE WORLD: A HOW-TO GUIDE

What bugs you? What problems and opportunities do you see in your everyday life, in your home, school, community, and world? And what can you do about them? Join us as we brainstorm ideas for Action Projects and go through some handy tips and tricks for getting started in making a difference!

Sam Gawron
Email: samantha@LSF-LST.ca
Twitter and Instagram: @LSF_LST
Facebook: www.facebook.com/LSF.LST.ca
Website: www.LSF-LST.ca

Sam is the Program Manager for a small charity called Learning for a Sustainable Future (LSF). LSF wants to integrate sustainability education into the school system; we want students to be learning about sustainability across all grades and subjects. We empower students to take on Action Projects, which use the real world as the context and the classroom to gain hands-on experience and making a real impact while they learn.

BEHAVIOUR CHANGE AND CLIMATE CHANGE

Research shows that a significant proportion of greenhouse gas (GHG) emissions can be directly tied to individual behaviors and choices. This means that strategies that change the behaviour of people in our community can be hugely helpful in the face of a changing climate. This workshop will show the utility of behavioural science in combating climate change through consideration of scientific research about the cognitive biases and behavioural barriers that preclude sustainable choices and behaviours (i.e., understanding causes), and the introduction of scientifically-informed interventions that can change behaviour and reduce GHG emissions (i.e., creating solutions).

Nathaniel Barr
Email: nathaniel.barr@sheridancollege.ca
Twitter: @BarrNathaniel

Nathaniel Barr, Ph.D., is a Professor of Creativity and Creative Thinking at Sheridan College. He is also a Scientific Advisor at BEworks, a behavioural science management consulting firm and advanced research institute. An award winning educator and researcher, Nathaniel's expertise centres on cognition, decision making, technology, creativity, and innovation, and much of his work focuses on how understanding the human mind, and applying that knowledge, holds promise in solving some of humanity's most pressing challenges.

BUILDING SMART CITIES

'Smart' cities are trending in Canada and beyond. From Halton, to Singapore, to London, England, we can probably all point to small and large examples of 'smart' data and technologies being used to make our lives easier, more efficient, and more connected. We're also increasingly looking for ways that data and technologies can help us fight the climate crisis and reduce GHG emissions. Join Evergreen and Future Cities Canada in the workshop, *Building Smart Cities*, to explore what it means to be 'smart,' find out how Ontario communities are using data and technologies to reduce GHG emissions, and engage in an activity that encourages you to think outside-of-the-box and re-imagine the future of Halton! What does 2030 look like, how can you help shape it, and what does 'smart' have to do with it?

Carly Livingstone
Email: clivingstone@evergreen.ca
Twitter: @Car_Livingstone

Carly Livingstone is a Senior Program Manager of the Community Solutions Network, a program of Future Cities Canada, at Evergreen. In her role she leads a series of regional events that bring together mid- and senior- level municipal staff and Indigenous leaders to learn about emerging trends, issues and approaches in open smart cities, as well as best practices and lessons learned. Carly has previously worked in both public and not-for-profit sectors in areas related to technology, food and agriculture and holds a master's in communication, specialization in data science at Carleton University where her work focused on the intersection of food, data and technology. She is committed to advancing smart cities and food systems work that is rooted in environmental principles (and she'll ride her bike as much as she can).

Julie Fader
jfader@evergreen.ca

Julie Fader is a Program Officer at Evergreen, where she works on a program that helps communities across Canada navigate the smart cities landscape. She developed a passion for cities after two years in Tokyo, working at a tech start-up that helped travelers navigate and fully appreciate Japan's urban areas.

CITYTREES, URBAN FORESTRY, AND CLIMATE ACTION

Participants in this workshop will take a facilitated walk outside to explore and discuss local trees and their social, environmental and economic role in urban communities. Several trees will be identified for species and key physical characteristics of them measured. With this information, participants will learn how to interact with Citytrees, and participate in citizen science geared toward mapping and estimating urban tree benefits for public access and decision making.
Citytrees: www.citytrees.ca

Courtney Carrier
Email: courtney.carrier@ryerson.ca

Courtney Carrier is a Master's Student in the Environmental Applied Science & Management Program, and holds an honours BA in Environment & Urban Sustainability. Her research interests focus on the use of technology to facilitate the delivery of outdoor place-based environmental education.

Dr. Andrew Millward
Email: millward@ryerson.ca

Andrew Millward is an Associate Professor and award-winning teacher and researcher with a focus on innovation and social action that seeks to improve the lives of urban dwellers by connecting them with nature and facilitating its stewardship. Specifically, Professor Millward studies city trees and urban forest ecosystems where he is keenly interested in the environmental benefits (including for climate) that well-maintained trees provide to humans. He is the principal investigator with the Urban Forest Research & Ecological Disturbance (UFRED) Group at Ryerson University, and is co-founder of Citytrees.

COMMUNICATION MATTERS! STRATEGIES FOR AUTHENTIC CLIMATE CONVERSATIONS

Communication matters! Somewhere along the way to our mitigation project's end goal, we are going to face a challenge. It's likely going to be about communication. During this workshop, we will share strategies and tips, and use interactive role play exercises to:

- Confidently cope with climate resistance
- Expertly navigate difficult conversations
- Authentically communicate about your project

Amanda Kennedy
Email: amanda@kennedyconsulting.ca
Twitter: @ak_yyz
LinkedIn: www.linkedin.com/in/amandakennedy

Amanda Kennedy is a trained and experienced facilitator and public engagement specialist. She has worked in every Canadian province and territory, bringing dozens of groups together to explore complex social and environmental challenges. Her current work is focused on engaging communities in meaningful dialogue about climate change. Amanda has an MSc in Environmental Change and Management from the University of Oxford and two undergraduate degrees from Queen's University in Economics and Biology.

CREATING A YOUTH MOVEMENT: HOW TO FUND, MARKET, AND BRAND

Our workshop focuses on how to fund, market, and brand an initiative. We will be focusing on how we made our Pop-Up Cleanup event successful and give students the tools to plan their own successful events. We will go through the essential steps of executing an event, including how to reach out to sponsors and how to promote the event using social media and visuals.

Dominique Greyvenstein, Gabriella Rae, Kiara Theron, Grace Ogundeji, and Emily Pokou
Email: domigreyvenstein@gmail.com
Instagram: @ibeco_org

We are 5 Grade 12 IB Students from St. Thomas Aquinas. For our CAS (creativity, activity, service) Project, a requirement of the IB program, we organized a pop-up cleanup event. Participants picked up garbage from any area and brought the garbage to our high school where it was sorted into the appropriate bins, promoting waste diversion and ultimately reducing greenhouse gas emissions.

ELECTRIFIED TRANSPORTATION - CHARGING FORWARD ON CLIMATE ACTION

The need to transition to electrified transportation to fight climate change is becoming increasingly clear as more scientific studies assess the climate impacts of the vehicles that we use to get around our communities. Most of our transportation options use gas or diesel fuel. Energy to drive these vehicles comes from the internal combustion engine or ICE technology that is fairly inefficient and produces tailpipe emissions. Automakers are producing more fuel efficient and less polluting cars, however when compared to electric vehicles, EVs win as the most environmentally sustainable vehicles that bring economic benefits as well. The workshop covers the environmental impacts of typical cars versus EVs, the owner/driver's perspective, and the importance of moving towards an electrified transportation future as a critical climate action. Affordable EV models are available, and they are easy to operate. Driving an EV is an environmentally responsible way to ensure a more sustainable future.

Cindy Toth
envirogal@hotmail.com

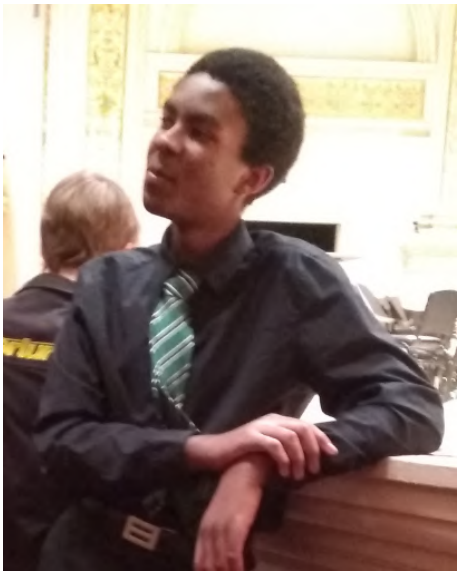
Tim Burrows
timtalkstesla@gmail.com

Stephen Bieda
Stephen.Bieda@evsociety.ca

Cindy Toth has worked as an environmental scientist for 35 years. As the Town of Oakville's Environmental Policy Director, she led Oakville's climate change and greening initiatives in sustainability, fleet, buildings, operations and biodiversity. Cindy advocates for EVs and has driven an EV for 14 years. Tim Burrows is passionate about his EV and advocating for positive societal change. He has owned and driven battery-electric cars for 7 years logging 200,000 kms. Tim reaches out to all ages and 1000s of people to deliver "Tim Talks Tesla" presentations on the EV owner/driver's perspective. Stephen Bieda is a long-time advocate of environmental sustainability and climate change action. His leadership and extensive experience includes cleantech consulting, EV charging infrastructure projects, zero emission vehicle development and working with agencies to develop EV strategies. Currently he is an EcoBrand Business Development Manager with Kia Canada.

GREEN TECHNOLOGY AND ITS APPLICATIONS TO AUGMENT CLIMATE RESILIENCY

Hosted by Tech Under 20, a local student-run organization affiliated with Silicon Halton, this workshop will introduce you to different types of green technology and show you how they can be applied in your daily life to reduce your carbon footprint. You will walk away from this workshop equipped with the ability to critically analyse a problem and derive a solution from your observations.



Dorian Knight
Email: dorianknight@outlook.com

Dorian Knight is a Grade 12 student at T.A. Blakelock High School, right here in Oakville. Dorian is highly involved in his community, having completed nearly 1000 volunteer hours with various organizations, and participating in numerous clubs and councils. In school, Dorian is Blakelock's Co-Prime Minister, Co-president of Blakelock's TU20 chapter and DECA chapter, Blakelock's representative on Stephen Crawford's youth council, head chair of Blakelock's club council, active member of Blakelock's eco club, and a member of both Senior band and Jazz band. Outside of school, Dorian is also a youth stakeholder with the Halton Environmental Network, a member of Junior Optimist, FIRST robotics, the YMCA's Young Leader's Initiative, and account executive for TU20.

HOW TO LOBBY POLITICIANS TO REDUCE GHG EMISSIONS

Do you want to meet politicians face-to-face to discuss actions to reduce GHG emissions? Does it sound scary and intimidating? It can be exciting! In this workshop, each of you will participate in a mock lobbying session. By the end of the workshop, you'll feel comfortable leading a meeting with politicians to take practical steps to reduce Canada's GHG emissions.

Amar Kumar
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Twitter: @effensource

Amar Kumar is the group leader for the Oakville chapter of Citizens Climate Lobby Canada, non-profit, non-partisan, grassroots advocacy organization with a twin focus: to create the political will for a livable planet and to empower people to claim their political and personal power.

HOW TO MEASURE, TRACK AND REPORT YOUR IMPACT (MANDATORY)

You can't manage what you don't measure! From small activities to large communities, climate change mitigation is measured and reported on by greenhouse gas (GHG) emissions saving. This workshop shows students a step-by-step method for how to quantify greenhouse gas (GHG) emissions impacts. Students will be guided through measuring the GHG impact of an activity and determining the savings achieved through a climate change commitment.

Michael Dean
Email: mdean@haltonhills.ca

Michael Dean manages the Town of Halton Hills' energy and climate change mitigation portfolio, works to integrate sustainable development principles in land use planning decisions, is responsible for the development and implementation of a wide range of sustainability plans, policies and strategies, and serves as the Town's "energy champion/subject matter expert" to provide advice to Council, Town departments, the public, and external agencies. Michael has a Masters in Urban Planning from the University of Toronto and a Masters in History from the University of British Columbia.

Deniz Ergun
Email: deniz.ergun@oakville.ca
Website: www.oakville.ca

Deniz Ergun leads community climate change mitigation work at the Town of Oakville. This includes managing the development of Oakville's Community Energy Plan, which establishes greenhouse gas emissions reduction, energy conservation, and economic savings targets for 2041, and a pathway for the residents, businesses, institutions and commuters in Oakville to achieve this. She also works on town policies and programs related to energy conservation, electrification and engaging the public on climate change. Deniz has a Masters in Applied Science, Building Science from Ryerson University.

PUT A LID (Low Impact Development) ON IT

This workshop focuses on how LID (Low Impact Development) projects can help communities become more resilient to climate change. First, students will use an interactive table model to review how different types of land differ in their ability to manage rain and precipitation. Students will review data on changing patterns in local climate, discussing potential impacts if these trends continue. After a brief discussion, students will learn about LIDs (native plant gardens, rain gardens, permeable paving etc.) and how they can be used as tools at home and at school to adapt to climate change and increase greenhouse gas absorption. To conclude, a citizen science opportunity will be shared that allows students to contribute precipitation data to a national database.

Sasha Benevides
Twitter: @ConservHalton
Instagram: @conservationhalton

I am the Community Outreach Coordinator at Conservation Halton. Conservation Halton, works to protect, restore and manage natural resources in the Halton watershed from lake to escarpment. Conservation Halton is an active member of the Sustainable Business Initiative. We've planted over 4.4 million trees since 1956 to mitigate carbon emissions and provide many other ecosystem goods and services. We also own over 10,000 acres of land, much of which is actively sequestering carbon and providing other ecological services such as clean air and water.

SHARE YOUR CLIMATE STORY THROUGH FILM

Learn how to communicate your environmental action and create your own eco-film! This workshop is designed to take you through filmmaking techniques and the tools and equipment for shooting, recording sound and editing so you can tell your story through film.

Katrine Handley-Derry
Email: katrine@haltonenvironment.ca

Katrine Handley-Derry graduated from the University of Toronto with a Master's in Environmental Science, following undergraduate studies in Ecology and Film. Katrine works in marketing and design using her passion for engaging audiences to inspire environmental action. She traveled and lived abroad, developing her language skills in both French and Spanish. Outside of her academic and professional career, she is a landscape painter.

SHERIDAN DISTRICT ENERGY SYSTEM TOUR

Sheridan College's District Energy System was installed in 2017 with the goal of moving beyond wasteful and outdated energy practices, conserving energy, and being as efficient as possible, by reusing any energy rejected by the plant and cycling excess heat produced back into the system. Join us on a tour of Sheridan's District Energy System to learn more about how the system ultimately reduces the college's energy consumption and CO_2 emissions.

Herb Sinnock
LinkedIn: www.linkedin.com/in/herbert-sinnock-66013910

Herb Sinnock is a veteran Energy Manager with a passion for radical transformation of institutions, systems and society toward a sustainable future. Herb is killed in Sustainable Development, Strategic Energy Management, Advanced Low-Carbon Energy Systems, Business Planning, Technical and Financial Analysis, Smart Grid, and Culture Change.

THE 5R'S OF WASTE MANAGEMENT

This workshop will focus on the 5R's (refuse, reduce, reuse, repurpose, recycle) of waste management. In that order, we will discuss each of the 5 R's in detail: refuse what you don't need; reduce what you do need; reuse what you can't reduce; repurpose what you can't reuse; and recycle what you can't repurpose. Participants will also be exposed to the popular concept of "circular economy" and how it contrasts with the traditional model of linear economy for consumer goods. We will explore this concept with a review of Ontario's blue box program and its attempt to divert waste from landfill and reduce greenhouse gas emissions.

Ashley Arora
Email: ashley.arora18@gmail.com
LinkedIn: Ashley Arora

Ashley has graduated with a BSc in Biochemistry and Environmental Science, and a MSc in Sustainability Management from the University of Toronto. She had discovered her interest in Food Sustainability while studying at Lund University in Sweden during graduate studies, and applying her skills with projects in both the non-for-profit and for-profit sector. She has accumulated work experience in Research, Education, and Consulting, with her recent experience working in the start-up space within the hospitality industry. This has allowed her to work with local restaurants in Toronto to create customized sustainable programs and support the diversion of 200,000 pounds of waste from landfills!

Action Projects to Change the World: A How-To Guide

Presented by Sam Gawron

From Learning for a Sustainable Future (LSF)
www.LSF-LST.ca

Learning for a Sustainable Future
LSF

What's An Action Project?
Action Projects help you make change in the areas you're passionate about.
While planting a tree is an activity, a tree planting Action Project would include:

- identifying the **issue** (lack of trees at school)
- **planning** your solution (finding root causes, choosing an action)
- setting your **goals** (plant 50 trees on school grounds)
- using your **resources** (consulting planting experts, learning about tree species)
- completing your **action** (hosting a tree-planting event)
- **reflecting** (measuring your impact, planning for next year!)

Why Do An Action Project?
Action Projects help you make a real impact on an issue that's important to you. They're also a great learning tool that gives you hands-on, real-world experience. The skills required to successfully complete an Action Project are directly transferable to higher education, careers, and life. You can even put them on a resume!

Where Can I Get Support?

- Check out LSF's Our Canada Project online sharing platform for Action Project ideas!
- Post your own projects at www.OurCanadaProject.ca by **May 15, 2020** to be eligible to win up to $3,000!

OUR CANADA PROJECT
PROJET NOTRE CANADA

Behaviour Change and Climate Change

Presented by Nathaniel Barr

This epoch has been called the Anthropocene, to reflect the fact that human behaviour is now the most significant influence upon the planet. Research shows that a significant proportion of greenhouse gas (GHG) emissions can be directly tied to individual behaviors and choices, like what we eat and how we get where we need to go. This means that strategies that change the behaviour of people in our community can be hugely helpful in the face of a changing climate. This workshop will show the utility of behavioural science in combating climate change through consideration of scientific research and the introduction of behavioural strategies to reduce GHG emissions.

In order to leverage these approaches in the pursuit of lowering GHG emissions, it is important to understand behavioural barriers and cognitive biases to achieving sustainable behaviour, as well as scientifically-informed behavioural interventions that can be deployed to change behaviour.

Behavioral Barriers & Cognitive Biases: Understanding how we think and behave can illuminate the causes of unsustainable behaviours. A general principle of great importance is the say-do gap. There is a big difference between what we say we should/are going to do, and how we behave. This has serious implications for initiatives to reduce GHG—getting people to have good intentions is not enough. Many more specific barriers/biases are relevant to GHG, and will be discussed in the workshop, including hyperbolic discounting (people choose smaller-sooner rewards over larger-later rewards), halo effects (e.g., I recycle so I can drive an SUV), illusory superiority effect (e.g., I am better than most people), and diffusion of responsibility (e.g., I am just a drop in the bucket).

Behavioural Interventions: Research shows that information and incentives hold little sway in changing our behaviour. For example, knowing a food is unhealthy does little to stop us from eating it. Likewise, learning how unhealthy an action is for the planet does little to stop us from doing it. Nudges and other strategies can shift behaviour more effectively, without needing changes to law or policy. Some effective examples include social proof (people want to do what others do), precommitment (commiting to a future action increases odds of follow through), implementation intentions (detailed plans), pledges (public declarations to complete an action), and concretization (making the abstract concrete).

Reducing GHG emissions stands as a global priority in our pursuit to prosper and persist on this planet. Youth leaders of today can make significant contributions toward a more sustainable planet by learning about human cognition and behavior, and leveraging that understanding to change the behaviour of those in their community, for the better.

Recommended Reading:

Barr, N. & Pennycook, G. (2018). The most dangerous and misunderstood threat to humanity is the human mind. *Quartz*.

Bobrow, E. (2018). Fight Climate Change with Behavior Change. *Behavioral Scientist*.

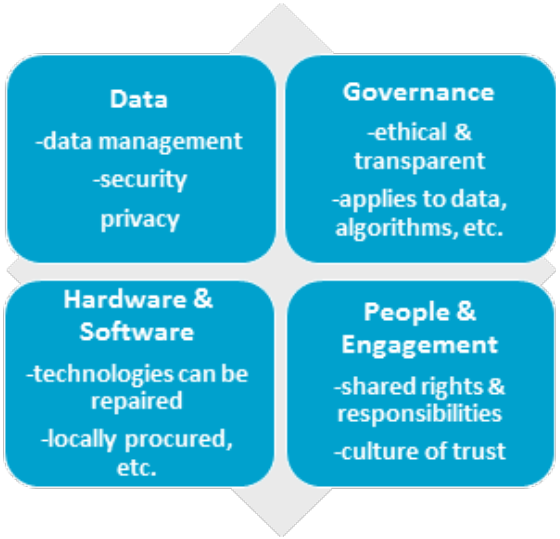
Building (Open) Smart Cities

Presented by Carly Livingstone and Julie Fader

What is an Open Smart City?

An Open Smart City is where residents, civil society, academics, and the private sector collaborate with public officials to mobilize data and technologies when warranted in an ethical, accountable and transparent way to govern the city as a fair, viable and liveable commons; and balance economic development, social progress and environmental responsibility.

What's included in the Open Smart City?



The Activity

In this activity, learn how to create a vision and a plan for Halton as an open smart city. Then, lead this activity with your friends, family and your community!

Backcasting: Imagine what your desired future is, and then work backwards to determine how to reach the desired vision or state.

Resources: backcasting canvas, blue post-its, orange post-its, green post-its, sharpies

Step 1: Choose your desired future

Choose an overarching vision for the future. Example: In 2050, we have successfully leveraged big data and connected technology to realize zero-carbon cities across Southwestern Ontario.

Jot down 1-5 characteristics of your vision for the future on the blue post-its. Example: People are able to commute by bike all year.

Step 2: Identify barriers

Jot down 1-5 barriers on the orange post-its that are stopping you from achieving your vision for the future. Example: Bike lines are not consistently maintained in the winter.

Step 3: Identify milestones

Jot down 1-5 events on the green post-its that would demonstrate you are getting closer to achieving your vision for the future. Example: There are protected bike lanes throughout the city made with heated pavement that melts snow.

Step 4: Identify necessary actions

Take 2 minutes to look at the canvas and read through the post-its. Based on what's up there, take 2 minutes to individually jot down actions that are necessary to overcome barriers and ensure milestones are reached.

Citytrees, Urban Forestry, and Climate Action

Presented by Courtney Carrier and Andrew Milward

Nature is present across our cities, and knowledge of its functions, benefits, and vulnerabilities is the beginning to driving evidence-based decisions concerning future urban visions that prioritize community participation, collective environmental action and climate resilience. In this workshop, students will explore the outdoors to learn some of the key ideas and concepts regarding urban trees and the Citytrees web-app.

Urban Trees

Urban trees and the forested urban ecosystem are very important to our cities, and contribute to our cities in many ways. For example, urban trees provide food and shelter for many urban critters, while also providing humans with an array of environmental, social, and economic benefits including but not exclusive to: cleaner air, soil stabilization, moderate temperatures, cooling of buildings, aesthetic pleasure, reduced stress and anxiety, and climate change mitigation through carbon and other greenhouse gas sequestration.

Citytrees (www.citytrees.ca)

Citrytrees is a proof-of-concept, open access, citizen science web-app created at Ryerson University. The Citytrees web-app estimates the ecological benefits on urban trees on an individual basis, and can aggregate benefits to the scale of a forested neighbourhood and beyond. Scientific modeling of benefits is done in partnership with the US Forest Service, which has developed open-source access to models that focus on carbon storage and sequestration by urban trees, storm water mitigation potential, and moderation of summer temperatures. Each of these benefits is plotted in Citytrees and is digestible with user-friendly dialogue.

Students will learn several basic tree measurements, and why they are important for creating a tree inventory. Measurements will be taken for input into Citytrees, including:

- Tree identification based on leaf characteristics,
- Diameter at breast height (the size of the trunk of the tree),
- Crown width (from dripline to dripline), and
- Canopy condition.

Among other things, Citytrees allows the user to map and interact with the urban forest to learn about trees and their ecosystem services and benefits, including:

- Carbon sequestration and how this relates to mitigating climate change,
- Stormwater mitigation, and how this reduces the amount of run off rushing into bodies of water
- Temperature regulation and how that helps mitigate the urban heat island effect,
- And more!

We believe that by informing city dwellers of the value of urban trees and encouraging them to be citizen scientists (collecting and posting data about neighbourhood trees) we can build human capacity to better steward nature in cities as one approach to taking climate action.

Communication Matters! Strategies for Authentic Climate Conversations
Presented by Amanda Kennedy

COMMUNICATION MATTERS!

During this workshop, we will share strategies and tips and use interactive role play exercises to:

- ✓ **CONFIDENTLY COPE** WITH CLIMATE RESISTANCE
- ✓ **EXPERTLY NAVIGATE** DIFFICULT CONVERSATIONS
- ✓ **AUTHENTICALLY COMMUNICATE** ABOUT YOUR PROJECT

Why is this important?

- Authentic communication means that you are:
  - Focusing on expressing your feelings and needs
  - Able to listen to another person's vantage point
  - Being honest and direct
  - Coming from a place of mutual respect
  - Speaking directly to the other person and not interrupting

What can you do?

- Use simple language to communicate about your project (in as few words as possible!) → practice saying this aloud
- Be able to describe the benefits of your project and why it matters to you, personally → practice saying this aloud
- Stay calm; pause and take a few breaths, if needed.
- Speak using "I" statements instead of "you" statements to avoid blame or assumptions.
- Listen, listen, listen and focus on shared, common values like family and a better future.
- Don't worry about "winning" a conversation or exchange.
- Have a reliable source of information ready to share, if asked; the interactive NY Times page is one plain language example: https://www.nytimes.com/interactive/2017/climate/what-is-climate-change.html
- Watch Katherine Hayhoe's inspiring TED Talk about how to talk about climate change: https://www.ted.com/talks/katharine_hayhoe_the_most_important_thing_you_can_do_to_fight_climate_change_talk_about_it?language=en

"[T]here is no "right" way to talk about climate, just like there's no right way to talk about race, or gender, or sexuality or any of the issues of humanity where we desire unity versus division. The key is to have open conversations with the intent to understand each other as we seek solutions." Heather McTeer Toney, 2019

QUESTIONS? WANT TO CONNECT? FEEL FREE TO REACH OUT:
Amanda Kennedy | Phone: 416.930.0173 |. Email: amanda@kennedyconsulting.ca |. Twitter: @ak_yyz

Creating a Youth Movement: How to Fund, Market, and Brand

Presented by Dominique Greyvenstein, Gabriella Rae, Kiara Theron, Grace Ogundeji, and Emily Pokou

In this workshop, you will learn the basics of how to fund, market, and brand an initiative. We will be focusing on how we made our Pop-Up Cleanup event successful and give students the tools to plan their own successful events. We will go through the essential steps of executing an event, including how to brainstorm, plan, reach out to sponsors and promote the event.

1. **Brainstorm and Plan:** Come up with multiple ideas for your initiative determine the 5Ws to help you decide on the most realistic and effective strategy.
    - **Who** is your target audience? Who will you reach out to?
    - **What** is your event?
    - **When** will your event take place? What is your rain date?
    - **Where** is the event taking place?
    - **Why** are you organizing the event?
    - **How** will you reach your audience? How will you execute your event?

2. **Reach Out to Sponsors/Partners:** Events can be pricey! If your initiative has costs, you may need to reach out to family, friends, organizations, and other community groups for funding.
    - Research companies whose values match your event. For example, if your event is environmental, reach out to companies who make “green” products or who consider the environment in their endeavors.
    - Write a formal letter explaining the 5Ws and requesting help
    - Send out your letter to as many community members as possible. Many will decline your request, but don’t get discouraged - someone will eventually say yes!

3. **Promote Your Event:** Once your idea is finalized, start promoting! There are several possible methods of communication. Make sure you are using one that is appropriate for your audience.
    - Social media: Posts should be visually appealing for your audience, and should include many visuals and little text. In general, Instagram is a good platform to reach youth, while Twitter is a great way to target an older audience.
    - Posters: place posters around your school and community.
    - Word of mouth: Direct communication with others is one of the most effective ways of spreading the word. Make announcements at your school and/or speak at assemblies.

4. **Execute:** Be prepared! Make sure you gather all the supplies needed, that you arrive early on the day of the event to set up, and that you are tracking your impact! You may also find it helpful to create a sign-up system (e.g. Google Form) to anticipate numbers and to ensure that you have all supplies needed

To learn more about our Pop-up Cleanup event, visit us on Instagram @ibeco_org.

Electrified Transportation – Charging Forward on Climate Action

Presented by Stephen Bieda, Tim Burrows, and Cindy Toth

History

Invented in 1832, electric vehicles (EVs) became popular in the early 1900's but then became overshadowed around 1910 by the mass-produced Ford Model T that used energy from an internal combustion engine (ICE) technology. Since that time, EVs have made a comeback, as gas prices have dramatically increased. As an example, GM produced the popular but limited EV1's in the 1990's. These cars were subsequently crushed as documented in the movie 'Who Killed the Electric Car'. Now, once again, EVs are returning to popularity for many reasons. What was a great idea in the 1800's is still a great idea going into our 21st century.

EVs for Climate Action and Impact

In our community, we **need** to get to places like school, and we **want** to go places to visit friends or go to movies. We each choose how we travel to these places. What we are not very aware of is the climate impact of our choices. In Canada, from the 2017 national inventory, the transportation sector produces about 28% (201 MT CO2 eq) of Canada's GHGe's and passenger and freight gas vehicles produce 96% of these emissions. So personal choice on how we get around can move the dial on GHGe reductions.

EVs are 3 times more efficient than gas powered cars. They have no tailpipe and no exhaust emissions. The energy powering EVs in Ontario comes from cleaner sources (wind, hydro, sun, natural gas and nuclear) making the GHGe **reductions** attributable to EVs very effective. In other areas where electricity is from coal-fired generating stations GHGe reductions from driving EVs are less but still respectable. By driving electric, vehicle GHGe's can be decreased by between 50-100% depending on how the electricity is generated.

Driving Towards the Future

Myths exist about the limited EV availability, expensive costs, environmental impact, unreliable performance, difficulty charging up and range limitations. Let's bust some myths! There are currently 26 plug in EVs (BEVs) and 23 hybrid EVs (PHEVs) available in Canada with purchase costs starting at $27,000 for some models. Currently there is a federal $5,000 incentive that can lower this purchase cost. EVs require less maintenance than gas cars, and although they may be more expensive to buy, they are better value to operate and maintain. Operating an EV can be 20-25% of the costs of an ICE car so an EV driver can save over $1,000 per year in gas and maintenance costs. Charging infrastructure is now readily available, easy and can be fast. There are 750 high powered (Level 3) public chargers and 2500 Level 2 chargers available for the over 34,000 EVs in Ontario. EVs have ranges now that go from 100 to 600 km per charge. Using EVs rather than gas cars reduces GHGe's and air pollution. They don't idle and EVs have a lower life-cycle footprint. EVs are safe, comfortable and are quick off the mark. Not only are EVs quiet, they are connected, and really fun to drive!

Climate Smart Transportation Future

Within our communities we want to get out and around. We have options. As part of a climate smart strategy for our own transportation, it is very important to think in terms of options related to what we want to do and how many GHGe's and air pollution we want to generate. We can walk, cycle, use public transportation, car pool, use a ride service or drive with an ICE car or EV. In Canada there are over 128,000 EVs on the road with about 34,000 in Ontario. Over 44,000 EVs were purchased in Canada last year alone. This means that over 2% of the vehicles bought by Canadians last year were EVs. The potential for impact across Halton and Oakville to move to a more climate smart transportation future will be reviewed with data from the nearing completion, Oakville Community Energy Plan. There is a hierarchy of choice in climate smart transportation options – and each of us can define our role to take climate action by the personal transportation choices we each make every day.

Reference Websites:

Electric Vehicle Society: https://evsociety.ca/
PlugNDrive: https://www.plugndrive.ca/
Electric Mobility Canada: https://emc-mec.ca/

History of the Electric Car: https://www.energy.gov/articles/history-electric-car

EVs for Climate Action:
https://equiterre.org/en/solution/why-electrification
https://www.corporateknights.com/channels/leadership/highway-clean-prosperity-greening-transport-can-boost-economy-lower-ghgs-15712164/
https://www.corporateknights.com/channels/clean-technology/faceoff-electric-vs-gas-cars-on-cost-15555966/
https://www.carbonbrief.org/factcheck-how-electric-vehicles-help-to-tackle-climate-change
https://policyoptions.irpp.org/magazines/july-2018/electric-vehicles-as-part-of-canadas-climate-change-solution/

Canadian EV Sales:
https://www.tinyurl.com/CanadaEVSales
https://emc-mec.ca/new/electric-vehicle-sales-in-canada-in-2018/
https://www.plugndrive.ca/electric-cars-available-in-canada/

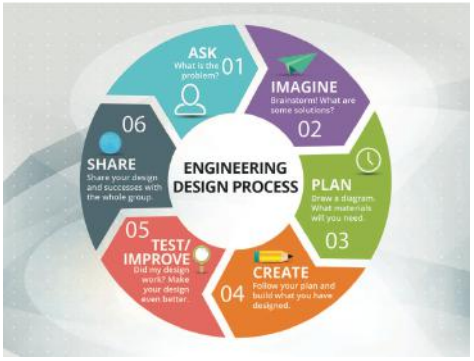
Canadian GHG Emissions:
https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/sources-sinks-executive-summary-2019.html

Footprint Calculator:
https://www.carbonfootprint.com/calculator1.html

Green Technology and Its Applications to Augment Climate Resiliency

Presented by Dorian Knight

Green technology is the use of technology and science to create products that are environmentally friendly, with the goal of protecting the environment or repairing damage done to the environment that was done in the past. Green technology is not limited by buttons and circuit boards. Applications of green technology utilize general engineering principles to solve a problem present in the environment.



Engineering design process

- Define problem
- Clearly identify constraints
- Create a solution
- Test solution
- Repeat when needed

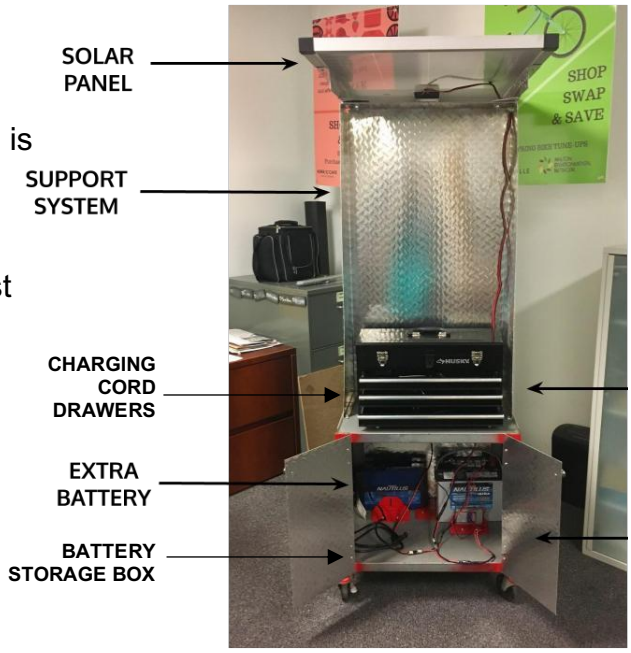
Don't put artificial restraints on your thinking

- Think outside the box and find new solutions!

Solar Cellular Charging Station

The OakvilleReady Solar Cellular Charging Station is an essential tool that can and should be used by community members in the case of a climate emergency where there is no access to electricity. This station was designed and built by students just like you, right here in Oakville!

In this workshop, you will learn how this station works, and then apply the engineering design process to discuss how it can be improved for future models.



Tech Under 20

Tech Under 20 is a student-led organization dedicated to helping students from grades 9 - 12 catalyze their critical thinking and problem-solving skills. TU20 hosts exciting events throughout the year like the TU20 Cup, TU20 Expo and TU20 Learn 2 Get Hired. Best of all, there's probably a TU20 chapter at your school. If your school doesn't have a chapter but you would like to start one up, let me (Dorian Knight) know!

How to Lobby Politicians to Reduce GHG Emissions

Presented by Amar Kumar

In this workshop, you will learn how to lobby politicians to reduce GHG emissions, and practice your skills in a mock lobbying session.

Tips for talking to politicians:

- Decide on your main ask ahead of time. Make sure your ask is clear and actionable.
  - Ex. increase the national carbon price past 2022 until it reaches $100 per tonne.
- Book your appointment early!
  - Find your local MP on the House Of Commons website, then call their office to set up an appointment (www.ourcommons.ca/Members/en/search).
  - Make sure you book your appointment at least 2 months before you want to meet. Mention that you are a constituent.
- Ask good, open-ended questions to get the politician to speak.
  - Sometimes politicians want to talk but may stray off topic, while other times they will be quiet. Good open-ended questions can help avoid both of these situations.
- Once you ask your question, listen silently and attentively, and take good notes.
  - Although you surely have a lot of knowledge to talk about it, the goal is to let the politician talk.
- Don't bring conflict into the room.
  - It's natural to be angry about the lack of action on climate change, but don't bring that anger into the room with you. Walk into the room with the intention to find common ground, collaborate and build trust with each other.

Practice!

1. In groups of 5 or 6, assign each of the following roles:
   a. Politician – plays the MP that the lobbying team are meeting
   b. Group leader – facilitates the meeting
   c. Lobbying team – will lobby to the politician to reduce GHG emissions
2. Have the politician explain to the lobbying team a bit about the role they are playing.
   a. Your character can be real or fake, friendly or difficult, anything you want as long as the politician acknowledges the existence of human caused climate change. If you don't know the answer to something, make it up. For this exercise, the content doesn't matter.
3. Have the lobbying group decide on their main ask for the politician and plan the meeting accordingly. Organize the questions you're going to ask, the tasks you want to complete, the order in which to do them, and who will do each one. Some things to consider include:
   a. Who will explain who you are?
   b. Who will explain your ask?
   c. Who will take notes?
   d. Who will be the timekeeper?
   e. Who will ask to take the picture at the end?
4. Have your meeting with the politician.
   a. Do your best, feel free to make mistakes, and have fun with it!

For more information on how to lobby, visit https://canada.citizensclimatelobby.org/volunteer-resources → scroll down to bottom of page and expand on 'Lobby Tool Kit.'

How to Measure, Track and Report Your Impact

Presented by Michael Dean and Deniz Ergun

You can't manage what you don't measure! Tracking and measuring your impact is the cornerstone to any effective initiative, as this will allow you to determine how your initiative actually performed, and provide you with tangible results and data in order to better manage your actions and improve your efforts. From small activities to large communities, climate change mitigation is measured and reported on by greenhouse gas (GHG) emissions savings. This workshop will show students a step-by-step method for how to quantify the greenhouse gas (GHG) emissions impacts of their community initiatives.

How do you calculate GHG emissions?

$$\text{GHG Emissions} = \text{Activity} \times \text{Energy intensity} \times \text{Emission Factor}$$

What is an Activity?

An activity is a quantity of GHG producing behaviour, such as:

- Driving *x* distance
- Using a lightbulb for *y* amount of time
- Eating *z* quantity of food

Some activities are easier to quantify than others. Think about how you will quantify your activity before you decide what to do. The above examples are relatively simple activities to quantify. While others are certainly possible and accepted, they may require some additional research.

What is Energy Intensity?

Energy intensity is the amount of energy or fuel used per duration/ distance/ size for a particular activity, such as:

- Litres per km (L/km)
- Kilowatt per hour (kWh)
- Cubic meter per hour (m^3/h)
- Gigajoule per square meter (GJ/m^2)
- British thermal unit per square meter (BTU/m^2)

See Tables 1, 2, and 3 for some common energy conversions and intensities.

What is an Emission Factor?

An emission factor is the amount of GHG produced by one unit of fuel or energy, such as:

- Electricity – 20 gCO_2e/kWh
- Natural Gas – 1899 gCO_2e/m^3
- Gasoline Vehicle – 2317 gCO_2e/L
- Diesel Vehicle – 2748 gCO_2e/L

See Tables 4 and 5 for some common emission factors related to electricity and transportation.

For consumption-based activities…

$$\text{GHG emissions} = \text{quantity} \times \text{carbon intensity}$$

Consumption-based activities, such as food and waste consumption, present some unique challenges. See Table 6 for the carbon intensities of various types of foods.

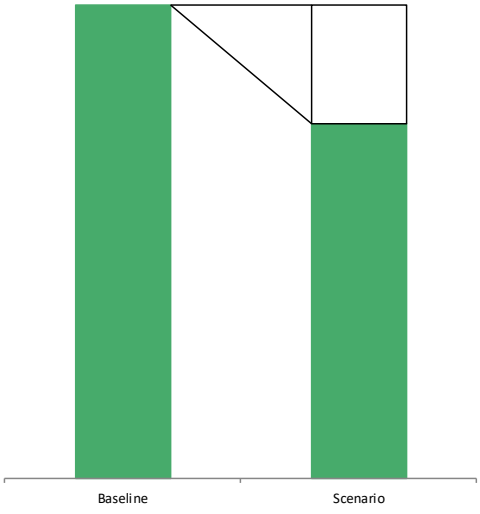
So…how do you calculate the impact of your program?

1. **Choose a program**
   Typically, a GHG reduction program will change one or more of these three things:
   - Amount of activity
   - Energy intensity
   - Carbon intensity

2. **Calculate Baseline GHG**
   If you made no change to your behaviour, how much GHG would you produce?

3. **Calculate Program GHG**
   When you implement your initiative, how much GHG will you produce?

4. **Impact = Baseline GHG – Program GHG**
   What is the difference between the baseline and the program GHG totals?



Reporting your impact

The way in which you report your impact is crucial to communicating your results with the community. It is important that you report your results clearly and with sufficient details so that the community knows exactly what your impact was and how you achieved these results.

Some tips for reporting your impact:

- Of the seven different GHGs, each one has a different global warming potential (GWP). This means that the same amount of each gas will contribute a different amount to global warming. As a result, GHGs are most often reported in CO_2 equivalents (CO_2e).
- The magnitude of your impact will depend on how long you continue your initiative for. However, in order to compare results, it is important that results are all reported in a standard unit, such as on a per year basis. Please report your impact on an annual basis.
  - For example, if you continue your initiative for one month, you will multiple your impact by 12 in order to report how much impact you would have in one year.
- It is important that you keep a detailed record of all of your data and calculations. In the case of an error, this will ensure that you can go back and find where you went wrong. Your calculations should be written or typed out with enough detail and clarity that someone else would be able to look at them and follow along, step by step.

Use some of the data below to help you with estimating the emissions impacts for your actions.

Energy Intensity Values

1. Common Energy Conversions

Energy Source	GJ	ekWh
1 cubic meter (m^3) Natural Gas	0.0373	10.36
1 kilowatt hour (kWh)	0.0036	1
1 Liter (L) Propane	0.0255	7.09
1 Liter (L) Gasoline	0.0346	9.61
1 Liter (L) Diesel	0.0387	10.75

2. Common Vehicle Fuel Efficiencies

Type of Vehicle	Fuel Consumption (L/100Km)
Sedan	9.6
Luxury Sedan	12.2
Sports Car	14.3
Van	10.7
Pickup Truck	14
SUV	12.3
Diesel Bus	78.4

3. Common Power Use for Household Appliances

Appliance	Watts (J/s)
Air conditioner	1,400
Dehumidifier	257
Ceiling fan	125
Heater	1,500
Humidifier	177
Hair Dryer	1,000
Blender	400
Coffee Maker	894
Dishwasher	1,200
Microwave Oven	1,450
Freezer	341
Refrigerator	440
Clothes Dryer	4,900
Washer	512
42" Plasma TV	320
Computer	500
Hot Tub	5,000
Lightbulb	Look on bulb

Emission Factor Values

4. Vehicle Fuel Emissions Coefficients

Mobile Combustion	GHG Coefficient	unit
Gasoline Vehicles	2317	g CO2e/L
Light Duty Diesel Vehicles	2728	g CO2e/L
Heavy Duty Diesel Vehicles	2748	g CO2e/L

5. Ontario Average GHG Intensity for Electricity

	GHG Coefficient	unit
Electricity	20	gCO2e/kWh

Consumption-based activity values

6. GHG Emissions for Common Foods

Food	kg of CO2e emissions per Kg of Food
Lamb	39.2
Beef	27.0
Cheese	13.5
Pork	12.1
Farmed Salmon	11.9
Turkey	10.9
Chicken	6.9
Canned Tuna	6.1
Eggs	4.8
Potatoes	2.9
Rice	2.7
Peanut Butter	2.5
Nuts	2.3
Yogurt	2.2
Broccoli	2.0
Tofu	2.0
Dry Beans	2.0
Milk	1.9
Tomatoes	1.1
Lentils	0.9

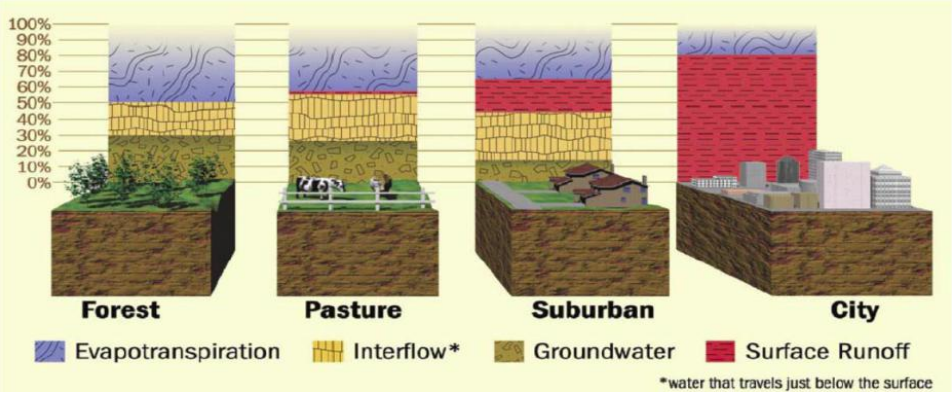
If you cannot find the appropriate values for your initiative, additional data and guidance on estimating emissions can be found at the sources below:

2019 NRCan Fuel Consumption Guide	https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/oee/pdf/transportation/tools/fuelratings/2019%20Fuel%20Consumption%20Guide.pdf
NRCan Survey of Household Energy Use	https://www.nrcan.gc.ca/energy/efficiency/17097
Statistics Canada Energy Information Portal	https://www.statcan.gc.ca/eng/topics-start/energy
UNFCCC National GHG Inventory Reports	https://unfccc.int/process-and-meetings/transparency-and-reporting/reporting-and-review-under-the-convention/greenhouse-gas-inventories-annex-i-parties/national-inventory-submissions-2019
GHG Protocol, Policy and Action Standard	https://ghgprotocol.org/policy-and-action-standard
IPCC Emission Factor Database	https://www.ipcc-nggip.iges.or.jp/EFDB/main.php

Put a LID (Low Impact Development) On It

Presented by Sasha Benevides

Did you know? Different types of land absorb and deal with precipitation differently:



Less permeable lands, found largely in Suburban and City spaces, tend to have greater quantities of surface water runoff. When looking more specifically at paved surfaces (i.e. driveways, roads, pavement on school playing grounds) these often have extremely low to zero water absorption. **More permeable lands**, typically found in natural areas like forests and farmland/ pastures, tend to absorb water more easily with added natural water filtration and environmental benefits. Depending on the intensity of a rain event, water can still become runoff.

Humans can improve water absorption on City and Suburban land using Low Impact Development (LID) projects, lowering water runoff.

What is a LID? (additional resources can be found at https://cvc.ca/low-impact-development/low-impact-development-support/stormwater-management-lid-guidance-documents/**)**
LIDs use naturally based methods to manage and absorb storm water as close to where it originally falls as possible. Examples of LIDs that will be discussed in this activity are naturalization (planting with native/pollinator species), rain gardens, and permeable pavement.

How do LIDs help mitigate the effects of climate change?
According to Wazneh, Hussein, et al. “Historical Spatial and Temporal Climate Trends in Southern Ontario, Canada.” Journal of Applied Meteorology and Climatology, vol. 56, no. 10, 2017, pp. 2767–2787…

- Annual Total Precipitation across Southern Ontario increased by an average of 17mm/decade
- Increasing trend for the Extremely Wet Days and decreasing trend for the Extremely Dry Days

With increasing annual precipitation and extremely wet days in Southern Ontario, LIDs can add denser natural ground cover and increase the amount of water absorbed in urban or suburban areas; reducing runoff and the impacts of flooding. LIDs tend to also increase plant cover, allowing for more carbon sequestration.

How students can take action:

- Initiate local LID projects - Our yards (both school yards, and yards at home!) can be useful tools in climate adaptation and greenhouse gas reduction.
- Become citizen scientists and volunteer with CocaRahs to help monitor precipitation events and provide more robust data that will help scientists report on flooding events (school portal: https://www.cocorahs.org/Content.aspx?page=CoCoRaHS_Schools).

Share Your Climate Story Through Film

Presented by Katrine Handley-Derry

What is an environmental short film?

A short film can be live-action or animated, and should tell a closed-ended story with a distinct beginning, middle, and end. An environmental short film should have a clear focus on an environmental issue.

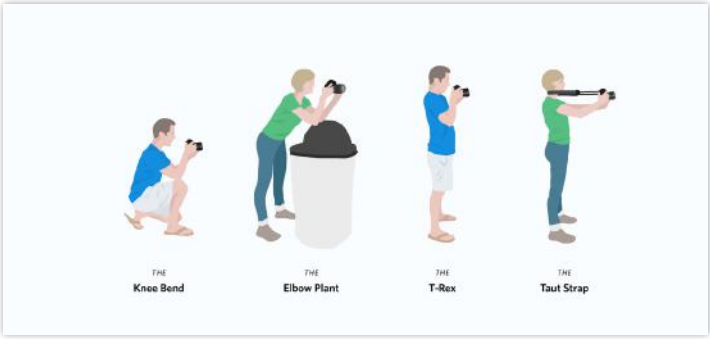
Steps to creating a short film

1. **Brainstorm:** Take a walk, talk to people you know, or watch other environmental films or documentaries. Be inspired by the community and the environmental/ climate action around you.
2. **Plan**: Use a storyboard to plan out your story before you shoot, this will save time and make it easier when filming.
3. **Shoot:** Grab your phone or recording device and start filming! Check out these apps that can help you during filming: https://vtrep.com/free-video-recording-apps/)
4. **Edit:** Take all your clips and make it into your film.
    a. Use editing software on your device or check out these free apps: https://www.makeuseof.com/tag/best-free-video-editing-apps-ios/
    b. Add music and sound effects during editing

Remember:

Keep it simple! A compelling story is the heart of any short film, but you only have minutes to share your story, so make sure you have a clear, concise, and simple premise. The best short films have a clear focus.

Don't take shaky footage. Stay as still as possible when filming, or use a stable surface if you find it difficult. Check out the filming postures in the picture and see which works best for you!



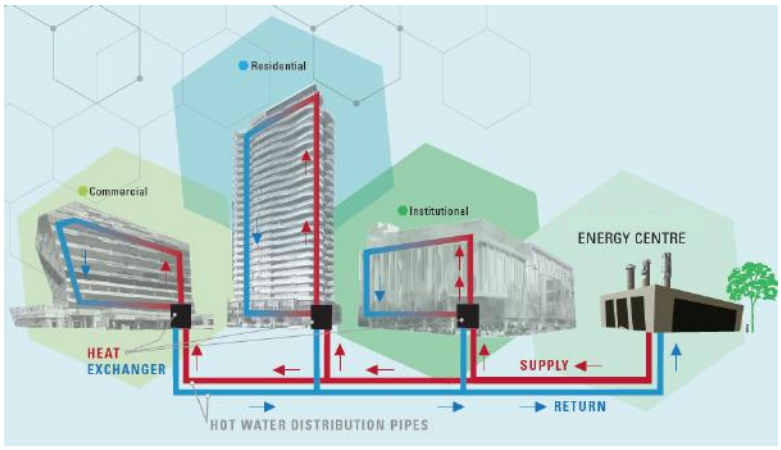
Not all music is free. Check out these royalty-free music sites to find songs, sound effects, and other sounds you can use for free in your film!
https://www.bensound.com/royalty-free-music/cinematic
https://www.zapsplat.com/
https://filmstro.com/music

Don't be afraid, just get out and share your climate story through film!

Sheridan District Energy System Tour

Presented by Herb Sinnock

District Energy Systems are networks of hot and cold water pipes, typically buried underground, that distribute thermal energy to multiple buildings in an area or neighbourhood in order to efficiently heat and cool buildings. These systems typically consist of a heating and cooling centre, and a thermal network of pipes connected to a group of buildings, which ultimately uses less energy than if the individual buildings were to each have their own boilers and chillers.



Benefits

District Energy Systems have several benefits including:

- **Reduced carbon emissions**: DES enable the use of less carbon-intensive fuel sources, such as solar thermal, sewer heat, biogas, cold lake water, biomass and ground heat, and integrate them at an energy centre with virtually no impact on the connected buildings.
- **Resource efficiency**: DES use less energy resources than Business-As-Usual (BAU) systems, due to higher overall efficiency, better utilization of "waste heat", and taking advantage of opportunities for "free cooling" (such as using lake water).
- **Energy optimization**: Equipment is generally optimized to run most efficiently and deliver a particular amount of thermal energy. In traditional energy systems, having many chillers or boilers run at partial loads is an inefficient use of resources, but by having a DES, the number of machines turned on can be controlled to meet demand producing more thermal energy per unit of energy input.
- **Local Economic Development**: DES allow large emissions reductions at a lower cost than individual building systems, attract private investment and support local economic development.

Some Existing Systems in the GTHA include:

- Sheridan College Davis and Trafalgar campuses
- University of Toronto: Operating since 1912, the University of Toronto system serves most of the campus.
- York University Keele Campus: Operating since the 1960s.
- Enwave: Consists of a steam system and Deep Lake Water Cooling that uses water from Lake Ontario to cool more than 60 buildings, including Toronto City Hall, Air Canada Centre, Royal Bank Plaza, and Queen's Park.
- Regent Park: The redeveloped thermal network will eventually heat, cool, and provide electricity to more than 50 buildings.

The 5R's of Waste Management

Presented by Ashley Arora

1. **Waste (Food/Organic Waste) and its Impact on Climate Change**

In some larger cities, the amount of organic waste accounts for almost 70% of the total waste generated. Most of this ends up in dumpsites or in landfills. When organic waste decomposes, carbon dioxide and methane gas are created, both of which are greenhouse gases, and contribute to global warming and climate change. Carbon dioxide is the natural product when anything rots in air, while methane is created when there is no air present.

2. **Impact of Animal Agriculture on GHG**

Though much of the world is focused on transitioning away from fossil fuels as a way to fight climate change, there is another, often-overlooked climate change culprit: animal agriculture and its environmental impact. Animal agriculture is the second largest contributor to human-made greenhouse gas (GHG) emissions after fossil fuels and is a leading cause of deforestation, water and air pollution and biodiversity loss.

3. **5 R's (Refuse, reduce, reuse, repurpose, recycle)**

Refuse what you don't need: By doing this you reduce the generation of waste. Every item refused reduces the demand for the production of that item. In doing so it avoids GHG emissions associated with the production, transport, use and disposal of that item.

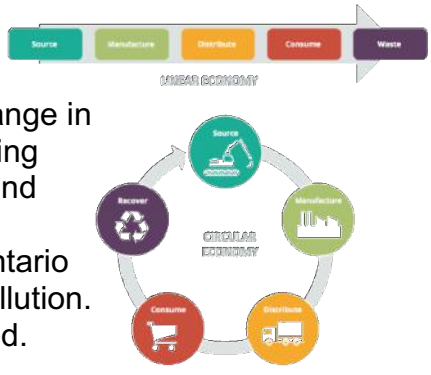
Reduce what you do need: There are some things we can't live without, but we can reduce the use of those items. As an example, purchase goods in bulk, rather than individually packaged items. Smart thinking like this will reduce the amount of waste to be managed and thus reduce the GHG emissions.

Reuse what you can't reduce: This prevents the return of the carbon within the materials to the environment for as long as possible. Reuse also reduces demand for new raw materials and therefore reduces climatic impacts from this and associated materials transportation.

Repurpose what you can't reuse: Repurpose refers to activities which convert waste into another useable form. Examples include the incineration of waste and harvesting the heat to generate electricity, or the composting of organic waste to produce compost.

Recycle what you can't repurpose: Recycling is not as effective as reducing or reusing waste, since it requires the waste to be transported to a processing centre where its original raw materials are extracted – all of which generates GHG emissions. However, it does avoid the GHG emissions associated with extracting and processing virgin raw material.

4. **Circular economy**



There's a world of opportunity to rethink and redesign the way we make stuff. 'Re-thinking Progress' explores how through a change in perspective we can re-design the way our economy works - Looking beyond the current take-make-waste extractive industrial model and designing products that can be 'made to be made again'. We will discuss applicable examples, such as the blue box program in Ontario to divert waste from landfills as well as how this tackles plastic pollution. Benefits and challenges of circular economy will also be discussed.

Next Steps and Additional Support

The Halton Climate Collective is committed to providing you with guidance and support throughout the implementation of your community projects. Using the resources in this toolkit and the skills and tools learned at the Un-conference, students will implement their very own greenhouse gas emission reduction initiatives in community. Students will also have access to bi-weekly support webinars with a Q&A period, and an opportunity for 1-on-1 meetings with HCC staff for additional support.

For any questions, comments, or concerns, students are encouraged to contact Alana Wong or Afreen Ghouse at the contact information below. They will be the primary points of contact for students and will be available for support throughout the implementation of students' initiatives.

Alana Wong
Project Lead
alana@haltonenvironment.ca
905-815-6185 ext.1

Alana graduated from Brock University in 2018 with a BSc in Biochemistry. After completing several co-op work terms in the pharmaceutical industry, her interests shifted towards the environmental sciences. More recently, Alana has completed her Master of Environmental Science at the University of Toronto, and is now working with the Halton Environmental Network and Halton Climate Collective, focusing on engaging youth in the community of Halton to reduce greenhouse gas emissions and tackle climate change. Outside of school and work, Alana loves the outdoors and is an avid athlete, playing provincial level soccer as well as many other recreational sports, coaching kids' soccer, and watching sports in her free time.

Afreen Ghouse
Youth Coordinator
afreen@haltonenvironment.ca
647-524-6814

Afreen obtained a B.Sc. in Biology, with a minor in Psychology at Ryerson University. She aspires to be an advocate for the younger generation and provide them with the voice and necessary tools for climate action change. Fiercely passionate about raising awareness for our deteriorating Earth, she is determined to motivate all who will listen to put on their eco-hat, and sprint together to create the universal change needed for a sustainable future. Volunteering/working at Halton Environmental Network and Halton Climate Collective allows her to explore the different ways there are to achieve this overarching goal. With her free time, she enjoys reading books and watching shows/movies with a superhero character.

Webinar Series

Following the Un-conference, additional support will be offered throughout a series of online webinars. Each webinar will consist of a short talk on a topic related to climate action, followed by an open Q&A period for students to ask any questions regarding their community initiatives. For specific topic suggestions, please email info@climatecollective.ca. For your convenience, all webinars will be offered via Zoom after school hours.

More information to come following the Un-conference.

Spring wrap-up conference

On March 24, students will return following the completion of their projects to share their results with their peers at the Generation Green Wrap-up event. This will be an opportunity to learn about other students' initiatives, share feedback, reveal the collective impact that the students of Generation Green have made across the community of Halton, and announce our award winners.

More information to come following the Un-conference.

Post-Secondary Environmental Programs

Are you interested in pursuing a post-secondary education in environmental studies? Over the lunch period, we will be hosting an Environmental University/ College Fair to provide students with an opportunity to network and learn more about the environmental post-secondary programs offered in Ontario. Be ready to ask questions and explore your options.

Stay Connected

Be the first to know! To stay up to date on the webinar series and Spring wrap-up event, be sure to regularly check your email, and stay in touch with us on Social Media:

@HaltonClimate
@HaltonClimateCollective

info@climatecollective.ca
www.climatecollective.ca
Subscribe to our newsletter:

This toolkit along with all other Generation Green resources will be posted to the Halton Climate Collective's website, www.climatecollective.ca.

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Contact Us

2302 Bridge Road
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info@climatecollective.ca
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Stay Connected

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