

GREENER

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### Challenge

**Introduce us to the new, conscious you!**

- **Provide a professional high-resolution headshot (at least 400 x 396 dpi) and a head-to-toe photo. The photo must be taken with good lighting, with a beautiful nature or plain colored background. [Please view this example](#). If you are selected for the PGC Finals, this will be the photo that will be posted on the PGC website. A jpeg of your head shot needs to be emailed to [info@turninggreen.org](mailto:info@turninggreen.org).**

• Emma Melis headshot and head-to-toe shot People  

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**Emma Melis** <emma.melis@rogers.com> Today at 11:42 PM  
To [Turning Green](#)

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Day 29 Greener:

Emma Melis  
McGill University  
Montreal, Canada  
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Emma Mel..jpg

  
Emma Mel..jpg

- **Please provide a one-paragraph bio that tells us about you, where you're from, what school you attend and anything you would like to share about yourself. This bio will introduce you to the world. Use the opportunity well.**
  - I'm Emma Melis, a passionate young environmentalist, originally from Toronto, Canada, and now living in the heart of Montreal to study at McGill University, where I study Arts and Sciences for Sustainability, Science, and Society. Environment-wise, I'm super passionate about pollinators, "trashion," zero-waste, and respect for nature. Otherwise, I love painting with watercolours, writing, learning languages, watching documentaries, travelling, and meeting new people!

**Put together your PGC portfolio:**

- **Select 10 of your PGC submissions that you are most proud of and that truly depict the PGC experience for you. Assemble them into one PDF document.**
- **Write a cover letter explaining why you selected these submissions. Use this as an opportunity to share anything you feel we should know about your PGC experience.**

I selected the 10 challenges you see below and compiled them as a summary of the past month of my life because of how they've impacted me and people around me. Over these last 4 weeks, whenever people have asked me about some of the challenges which the PGC has entailed, I have usually gravitated towards delving into explaining select Challenges. The examples I tend to provide over and over again, which are those on the tip of my tongue, are the ones which you'll see below. I think these ones stuck out to me partly because the challenges resonated with me in particular, partly because it showed me that I can engage my peers in being interested by environmental issues, and also perhaps partly because of the way I responded to the challenge. I have really appreciated being able to embrace my creative side throughout the challenge! University studies don't leave much time for painting and drawing, photography, and recreational writing, and this challenge has given me reason to set time aside from studies for my two passions: environment and art, merged together and combined to send a powerful message. Most of the submissions which were my most memorable involved my creating some sort of art piece and aligned with subjects which I was fascinated by.

Other challenges, such as the submission from Food, are the most prominent in my memory because it totally threw me out of my comfort zone to do. I had enlisted some of my friends to go dumpster diving with me for FLOSN foods. We (somewhat illegally) pried open the grocery store's garbage bins and took some of the discarded food from the upper layer of the dumpsters, then brought it home to cook a meal for other people in our residence. I was really scared while doing it – scared of authority, scared of judgement from others. But as soon as I saw all the perfect food which was going to be sent to landfill, I realized that I had no reason to fear trouble from the police or from social pressures because it's the *food waste* that's wrong, not my actions.

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This challenge has been trying, educational, and empowering. There were definitely some times when I felt overwhelmed by the content and quantity of the challenges, but that's the point of it: it's meant to challenge you and to pull you out of your comfort zone so you can call the status quo into question. I've never done something like the PGC before, and I'm so glad I have because it's honestly changed my life – I'm really not just saying that.

These are some of many messages which I'm taking away from this PGC – that our dedication to bettering the world around us is imperative and important, and that one has to be strong and true to oneself in order to stay inspired and to inspire others to change. Looking back, I think the 10 challenges below exude this kind of mentality:

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**#1:**

**DAY 9: Justice Greener**

## Challenge

Start the challenge by watching this beautiful and inspirational [video](#) from our partner, [Conservation International](#) – “*Shailene Woodley is Forest*”. If you were moved by this film, think about how you take that inspiration and turn it into action.

Then, check out this [video](#) from environmentalist and author, Paul Hawken talking about the unstoppable movement of people and organizations dedicated to restoring the environment and fostering social justice. Here’s where you come in.

- **When you look across your campus or community, do you see any social injustices? It may be something you’ve observed but don’t know how to deal with, a concept you want to further explore, an issue that is important at this moment in time. Whatever you are thinking about, share your thoughts and observations.**

Yes. My school’s campus is in downtown Montreal, where there are many homeless Indigenous people. In particular, there is one First Nations couple that I see nearly every day right in front of the campus gates. Even when I used to visit Montreal when I was younger, I saw this same couple. They are visible alcoholics, and I have seen their problem getting worse and worse as time goes by. It’s a really harsh reality check each time I walk onto campus. My biggest wake-up call comes when I walk past their ‘home’ right after I’ve had an environmental council meeting, where my teammates and I have just excitedly discussed our new campaign ideas. I then see this couple sitting there, drunk at 1 pm in the afternoon, and I’m reminded that their ancestors used to be the preservers of the land before they were kicked off it and their ecosystems were ruined. I consider this social issue to be a social injustice.

- **What is the one that resonates most with you?**

### COLONIALISM OF ECOLOGICAL CONSERVATIONISM

- **Write a reflection about that injustice and why it matters.**

Ever since I’ve gotten involved in the environmental movement, I’ve seen many counts of colonialism of the idea of ecological conservationism. Although the original protectors and keepers of the Earth were Indigenous, the idea of stewardship is being re-written as a new, cool idea.

I consider this an injustice because Indigenous opinions are continuously devaluated and struck down on all levels in Canada – educational, social, political, even cultural. For example, Canada’s First Nations populations suffer more social issues like alcoholism, drug abuse, suicide, rape, kidnapping, murder, illiteracy, lack of access to electricity and safe water, and youth homelessness

than any other Canadian demographic, and yet their community Elders' pleas and cases for help from our government continue to be ignored.

When what was once an Aboriginal way of living in harmony with the planet becomes colonised and treated as a fad via greenwashed marketing campaigns, it just upsets me to see the injustice in how we mistreat Canada's original peoples while using their philosophies, pawned off as our own new ideas of "eco-friendly living" with no credit to these marginalised groups.

- **Think about how you might become proactive and become a changemaker. What might already be happening on your campus or community (a group, club, non-profit org) or do you need to start your own club?**

1. There are already a few organisations on campus which exist to provide support to Indigenous students. Some of these include the Indigenous Student Alliance, First Peoples' House, Indigenous Affairs Work Group, and the Indigenous Education Programme, and they all provide resources to offer financial, educational, and social support to First Nations or Metis students.
2. We just finished a campus-wide Indigenous Awareness Week (IAW) last week. Although I think that there is a lot of intersection between environmentalism and social equity regarding Indigenous-Canada relations, there wasn't much discussion throughout the IAW. I would have loved to see some representation of First Nations ecological advocacy, so I plan to speak with the IAW organisers to possibly plan for something next year.
3. As a member of my residence's Residence Hall Council and the First-Year Environmental Residence Council, I had to attend a council orientation session during which we discussed the idea of colonialism at University. During the discussion, as the Vice-President on the council, I brought up my thoughts on environmental colonialism. The other council-members were totally on board with what I was saying, and so we decided to commit to a few outreach activities as a Council over the course of the year.

- **Tell us how you take on your issue and create an action plan to address it. Share your next steps.**

My plan to address this issue is not to create a trade-off between Indigenous ecological activism and regular environmentalism. Both streams have one common goal: to preserve and protect nature, and so it would be against both our aspirations to cut the other group out of the movement. However, I think that people must give more acknowledgement to the existence of Indigenous activism, and must give more credit to it.

I don't think that I would be able to (or that it would be appropriate for me to) start my own club to advocate for Indigenous issues. I don't think it is my place to take that role from a person of First Nations heritage, but I am definitely ready to be in an alliance to raise awareness about the importance of Indigenous environmentalism. In partnership with McGill's Indigenous Students Alliance, I would like to approach this social injustice from an ecological perspective, from a point of common interest, and spread awareness about the importance of acknowledging the keepers of the land before our arrival. Ultimately, I think that we need to take care to not usurp or undermine the validity of Indigenous ecological spirituality. What we know today as "environmentalism" has been around for millennia, and I want to restore value to Aboriginal conservation efforts and environmental stewardship.

David Suzuki once said, *Aboriginal people, not environmentalists, are our best bet for protecting the planet*, and I'd like to play a part in reminding fellow environmentalists of that by hosting awareness campaigns, supporting Indigenous grassroots movements, helping to amplify First Nations voices, and doing what I can to share the wave of the movement with people from marginalised groups.

My next step is to get involved in the Indigenous Students Alliance to gain insight on these social injustices from an inside perspective and to get further insight into how I can help alleviate the unfairness on small and large scales.

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**#2:**

**DAY 12: Water Greenest**

## Think

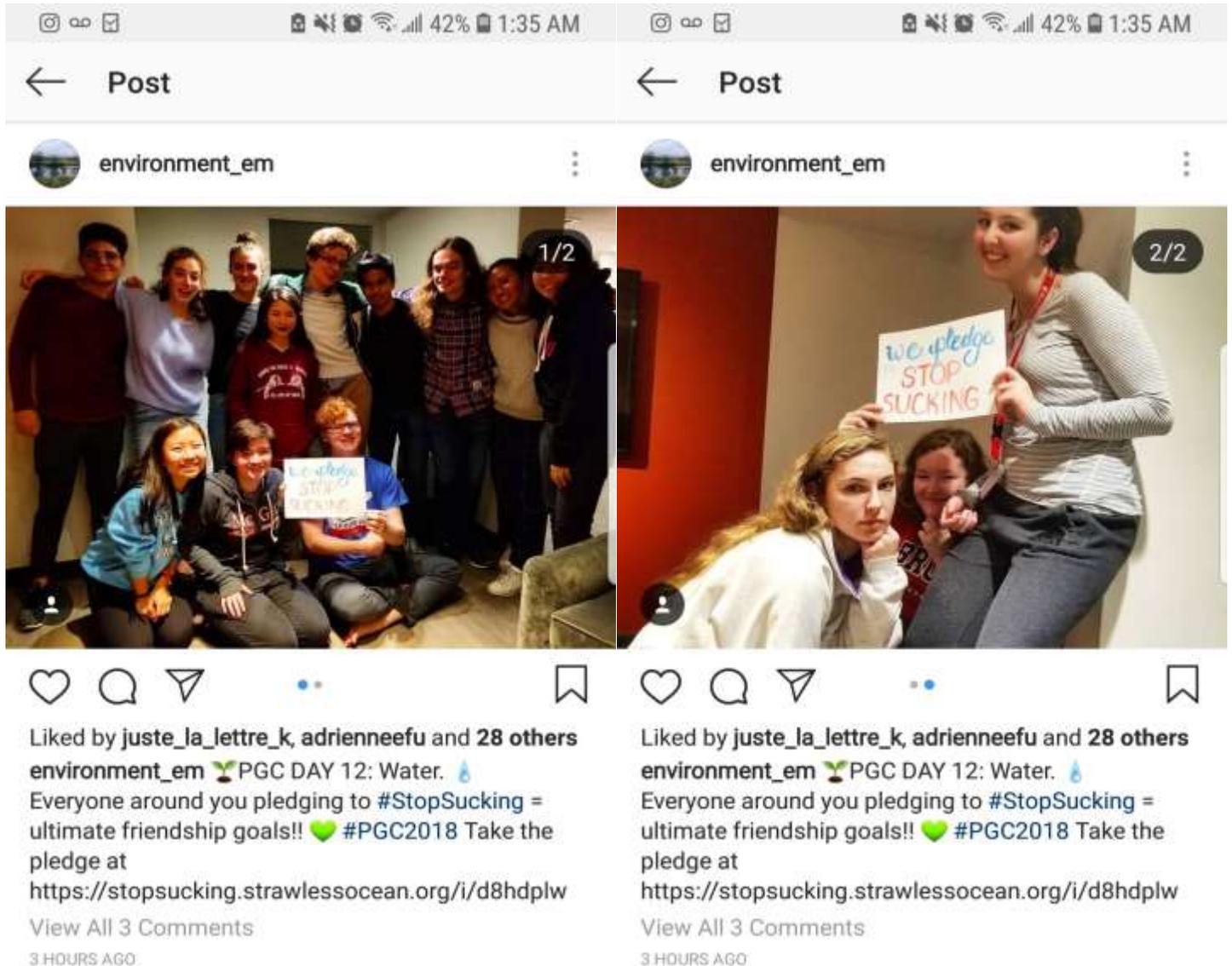
According to [CNN](#), Americans throw away half a billion plastic straws every day, which is enough to circle the Earth *2.5 times*. We use each straw literally *one time* before tossing it. Just think about the sheer number of straws people receive *every single day* in your smoothies, iced coffee, milkshakes, etc. Many of these straws end up breaking into micro-plastics, contaminating our oceans and waterways. It is predicted that by 2050, the amount of plastic in the oceans will out weight the amount of fish! To get rid of this abomination, we're asking you to join the [#StopSucking](#) campaign for this challenge. They are working to get rid of plastic straws to save our oceans!

## Challenge

- **Get Informed:** Watch Lonely Whale and Adrian Grenier's Strawless Ocean Campaign <https://www.youtube.com/watch?v=CAGhM1HFyrE> and learn about the #StopSuckingCampaign and why straws should be banned.
- You now know how bad straws are and how easy it is to live without them. This challenge invites you to make a personal commitment to self to stop using straws.
  - Done! Totally on board with this!!
- Take a look at Lonely Whale's [#StopSucking](#) campaign and upload responses to steps 1, 2 and 3 on their website. Here's how to get started:
  - **Step 1:** Accept the challenge and make your own unique challenge URL [here](#).
    - My link: <https://stopsucking.strawlessocean.org/i/d8hdplw>

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- **Step 2: Share the #StopSucking campaign on your social media platform of choice and challenge at least 5 friends to join. Tag us on Facebook @TurningGreen, on Twitter @TurningGreenOrg, and on Instagram @TurningGreenOrg and use #PGC2018 and tag**



**Lonely Whale.**

- **Step 3: Use your URL code to see who has accepted your challenge**
  - Hopefully in a few days' time I'll have many people to have accepted the challenge online! At least I have many in-person committers to the challenge 😊
- **Upload to us, your personal commitment, a series of photos documenting your journey and the acceptances from 5 friends to #StopSucking.**

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- \*For photos, see above attached pictures of the in-person pledges of 15 people!!!\*
- Personal commitment: I personally commit to influencing people around me to give up their addiction to single-use plastic straws. I want to open up the dialogue surrounding the general uselessness of single-use disposables and to engage people in discussing whether or not they think they can live without using straws. One of my tactics at my high school to discourage students from unnecessarily using plastic straws was to put the picture of the turtle with a straw up his nose *right* beside the box of straws in the cafeteria. I noticed that it was very effective.
- In my own life, I commit to no longer using plastic straws. I already rarely use straws for beverages, although I have two reusable straws – one made of stainless steel and one from a hollow branch I once broke off a tree, actually! – that I sometimes use for specific drinks.

Here is an image I painted to show to my friends and convince them to stop using plastic straws:



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**#3:**

**DAY 14: Adventure Greenest**

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## Challenge

Start by reading the Huffington Post's [6 Reasons to Step Outside Your Comfort Zone](#), to get inspired for this challenge.

- Let the adventure begin! One twist, it's a scavenger hunt to prompt you to notice your surroundings; living things, places, and moments you might not expect. Take a series of photos to address the tasks below and share them with us.
- PGC ADVENTURE SCAVENGER HUNT

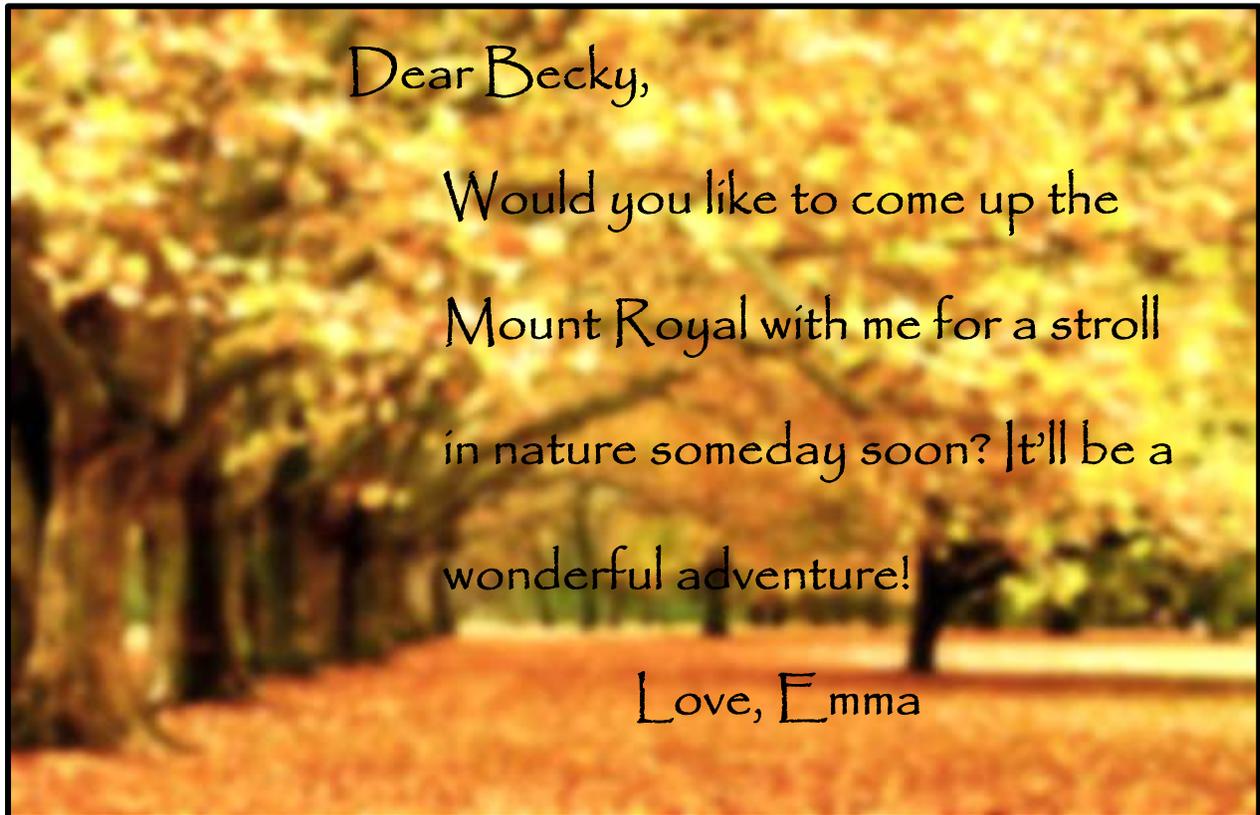


- Take a picture of your surroundings and caption it with your observations (What are you seeing? How does it make you feel? And of course, the name of the destination: city, state, etc.). Here are some suggestions of things to keep an eye out for. Take this list and tell us what you saw:
  - The Mont-Royal: Montreal, Quebec, Canada

- Since I was little, the Mont-Royal has always been a place of wonder and awe for me. One of the higher peaks in the region and visible from more than 80 kilometres up in the Laurentian Mountains, this mountain is majestic and frankly awe-inspiring. I always feel humbled by the Mount Royal's beauty and vastness.
- **A pollinator and what it's pollinating**
  - Unfortunately the weather has already turned to cool-weathered autumn, so pollinators are becoming rarer to spot. I kept my eyes open for pollinators, but didn't see any insect or animal pollinators that I could spot!
- **2 plant species**
  - I saw many maple trees, with their leaves already turned all sorts of brassy tones of reds, yellows, browns, and oranges... Some of their leaves already littered the trail, but most of them still hung precariously on the tips of the maples' branches.
  - There were also pine and fir trees native to the region all up the mountain.
- **1 bird species**
  - I saw a gorgeous red male cardinal while on my way back down the mountain – I had brought my binoculars, so I had a perfect view of him as he swooped through the air above me.
- **1 flower species**
  - Although it's not exclusively a flower (it's more of a tree), I saw the flowered buds of some Sumac trees along the path up the mountain today. The colour of the buds was just finishing its transition from bright red-orange to a dull brown-maroon for the wintertime.
- **Wildlife**
  - At one point, I had to burst out laughing because I saw the possibly the fattest squirrel I've ever seen in my life! The chubby rodent lumbered his way between the trees, looking for food to hoard away. I stopped for about 10 minutes and watched him stock up on food for his upcoming winter hibernation.
- **The terrain (is it dusty? Dry or grassy? Muddy, well-trodden?)**

- It rained for all of last week, so the dried mud along the path I took up the mountain today still had past walkers' footprints – the remnants of last week's downpours.
- **The sky (is it Cloudy? Clear? Sunny?)**
  - Today was a clear and sunny day. Slightly chilly, but still gorgeous outside!
- **What is something that took your breath away?**
  - The view from the outlook at the top of the mountain was incredible. Even beyond the majestic skyline of Montreal. Because it was such a clear and bright day, I could see the mountain range down to the south, way across the Canada-US border in Vermont. Being able to look out over a beautiful city like Montreal, see the western part of the Saint Lawrence River [which ultimately extends *all* the way East to the Atlantic Coast], and then see the faintest blue and purple tinges of mountains 200 kilometres south... The wind in my ears and the sun in my eyes, and the taste of autumn on the tongue... feeling empowered and looking down at the city and the world below and beyond me.... It was just absolutely breathtaking.
- **What is something that surprised you?**
  - I was very surprised (and saddened) to remark that there were very few people who had taken advantage of such a beautifully sunny weekend day to ascend the core landmark of Montreal – the Mount Royal. I would assume that they were deterred by the chilly weather, but, in having that mindset, they miss out on the beauty of Quebecois autumn. Such is the symptom of nature deficit disorder (NDD).

- Share an invitation with a friend to visit this special place. Select a picture from your adventure and caption it with the invitation, share why you think this place is so special and why you want your friend to experience it as well.



*Becky, please come with me up the Mont-Royal when you come to Montreal for a visit! The majesty and beauty of this mountain is completely unlike anything you've ever felt. The mountain has a soul of its own. It keeps the city alive with the power from within. When you see the fire atop the leaves on the trees during this Autumn, you'll finally understand why I love coming back to see the nature on this mountain so much. -Emma*

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**#4:**

**DAYS 3 & 4: Zero Waste Greenest**

- **Get super creative!! For this challenge we want you to produce a PSA (public service announcement) that will inform, inspire and mobilize to bring awareness to the global waste crisis and to prompt change in habits to reverse the trend. Create a video, song, poem, painting, a drawing – use your ingenuity and creativity to prompt change. Share your final presentation.**



**DRAWING:** McGill is my university in Montreal, situated on a mountain called the “Mont Royal.” In my PSA, I have depicted all of McGill’s most wasteful practices which are recurring issues in all our cafeterias and during all school events. The black-coloured figures represent all the victims of wastefulness – whether biological species or marginalised populations of people – and those who suffer as a result of our environmental carelessness. Pictured are:

- the single-use utensils – fork, spoon, knife, and chopsticks – which are used in our cafeteria every day
- the plastic beverage cups used at drinking events
- the plastic straws provided in every cafeteria
- the wax-coated disposable coffee cup and plastic lid which are the only option for students to drink warm beverages in the cafeteria, even if they’re staying there to drink them
- the single-use Bento sushi box, depicted here as a casket in a procession marking the demise of nature and ecology
- the wax paper/clear plastic window sandwich bag (not fully recyclable), which is the only way that sandwiches are served, despite the fact that most students will never bring the sandwich with them to eat elsewhere but will instead remain inside the cafeteria to eat it!

**ACCOMPANYING TEXT FOR THE PSA:**

McGill: Where we drown both in homework and in waste.

Look around you – you know that we here at McGill practice tons of unsustainable practices! Whether it’s the plastic cups at OAP, the single-use Bento sushi boxes at RVC, plastic straws galore, or the wasteful to-go cups for Roddick Roast coffee, McGill still has a long way to go before they can truly be a sustainable, forward-thinking campus. We can all use our own power as consumers and members of the campus community to advocate for the changes we want to see at the administrative level.

- **Tell us/show us how you will spread this PSA to your campus community**

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- Because I am the Vice President for the Environment for the Environmental Residence Council of my first-year campus residence, I have access to all their social media platforms and can speak to the administration about using the different channels of communication (listservs, website posts, blogs, advertisements in the newsletters, and through the different clubs which are involved in first-year residence life!). All I will have to do is get the PSA approved, and then I can spread the message around campus!

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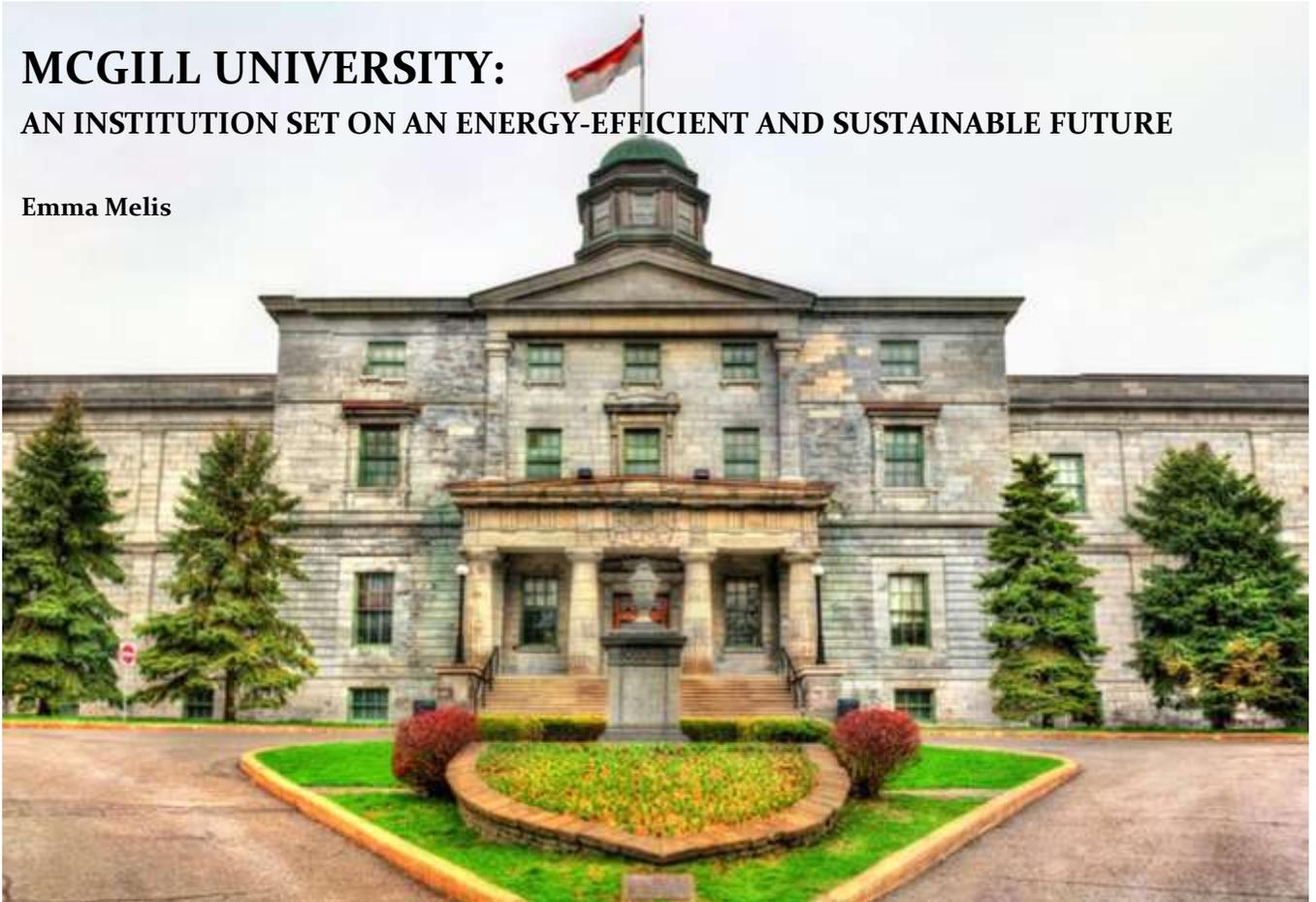
**#5:**

**DAY 5: Energy Greenest**

## MCGILL UNIVERSITY:

### AN INSTITUTION SET ON AN ENERGY-EFFICIENT AND SUSTAINABLE FUTURE

Emma Melis



We've all been to lectures with projector screens, wifi access, and brightly-lit hallways and classrooms across campus. We use the microwaves in the cafeterias, use the printers, and charge our laptops in the libraries every single day. Power and energy are an integral part of every facet of a McGill students' life, but I'm willing to bet most of us have never stopped to consider where exactly McGill sources its energy, let alone how much it expends. So what exactly *is* McGill's relationship with energy? It's a broad question, though McGill's sustainably-progressive projects and initiatives in the past two decades makes it very easy to answer with some very specific examples of environmental leadership.

If you think about McGill's demographic makeup among its students and faculty members, it's no question that they come from all parts of the world. However, we're geographically diverse even when it comes to where we live on the island of Montreal (and slightly off it!). Just to get to school and work every day, most of McGill's 45,000+ person community has to commute in some way. This entails a huge amount of carbon and energy expenditure associated with *just* that commute. In order to alleviate some of these energy expenditures, McGill has started turning towards ridesharing between campuses. Any students who commute between the downtown and Macdonald campuses each day can rideshare on the Mac Shuttle which goes to and from daily. By having a capacity of approximately 50 students at a time, the buses reduce the number of vehicles on the road by a factor of 50! For closer commutes,

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accessible Bixi bike stations are dotted all around campus for students and faculty members to check in and check out as they need! If you don't have your own bike, need to stretch your legs a bit on your commute home, *and* have a commitment to reduce your carbon output, taking up a membership with Bixi is a phenomenal way to contribute to Montreal's growing movement of bike sharing and sustainable transit. However, for students who live too far off-campus to cycle, all McGill students are eligible for student discounts on obtaining OPUS cards to get cheap transit fares. In fact, some at McGill are even eligible for *fully*-subsidised OPUS memberships to assist their daily commutes on public transportation.

When it comes to food, McGill is known for their delicious and sustainable food options! The Royal Victoria College cafeteria in particular is known for its Fair Trade, local, and vegetarian/vegan meal options. In partnership with the Macdonald campus crops, the cafeterias are supplied with local and sustainably-grown produce. This aligns perfectly with McGill's commitment to sourcing their food from low-impact origins with less energy needed to ship from overseas. In fact, last year, McGill won a Sustainability Award for the variety of environmentally-sustainable meal options in its on-campus cafeterias! Yet another way that McGill students reduce their overall energy expenditure is with the new Ozzi Machine reusable container system. The Ozzi system involves students exchanging their used to-go meal containers for a token from the machine and giving the token to the servers in the cafeteria to claim a newly-cleaned container. It's a perfect cycle. By having these reusable container options, automatically given to all first-year students in residence upon arrival, *so* many disposable containers are being saved from production and waste. This reduces all the energy needed as input for production, as well as the high energy expense to recycle or compost a single-use container after it's been used.

McGill is known for its educational prowess, but with its world-class reputation comes great energy intensity and a massive carbon footprint. According to a 2016 McGill Energy Management Plan, McGill uses more energy per square foot than its peer institutions in the rest of Canada do. In fact, in 2015, the University released 54,060 *tonnes* of CO<sub>2e</sub> (carbon dioxide and its equivalents) – a shockingly high number. The Energy Management Plan affirmed that McGill's carbon output numbers had been steadily decreasing each year since becoming more conscientious in the mid-1990s, and, hoping this trend continues to fall, the plan is set to achieve carbon neutrality by 2040, paired with an intermediate target of reducing its GHG emissions by 58% by 2025.

Being located in Montreal, Quebec, where the biting cold weather begins in early October and finally leaves us at the end of April, an adequate heating system is a definite energy vacuum for a large institution like McGill. According to the McGill Facilities and Utilities web page, "the role of Utilities and Energy Management is to monitor energy usage and develop programs to reduce energy consumption and maximize the efficiency of the University's utility networks." They seek to ensure quality stewardship and efficient operation of the heating and cooling systems of the University in order to maintain energy-minimal levels, while ensuring the McGill community at large neither sits in the darkness or freezes to death during the winter.

Speaking on winter and natural water cycles, Quebec and Canada, in general, source huge proportions of their electricity from hydro-electric power! In fact, Québec is Canada's biggest provider of hydro-electric power, providing the grid with 38,400 MW of power per year. According to Statistics Canada,

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2008 levels of Québec's total hydropower generation equalled 186,400,534 megawatt hours, making up 96.8% of its total electricity output, in fact! The nearest power plant to campus is located just across the Prairie River north of the island of Montreal. The Hydro Québec Rivière-des-Prairies Generating Station is responsible for providing the local energy grid with 48 MW at a time! Built from 1928 to 1930 at the time when the region of Montreal was electrified, the hydroelectric dam weighs 110 tonnes and cost \$14 million to build – back in 1930! To build such infrastructure today would surely cost several hundred million dollars. Although this hydroelectric power station has been around for nearly nine decades, it has had to be adapted slightly in order to take into account the possible environmental detriments which hydroelectric dams can incur. In recent years, the power station has installed an ultrasound system upstream of the generating station to help adult American shad fish bypass the generating station to migrate to the Atlantic Ocean after they spawn in the Saint Lawrence River. According to Hydro Québec, however, two major studies by Hydro Québec, the UQAM Biology department, and La Société de la Faune du Québec which have been done in relation to possible environmental impacts on fish and ecosystem health in general are still in progress, and are still inconclusive, although projected to demonstrate positive results.

Despite the fact that a large portion of McGill's energy comes from renewable energy sources, McGill has been strongly committed to reducing its energy consumption and expenditure for many years. Since 2014, McGill has implemented Vision 2020 as an extension of their Sustainability Strategy, which seeks to achieve the highest possible standards of sustainability on campus, according to its Sustainability website page. Their official Climate & Sustainability Action Plan was officially kick-started in 2017 and is set to be well on track of achieving its goals by 2020. These aforementioned goals include full carbon neutrality by 2040. In order for McGill's carbon neutrality to be achieved, and to release as many greenhouse gases are being sequestered or offset, the University has had to strategize for a more energy-efficient campus energy system, offsetting air travel, greening commuting policies by implementing carbon-minimal transit options, and planting more trees to act as carbon sinks. McGill has already made bounds in setting up arboretum projects on rural land owned by the University function as research fields to measure their current sequestration rate and to increase its carbon sequestration. Some of these McGill-affiliated and owned properties include the Gault Nature Reserve, Macdonald Campus Farm, and Morgan Arboretum.

McGill also hopes to attain a Platinum sustainability rating from the AASHE (Association for the Advancement of Sustainability in Higher Education) by 2030. By implementing many of the actions in their Climate and Sustainability Action Plan will bring them closer to achieving this goal. For example, the McGill Peak Demand Management project will lower the Institution's dependence on Hydro Quebec and the Quebecois power grid by reducing electricity demand in buildings during peak hours and extreme cold. They will do so by "transitioning buildings from static energy consumers to dynamic smart grids and pave the way to a carbon-neutral energy transition," according to the McGill Energy Management Plan. This is expected to reduce its overall energy use intensity by 22% *below* the newly-implemented 2013 government baseline. The cost of this energy conservation shift? Around \$22 million is the estimated cost of this forward-thinking switch to sustainable energy habits. However, the predicted annual savings post-implementation are estimated at \$3.99 million over a total payback

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period of 4.3 years. After 20 years, the total net value is expected to be \$14.89 million. So is it worth the up-front investment? This is always the question of environmental economics. I am so glad McGill said “yes,” because I’m confident that the eventual benefits will outweigh the costs.

Recently having gotten involved with McGill’s Office of Sustainability as one of their new Sustainability Project Fund ambassadors, I had the chance to speak with Shona Watt, a Sustainability Officer at the McGill Office of Sustainability (otherwise known as MOOS). When speaking on McGill’s efforts to merge top-notch education and environmental sustainability, Shona touched on the University’s commitment to mitigate the effects of climate change, and the imperative part students play in making this institutional project a reality. “As McGill University works to reduce energy consumption and environmental impacts on campus, students play a large role in spreading behavioural change and reducing their own emissions. Students’ passion and awareness of environmental and social issues are key in transforming our campus into a flourishing community for all.”

The Sustainability Project Fund collects approximately \$0.55 per credit per student, which is matched by the University, in order to fund on-campus projects pertaining to all things environmental! Some of the most successful student-led energy conservation projects in the past decade since the SPF began have been funded by this program. MOOS TRAX, currently being remodelled as the McGill Carbon Calculator, was the 186<sup>th</sup> SPF project. As visible in the photo below, the online application asks students to list how they travelled and the original postal code from their destination. Based on this data, the app can calculate how much carbon was expended during their commute. This has been used by most sustainably-certified McGill events to collect information about how its attendees commuted in order to allocate part of the budget towards paying the carbon offset for the commutes. The MOOS TRAX app is a sure upgrade from the 26<sup>th</sup> SPF project back in 2011, the Pulse Energy Dashboard! The project was funded for a mere \$1,200 and has been providing energy consumption information and statistics to members of the McGill community since its creation seven years ago.

All in all, in researching McGill’s many forward-thinking approaches to reducing its carbon output and energy expenditure, I became more and more reassured in my decision that I had made a good choice in coming to this school. To study in an institution which has committed to reducing its energy consumption and wastage is a lucky situation indeed, especially as an avid environmentalist. For sustainable values to literally *power* such an institution is indicative of the commitments it is willing to make to ensure the health and conservation of our planet for generations to come.



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**#6:**

**DAY 10: Body Greener**

## Think

Even if you read the ingredient labels before purchasing products, you may not be getting the whole story. A single ingredient, like [“synthetic fragrance,”](#) can actually represent hundreds of different chemicals with proven health risks. In fact, in the United States, there are no government mandates requiring that the ingredients found in “fragrance” or “parfum” be listed on the package or anywhere else for that matter – which translates into a serious lack of transparency to the consumer, YOU!

## Challenge

If you have a smartphone, download the [Think Dirty App](#), or use EWG’s Skin Deep [Database](#) or [app](#).

Pick one personal care product that you can’t live without and dig into this challenge:

- Maybelline Voluminous Mascara
- Snap a photo on your phone and scan the product’s barcode into the Think Dirty app, or search for your product on the Skin Deep database. If you can’t find your product, use the Campaign for Safe Cosmetics [Red List](#) to check ingredients on the label of your product. You can type your ingredient onto the Red List database to obtain its details.
  - According to the app, database, or Red List, what is the overall hazard rating of your product?
  - How many ingredients did you find to be potentially hazardous?
  - Which ingredient was the most hazardous in your product? Why? what is the basis for the rating?
- Find a sustainable alternative for your conventional product at a local green grocer, body care shop or online retailer. Look for brands like [Acure Organics](#), [Dr. Bronner’s](#), and [Everyone](#). You can also check out Made Safe’s [Certified Products list](#) for some more ideas.
  - Share the name, brand, and ingredient list of your clean option, and where you found it.
    - Dr. Hauschka Mascara
      - I heard about this German brand when I was visiting family in The Netherlands this past summer. It can be found in most drugstores and cosmetics stores in Western Europe.
  - What is the cost of your conventional product vs. the eco-friendly product?
    - Maybelline: \$27.40 CAD
    - Dr. Hauschka: \$36.15 CAD

- Share two things that make the eco-friendly item a safer and healthier choice.
- Will you make the switch? Why or why not?
  - I don't think I'll make the switch to this product because it's not very affordable for me to purchase it for 10 dollars MORE, and THEN have to ship it overseas. That's an unnecessary expense and also an unreasonable expenditure of CO2 emissions to have to ship it across the ocean.
  - Instead of continuing to purchase Maybelline's mascara, however, I might try making my own mascara at home out of charred almonds and extracted aloe vera gel.

- Create an infographic post comparing your conventional product and its alternative.

- Share it on social media to inform your followers about the health and environmental impacts of the conventional product and the benefits of the healthy option. Include two facts on each side.

- Tag [@TurningGreen](#) on Facebook or [@TurningGreenOrg](#) on Instagram, [@safecosmeticsHQ](#), [@madesafeHQ](#) and include the hashtags [#PGC2018](#) and [#Body](#).



environment\_em 🌱 PGC DAY 10:

Your regular drugstore brand mascara probably has tons of toxic chemicals with all sorts of unknown health dangers, and no guarantee against animal cruelty. 🐼 If you had the chance, would you take a chance and switch to a more eco-friendly, sustainable, plant-based and cruelty-free brand of the same product?

The only choice is look good, or look great? Feel good, or feel great? Find the latter with alternative cosmetic products. 🌱 Don't always reach for the first drugstore shelf product: shop your options for sustainable alternatives! 🌱 (Or even DIY!)

#Body #PGC2018



**YOUR AVERAGE DRUGSTORE MASCARA**

looks good

no cruelty-free guarantee

full of harmful chemicals

cheap

unsustainable packaging

can't ingest any of its ingredients without getting sick

probably can't pronounce any of its ingredients

feels good



**AN ENVIRONMENTALLY-CONSCIENTIOUS MASCARA BRAND**

could probably eat most its ingredients in your diet

feels great

free of harmful chemicals

worth the investment

your grandparents could recognise each ingredient

vegan and cruelty-free alternatives

looks great

sustainable packaging alternative

**The only person to know the difference? Your own body.**

@environment\_om

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**#7:**

**DAY 8: Food Extra Credit (also has a lot of overlap with Day 13 Food Waste Greenest)**

## Challenge

We hope that you are beginning to think more critically about the food that you put on your plate. For this challenge, we want you to recreate a familiar and delicious meal – which we will call a PGC Sustainable Supper – but using ingredients that are better for you, the environment, farmers, animals and all species.

Here is an example of the impact of an iconic meal. Americans *love* burgers, and eat at least 20 billion of them a year. Unfortunately, most of those burgers come from animals raised on polluting factory-farms that are fed a diet of water-intensive, genetically modified corn and soy. Growing vast monocultures of feed uses enormous amounts of toxic chemicals that pollute our water, land, soil, animals, insects, and us, humans. It also generates major greenhouse gas emissions and destroys precious biodiversity that supports pollinators and other living creatures.

This is just one example of what might seem like a simple choice that in reality has an enormous impact. So be creative and prepare a meal that you would love to share with friends that honors our food system and the people that grow our food.

A large portion of this challenge was simultaneously merged with the DAY 13 GREENEST Challenge for Food Waste because having sustainable food and preventing food waste goes hand-in-hand.

- **Create a Sustainable Supper menu that must include an entree, a side(s), and a drink. Use as many FLOSN ingredients as possible. (FLOSN ingredients = more points!) and prepare your meal!**
  - **Show us your rendition of a Sustainable Supper.**
    - ENTRÉE: vegetable stew
    - SIDE: garlic bread
    - DRINK: apple cider

## Meal Prep & Shopping

- Because there was a lot of overlap between my DAY 13 GREENEST Challenge against food waste, I had decided to get the food for my Sustainable Supper from... a grocery store dumpster to reclaim and salvage the perfectly healthy foods that they'd discarded. My findings were better (which, in the case of food waste, means *worse*) than I'd hoped. We managed to fill three bags of fresh produce, most of which Local, Fresh, and in-Season. Some of the produce was even

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certifiably Organic! I think it was astonishing how many FLOSN foods we found in the trash when these healthy and sustainable foods could have gone to food-insecure people.

- We found the food outside an InterMarché in the Plateau neighbourhood of Montréal.

<u>RECIPE</u>	
<b>VEGETABLE STEW</b>	
<u>INGREDIENTS:</u> <ul style="list-style-type: none"><li>▪ 1 ½ bags of potatoes</li><li>▪ One red pepper</li><li>▪ One green pepper</li><li>▪ Two red onions</li><li>▪ Two yellow onions</li><li>▪ ½ ginger root</li><li>▪ 5 large tomatoes</li><li>▪ 1 head of cauliflower</li><li>▪ 1 stalk of kale</li><li>▪ 2 cloves of garlic</li><li>▪ 1 can of black beans (<i>not from dumpster</i>)</li></ul>	<u>INSTRUCTIONS:</u> <p><i>*We scrubbed and cleaned all our foods ahead of cooking it*</i></p> <ul style="list-style-type: none"><li>• First, we cut, and boiled the potatoes, adding half a thinly-sliced ginger root to the water for taste.</li><li>• Once the potatoes were boiled, we drained the water and pureed half the potatoes in a blender to make a soup base.</li><li>• In the meantime, we chopped and grilled our red and green peppers and the four onions, and tore the kale up into medium-sized pieces.</li><li>• We cut up the cauliflower and set it to roast in the oven spiced with some turmeric.</li><li>• We also cut up tomatoes into large pieces to add later.</li><li>• Once the grilled vegetables, roasted cauliflower, kale, and other ½ of boiled potatoes were ready, we added them all to our blended potato-ginger soup base and stirred it all together on medium-high heat.</li><li>• Our soup base was a bit too thick, so we put our vegetable scraps into another pot and made vegetable stock to add to our main pot and loosen up the soup.</li></ul>

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	<ul style="list-style-type: none"><li>• We cooked the soup on medium-high heat until the kale had boiled down and turned darker, at which point we added our pieces of tomato to simmer a bit before we served the soup.</li></ul>
<b>GARLIC BREAD</b>	
<u>INGREDIENTS:</u> <ul style="list-style-type: none"><li>▪ 1 large piece of bread</li><li>▪ 3 cloves of garlic</li><li>▪ ¼ stick of butter (<i>not from dumpster</i>)</li></ul>	<u>INSTRUCTIONS:</u> <ul style="list-style-type: none"><li>• I sliced the bread on an angle and set it in the oven to toast.</li><li>• In the meantime, I thinly diced 3 cloves of garlic and melted down ¼ stick of butter (which wasn't from a dumpster) to make a garlic butter.</li><li>• I spread the garlic-butter spread onto the toasted bread and served it hot!</li></ul>
<b>APPLE CIDER</b>	
<u>INGREDIENTS:</u> <ul style="list-style-type: none"><li>▪ 5 assorted apples</li></ul>	<u>INSTRUCTIONS:</u> <ul style="list-style-type: none"><li>• We cut up the apples and set them to a boil.</li><li>• We then placed the boiled apples – skins and all! – into a blender with an equal apple:water ratio.</li><li>• We then strained the mixture until it was hot, 100% apple cider.</li></ul>

### Leftovers

- I invited as many people as possible to attend the dinner that my friends Molly F. and Jacob S. had cooked with me! We wanted to share the meal we'd cooked with people to avoid any food waste and to raise awareness about food waste in grocery stores. We nevertheless ended up with some leftovers which people took back to their rooms to eat later.

### Food Waste

- **Minimize waste. Make a plan for food scraps.**

- Ah, but what if the food *is* the scraps? Because I sourced my food for this challenge from foods which had already been disposed of, food scraps, we were more aware of what it means to *not waste food*. Nevertheless, after peeling, chopping, and dicing our food to prepare it, we of course produced some waste. However, we maximised our use of food scraps before finally sending them to the compost. We did this by boiling our vegetable peels (ie – onion skin, cauliflower stalk, tomato innards, etc) In order to make vegetable stock for our stew!
- **Post a photo of your Sustainable Supper and include hashtag #FLOSmeal on Instagram. Caption it with the recipe and procedure you used for one of your dishes. Tag @TurningGreenOrg and use the hashtags #PGC2018 and #FLOS. Also tag today's partners. Create a document with a full report, including where you got your food, meal prep, recipes, leftovers and waste. Include a photo essay or short video (must be: 90 seconds maximum or points will be deducted) highlighting the feast, along with a screenshot of your social media post.**

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PHOTO ESSAY:

**All the food waste in the dumpster  
and what we brought home...**



GREENER

## Boiling and blending the potatoes



## Roasting the cauliflower



GREENER

## Cutting and grilling the garlic, onions, and peppers



An example of the local and certifiably-organic kale found in the dumpster...



# Soup on the stove and making vegetable stock out of vegetable scraps.

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## The final result, and our minimal food waste to compost!



← Post



environment\_em



All the food waste in the dumpster  
and what we brought home...



environment\_em 🌱 PGC DAY 8: Sustainable Supper!  
F.L.O.S.N. - Fresh, Local, Organic, Seasonal,  
Non-GMO.  
#FLOSmeal #FLOS N #PGC2018



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**#8:**

**DAY 16: Soil Greenest (using the resource I made from Soil Greener)**

**Challenge**

- **Put your awesome and informative presentation into action! Approach this as a campaign that will make a huge difference to our future and our planet. How far and wide can you spread the word in 24 hours?**
  - **Develop a communications plan to achieve that goal. Here are some ideas: present in a large lecture hall, to a big group of friends who you make a captive audience, on social to a huge sphere of virtual friends who you will start to influence as changemakers. Think big!**

IDEA:	ACTUAL IMPLEMENTATION PLAN:
Talk to people in person.	I explained what I had learned from today’s challenge and the videos and research I watched to a small group of people living in my residence (see photo below). The presentation lasted around 10 minutes because of everyone’s interest in the role of snails and earthworms and other detritivores in soil health – we had just written our biology exam on <i>Gastropoda</i> , <i>Annelida</i> , and detritivorism, and because most people had never thought about the role of erosion in soil health before.
Use an infographic.	I created an infographic for my Greener challenge today (see below), and passed it around the same group of people who listened to my little presentation on soil health this evening!
Share an informative blurb and the infographic through different listservs of Environmental and Agricultural groups and faculties on school campus.	I would like to share an informative summary about soil health and what is listed in my infographic, and distribute it through McGill listservs and media streams such as: <ul style="list-style-type: none"> <li>• McGill Permaculture Club</li> <li>• Mac Organic Market</li> <li>• Environmental Residence Council</li> <li>• McGill Environmental Students Society</li> <li>• McGill Office of Sustainability</li> <li>• Students Association for Sustainability, Science, and Society</li> <li>• Campus Crops</li> </ul>

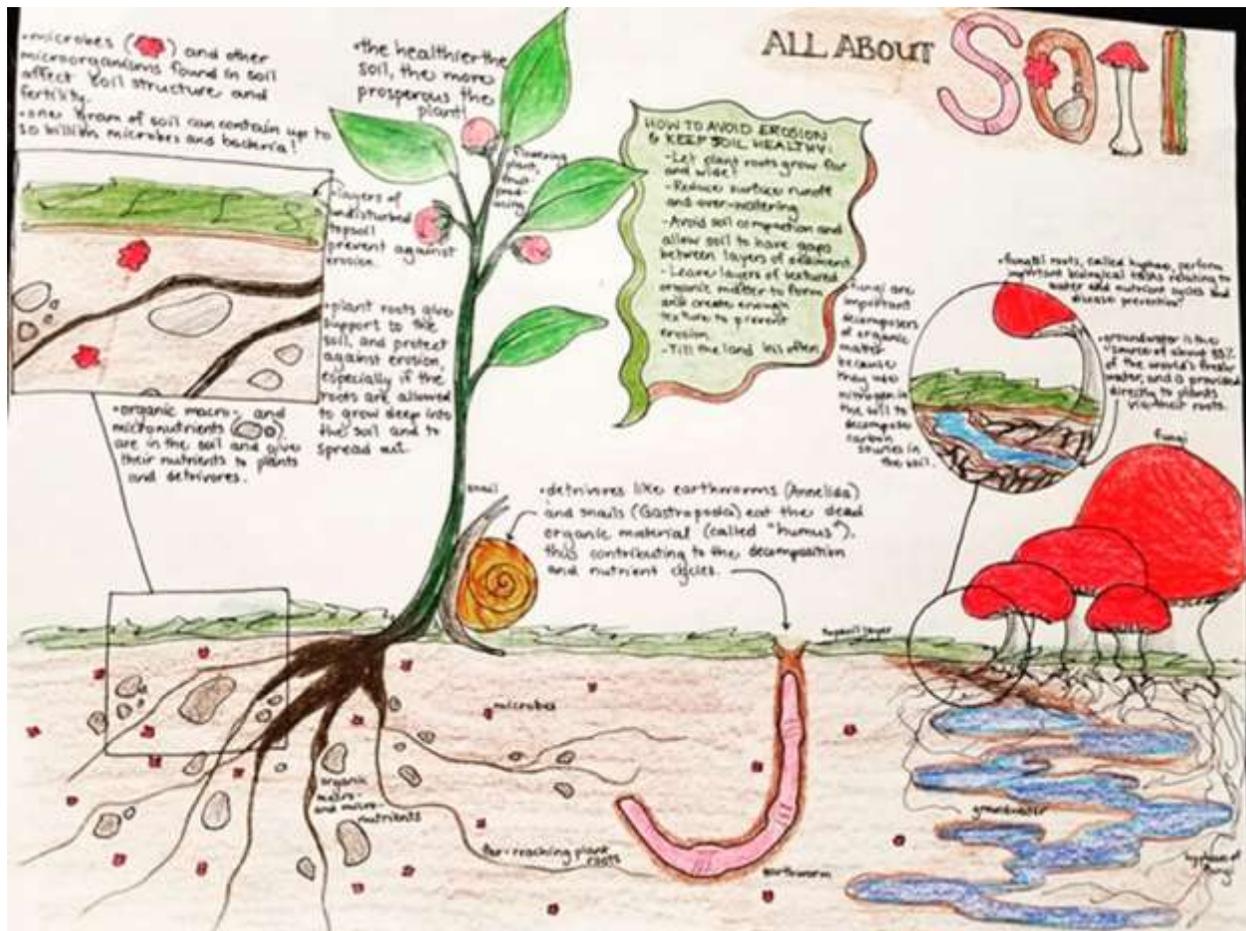
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	<ul style="list-style-type: none"><li>• And many more to be determined!</li></ul>
Share a bite-size amount of information in an eye-catching way on social media.	In a more unofficial stream, I will share an informative and easy-to-read post accompanied by a photo of my infographic on social media (see below)

Me delivering presentation with infographic:



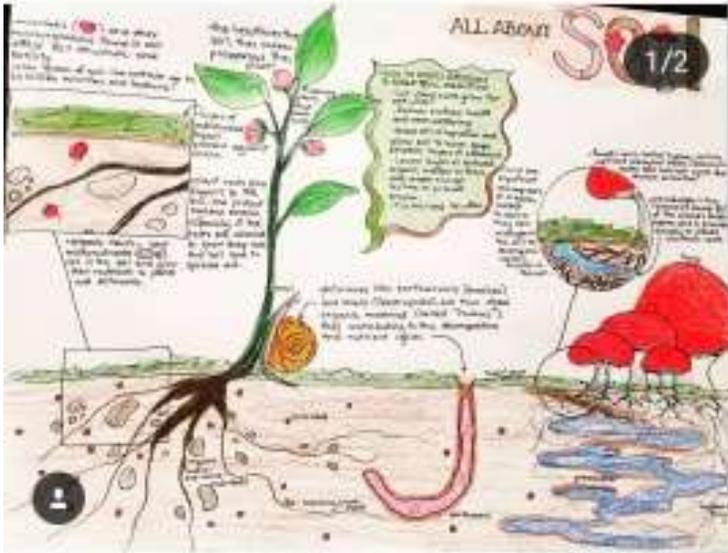
My infographic:



- **Write up a reflection of this experience. What were you able to accomplish as a teacher?**
  - It felt really great to be a teacher on an unknown and important topic that I (now) felt informed about. I was really happy with the impression the presentation had on people because I got them interested in soil and engaged on a topic that I think most of us have never stopped to think about. Because soil is such an inseparable part of our planet's health, and thus our health, I think people were very shocked by the realisation that we play a direct and crucial role in determining the future of agriculture through our actions -- and it's as easy as preventing erosion, protecting microbes and detritivore populations, and not using up all our fresh groundwater! Some of the people listening even asked questions and started discussing the biology behind the organisms which perform the chemical reactions to maintain soil health.
  
- **Include two pieces of feedback that you received confirming that your message reached the audience.**
  - *"Before you told me about soil today, I'd never put two and two together and realised that some of the things we consider as good can actually harm the soil... Like turning dirt over to 'make your garden healthier' or whatever. It's so strange that that can actually make soil health worse! So does this mean that our agricultural land is going to get less fertile if we keep farming like this??"*
    - Paraphrased from a comment by Andres. D.-L.
  
  - *"There are that many microbes and micro-organisms in that tiny amount of dirt in your hand right now!? I don't believe you, that's unreal! [five minutes later, after my presentation to the group] Oh shoot, so all those little microbes need to be protected at all costs, I guess, if they're so useful for soil fertility levels and digesting organic compounds."*
    - Also paraphrased, from a comment by Molly F.

Post

environment\_em



environment\_em 🌱 PGC DAY 16: Soil! 🌱  
 You live on it, you eat its plants' yield, it purifies your water, and takes carbon out of the atmosphere... it's you run of the mill dirt, but it's incredibly important! Did you know that one handful of soil contains a higher number of microorganisms than humans on the planet? I didn't before today, and I also didn't fully understand how to prevent erosion from ruining our world's arable soil.  
 Check out the infographic I made for today's #PGC2018 Greener Challenge for more info about soil health and diversity! 🍀

6 SECONDS AGO

Post

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environment\_em 🌱 PGC DAY 16: Soil! 🌱  
 You live on it, you eat its plants' yield, it purifies your water, and takes carbon out of the atmosphere... it's you run of the mill dirt, but it's incredibly important! Did you know that one handful of soil contains a higher number of microorganisms than humans on the planet? I didn't before today, and I also didn't fully understand how to prevent erosion from ruining our world's arable soil.  
 Check out the infographic I made for today's #PGC2018 Greener Challenge for more info about

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**#9:**

**DAY 2: Footprint Greener**

## Challenge

- **Please answer the following questions:**
  - **Which step did you take?**
    - I chose to pursue the step of committing to streamlining my wardrobe to make it more sustainable. I attended a presentation and workshop led by the Canadian organization Fashion Takes Action which discussed the high levels of carbon emissions of the fashion industry. It takes 2720 litres of water just to produce one cotton t-shirt! The fashion industry is one of the most polluting today, and I want to do my best to not contribute to its wastefulness and unethicity.
  - **What is your plan to follow through with that step?**
    - My plan for this step is to shop secondhand for vintage clothing, to boycott fast fashion fads and raise awareness about the environmental and social detriments of cheap clothing, to encourage the idea of repurposing fabrics and materials for “trashion” items of clothing and accessories, as well as to raise awareness about clothing waste, which is a growing concern all across the planet.
  - **Show us evidence of your first step in following through with your pledge (e.g. photo or video)**
    - My first step for my pledge is to wear an outfit made up entirely of ethical, homemade, and vintage items of clothing and accessories. From ethical homemade non-leather moccasins made from leftover fabric scraps, to my thrifted jeans, to my self-made (and self-designed) trashion umbrella jacket, to my Boomerang Bag made from repurposed advertisement fabric, my outfit for tomorrow will be 100% sustainable, and 0% fast fashion.
  - **Share your step on your social media platform of choice. Don't forget to tag @turninggreenorg and @EndOvershoot, and hashtag #PGC2018 and #movethedate.**
    - I have shared this first step on my environmental blog, @environment\_em !

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**#10:**

**DAY 27: Ripple Greener**

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### Think

The way we journey through our lives all comes back to mindset. If you think you can accomplish something, you can! If you think you are a changemaker, you are! If you lead with intention and purpose – your actions will be far-reaching and powerful. It's all in how you see yourself.

### Challenge

All ripples begin with that single pebble – and you *are* that pebble. Friends, family, your community have been watching and maybe even participating in your PGC journey. You've started a ripple and now it's time to capture the impact. Today is about being an inspiration for change *and* witnessing the process.

- Recruit 3 friends or classmates (not your teammates!). Ask each of them to start their own PGC ripple in the next 24 hours. It can be anything that will contribute to a more sustainable lifestyle, campus or community. *Big or small – what matters is that they take an action and move forward.* Ask each of them to send you a photo of their ripple in action. Caption each of the photos telling us about their ripple and impact.

(see photos below)

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### Sustainable Event Hosting: Molly F.

Molly was hosting a Halloween party this weekend, and I asked her to show me some way in which she was making the event more sustainable! She sent me this photo of her borrowing 150 reusable plates and glasses from *Plate Club* (an on-campus organisation which loans out reusable dishware) to avoid producing waste at the party. As a result of Molly's dedication to make sustainable choices, 150 peoples' waste will be avoided, and all will be more aware of how easy it is to go waste-less and enjoy yourself.

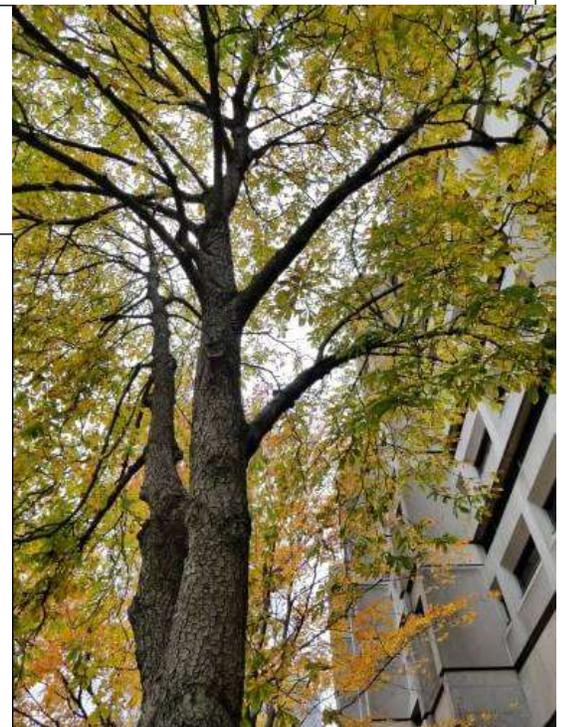


### Eating Vegetarian: Andy L..

I asked Andy if he would share something he did today to be environmentally conscientious, and he sent me a photo of his lunch: a vegetarian meal in a reusable lunch container rather than in a disposable one. Andy had the choice of many meat-containing meals, and instead he opted for the vegetarian option, a choice which (I'm sure) was noted by all those sitting around him in the cafeteria.

### Natural Mindfulness: Andres D.L..

Andres accepted my challenge to be mindful in nature, and he sent me this photo of a chestnut tree beside the library on our campus. If anyone noticed him slowing down to stop and admire the tree today on campus, hopefully they realised the natural beauty all around us.



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**SUBMITTED AT:** 2:15 am ET 30 October 2018