

SUMMARY REPORT OF HIGH SCHOOL CLIMATE CHALLENGE (HSCC) BC SCHOOLS 2011-2012

During the 2011/12 school year, students and teachers struggled to participate in the program due to the BC teachers' action. We had an early registration of 13 schools (7 from Surrey) for this school year; however, several schools opted not to continue with participation in the program as the teacher action escalated throughout the year. Nonetheless, we were fortunate to have eight BC schools (five from Surrey) involved in the program this year. We are also pleased to announce that Lord Tweedsmuir won the top prize of all participating Canadian schools, receiving \$1,000 to put towards a green initiative at their school, with thanks to our gold sponsor Honda Canada Foundation.

For the 2011-2012 school year, a new Champion presentation was offered to schools and became the central focus of the program. The presentation focused on happy, healthy schools and environments, discussing a range of topics from climate change science, to green jobs of the future, to sustainable happiness. Student groups were also given the opportunity to take action at their schools by completing as many of HSCC's '140 acts of green' as possible.

Despite the challenges faced with the BC teachers' action, we are pleased with how the new format of the HSCC program was received during the 2011/12 school year and look forward to expanding the reach of the program over the coming year!

	B.C. Total	Surrey Total
Presentations given	12	8
Students reached	1850	1690

Fraser Heights Secondary School – Surrey

This was Fraser Heights third year participating in the High School Climate Challenge. Clean Air Champion and Olympic cyclist Gina Grain presented to a group of approximately 250 students in the school's auditorium.

"The Champion presentation was great! I personally found it really inspiring. I especially liked the "Did you know" parts because most of the facts we never even knew, such as what appliances use how much electricity, etc."

-Erina Park, Student, Fraser Heights Secondary School

Lord Tweedsmuir Secondary School – Surrey

This was Lord Tweedsmuir's third year participating in the High School Climate Challenge. Clean Air Champion and Olympic cyclist Gina Grain gave 2 presentations, reaching an approximate total of 70 students. The first presentation was given to the Environment Club, and the second one to a Physics 11 class. While at the school, Gina also stopped in to visit another class where a number of students were preparing to participate in the Ride to Conquer Cancer. Gina spoke to

the students about cycling, sustainable transportation choices, and working hard to achieve your goals.

“The High School Climate Challenge has been an excellent catalyst for growth in our high school environment activity, being visited by Olympic athletes. This year we very successfully tied in Olympic cyclist Gina Grain to our whole school campaigns to decrease traffic, and increase biking, walking and cycling to school. A guest speaker helps to lift the student's interest and originality.

Gina had an engaging and educational presentation and her stories related to all of the students well! I strongly recommend this program and feel that our yearly Olympic visit has been a real high point in our club's calendar.

We are looking forward to make our Champion's visit the focus of next year's BC Green Games entry.”

-Susan Hunter, Physics Teacher, Lord Tweedsmuir Secondary, Surrey, BC

Taking Action at Lord Tweedsmuir!

The Climate Action Team (CAT) at Lord Tweedsmuir won HSCC's top prize of \$1,000 for earning the most points through HSCC's 140 'acts of green'. Point values are based upon greenhouse gas emissions saved and estimated time required to complete an action. Lord Tweedsmuir's CAT completed a total of 92 'acts of green' as outlined below:

Action Category	Actions Completed
Community & Health	<ul style="list-style-type: none"> ✓ Investigate any major upgrades or new construction on your school grounds and identify LEED policies/involvement ✓ Research green building options ✓ Research green careers ✓ Read about Air Quality, Asthma and Your Health ✓ Start/Join a Climate Action Team or EcoClub & designate roles ✓ Encourage one or more friends to do the High School Climate Challenge ✓ Host a green/climate/energy/Earth Day/advocacy event ✓ Host a green fundraising event ✓ Present carbon footprint results (from the HSCC Calculator) within your school community ✓ Present your climate action plan within your school community ✓ Adopt a healthy living week and encourage physical fitness and nutrition ✓ Volunteer to support a green organization or community project
Heating	<ul style="list-style-type: none"> ✓ Read about heating and climate change

	<ul style="list-style-type: none"> ✓Organize a tour of your heating and ventilation units with school custodian. Identify heat saving measures that your custodian implements (changing filters, weatherstripping, etc) ✓Investigate geothermal systems and determine if this would be a future option for your school ✓Set a heating reduction target and calculate how much your school would save by reducing heating fuel use ✓Host a 'Turn it Down Tuesday' or 'Crazy Sweater Day' and turn down the thermostat ✓Use Blinds to Keep Heat In / Cold Out - Blinds down at night, Open with the Sun ✓Turn off heat in unused rooms ✓Keep air vents clear (to improve heating & ventilation efficiency) ✓Keep Windows and Doors Closed when Air Conditioner is On
Electricity	<ul style="list-style-type: none"> ✓Read about electricity and climate change Find out how your school's Building Automation System (BAS) works ✓Use the HSCC Calculator to conduct your school electricity audit ✓Conduct the Detailed Electricity Audit ✓Compare one month's electricity to previous year (same month). ✓Set an electricity reduction target and calculate how much your school would save by reducing electricity use ✓Determine your school's building footprint and school population. Report it in the HSCC Calculator. Use this to display per capita and per m2 footprint reports ✓Turn it Off campaign (computers, lights, monitors, power bars) Use daylight and window shades as both lighting and temperature controls ✓Reduce the use of air conditioning by using operable windows in spring and fall ✓Use space heaters in gyms and other rooms conservatively - lower the thermostat ✓Replace new computers with more energy efficient ones ✓Use daylighting where you can - Take class outdoors using portable white/black boards ✓Install a BAS (Building Automation System)
Transportation	<ul style="list-style-type: none"> ✓Read about transportation and climate change ✓Use the HSCC Calculator to conduct your school transportation audit ✓Complete the Transportation Survey ✓Calculate the average carbon footprint per student from data

	<p>in your transportation survey</p> <ul style="list-style-type: none"> ✓Fundraise for and install sufficient bike racks <p>Implement a carpooling initiative</p> <ul style="list-style-type: none"> ✓Organize a walk-to-school day ✓Implement an anti-idling initiative. Use the HSCC How-to Guide for reducing vehicle dependency ✓Organize a Bike to school week / Commuter challenge ✓Investigate green fuels and school bus retrofits ✓Use Clean Air Champions Trip Tracker Tool (Public)
Waste	<ul style="list-style-type: none"> ✓Read about waste and climate change ✓Watch the Story of Stuff with your class or club ✓Find out where your school's waste goes and the type of landfill ✓Conduct a Waste Audit. Report the results of your waste audit in the HSCC Calculator ✓Set a waste reduction target and calculate how much your school would save by reducing waste to landfill ✓Use and monitor recycling bins. Utilize school resources to build bins if you don't yet have them ✓Collect Batteries, Cells, Computers, Printer Cartridges, Lightbulbs, Paint, Solvents, Furniture ✓Implement a compost system at your school. Use the HSCC How-to Compost Guide for assistance – Completed ✓Host a waste free lunch day ✓Reduce disposable kitchen products in your cafeteria
Paper	<ul style="list-style-type: none"> ✓Read about paper and climate change ✓Find out your school's purchasing policy for recycled paper ✓Use the HSCC Calculator to conduct your school paper audit ✓Convert to recycled paper - 30%. Try to keep the paper budget the same by applying funds from conservation to new recycled paper ✓Request Online Handouts from Teachers ✓Establish a paperless communications policy
Bottled Water	<ul style="list-style-type: none"> ✓Read about bottled water and climate change ✓Watch the Story of Bottled Water with your class or club ✓Use the HSCC Bottled Water Guide to conduct a bottled water audit ✓Calculate the GHG savings from implementing a bottled water campaign ✓Bottled water reduction campaign. Sell & Monitor Use of Stainless Steel Water Bottles (see bottled water guide) ✓Design, create, and sell school water bottles
Water	<ul style="list-style-type: none"> ✓Read about water and climate change ✓Conduct the Leaky Tap Audit ✓Calculate your school's savings by replacing leaky taps

	<ul style="list-style-type: none"> ✓Repair all leaks in taps and fountains and replace inefficient water fixtures when they wear out ✓Water school property, including the lawn and gardens, only at dawn or dusk ✓Research grey water systems to learn if your school could benefit from implementing one
Greens	<ul style="list-style-type: none"> ✓Learn about the urban heat island effect and permeable surfaces ✓Discover native plants for your region ✓Do a green art project in class – Completed ✓Measure % of green space on your school's property ✓Calculate the percentage of native plantings in green spaces ✓Conduct a Food Survey ✓Greening Project: Plant a tree, create a wetland, butterfly/bee garden or other animal friendly habitat ✓Encourage cafeteria to use local/organic food whenever possible ✓Reduce turf grass and invasive species; Increase native plantings ✓Talk to maintenance staff to convert to natural, organic fertilizer ✓Connect with the outdoors: build an outdoor classroom, increase outdoor learning and field trips ✓Apply for grants for green projects
Refrigerants	<ul style="list-style-type: none"> ✓Read about refrigerants, ozone depletion, and climate change ✓Organize a tour of your central air conditioning unit with your school custodian. Determine refrigerants used and when they are topped up ✓Determine what happens to old refrigerators in your municipality ✓Use the HSCC Calculator and guide to conduct your school refrigerant audit ✓Replace old air conditioning, HVAC, and refrigerators with refrigerants that have been phased out ✓Ensure proper disposal of old air conditioning units (single class based units)



Lord Tweedsmuir Environment Club students accepting their \$1000 prize from Olympic & National Team athlete Nathan Vadeboncoeur at their year-end celebration in Greenaway Park, Surrey.



Lord Tweedsmuir Environment Club students proudly display their Clean Air Champions' vests, Greenaway Park, Surrey

Clayton Heights Secondary School – Surrey

Clean Air Champion and Olympic white water kayaker Margaret Langford gave two presentations as a part of Clayton Height's Reality Week in the school auditorium, reaching an approximate total of 300 students.

Killarney Secondary School – Vancouver

Clean Air Champion and Canadian National Team athlete Nathan Vadeboncoeur gave 2 presentations to Grade 10 Science students, reaching a group of approximately 90 students.

“Nathan was very friendly, knowledgeable, and engaging; he made an effort to adapt to the needs of each audience. He has a wealth of knowledge about environmental issues and concerns and kept the information at a tangible level for the students. We highly recommend inviting him in to present to your classes. We can't afford not to educate our youth on these pressing environmental issues.”

-Denise North, Science teacher, Killarney Secondary, Vancouver, BC

Taking Action at Killarney Secondary!

The Climate Action Team (CAT) at Killarney won HSCC’s Champions’ Choice Award of \$500 for the exemplary effort and commitment they showed towards greening their school. The Killarney CAT completed a total of 24 ‘acts of green’ as outlined below:

Action Category	Actions Completed
Community & Health	<ul style="list-style-type: none"> ✓Research green building options ✓Read about Air Quality, Asthma and Your Health ✓Start/Join a Climate Action Team or EcoClub & designate roles ✓Encourage one or more friends to do the High School Climate Challenge ✓Host a green/climate/energy/Earth Day/advocacy event ✓Host a green fundraising event ✓Volunteer to support a green organization or community project
Heating	<ul style="list-style-type: none"> ✓Host a 'Turn it Down Tuesday' or 'Crazy Sweater Day' and turn down the thermostat
Transportation	<ul style="list-style-type: none"> ✓Organize a walk-to-school day ✓Implement a carpooling initiative ✓Implement an anti-idling initiative. Use the HSCC How-to Guide for reducing vehicle dependency ✓Plan a Bike Safety & Maintenance workshop ✓Organize a Bike to school week / Commuter challenge
Waste	<ul style="list-style-type: none"> ✓Watch the Story of Stuff with your class or club ✓Collect Batteries, Cells, Computers, Printer Cartridges, Lightbulbs, Paint, Solvents, Furniture ✓Implement a compost system at your school. Use the HSCC How-to Compost Guide for assistance – Completed ✓Host a waste free lunch day ✓Host an Eco-fashion clothing swap or fashion show ✓Reduce disposable kitchen products in your cafeteria ✓Eliminate cafeteria trays (reduces food waste by up to 30%)
Paper	<ul style="list-style-type: none"> ✓Find out your school's purchasing policy for recycled paper

	<ul style="list-style-type: none"> ✓ Establish a paperless communications policy
Bottled Water	<ul style="list-style-type: none"> ✓ Bottled water reduction campaign. Sell & Monitor Use of Stainless Steel Water Bottles (see bottled water guide) ✓ Design, create, and sell school water bottles
Refrigerants	<ul style="list-style-type: none"> ✓ Read about refrigerants, ozone depletion, and climate change ✓ Determine what happens to old refrigerators in your municipality

The Killarney CAT went above and beyond HSCC's 'Acts of Green' by completing a number of bonus actions. This included things such as presenting "Enviro. Tips of the Week" to staff and students in the daily bulletin, successfully campaigning to go plastic water bottle free, analyzing and educating students and staff on positive results on water quality testing in their school, participating in the Shoreline Cleanup in Vancouver, and hosting week long Earth Day celebrations at Killarney Secondary (April 16-20). Earth Week events included: Wear Green Day, Scooter Challenge, Dress Environmental Day, and hosting two assemblies for Earth Day.



Killarney Secondary Environment Club students receiving their \$500 prize from Clean Air Champion Nathan Vadeboncoeur at their year-end gathering.

St. George’s Secondary School – Vancouver

Clean Air Champion and Canadian National Team athlete Nathan Vadeboncoeur presented to a group of approximately 40 students involved in the Leadership Club at St. George’s school.

“Nathan Vadeboncoeur was a great presenter and person overall. We found the presentation to be very informative.”

-Graham Lee, Gr. 11 student, St. George’s Secondary

Sullivan Heights Secondary School – Surrey

Clean Air Champion and Olympic cyclist Gina Grain presented to a group of approximately 1,000 students as a part of Sullivan Height’s Earth Day Assembly.

North Surrey Learning Centre – Surrey

Clean Air Champion and Olympic cyclist Gina Grain gave two presentations, reaching approximately 70 Science students.



Olympic athlete Gina Grain explaining the impacts of our food choices.



Gina Grain explaining why she is a Clean Air Champion.

Shawnigan Lake Secondary School – Cowichan Valley

This was Shawnigan Lake’s third year participating in the High School Climate Challenge.

Taking Action at Shawnigan Lake Secondary!

The CAT at Shawnigan Lake completed a total of 23 ‘acts of green’ as outlined below:

Action Category	Actions Completed
Community & Health	✓Host a green/climate/energy/Earth Day/advocacy event ✓Volunteer to support a green organization or community

	project
Heating	<ul style="list-style-type: none"> ✓Organize a tour of a solar water heater. If your school has one, organize a tour for others
Electricity	<ul style="list-style-type: none"> ✓Organize a tour of either solar panels or a windmill. If your school uses renewable energy, organize a tour for others ✓Install solar PV cells
Transportation	<ul style="list-style-type: none"> ✓Investigate green fuels and school bus retrofits
Waste	<ul style="list-style-type: none"> ✓Watch the Story of Stuff with your class or club ✓Use and monitor recycling bins. Utilize school resources to build bins if you don't yet have them ✓Train your student body on the recycling system with rewards for least waste production by class or grade over a time period ✓Collect Batteries, Cells, Computers, Printer Cartridges, Lightbulbs, Paint, Solvents, Furniture ✓Implement a compost system at your school. Use the HSCC How-to Compost Guide for assistance – Completed ✓Reduce disposable kitchen products in your cafeteria
Paper	<ul style="list-style-type: none"> ✓Start a "think twice" campaign to encourage people to think twice before they print on paper (make the campaign paperless - publicize in e-newsletters and during the morning announcements) ✓Add USB keys to mandatory school supplies lists and encourage submission of assignments via USB (to designated folders on teacher PC)
Bottled Water	<ul style="list-style-type: none"> ✓Read about bottled water and climate change ✓Watch the Story of Bottled Water with your class or club
Water	<ul style="list-style-type: none"> ✓Read about water and climate change
Greens	<ul style="list-style-type: none"> ✓Greening Project: Plant a tree, create a wetland, butterfly/bee garden or other animal friendly habitat ✓Start / Volunteer with school food garden ✓Encourage cafeteria to use local/organic food whenever possible ✓Connect with the outdoors: build an outdoor classroom, increase outdoor learning and field trips ✓Apply for grants for green projects