THINK & EAT GREEN @School

Annual Activity Report 2011–2012

Report Authorship

This report was collaboratively written by:

Coordinating Committee of Think&EatGreen@Schoool:

Principal Investigator: Alejandro Rojas

Co-Investigators: Gwen Chapman, Jennifer Black, Cyprien Lomas

Project Manager: Elena Orrego

Project Coodinator: Will Valley

Project Community Liaison: Brent Mansfield

Acknowledgements

Important contributions to the preparation of the report were made by:

Co-investigator: Sarah Carten, Vancouver Coastal Health

Graduate Research Assistants: Naseam Ahmadi, Chessa Adsit-Morris, Eric Drewes, Matthew Kemshaw, Ilana Labow, Jamie Shaap, Stephanie Shulhan, Teya Stephens.

Compilator: Will Valley

Graphic Designer: Rosamelia Andrade

Funded through the Social Sciences and Humanities Research Council of Canada's Community-University Research Alliance Program

Social Sciences and Humanities Research Council of Canada

Conseil de recherches en sciences humaines du Canada

Canada

a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

Land and Food Systems

Table of Contents

Report Authorship ii

A Year in Numbers 1

Year in Review 2011—2012

- Project Overview 3
- Reflections on the Second Year 4
- Project Planning Diagram 5

Professional Development

- Think&Eat@School Project Summer Institute 2011 7
- Other Professional Development Activities 8
- Mini Institutes 8
- Minigrants—Small Funds 9

UBC Courses—Description and Activities

- A) Land, Food and Community I (LFS 250) 11
- B) Land, Food and Community II (LFS 350) 14
- C) Nutrition Education in the Community (FNH 4373) 16
- D) Sustainable Soil Management (APBI 402/ SOIL 502) 18

Activity Report by School

- Elementary Schools 21
- Secondary Schools 31

Collaboration with Community Partners

- Environmental Youth Alliance—Growing Kids Program 37
- Society Promoting Environmental Conservation—School Garden Project 39
- Public Health Association of BC—Farm to School Greater Vancouver 40
- Sustainable Opportunities for Youth Leadership (SOYL)—Summer Program 41

Collaboration—Local, National, International

Local collaborations 43

National collaborations 44

International collaborations 44

Monitoring & Evaluation

Tyee Collaborative Teacher Inquiry Group 45

Schools in Transition Study Design 46

School Food Environment Assessment Tool (SFEAT) 47

Individual Eating Assessment Tool (I-EAT) 47

VSB Organic Waste Management Initiative 49

Focus on Food 49

School Garden Soil Assessment 49

Directed Studies Work 50

Think, Eat and Grow Green Globally (TEG3) 51

Knowledge Mobilization Activities

Refereed Publications 53

Conference Presentations 53

Reports 54

Public Presentations 54

Video and Media Presentations 56

A Year in Numbers

1206

UBC undergraduate students that have left the classroom (**453** in 2011-12) to engage in community-based experiential learning projects through the Think&EatGreen@School Project.

36

Schools in the Vancouver School Board (out of 108) that participated in the Think&EatGreen@School Project.

$20 000

In minigrants awarded to schools for reconnecting gardens, composting and kitchens to class-rooms.

1194

Students who have access to local produce through the new **Farm-To-School** salad bar program in VSB schools.

44

Percentage of solid waste that can be diverted from the landfill through composting food waste.

18

New vermiculture composting bins in VSB classrooms.

146

VSB students who ate (and loved!) kohlrabi, celeriac, broccoli and other fresh, seasonal vegetables in a collaborative cooking activity between university undergraduates and VSB students.

14

Schools that received funding through Think&EatGreen@School to develop their own strategies to enhance teaching, learning and the sustainability of their school food system.

Year in Review 2011 — 2012

Project Overview by Alejandro Rojas

"Think & Eat Green @ School" is a community-based action research initiative housed at the University of British Columbia-Vancouver, Canada, promoting change in what students eat, learn, and do at elementary and high schools in relation to food, health, the environment, and sustainability while providing children with opportunities to learn key survival skills that have been eroded overtime. The **Think&EatGreen@School project** emerged from a decade of community-university interaction that developed from community-inquiry into community-engagement activities. By working closely with school authorities, teachers, parents, and youth, the project aims to reconnect participants with the sources of their food and create opportunities for them to experientially learn the full cycle of a food system - from production to preparation, sharing and consumption to (sustainably) end disposal of food "waste". Think&EatGreen@School is also exploring how food policies, food practices, and food learning within complex institutions can contribute to a relative re-localization of the regional food system and support transitions towards a more sustainable food system in Vancouver, a form of institutional adaptation to climate change.

The **Think&EatGreen@School Project** comprises a wide range of partners, described in five general categories:

Local community-based organizations that focus on food security, sustainability, and related issues, including the Environmental Youth Alliance, the Society Promoting Environmental Conservation, Growing Chefs, and Farm Folk/City Folk;

Provincial or National community-based organizations, including the Public Health Association of British Columbia, Canadian Centre for Policy Alternatives, and the Evergreen Foundation;

Individual city schools: 36 in the two iteration of the project covering two and half years;

University-based partners, including 15 professors and 15 graduate students from the University of British Columbia, and 1 researcher from both Simon Fraser and Ryerson University. At UBC, partners include the Faculty of Land and Food Systems, the Centre for Sustainable Food Systems at UBC Farm, and researchers from the Faculty of Education.

Since the fall of 2009, over 1200 UBC students from 6 courses have been involved in 36 public elementary and secondary schools in Vancouver, conducting school based action-research projects agreed upon and planned with community partner organizations and school-based teams of teachers, students and school authorities supported by the Vancouver School Board.

At the Summer Institute at UBC, teachers work at the Faculty of Land and Food Systems' Orchard Garden, planting, harvesting and composting food, prepared, shared and celebrated in the Summer Institute meals, while being exposed to experiential learning workshops and plenaries focused on the integration of all the components of the food cycle. Participants have the opportunity to share experiences and reflect on how to apply the new knowledge in their practices and schools.

15 schools obtained the formal designation of "Think&EatGreen@School" School after forming their own school-based teams to work towards the goals of our community-based action research project and obtained organizational and financial support from the Think&EatGreen@School grant to carry out their own school generated projects.

At the same time, the last year has seen a significant effort from all the working groups of the project to conduct ambitious research plans to better monitor the impacts of the collaborative work in the schools and assess our success and challenges based on indicators and evaluative criteria.

Reflections on the Second Year

As productive as these two and a half years have been, we realized that in order to have sufficient presence in the schools, we needed to intensify and deepen the impacts of the project in each school and thus decrease the number of core schools we work with in each subsequent year. We have thus refined our research plan for three Action Cycles (or Years 1-3) of the Project. We were originally planning to focus on 8 schools in Year 1 (4 elementary and 4 secondary), and then add 2 to 4 additional schools in each of Years 2 and 3. Schools were either considered in the more intensive core of "Engaged Schools", or to be a part of the Project as "Inquiry Schools" that may gradually evolve into "Engaged Schools" through contact with our Project. However, the Project team remained open to other requests and opportunities with additional schools, assuming that the synergies already unfolding through the Project's network could intensify and expand its appeal and intervention capacity (i.e. if more funding was secured and if counterpart teams in the collaborating schools formed). However, our team probably underestimated the level of interest that the project would encounter in the schools and in the community at large. By the end of the second year we had already 36 schools involved in different aspects of the project with 15 of them having already the formal designation of "Think&EatGreen@School" schools. This designation means that all these schools have teams of at least 4 people and projects generated by the school communities with organizational and small funds financial support from Think & Eat Green.

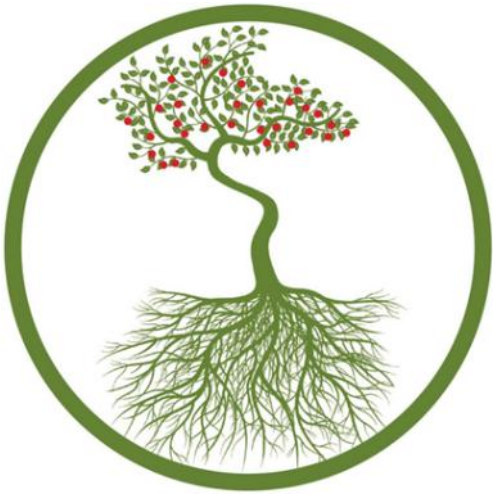
Also, the food and sustainability movement in the City of Vancouver has acquired a momentum and scope that is reflected in a rapidly evolving policy environment and new emerging possibilities, stimulated by a growing global awareness of the relationships between food, health and the environment. We continue to monitor these processes.

This report is the fruit of the collective collaborative effort involving the Project's Coordinating Committee, the Graduate Research Assistants and all four working groups (Food Production at School; Food Consumption at School; Curriculum and Pedagogical innovations; and School Food Policies and School Adaptations to Climate Change). The report presents successes, challenges, and the emergent learning from the two years of this project. We also report on the outcomes to date, including initial interventions to improve food at schools; reduce schools' negative impacts on the environment and on the health of school communities; transform curriculum content and ways of learning (pedagogy); and attain an understanding and

Year in Review 2011 — 2012

appreciation of food as a grand connector between humans and nature and as a central element in all human relations.

Project Planning Diagram



By the end of June 2012, the Think&EatGreen@School project will have been in action for almost two-and-a-half years, approaching its federally funded half-life. From the beginning, we have been guided by a desire to apply a systems approach to all aspects of the project. This means that all of our separate activities - from working with educators, researchers, and community partners to students, policy makers, chefs and farmers - need to be grounded in, and aware of, their connections with each other and their relationship to the food system as a whole. What is sold in a school cafeteria has a connection to student learning, soil health and the regional economy. What is taught in the classroom about food has an impact on student health, local ecosystems and regional culture. Everything is connected and we believe real change is possible when we work together with this idea in mind.

And to follow this idea through, not only are we attempting to maintain the vision of a healthy, sustainable school food system when planning our activities, we are also mindful of the language and metaphors we use to describe our overall project. Very early on in the development of the Think&EatGreen@School project, when we were first getting to know each other and our partner organizations, the image of an apple tree (Spartan variety in my mind) was deemed a fitting symbol for our collaborative structure. Not only did the anatomical structures of the tree (roots, trunk, branches, leaves, fruit, and seeds) correspond well to the different components of the project (community organizations, coordinating committee, theme working groups, undergraduate students, monitoring and evaluation, and professional development activities), but the deliberate use of an organic, natural symbol felt appropriate, rather than a mechanistic one, such as a wheel or machine, which equally represent our organizational structure, but with a little less warmth, let's say.

As represented in the tree diagram, there are many mutually dependent and inter-related components to our project. The characteristics of each have slowly emerged since the beginning of the project and, in all likelihood, will continue to change over the next two-and-a-half years. Each component will be expanded upon with further details in different sections of the report.

Roots represent the community and partner organizations that have been engaged in food system activities for many, many years. Vancouver is fortunate to have such a diverse level of expertise and support for sustainable food system transformation.

Fertilizers (organic of course, mainly compost) – In order to help support the educators involved in bringing food system activities into schools and classrooms, we have been developing a number of professional development activities, such as our annual Summer Institute, our 'mini-institutes' and our more traditional pro-d activities designed for school teachers in the VSB. The ongoing programs offered by our community partners like EYA, SPEC and Growing Chefs help support educators and students in the city as well.

The **Trunk** of the tree is composed of our academic and community co-investigators, project staff and research assistants. The efforts of

our diverse team are highlighted throughout the report.

Branches – There are three theme groups in the project, focusing on different aspects of the food cycle continually finding new ways to integrate learning and engage students in enhanced educational experiences.

- Food Production at School
- Food Consumption at School
- Curriculum and Pedagogical innovations

The **Leaves** of the tree are an apt symbol for the undergraduate courses and student activities that occur through the project. Just like the annual regrowth within a deciduous tree, a new group of undergraduate students inject their youthful energy into the project each year. The Think&EatGreen@School project offers the students hands-on, experiential learning opportunities in their community. This allows them to escape the confines of the lecture hall and apply their theoretical concepts in a dynamic, real world setting. They also become mentors and ambassadors for sustainable food system change for the younger students they interact with in the school gardens, cafeterias and classrooms. It's a wonderful partnership that benefits the learners regardless of their particular moment in our K-20 education system.

Environment and Atmosphere – A group of co-investigators is dedicated to documenting and investigating the impacts of policies on school food systems, from the level of the school, school board, city, region, provincial and federal levels (global as well, it's all connected!). This group is also responsible for connecting project efforts that facilitate school and institutional adaptations to climate change.

It is important to harvest the **Fruit** of our collective efforts in order to capture and document the stories and initiatives that are occurring in each school and at the school board level. Our co-investigators are monitoring and evaluating many aspects of the project through a number of research initiatives that you will find highlighted throughout the report.

Seeds – Through offering small grants to individual schools (14 this past year) and through the efforts of our partner organizations, we are hoping to help facilitate change by planting small seeds in the VSB.

Professional Development

Think&Eat@School Project Summer Institute 2011

In 2011, Think&EatGreen@School Project conducted a Summer Institute held at UBC for three days in early July. Vancouver school teachers, University faculty and students, and community partners gathered to share ideas about how to strengthen and integrate different components of the school food system, including food gardens and orchards; composting and waste management; food procurement, preparation and consumption; curriculum and pedagogical innovations; and school food policies.

Objectives

1. To build a network of VSB teachers and students, University faculty and students, and community partners, committed and inspired to promote change in school food systems, reduce the school-level environmental impacts, and foster food citizenship among students, staff, and administrators.
2. To share strategies for engaging students with food including: Food production and composting; Cooking and eating together; Integration of the food cycle into curriculum and innovative pedagogical action plans; School food policies for a healthy, sustainable school food system; Integrating food, health and environment.

Summer Institute 2011 activities:

1. Plenary sessions where participants learned more about the Think&EatGreen@School Project, inspirational examples of food system activities taking place in Vancouver schools, and innovative ways to connect food across the curriculum.
2. Hands-on workshops where participants worked in the UBC Orchard Garden and Culinary lab (products were eagerly consumed at lunch!) followed by individual and group reflections on the implications of these experiences.
3. Breakout workshops providing information, ideas, and discussion opportunities about integrating all parts of the food system into school activities and curricula.

Forty-one participants attended the Summer Institute 2011 from eighteen Vancouver schools. The following organizations were also represented: UBC Faculty of Land and Food Systems; UBC Faculty of Education; The Learning Exchange at UBC; Vancouver School Board; Vancouver Food Policy Council; Vancouver Coastal Health; Public Health Association of BC / Farm to School Greater Vancouver; Environmental Youth Alliance; Society Promoting Environmental Conservation; Growing Chefs!; Fresh Roots Urban Farm; Project Chef; Evergreen; Environmental Educators Specialists Association of the BC Federation of Teachers.

Other Professional Development Activities

Several team members were also involved in providing workshops on a number of the province-wide and district-wide professional development days. Topics covered school gardens, fruit trees and community orchards, indoor gardens and last but not least composting. On-going professional development will continue to happen next year with the plan to return to monthly 'After-School Specials' on different topics at different schools and locations around the city.

Mini Institutes

Following the success of the 2011 Summer Institute (July 4-6), many members of the Think&EatGreen@School community began to discuss the possibility of hosting "mini-institutes": a series of smaller-scale workshops and seminars, ideally scheduled for teachers' professional development days. On Saturday March 3rd, the Think&EatGreen Production Team held its first ever mini-institute (although the team members decided to bill the event as a "Skill Share"). The theme was "Preparing for the Spring Harvest", and addressed a challenge that faces most school garden projects in Canada: how can teachers create meaningful gardening experiences for their students, when the school is out of session over two months of the growing season?

Six teachers from five VSB schools were engaged in three different activities. First, there was a brief discussion on crop selection, starting seed indoors, hardening off, and transplanting. Second, the group constructed an indoor seed-starting station, designed for implementation in a small classroom. Finally, the group constructed a poly-tunnel cold frame (a "mini-greenhouse"), designed to fit atop a standard 4' x 8' raised garden bed. Design plans were distributed amongst all participants, so that they could build more of them in their own school gardens.

By the end of the Skill Share, teachers were confident that they could translate these new ideas and know-how into successful spring gardens. They considered the construction projects to be straightforward and well-suited to their students' after-school garden club activities. They also felt that the structures would allow them to get an early start on growing and harvesting, so that their students could see (and eat) the fruits of their labour before school lets out in June.

On a more fundamental level, the teachers appreciated the opportunity to connect with their peers from other schools. Several teachers commented that they can sometimes feel isolated from their colleagues when working on a school garden project. They were glad to attend the Skill Share not only for what the

Professional Development

Think&EatGreen Production Team had to share, but also for the dialogue with teachers from other schools.

It is the opinion of Think&EatGreen@School that our project has a tremendous capacity to bring together a community of learners. One way to do this is to provide a venue for enthusiastic teachers to come together for the sharing of ideas, experiences, and knowledge. We plan to host more "mini-institutes" in order to facilitate such interactions.

Minigrants - Small Funds

Within the general approach of the project aiming at increasing community engagement, our team decided to set aside $20,000 from the SSHRCC Grant for financing small greening projects in Vancouver schools. These small grants were made available to help create incentives for the formation of school-based teams to start-up, expand or improve school projects in the areas of food production, procurement, consumption, curriculum and pedagogy innovations and policy. These grants were expected to trigger synergies among schools which although convergent with Think&EatGreen@School goals were directly generated by the schools' communities. At the same time, the UBC researchers saw this as an opportunity to listen directly to the ways school communities would articulate their needs and priorities, which in turn would provide the research teams with important keys to guide the process of integration and intensification of research activities.

The application process offered several opportunities for interested schools:

1. Application to be a Think&EatGreen School and receive a grant of up to $2000.
2. Additional application to bring the "farm" into the Think&EatGreen School to receive a $1500 Farm to School grant.
3. Enrolment in the First Think&EatGreen@School Summer Institute on July 4-6, 2011.

Criteria to grant the Small Funds

Schools were expected to demonstrate the following:

- A working team of 3 or more, composed of teachers and staff committed to strengthening the connections within the food system at their school (teachers, administration, support staff, food service staff, maintenance staff, students and parents may be included).
- A commitment to initiatives that integrate all the aspects of the food cycle by seeking to make connections between its different aspects (i.e. growing, preparing, sharing and managing waste, learning and food school policies) at school.
- Participation of a team in the Think&EatGreen@School Summer Institute.
- Partnerships with community-based organizations and/or other schools.
- Willingness to receive UBC students and facilitate their involvement in the

development of food system activities and projects at the school.

- Willingness to participate in research aimed at developing a healthy and sustainable school food system.
- Commitment to participate in the project for at least 2 years.

It was understood that no one school may meet all of the criteria; however, applications that demonstrated that they were able to satisfy as many of the above points as possible would be given priority. In the end, the Coordinating Committee decided to share the $20,000 among 14 schools.

Some possible projects could include:

- Food production including gardens and orchards.
- Composting and other waste management projects.
- Cooking and other culinary / food preparation activities involving students.
- Teaching and learning that connect food, health, and the environment across the curriculum.
- Projects that establish links between growing, preparing and eating food at school with new curriculum and ways of teaching and learning.
- Programs that provide healthy and sustainable foods for students.
- Projects that establish links between schools and farms for healthier school meal programs and cafeteria menus and learning opportunities.
- Release time for teachers and staff to collaborate, develop and implement proposed activities.
- Celebrations around food (e.g. a food day or food week at school).
- Artistic projects related to food systems issues (including videos, multi-media, painting, music, theatres).

On May 31, 2012, the 14 schools that were recipients of the Think&EatGreen@School Small Funds and/or Farm-to-School grant were invited to present poster reports in a joint meeting with the Thik&EatGreen@School team, to share and celebrate their accomplishments, conduct their own assessment of progress and their needs to continue working to achieve the goals of our Project. The meeting also provided the opportunity for an authentic exercise of joint planning within our framework of Community Engaged Scholarship.

UBC Courses Description and Activities

A) Land, Food & Community I (LFS 250)

School Project I: School Food Environment Assessment Tool (SF-EAT)

Schools: David Lloyd George, Charles Dickens, Henderson, Nootka, Queen Elizabeth, Queen Elizabeth Annex, Grandview, Graham Bruce, Sexsmith, False Creek, Bayview, General Gordon .

This scenario aimed at documenting the food environment in a particular school. By administering the questions in the SF-EAT, students created a snapshot of the current state of the school's food system. The tool will document the type of food available for consumption in the assigned school, and examine the strengths, areas for improvement, and stakeholder concerns about this food. The work involves three main aspects:

- A 'situational assessment' of the school food environment (including the surrounding neighbourhood) based on the Availability, Accessibility, Affordability, Appropriateness, Safety and Sustainability criteria of food security to document what food is currently available in the school.
- Conduct interviews with a number of stakeholders (administrators, teachers, and/or staff) to determine the strengths and opportunities for improvement in the food system of the school.
- A return to the school to present the data collected to ensure accuracy of the information.

The data from the SF-EAT is currently being systematized and analyzed by Think&EatGreen@School co-investigators, community partners and graduate research assistants and devolved to the school communities.

School Project II: Food Production at School: Lasagna Gardening

Schools: Sexsmith, Tyee, David Lloyd George, Henderson, Nootka, Queen Elizabeth Annex.

The idea of creating or expanding a school garden does not need to be expensive or labour intensive. In fact, by incorporating the principles of sheet composting and collecting common materials that are destined for landfills, a school can make a fertile garden plot with very little effort. You just need to plan ahead.

For this project, the undergraduate team was responsible for helping establish a small garden plot with school stakeholders through the process of *Lasagna Gardening*. By alternating carbon-rich and nitrogen rich materials on a designated area in the fall, the school will have fertile soil in the spring, without having to remove existing sod or other plant matter.

Specific Tasks

- Prepare a 30-minute presentation on the concept and process of Lasagna Gardening to be presented to the school stakeholders.
- Determine the best place for the location of the lasagna garden with the school stakeholders.
- Create the lasagna garden with school stakeholders .

Recommend a list of appropriate vegetables that can be planted in the spring and harvested before the end of June.

School Project III: Completing the Cycle: Vermicompost in Classrooms

Schools: Sexsmith, Queen Elizabeth, Queen Elizabeth Annex, Nootka (3), Henderson, David Lloyd George, Strathcona, Magee Secondary, Vancouver Technical Secondary, David Thompson Secondary.

According to Metro Vancouver data, 44% of the materials that end up in our landfills are organic wastes. Composting is a key component to a sustainable food system and schools are ideal locations for experimenting with a variety of methods for turning our food scraps into a usable end product for gardens. One of the most desired soil conditioners on the market are worm castings, the result of having a specific species of worms, Red Wigglers, process organic waste into 'black gold'. Vermicomposting is ideal for classrooms as they are inexpensive, easy to maintain, and can be set up inside, allowing for year round composting.

Specific Tasks

- Prepare a 30-minute presentation on the concept and process of Vermicomposting to be presented to the school stakeholders.
- Gather materials and organize the construction of a vermicomposting system with the school stakeholders.
- Construct and establish the vermicomposting system with school stakeholders.
- Instruct the school stakeholders on proper maintenance of the vermicomposting system.

School Project IV: Preparing and Sharing: Food in the Classroom

Schools: Gladstone Secondary, Magee Secondary, Sexsmith, Grandview, Queen Elizabeth, Queen Elizabeth Annex.

As Wendell Berry stated: '*Eating is an agricultural act*'. No matter who or where we are, we are all deeply involved in agriculture, often three times a day. What we eat impacts our personal health and the health of the environment. Eating is also a social act, as food plays a central role in many cultural ceremonies, celebrations and traditions. In this activity, the undergraduate team was responsible for developing and delivering a 40-minute session with school stakeholders (administrators, teachers, and/or staff) focusing on preparing and sharing food in a classroom setting, following food safe techniques. This is a meaningful way to influence the health of young students by using age-appropriate activities (eg. tasting, preparing, and eating together) to help them develop an appreciation of, and willingness to try, new fruits and vegetables as well as an interest in food preparation.

Specific Tasks

- Through a dialogue with the school stakeholders, determine the types of vegetables and fruits that would be of most interest to use in this type of activity. This can be based on existing program and infrastructure within the school (i.e, produce from an existing school garden, participation in *BC School Fruit & Vegetable Nutritional Program, Spuds in Tubs,* or *Take a Bite of BC, Farm2School Salad Bar)*.
- Prepare and deliver a hands-on activity using food with the school stakeholder on preparing and sharing, incorporating elements of plant biology, historical and cultural connections, food safety, nutrition, food preparation skills, and/or issues of sustainability.

UBC Courses Description and Activities

- Solicit feedback from the school stakeholder on the group's implementation of the activity (i.e. choice of recipes/lessons/ activities). These comments should be incorporated into your final assignment.

School Project V: The Integrators: Capturing the Story of the LFS 250 Process

The power of digital media in communicating complex issues in an engaging manner is becoming more and more apparent. In our Faculty, we are fortunate to have the support of the Learning Centre through which students can explore alternative methods of demonstrating course specific learning outcomes. In this activity, undergraduate teams captured and presented the experiences of their colleagues in LFS 250 as they moved through their Think&EatGreen@School projects throughout the term. After a tutorial on basic technical skills for uses of digital media, groups created an action plan to convey the activities of the term, through video, narrated photo essay, or podcast. The Leaning Centre provided equipment as well as flexible troubleshooting assistance throughout the term, beyond the introductory session.

Specific Tasks

- Attend the tutorial on basic technical skills in digital media storytelling through the Learning Centre.
- Determine the method of capturing the student experiences (i.e. video, narrated photo essay, or podcast).
- Determine the appropriate roles for each group member (i.e. writer, photographer, camera person, narrator, editor, etc).
- Develop a storyline and action plan to capture a segment of the student experience and approach the student group/groups that you wish to document.
- Execute plan.

B) Land, Food & Community II (LFS 350)

LFS 350 UBC-Based Community Food System Project Scenario Descriptions

Term 1 - 2011

1. Farm to School Salad Bar at Graham Bruce Elementary/Windermere Secondary

Organization: Think & Eat Green @ School Project

Project overview: Graham Bruce Elementary School is entering the second year of Farm to School, an initiative to connect students with farmers and farm fresh foods. In 2010, with the launch of a salad bar, an evaluation was completed with the help of LFS 350 students to determine the change in eating habits of students. The salad bar influenced eating habits at lunch, but didn't have a large impact on local purchases in its first year. This year's focus was on increasing the amount of local foods in the salad bar by 15%. In order to demonstrate this change, baseline data about where the foods are grown is needed. The project will include quantifying local as well as educating students about local, specifically: 1) Visit the school's salad bar lunch service. Weigh the foods served pre/post, and using the price of food and point of origin of major ingredients, calculate the dollar value of the amount of BC food served and eaten. 2) Prepare 2 sessions to do with a grade 4-7 class: Part a) a game and/or lesson with a focus on eating local (e.g. 'food miles homework sheet', 'Price Check on Aisle 2'. Part b) Prep and taste local foods with the class to determine local favourites (provide facts about the food, practice food safe techniques, talk about where foods grow, etc).

Community service opportunities: Food preparation and tasting with students, other in-class activities related to food and composting (as determine by teachers in Sept.), garden maintenance with small groups of elementary students, supervising students on a walking field trip to visit Windermere's gardens, and collecting orders for the salad bar.

Community partners: Grace Zhou, Farm to School Coordinator for Graham Bruce Elementary School, and Sarah Carten, Community Nutritionist.

2. Assessing the School Food Environment in Vancouver Secondary Schools

Organization: Think&EatGreen@School (in conjunction with Vancouver Coastal Health and the Vancouver School Board).

Schools: Sir Winston Churchill Secondary School, David Thompson Secondary School, Vancouver Technical Secondary School, Magee Secondary School, Windermere Secondary School, Britannia Secondary School, Gladstone Secondary School, Prince of Wales Secondary School (or Point Grey TBA), Spectrum Program.

Project overview: Over the next four years, the UBC Think&EatGreen@School program will be implemented in Vancouver schools to develop healthy, environmentally sustainable school food systems to encourage the consumption of a nutritious, sustainable diet. In order to improve the eating habits and nutritional health of children and adolescents in Canada, more insight is needed about the ways health behaviours are embedded in social contexts and shaped by the local food environment, particularly in and around high schools where teenagers spend much of their time. To better understand the school food environment in Vancouver, the Think&EatGreen@School program has developed a School Food Environment Assessment Tool, "SF-EAT", to provide rigorously collected and

UBC Courses Description and Activities

valuable data about Vancouver secondary schools.

Student researchers worked with Joshua Edward (the SF-EAT co-ordinator), a Think&EatGreen@School graduate research assistant (community partner) and school stakeholders to collect and validate data regarding the school food environment including evaluations of the school's physical space, food access and availability, and policies and programs related to food, nutrition and food systems sustainability. Findings from diverse schools are then compared and contrasted and insights shared with (and informed by) school stakeholders. Insight gained from this assessment will inform Think&EatGreen@School action-research projects, policy recommendations and theoretical understandings of the connections between the school food environment and dietary practices.

Community service opportunities: Potentially assisting with food preparation, school gardens, and assisting with workshops for teachers in the Orchard Garden behind MacMillan.

3. Creating community-based produce sales with Fresh Roots schoolyard potager garden

Organization: Fresh Roots Urban Farm

Project overview: Students researched what is needed to create a farm-gate sales market at Queen Alexandra Elementary, selling food grown on school grounds into the school community and greater community. It's entirely feasible that the marketing could extend into the Grandview community, because the schools are 3 blocks apart. With our schoolyard potager garden growing, Fresh Roots Urban Farm is looking forward to offering neighborhoods equitable access to affordable, fresh, food grown in their community farms on school land. The research focused on assessing neighborhood assets, what community members do we need to support this, what are the permits and legalities, and what do we need to be successful. Students assisted Fresh Roots with helping Grandview set-up a neighborhood compost collection site at their Earthtub, and both school communities (students, staff, parents, neighborhood) were invited to take part in that as well.

Community service opportunities: Students working with Fresh Roots will have the opportunity to volunteer on community-engaged urban farms.

4. Chinese Market Garden with the Orchard Garden

Organization: The Orchard Garden (behind MacMillan)

Project overview: School communities are increasingly recognizing the value of outdoor classrooms/school gardens for environmental education, nutrition education, teaching and learning across the curriculum, and as an important facet of healthy school life (i.e.: social, emotional, physical health). However, teachers have little to no experience teaching in school gardens. LFS 350 students contributed to the project by researching how school gardens can be designed to effectively contribute to the school curriculum and provide an engaging space for innovative pedagogical approaches. Specifically, the Orchard Garden needed a group of LFS 350 students to prepare an educational resource report on the history and current context of Chinese Market Gardening.

During the summer of 2011, the Orchard Garden team established a Chinese Market Garden working with the Chinese Canadian historical Society of BC (http://www.cchsbc.ca/) to use as an educational tool. The Orchard Garden needed LFS 350 students to conduct research and compile resources for the Orchard Garden team to help connect the Chinese Market Garden with education curricula.

Possible research projects included:

- Historical agricultural practices around Market Gardens

- Research activities that could be done in the Chinese Market garden and integrated across the curriculum (social studies, health & nutrition, history, art, mathematics, drama, etc.)
- Growing traditional Chinese produce in this climate
- Other 'cultural' gardens and their pedagogical practices
- Food preservation and preparation practices
- How are cultural cuisine traditions influenced by agricultural and food preservation practices?

C) Nutrition Education in the Community (FNH 473)

In the winter term of 2012, approximately half of the FNH 473 Community Based Experiential Learning (CBEL) projects involved working with Think&EatGreen Schools, focusing on enhancing K-12 students' ability and willingness to prepare and eat healthy, local foods. Some of the inspiration for these projects has come from 'Project Chef', a program that involves chefs visiting a school for a week to immerse students in food preparation, clean-up and consumption. Through this curriculum-based program, students are introduced to healthy foods, learning about where the food comes from, how to prepare it, what it tastes like, and how to eat together (see www.projectchef.ca). Barb Finley, the creator of Project Chef, has collaborated with Think&EatGreen, and many teachers at Think&EatGreen schools have attended a Think&EatGreen sponsored workshop that Barb led. Some of this year's FNH 473 projects built on this foundation to help teachers implement classroom food preparation and consumption activities.

1. Laura Secord Elementary School

Background: Laura Secord Elementary School, located just off Broadway Avenue between Victoria and Nanaimo, is a large school with over 600 students in Kindergarten to Grade 7. Over half the students are in the French Immersion stream. This will be the first Think&EatGreen@School project at Laura Secord.

Project: FNH 473 students worked with a Grade 6 French Immersion teacher to plan and deliver food preparation & consumption activities.

UBC Courses Description and Activities

2. Nootka Elementary School

Background: Nootka Elementary School is located near Renfrew and 18th Avenue in East Vancouver and has 444 students. Previous Think&EatGeen@School projects at Nootka have included a School Food Environment Assessment, school garden enhancement projects and introduction of classroom vermicomposters.

Project: Project Chef will be at Nootka in late January. FNH 473 students will work with a Grade 3 classroom teacher to develop and deliver follow-up activities.

3. Lord Strathcona Elementary School

Background: Strathcona Elementary School is located in the Downtown Eastside, about 5 blocks from Main and Hastings. Because of the high proportion of socially and economically disadvantaged students, it is a designated Inner City school, and has a hot lunch program. This will be the first Think&EatGreen@School project at Strathcona, but the school works closely with EYA (Environmental Youth Alliance), which is a Think&EatGreen partner.

Project: FNH 473 students worked with two classrooms (Grade 5/6 and 6/7) to plan and deliver food preparation, consumption, and composting activities.

4. Tyee Elementary School

Background: Tyee is a small elementary school in East Vancouver, located near Knight and 19th Avenue. It is an active Think&EatGreen@School participant—previous projects have included a garden assessment and school garden enhancement projects.

Project: Seven classroom teachers (including all grades from K-7) are interested in working with FNH 473 students to develop food preparation and consumption activities. Because FNH 473 students could not deliver hands on activities to all of the classrooms, the project involved planning a school-wide event and developing activities and resources for classroom teachers to deliver.

5. Windermere Secondary "Family"

Background: Windermere Secondary School is located at East 22nd Avenue and Rupert Street in Vancouver's Collingwood neighborhood. It and 6 elementary schools in its catchment make up the Windermere Secondary Family. Through the community schools program, Windermere Secondary students volunteer to lead after school programs – including cooking clubs—in the 6 elementary schools. Windermere is an active Think&EatGreen@School partner, and has a successful school garden, aquaponics and compost program. The school cafeteria is actively working to incorporate healthy, sustainable food options and has interest in collaborating with Think&EatGreen.

Project: FNH 473 students worked with the after-school cooking programs to promote preparation and consumption of healthy, sustainable foods. This involved developing programs, strategies and activities that the high school leaders will be able to implement.

6. Sir Winston Churchill Secondary School

Background: Churchill Secondary School is located in south central Vancouver near Oak Street and 54th Avenue, with just over 2000 students in Grades 8 to 12. It has an active school garden and has just implemented a Farm2School program in its cafeteria.

Project: FNH 473 students worked with the Grade 10 Leadership class to plan and implement a school wide promotion of healthy, sustainable eating that builds on initiatives currently underway at the school.

D) Sustainable Soil Management (APBI 402/SOIL 502)

Vancouver Technical School Market Garden Site Analysis

A group of undergraduate students from the Faculty of Land and Food Systems, enrolled in APBI 402, completed an analysis of the future site of the Vancouver Technical Secondary School's Market Garden. This initiative is in partnership with Fresh Roots Urban Farm.

Here is a summary of the recommendations from the students report:

- Lime the southwest corner to raise the pH of the soil
- Supplement with N, K, Mg
- Avoid P supplementation in the first year
- Test greens and crops for Cu to ensure safe levels
- Develop/strengthen on-site composting capabilities to supplement soil nutrients
- Consider cover crops over the winter, such as clover and vetch, to increase available N; till in before the growing season
- Installation of drainage (e.g. ditch) along tennis court to redirect water run-off
- Resolving compaction issues may benefit drainage and water management
- Consider testing crop tissue samples for heavy metals in the future to ensure levels are not excessive.

Activity Report by School

Elementary Schools Activity Report

Bayview

UBC Courses – LFS 250 (SF-EAT)

The SF-EAT assessment was carried out with the school principal, Mr. Hugh Hooper. Bayview has a weekly hot lunch program, "Project Chef" events, and a potato-growing partnership. The Bayview PAC has established a weekly program giving students access to healthy lunches provided by "C'est Mon Cafe", a local restaurant in the Kitsilano area. The menu offers vegetarian options as well as nutritious meals, such as rice pilaf, chicken and vegetables. The Point Grey Community Church, which is located across the street, has partnered with the school to grow potatoes. The school takes potato plants that were originally grown in Bayview classrooms and replants them in the church garden in June. The church volunteers then maintain the plants throughout the summer and use the food to supplement community dinners.

Charles Dickens

UBC Courses – LFS 250
Mini Grant

Charles Dickens Elementary has 4 raised garden beds in which classes are growing annual vegetables. Working with Project Chef, 48 students have produced, prepared and consumed fresh produce from the garden. The school's green team is actively involved in maintaining the raised garden beds, as well as large garden areas around the school, in which they have planted a variety of herbs for meal programming. The school also boasts a small patio garden with culinary herbs, which are used by two classes in seasonal meal preparations.

David Lloyd George

UBC Courses - LFS250 (lasagna gardening, vermicomposting, SF-EAT)
Mini Grant ($1395) Materials for construction of new garden (4 raised beds). Tools and other garden infrastructure
Research – SF-EAT
Pro-D – Attendance at 2011 Summer Institute (Annie Lee)

DLG has been very active with the Think&EatGreen community. In addition to participating in 3 different projects with LFS250 student groups, DLG students (Annie Lee's class) visited the UBC Orchard Garden for workshop with Think&EatGreen staff. They are associated with the Spare Time Fun Centre (STFC, an onsite after-school care centre), which has created a brand new vegetable garden in collaboration with DLG students. STFC supports a hot lunch program for DLG students. In addition, students receive free weekly produce via the School Fruit and Vegetable Nutritional Program, supported by Agriculture in the Classroom Canada. Mrs. Hinson's grade 3 students maintain an in-class vermicomposting station, and they contribute their composted food waste to the garden.

False Creek

UBC Courses – LFS 250 (SF-EAT)

The SF-EAT assessment was carried out with two staff members at the school: Bruce Murton, the principal at False Creek, and a grade one teacher. False Creek showed a great deal of awareness and enthusiasm regarding food system-related issues, but lacked the funding and manpower necessary to drive all of the food system initiatives it wished to implement. Several food-related programs and initiatives are already in place at False Creek, but the great majority of these have only been implemented within the past one or two years. Currently, teachers and parents are the main stakeholders in efforts towards making the school food system a positive, healthy, and sustainable environment. There is a teacher-driven initiative for a "litter-less lunch" day, the goal of which is to produce zero garbage at the end of the end of the lunch meal. Teachers wish to challenge their students to learn how to reuse their lunch containers, wrappings, etc. The school also holds monthly special food days featuring food from local restaurants and retailers, such as Rocky Mountain Flatbread Co. and a local sushi restaurant owned by parents of students. There is currently no school garden or kitchen, and although composting and recycling systems are in place, the waste cannot be dealt with on-site and must be picked up to be processed elsewhere.

General Gordon

UBC Courses – LFS 250 (SF-EAT)

The SF-EAT assessment was carried out with the school principal, Margaret Davidson, and an actively involved parent. There is currently no hot-lunch program at General Gordon; students bring lunches from home and the school encourages healthy eating. There are 4 raised beds for growing vegetables on school grounds as well as a vibrant ornamental garden with many native plants that attract beneficial insects to the schoolyard. There are 2 standard black, household compost bins on-site used for garden waste.

Elementary Schools Activity Report

Graham Bruce

UBC Courses – LFS 250 (SF-EAT)
Research – SF-EAT, I-EAT
Ms. Purdy's class (27 students)
Mini Grant – Funds were used to plant apple trees and blueberry bushes as part of the school orchard garden.
Collaboration – The Farm to School program runs a school salad bar that offers fresh produce for small and large salads at $2.50 and $3.50, respectively.

Graham Bruce provides students many food system education opportunities such as project chef, environmental and cooking clubs. They also have a school garden with 2 functioning compost bins.

> *"Connecting food to how it's grown is important. At first, the students are reticent... but if you give them a shovel, then it really gets them digging in the dirt."*
>
> *- Mr. Leblanc*

Grandview/ ¿uuqinak'uuh

UBC Courses – LFS 250
Prepare and share with Ms. McCullagh's Grade 1 class, SF-EAT
Mini Grant – Funds were used to enhance the food growing, preparation and composting activities within the school as well as the weekly salad bar option in the school lunch program.

Grandview/¿uuqinak'uuh Elementary has 15 plots in their school garden, as well as a community garden on site. They also have 6 apple trees and 2 cherry trees. The school is part of the VSB school lunch program They are part of the Farm to School program through which they do a weekly salad bar as an addition to the lunch program that students are involved in preparing. As much produce as possible is either purchased from Fresh Roots Urban Farm, harvested from the garden or is grown in BC. They do school-wide composting using their Earth Tub composting system, as well as vermicomposting in some of the classrooms.

Henderson

UBC Courses – LFS 250 (lasagne garden, prepare and share, vermicomposting, SF-EAT)
Research – SF-EAT
Mini Grant – Funds were used to increase the number of students and staff engaged in gardening and composting initiatives in the school. Grade 5 and 6 students became lasagna garden and vermicomposting facilitators and taught others how to creatively dispose organic waste in ways that help the garden and keep unnecessary waste out of our landfills.

Lasagne Garden – The LFS 250 students prepared and presented a workshop for one of classes at Henderson, Ranee Shaw's grade 5 class. The lasagne garden was built on Sunset Community Centre's property which is located adjacent to the school. The LFS 250 students reported that the Henderson students displayed a large amount of excitement during the workshop as they eagerly participated in answering questions. According to Ms. Shaw, students who had never raised their hand to answer a question in class chose to answer the questions that were asked during our workshop.

Vermicomposting – The LFS 250 students prepared and presented a workshop on vermicomposting for a grade 5/6 class at Henderson. The workshop began with an

introduction to food webs in which the students each drew their own food web involving worms. The LFS 250 students then worked with the whole class to draw a school food web on the board that included both worms and students. After the introduction, the students were divided into five groups to construct the vermicomposting system and learn how the system functions: worms, habitat, food scraps, harvesting and trouble-shooting.

The SF-EAT assessment was carried out with the school principal, Mr. Darrell Cavanagh, the kindergarten and grade one teacher, Ms. Marguerite Leahy, and the Inner City Cupboard support staff, Ms. Diana DeRe. The LFS students found that many of the teachers and other faculty members were passionate about making the school environment more sustainable by participating/facilitating organic gardening, recycling, composting of organic wastes, and improving the quality of student food supply. The school has an existing garden, the Spirit Garden, which consists of two raised garden beds as well as an additional area of amended soil along the school's foundation, which was established with the neighboring Sunset Community Orchard. The school had success producing lettuce (Asian greens, butter lettuce and curly lettuce), two varieties of beans, chives, basil, oregano, zucchini, pumpkin, tomatoes, blueberries, sunflowers and potatoes.

Laura Secord

UBC Courses – FNH 473
Research – I-EAT, Ms. Chambers, Ms. Edwards, and Mr. Green's classes (73 students)

The FNH 473 students conducted a workshop with Ms. Jessica Rowe's grade 6 class of 28 students. Three workshops were conducted, focusing on Canada's Food Guide, waste management, and meat alternative consumption. Activities included placing food items in the correct food group, referring to Canada's Food Guide, placing waste items into blue box, yellow and blue recycling bags, and a food preparation and tasting session including hummus and yogurt parfaits.

> *"It was a pleasure to have the UBC students working with my students, using hands-on activities to promote an environmentally friendly and healthy life-style."*
>
> *- Ms. Rowe*

Livingstone

UBC Courses – N/A this year
Research – I-EAT – Two teachers/classes have volunteered their time to complete this online survey, including questions asking students what shapes their food choices on school days.
Pro-D – Attendance at 2011 Summer Institute (Cori-Lee Stevens, Jennifer Fischer)

Two of the classes at the school recently attended the Sea to Sky "Go Wild" program – Get Out for Wisdom, Inspiration and Leadership Development – as part of the programs offered by the Sea to Sky Outdoor School for Sustainability Education.

As part of the program, students learned creative activities to promote sustainability, such as the "no food waste challenge", where at each meal, both students and staff only took what they could eat and shared the remaining food served, to ensure no food on plates went to waste!

Elementary Schools Activity Report

Nootka

UBC Courses – LFS 250, S-FEAT (lasagna garden, vermicomposting -3 classes). FNH 473
Research – S-FEAT, I-EAT, Mr. Ferris's class (24 students)
Mini Grant – Ms. Clancy's class used funds to hold a Project Chef workshop

Ms. Basso's grades 1&2 class participated in a lasagna gardening workshop. The Nootka students collected all lasagna garden materials in preparation for the session. To end the session, the LFS 250 students distributed colouring worksheets with instructions for Nootka students to bring lasagna gardens to their homes.

Vermicomposting workshops were carried out with Ms. Pears, Ms. Dodge and Ms. Silverton's grade 1, 3 and 4 classes, respectively. All students collaboratively assembled a vermicomposting system. After preparing the vermicomposting bins, the LFS 250 students shared a store for Ms. Dodge's grade 1 class called Billy's Worm to convey the importance of not disturbing the worms. The workshops received positive feedback from both Nootka teachers and students.

Nootka has a group of teachers actively engaged in food systems education. The school has a gardening club, a recycling program and an outdoor garden. Nootka does not have a cafeteria or vending machines, but does offer a weekly hot lunch program with healthy meal options. All classes have a nutrition component to the health and career unit. Growing Chefs and Project Chef have conducted workshops with Nootka classes. Nootka also participates in the BC Fruit and Vegetable Snack Program.

A 2.5-hour snacking workshop was conducted with a 6/7 split class. The FNH 473 group assessed the student's understanding of the food groups, discussed the 'other foods' category and their nutritional components of concern (high sugar, sodium and fat). They conducted a food label reading lesson, presented information on nutrition -related chronic diseases (such as cardiovascular disease), and ended with a food preparation demonstration for healthy snack options.

Future directions include providing an additional follow-up lesson from UBC students, to work with smaller groups of Nootka students in future workshops and to produce handouts to distribute at the end of sessions.

Queen Alexandra

Research – I-EAT – Two teachers / classes at Queen Alexandra volunteered this spring to participate in this web-based survey, which included questions asking students what they eat on school days and why they choose certain foods.
Pro-D – Attendance at 2011 Summer Institute (Kathryn Giffin)

Queen Alexandra's school garden is over 10 years old! Fresh Roots Urban Farm is currently helping out with the garden and greenhouses. Some of the fresh leafy greens grown in the garden are being contributed to the school salad bar at Graham Bruce Elementary.

Queen Elizabeth

Mini Grant: ($1395) for garden expansion (5 new raised garden beds)
Summer Institute 2011– attended by Jaclyn Boyle and Leah Whitehead.

UBC Courses – LFS 250 (SF-EAT), prepare and share workshop, vermicompost workshop

UBC Research projects – School Food Environment Assessment (SF-EAT); Mr. Chiu's division two class of grade 6/7 students and Ms. Tayler's grade 6/7 class have participated in the Individual Eating Assessment Tool (I-EAT) survey.

Some features of Queen Elizabeth's school food system that deserve to be noticed are its lovely orchard (home to apple and plum trees, blueberry bushes, raspberry and strawberry plants, and kiwi and grape vines), 3-bin cedar compost system, student environmental club ('Green School'), and its four 8x4 raised cedar garden boxes (built by Sir Charles Tupper Secondary grade 12 woodworking students) where students, with support from teachers and SPEC, grow herbs and veggies. [Also, updates reveal that the five new garden boxes from the mini-grant funds are already yielding their first harvest, allowing even more students to practice their gardening!] Queen Elizabeth makes use of the BC fruit and vegetable snack program that provides a local fruit/veggie snack every two weeks, and has hosted garbage-free lunch days. Some goals identified by teachers and staff are healthy and sustainable food fundraisers such as whole wheat pizza and a farm to school salad bar. Teachers at QE believe that parent support in these future initiatives will be key to success! Follow-up visits from Graduate Research Assistants to brainstorm fundraising ideas are being planned in order to keep up QE's fantastic momentum.

On November 22, Ms. Whitehead's grade one class participated in a Prepare and Share workshop conducted by enthusiastic LFS 250 undergraduate students trained by co-investigators / community partners chef Steve Golob from Place Vanier at UBC, and Vancouver Coastal Health / VSB dietitian Sarah Carten. The 45-minute session engaged the first-grade students in preparing fun, healthy, easy-to-make local and seasonal veggie slaw. Students put Mrs. Whitehead's healthy eating lessons into practice, tried (and liked!) new veggies like kohlrabi and celeriac and got a feel for the brand new kitchen space that has been made available to Queen Elizabeth Elementary thanks to parental support.

Vermicompost workshop: On November 23 and 24th, Ms. Natasha Tousaw's Green School Environmental Club got to learn about how worms turn food scraps into healthy soil. Students collected leaves and newspaper, coloured decorative diagrams of worms' digestive systems, and created a food web showing the importance of returning nutrients to the soil. The finished worm bin that the students put together, and the two different techniques students learned for harvesting worm castings will help put precious nutrients to good use, and reduce the need to buy fertilizer for the school garden.

Elementary Schools Activity Report

Queen Elizabeth Annex

Summer Institute 2011 – attended by Tiffany Wainwright

Hosted student teams from UBC capstone course LFS 250 (School Food Environment Assessment or 'SF-EAT'; lasagna gardening workshop; prepare and share workshop; vermicompost workshop)

Hosted Research project – School Food Environment Assessment (SF-EAT).

UBC researchers were impressed by the school's recycling system for paper, plastic, glass and cardboard, its 'reversed lunch periods' where students play first and eat afterwards in order to improve appetite and digestion, and by the high quality of students' nutritious lunches. Parents of Queen E Annex students are well aware of the importance of good nutrition, and the school encourages packed lunches that contain minimal amounts of sugar. The school also partners with 'Growing Chefs', a not-for-profit that teaches children about good nutrition and food preparation in a hands-on way. The SF-EAT survey and interviews conducted in the fall revealed great progress towards making full use of the 'green cone' compost system, and towards establishing a school garden; exciting updates since then have tracked the progress of these projects. Now that the garden is full of beautiful plants, teachers are excited to begin working with Think&EatGreen@School team members to explore irrigation techniques and promoting plant health, and have eagerly signed up for gardening workshops hosted by some of the team's Graduate Research Assistants (GRAs). One of Queen Elizabeth Annex' goals is to incorporate the garden in classroom curriculum in order to strengthen students' understanding of local and sustainable food systems.

Lasagna Gardening workshop – Ms. Chantal Larrivée's Grade 3 class learned all about the food cycle, the value of compost, and how soil is made during a workshop from LFS 250 students from UBC. On November 17, the UBC student team spent twenty minutes giving an interactive presentation on lasagna gardening to twenty-four third-grade students, who then got to build a four-by-five foot 'lasagna garden' using a balance of carbon- and nitrogen-rich materials they had gathered with the help of their parents and teachers. Students had a blast collecting coffee grounds and kitchen scraps, leaves and yard waste, and layering them (just like a lasagna!) to prepare what they learned would eventually become rich soil perfect for gardening.

Prepare and Share workshop – On November 22, first graders at Queen E Annex worked in small groups to make a delicious seasonal veggie slaw with the direction of trained LFS 250 undergraduate students from UBC. Good teamwork helped make the day a success: 'team Bee' was responsible for making a light salad dressing, while team Broccoli and team Carrot chopped and prepared veggies. Using all 5 senses, students got a real feel for how much fun it can be to prepare and eat local, seasonal and healthy vegetables. They learned about kitchen safety, the use of measuring cups and graters, and about hygiene too.

Vermicompost workshop – The kindergarten class at Queen E Annex learned about making nutrient-rich soil ideal for gardening. In four stations led by LFS 250 undergrad students, kindergarteners explored the world of worms: their constructed habitats made of leaves, paper, water, sand; the food scraps they love to eat; and the harvesting of worm castings, which can then be used in the Lasagna garden being prepared by the grade 3 class!

SEXSMITH

UBC Courses – LFS 250 (lasagne garden, prepare & share, vermicomposting, SF-EAT)
Research – SF-EAT, local heroes identification
Mini Grant – Creation of a composting program, a cooking program and various gardening projects.

Lasagne Garden – The LFS 250 students prepared and presented a hands on workshop about creating a lasagne garden for two classes, Leslie Woolrich's grade 2 class and Sarah Liljefors grade 5 class. The Tyee students collected the lasagna garden materials (coffee grinds, leafs, grass clippings, etc.) in preparation for the workshop session.

Prepare & Share – The LFS 250 students prepared and presented a workshop about healthy food preparation for two classes, Dani Conrad's grade 6 class and Mari Matsuo'c grade 2/3 class. The workshop included a food preparation skills demonstration, a trivia game and an eating session. The LFS 250 students found that the children were willing to accept and learn about new foods.

Vermicomposting – The LFS 250 students prepared and presented a workshop on vermicomposting for two classes, Wendy Hugli's grade 1 class and Sarah Shankland's grade 1/2 class. The workshop given by the LSF 250 students was an hour long and consisted of a presentation about the benefits of composting and an interactive demonstration about how to build and manage the worm compost.

> *"Children are more aware of different types of foods, particularly vegetables… Children who were afraid to get their hands dirty are learning how to plant a seed, how to weed and how to water plants…"*
>
> *- Cheryl Lynn Richardson*

The **SF-Eat survey** found that Sexsmith elementary school has a number of food education programs, kitchen facilities, a recycling program, and a compost program. The students at Sexsmith elementary school learn about food in a variety of ways including by having a UBC food and nutrition expert that comes to the school to teach the students about nutrition, Project Chef, the Farm2School program, the BC fruit and vegetable program, and there are also two popular cooking programs after school time that incorporate art, food, and culture by making experiments with food in an artistic way. Currently Sexsmith is undergoing seismic upgrading and does not have much gardening space, however Sexsmith is planning to expanding their garden and create a composting system in the new school.

After receiving the TAEG@School mini-grant Sexsmith ambitiously started a composting program, a cooking program and various gardening projects all in one year. The goal of their activities was to have the students prepare lunch once a week using fresh produce (from produce grown in the gardens and from our local farmer, Ilana Labow from Fresh Roots). The activities that Sexsmith initiated include:

- Construction, filling and planting of the garden planter boxes.
- Installation of 2 compost bins with students regularly collecting compostables from the lunch room and staff room. Div.10 distributing collected leaves from the fall for layering of the compost.
- Cooking on Thursdays – 2 classes each week, rotating 4 times.
- Informal "Farmer visit" when Fresh Roots (Ilana Labow) drops off her produce in our classes.

Elementary Schools Activity Report

- Scientist in Residence working with 2 classes on decomposers.
- Environmental Youth Alliance (EYA) workshops: 4 classes on mason bees, 3 classes on composting.
- Local walking fieldtrips to Farmer's on 57th to observe a farm.
- Spuds in Tubs (4 classes).
- Indoor gardening in classes.
- Dairy classroom visit (open to the whole school).
- Workshops with the Langara Nursing students.
- Fundraising for more equipment and gardening space.

Sexsmith reported that the cooking and gardening programs have been wholeheartedly embraced by the teachers, students and the local community. The 7 teachers currently involved in the programs have been integrating the gardening, healthy food, composting and sustainability concepts into the curriculum. The teachers are also reaching out to other sources to extend their classroom projects (UBC, EYA, etc).

Strathcona

Research – I-EAT, waste management

Maryann Persoon's Grade 6/7 class has been collecting compost from staff rooms all year, and disposing of it in vermicompost bins and a small in-vessel compost system in their classroom. Much of the school garden has been transitioned to grow craft materials and perennial berries and fruits for the Strathcona Community Center and Elementary School's use. Small food production gardens are still maintained by 3 classes in the school, who grow food for soup and meal programs in their class. The Environmental Youth Alliance's Growing Kids program continues to support curriculum and garden development in the school.

"The Think&EatGreen@School project has helped my students understand, in a very profound way, the food cycle, from garden to soup pot to composting waste… I will continue on this path with my students for as long as I teach."

- Maryann Persoon, Grade 6/7 Teacher

Tyee

UBC Courses – LFS 250 (lasagne garden) LFS 350 (mason bees, waste free lunch and composting) FNH 473

Research – Collaborative Inquiry Group; i-EAT (Nellie Wong's class)

Lasagne Garden – The LFS 250 students worked with Alane Lublow's grade 4/5 students to establish a lasagne garden adjacent to their existing native butterfly garden. After the hands-on workshop with the LFS 250 students, Alane's grade 4/5 class we able to teach other classes at Tyee about the lasagne gardening process through the creation of posters and in-class demonstrations.

Mason Bees –The LFS 350 students worked with Alane Lublow's class of grade 4/5 students to create a brochure containing comprehensive information about mason bee maintenance that could be used to aid other teachers at Tyee Elementary in educating their students about beekeeping. The LFS

students recommend hosting fundraising events for materials needed to build shelters for the bees; the fundraising will also serve to help raise awareness of the mason bee population and their roles in our food system to the community.

Waste Free Lunch – The LFS 350 students worked with Sharon Ghuman & Leslie Gibbens's class of grade 4/5/6 students to facilitate a Waste Free Lunch Day (WFLD) at Tyee. Before the WFLD the LFS students conducted two waste audits in which they recorded the weight of all garbage, recycling and compost outputs. During the first visit the LFS students also presented to Sharon Ghuman and Leslie Gibbens's class, discussing how to pack a waste free lunch, as well as the environmental, economical, and social benefits. The LFS students also suggested that WFLD becomes a school wide event to create a more significant waste reduction.

Composting – The LFS 350 students created a comprehensive resource package for the Tyee teachers that included information on the basics of composting, checklists for maintaining the compost system, educational resources, and specific recommendations for optimizing the composting system at Tyee. The LFS students concluded by suggesting that Tyee increase the volume of compostable materials in their composting system in order to create a more efficient system. The students suggested increasing the volume by encouraging families or local external sources to bring in their compostable material.

The FNH 473 students created and facilitated an educational workshop about potatoes, which were targeted towards students ranging from grades 1 through 6. The goal was to design and deliver educational workshops to prepare the Tyee Elementary students for BC Agriculture's *Spuds in Tubs* program. The FNH 473 students delivered two separate workshops to four different classes. In the first workshop, the FNH students described the history of potatoes, analyzed the anatomy of the potato plant, examined a variety of potatoes, and discussed different nutrients present in potatoes; the second workshop featured a 'Potato Jeopardy' game.

Secondary Schools Activity Report

Britannia

UBC Courses – LFS 350
Research – I-EAT, waste management

Now in its second year, the Britannia Urban Garden (BUG) project has established a second large food production garden on the grounds of Britannia Secondary. The garden space was built and is maintained by Denise Isomura and Mike Dunn's Applied Skills 8 classes, as well as by the Streetfront, 8J/9J, and Outreach Programs at Britannia Secondary. Ian Marcuse of the Grandview Woodlands Food Connection has been actively organizing school and community involvement in the BUG. Britannia's Garden Club has established a compost collection program in the school's cafeteria and has helped install two 3-bin composters on site (one of which was built by Streetfront). The Environmental Youth Alliance's Growing Kids Program has been involved delivering bi-monthly workshops, garden advice, tools, and planning support for the BUG. SOYL has also been very involved in helping maintain Britannia's gardens, particularly over the summer months. Recently, of the Garden Club, was named one of Canada's "Top 20 Under 20" for her involvement in the BUG.

Churchill

UBC Courses – LFS 350, FNH 473
Research – SF-EAT
Mini Grant

Churchill Secondary has 2 8'x15' garden beds, which are used and maintained primarily by Francois Clark's new Sustainable Leadership 10 class. The school "Green Team" also supports school garden activities, as well as a school wide compost collection program that composts food waste from classroom green bins in a 2 bin compost system in the school garden. Churchill has received classroom workshops and garden support from Farmers on 57th and the Environmental Youth Alliance.

"The environmental leadership class learned about local and organic food through local food campaigns in the school, gardening and used of local produce in our school cafeteria."

- Francois Clark, Teacher

David Thompson

UBC Courses – LFS 250 (vermicomposting), LFS 350 (SF-EAT)
Mini Grant ($1860) Implementation of school-wide compost collection system; greenhouse maintenance and improvements; operating budget for Carrot Club (after-school garden club); workshops (2) from Fresh Roots Urban Farm Integration of community (e.g. elementary schools, restaurants) into existing green initiatives (e.g. BIoCYCLE compost collection)

Research – SF-EAT, I-EAT will be working with Annie Kwong's class (24 students)
Collaboration – EYA coordinates Carrot Club every Thursday after school, and has delivered composting workshops to the BIoCYCLE group

Pro-D – Attendance at 2011 Summer Institute (Chelan Wallace, Max Adrien, Lee Green)

David Thompson has a small garden that is run by the Carrot Club (after-school club coordinated by EYA), which hopes to begin providing food for the cafeteria. They have a sizeable greenhouse that will be

maintained through a collaboration with Fresh Roots Urban Farm. The student-led Green Team runs many sustainability-themed school activities/events, including compost collection, Sustainability Week, and filming of the popular "LipDub" music video (which showcases DT's green initiatives). During summer break, the BIoCYCLE team refurbished a collection of old bicycles, fitting them with trailers for the purpose of collecting compostable wastes from local restaurants and grocers. In the cafeteria, Chef/Instructor Lee Green has implemented a salad bar, and DT is currently investigating ways to make it more popular with students. Chef Green also runs the ACE IT Culinary Arts program, giving senior students a head start toward obtaining professional certification.

"David Thompson's green initiatives are now snowballing thanks to our early supporters such as Think&EatGreen@School."

- Chelan Wallace, Youth Sustainability Programmer

Gladstone

UBC Courses – LFS 350, Directed Study
Research – SF-EAT, I-EAT, Soil Science
Mini Grant

Gladstone built 2 new raised garden beds this year, and now maintains 11 4'x8' plots in the school courtyard. Shelley Noreen-Saltzman and Andrea Maley's Social Development classes are regularly involved in maintaining and learning in the schoolyard garden. Gladstone also has an active garden club who meets weekly to plan, maintain and harvest food grown in the school garden. The head of the school cafeteria, Paul Richardson, continues to support garden development and is actively involved in organizing the use of garden produce in the school cafeteria. Gladstone's science department, led by Raza Mirani, is looking at ways to use the schoolyard garden as an outdoor learning lab. Gladstone built a new 3-bin compost system this year, and composts food waste from the school cafeteria, and a local Katimavik house.

Gladstone has been working with the Environmental Youth Alliance's Growing Kids program for the past 2 years. The EYA provides: regular classroom workshops, tools, garden advice, an indoor garden and garden club support at Gladstone. It has also been working with the Cedar Cottage Neighborhood House's teen programs, which were a big support in maintaining the school garden last summer.

Magee

UBC Courses – LFS 250 (vermicomposting and prepare and share), LFS 350 (SF-EAT)
Research – SF-EAT
Mini Grants – The environmental club used funds to update their school garden

The environmental club, primarily sponsored by teacher Ms. Sewerin, took part in the vermicomposting workshop. The environmental club students actively participated in discussions surrounding food system security and were eager to share the knowledge and skills gained with other students at their school.

LFS 250 students prepared and presented a workshop to a Magee special needs class composed of grades 8 through 12 students. With the guidance of LFS 250 students, the Magee class prepared coleslaw using local produce, which exposed students to relatively unfamiliar vegetables such as kohlrabi and celeriac root. The workshop included a food preparation skills demonstration, a trivia game and an eating session. Magee student feedback included excitement to prepare and taste the vegetables and Magee teachers expressed an increased interest in sustainability, food citizenship and visiting the UBC farm.

The Magee cafeteria is run by Canuel. The Canuel staff reported that they no longer sell

Secondary Schools Activity Report

deep fried food or regular sugar-sweetened beverages. The cafeteria offers nutrient-dense foods such as whole grains and low-fat milk every day.

Recommendations from UBC students include supporting the environmental club in promoting food cycle information to more Magee students.

> *"The Magee students are incredibly well-organized… they built the garden shed and hoop house themselves."*
>
> *- Ms. Lehmann*

Point Grey

UBC Courses – N/A this year

Research – I-EAT **–** Two teachers/classes at Point Grey volunteered to participate in this new survey, which included questions asking students what thoughts they have about their school food environment.

Point Grey has a small garden located along the side stairway of the school. The garden has recently adopted a new compost bin!

Spectrum

Research – SF-EAT

Spectrum Alternate has 3 raised bed planter boxes, 3 vermicompost bins, and an indoor garden. Ana Despotovska and Cris Ohama have been using these to teach their science classes through the year. Kevin Hampson, who runs all meal programs and food classes in the school, has been actively involved in planning for and using any food grown in the school. Spectrum has been working with the Environmental Youth Alliance's Growing Kids program for the past two years, and is hoping (and planning) to be the VSBs first school to house chickens. Frances Alley has been a key support of these activities in the school as well.

Vancouver Technical

UBC Courses – LFS 250 (vermicomposting), LFS 350 (SF-EAT)

Mini Grant ($1395) Garden expansion; garden season extension via construction of hoop cold frames; workshops from Fresh Roots Urban Farm

Research – SF-EAT

Collaboration – Fresh Roots is working with Van Tech to create an urban farm onsite; SOYL offers summer programming at Van Tech, and helps to maintain the garden in July and August.

Pro-D – Attendance at March 2012 Mini-Institute (Katharine Shipley)

Van Tech currently operates a small vegetable garden, which is managed by an after-school garden club. There are plans to develop a large (1/4 acre) urban farm in partnership with Fresh Roots Urban Farm. The school collaborated with UBC soil science students to analyze soil fertility and ensure the farm site was free of contamination. A composting program is run in partnership with Grandview Elementary; cafeteria food waste is bicycled to Grandview's Earth Tub composter, and some of the finished compost is returned to the Van Tech garden. There is also a cooking club program that connects garden produce with the lunch menu.

Windermere

UBC Courses – LFS 350 (farm-to-school salad bar, SF-EAT), FNH473

Mini Grant ($1860) Garden expansion, cooking equipment

Research – SF-EAT, I-EAT will be working with Sharon Williams' and Dawn Kelly's classes

Collaboration – EYA collaborates with Windermere's Leadership department, providing support for curriculum development, workshops, and garden operations (e.g. greenhouse, aquaponics, compost system).

Pro-D – Attendance at 2011 Summer Institute (Donna Chan)

The Windermere Organic Garden is operated by students enrolled in the Leadership Program. It contains numerous vegetable plots, both in raised beds and in the ground. There are also several fruit trees. A diversity of compost systems are in use, including vermicomposting and an Earth tub. The garden is also home to an automated greenhouse and small aquaponics system. In the cafeteria, the ACE IT Culinary Arts program runs for half the year, giving senior students a head start toward obtaining professional certification. There is also an after-school cooking club, where Windermere students prepare food with grade 4-7 students at elementary feeder schools. Cafeteria Head Ms. Wong tries to order most food locally, and Chef Larry picks what's ready from the garden, especially from the perennial herb garden.

Collaborations

Collaboration with Community Partners

Environmental Youth Alliance
Growing Kids Program
2011/2012 School Year

Gladstone Secondary

- Garden planning, compost, and curriculum development support.
- Bi-monthly workshop series offered to social development 9 and 12 classes in 2010/2011 and 2011/2012 school years.
- Collaborated with 2 LFS classes in second half 2010/2011 school year.
- Curriculum group work with Caroline Dixon on developing materials for grade 8 leadership class.
- Garden Fiesta group hosted a party to attract support for and attention to the school garden and garden club.
- Collaborated with LFS directed study student Leanna Kiloram in effort to support and develop the school garden club (as well as relationships to community - Cedar Cottage Neighborhood House).
- Set up and helped maintain "Indoor Garden" in school.

Britannia Secondary

- Supported Ian Marcuse from Grandview Woodlands Food Connection in collaborative work with school to build a large food garden and orchard in under-used part of schoolyard.
- Bi-monthly workshop series offered to 3 Applied Skills 8 classes and the StreetFront Program.

Windermere Secondary

- Ongoing garden/greenhouse/aquiponics support.
- 2 part "ancient grains and our current food system" workshop series delivered to Leadership 11 class.
- Collaboration on curriculum and program development with Leadership department.

Vancouver Technical Secondary

- Development and delivery of year long Permaculture Project with 2 Biology 11 classes.
- 2 part "ancient grains and our current food system" workshop series delivered to 2 Science 8 classes.
- Garden and curriculum support for Melanie Beliveau.
- Set up and helped maintain "indoor garden" in school.

David Thompson Secondary

- Coordinated Carrot Club every Thursday after school.
- Delivered 2 compost workshops to BioCycle group.

Churchill Secondary

- Delivered 3 gardening/food security workshops for leadership 11 class.
- Offered ongoing garden support to Francois Clark through school year.
- Offered some support to Francois curriculum development.

Spectrum Alternative

- Delivered 2 gardening/food security workshops to 3 classes in school.
- Provided ongoing advice and guidance for food production in school.
- Set up and helped maintain "indoor garden" in school.

Strathcona Elementary

- Ongoing support for composting and food production in school working with 2 classes and the After School Adventures program.
- Offered 4 workshops this year.
- Set up and helped maintain "indoor garden" in school.

Hastings Elementary

- Bi-monthly workshops offered in grade 2-3 class.
- Set up and helped maintain "indoor garden" in school.

Charles Dickens Annex

- Hosted thanksgiving garden celebration in school.
- Collaborate with parent community to maintain and use school food garden.

**EYA offered all of the schools seeds, plant materials, soil amendments and access to their collection of garden tools. Some spring transplants were grown with students in the school, while the EYA's Community Nursery Project provides others.*

Collaboration with Community Partners

Society Promoting Environmental Conservation School Garden Project

2011/2012 School Year

Thunderbird Elementary

- Started up new relationship with Thunderbird and secure donations for the garden.
- Started up school garden at the school.
- Built 5 - 8 foot long planter boxes with students.
- Planted boxes and start potato tubs including the entire school community.

  Engaged with community groups for summer maintenance and expansion projects.

Queen Elizabeth Elementary

- Started school wide composting and measuring of organic food waste by environmental club.
- Expanded garden to include herb garden on southside of school.
- With TEGS mini-grant, built 6 new planter boxes with QE and Grade 12 Tupper students and plant boxes.
- Continued classroom visits in 8 classrooms.
- Organized fruit tree pruning workshop and mason bee workshop for students, staff and families onsite.
- Built grow light stand for starting seedlings.
- Collaborated with UBC Civil Engineering class for irrigation feasibility study for QE garden.

Bayview Elementary

- Collaborated with UBC Botanical Gardens for donations through their Christmas tree chipping program.
- Used the proceeds to build 2 more planter boxes.
- Started perennial garden with fruit bushes.
- Built grow light stand for starting seedlings.
- Started school wide composting with grade 6/7 class.
- Continued classroom visits in 4 classrooms.

Brock Elementary

- Built 3-bin cedar composter with intermediate students and Grade 12 Tupper students.
- Started school wide composting.
- Continued classroom visits to 6 classrooms.

Kitsilano Secondary

- Organized pruning workshop for students/staff.
- Continued classroom visits for Ecology classes.

L'Ecole Bilingue

- Assisted with finding garden funding.
- Classroom visits to 2 classrooms on soils and composting.

- Helped 6 classrooms start seedlings and plant cold and warm weather crops.

Grenfell Elementary

- Assisted with fall planting.
- Facilitated spring planting and classroom visits as requested.

Public Health Association of BC

Farm to School Greater Vancouver

2011/2012 School Year

Farm to School is a school based program linking school children from Kindergarten to grade 12 with local farms. These programs close the distance between farm and fork and bring local, nutritious and sustainably produced foods into our schools. Farm to School programs are an essential component of strong, resilient, sustainable, and economically viable, regional food systems - systems that contribute to the health of people, place, and the planet.

The concept is refreshingly simple! A relationship is developed between a school and at least one local farm. Foods from the farm are grown, harvested and served up in participating schools.

Four schools from Vancouver representing very different Farm to School models were selected: Grandview Elementary - a subsidized school lunch program; Sexsmith Elementary - a classroom cooking model; Graham Bruce Elementary - a new lunch program; and Churchill Secondary – integration into a high school cafeteria.

During the Fall 2011, all four schools formed their teams, were connected with farmers, and further developed their Farm to School plans. Two schools launched in Fall 2011 and the two remaining schools launched in January 2012. As part of their launches, the schools have done plenty of creative in-school promotion of the importance of local food.

Resources are under development to support farmers to work with educators and for educators to connect with farmers, and will be made available online and in DVD format. The DVD will be included in all future printings of the Farm to School resource guide.

Collaboration with Community Partners

Sustainable Opportunities for Youth Leadership (SOYL)

Summer Program Summary

Sustainable Opportunities for Youth Leadership (SOYL) Summer Internship was piloted by the UBC Faculty of Education's Intergenerational Landed Learning Project (ILLP) in 2010 to cultivate environmental leadership skills in adolescents, promote a sustainable local food system, and advance sustainable food production through gardening at schools.

During summer 2011, the SOYL interns maintained and advanced their school gardens through construction and growing projects. From July 11. 2011 until August 19, 2011, seven Vancouver youth participated in the SOYL Internship, cultivating their leadership and gardening skills while promoting local food security and taking food production to the next level at their schools. They maintained school gardens, worked with community partners on a variety of garden related tasks and explored topics in local and organic food production, traditional food processing, equitable access and distribution, and waste management and resource renewal.

The seven youth interns, ages 13-17, represented four Vancouver Public Schools in different regions of the city:

- Britannia Secondary School
- Sir Winston Churchill Secondary School
- David Thompson Secondary School
- Vancouver Technical Secondary School

Over the course of the six week, 25 hour per week internship, the youth contributed a combined total of 800 volunteer hours in maintaining to maintaining school gardens and advancing local food systems! Through the work of SOYL interns, thousands of students and teachers at participating schools have vibrant school gardens and working compost systems in which to learn, grow food, and participate in a more sustainable future. In addition, 800 disadvantaged people living in the downtown east side ate healthy meals through SOYL donations to the Food Bank and meals prepared for the Portland Hotel Society, and 20 disabled gardeners now have wheelchair access to a beautiful farm.

More information and photos from the summer can be found on our Blog http://soylprogram.wordpress.com/

The SOYL (Sustainable Opportunities in Youth Leadership) Mentorship program 2011-2012 was the second installment of a pilot project to partner undergraduate students from UBC's Faculty of Land and Food Systems with secondary students in the Vancouver School Board in a mentor-like relationship with a focus on learning about sustainable food systems and developing leadership skills in both groups. This program is an extension of the successful SOYL summer program for secondary students, which is run by the Landed Learning Project out of the Faculty of Education, in partnership with the Think & Eat Green @ School project out of the Faculty of Land and Food Systems.

For the 2011-2012 year 7 undergraduate students from the Faculty of Land and Food Systems worked with a number of youth from multiple VSB schools to develop their leadership skills and training in topics related to sustainable food systems. Five workshops were given to youth on a variety of topics including seed-saving, public speaking, connecting cafeterias and school gardens, group visioning processes, and springtime garden preparation.

VSB schools whose students were involved included: Point Grey Secondary, David Thompson Secondary School, Vancouver Technical Secondary School, Sir Winston Churchill Secondary School, Britannia Secondary School and Magee Secondary School. Crofton House students and a student group, Get It Done!, representing multiple secondary schools were also involved.

Orchard Garden

Located behind the Macmillan building, The Orchard Garden is a ¼ acre organic market garden and outdoor classroom providing collaborative, hands-on, immersive, and experimental learning opportunities for UBCV students, faculty and staff as well as current VSB teachers. We aim to cultivate knowledge and confidence in the practice of urban organic food production and enhanced teacher education. The Orchard Garden began as a directed studies project in 2005 and continues to be student-initiated and student-led through the Faculties of Land and Food Systems and Education.

Local, National and International Collaboration

Local collaborations

Faculty of Land and Food Systems

We have secured the ongoing involvement of all co-investigators of the Faculty and a new faculty member has joined as co-investigator, totaling now 7 Faculty members plus the Director of the Faculty's Learning Centre. Both have also joined the Think&EatGreen@School Coordinating Committee.

- The most important vehicle of collaboration in the faculty are the Working Groups, in which Faculty members are deployed and actively involved.
- The Dean of the Faculty is regularly informed and is a strong supporter of the project.

Faculty of Education (FoEd)

- Four Faculty members of Faculty of Education at UBC are involved as Co-Investigators and one of them leads the Curriculum and Pedagogy Working Group.
- The active presence of our project in the schools (36) has in turn strengthened the presence of the Faculty of Education in the Schools.
- The Project supported a successful application of a team of Co-Investigators in our Project from the FoEd to a Teaching and Learning Excellence Fund in support of the Orchard Garden that will be providing both *in situ* learning opportunities for participants in Project's professional development activities and in the Summer Institute, while providing produce for the Institute's meals.
- A team of Co-Investigators in our Project from the FoEd and the Principal Investigator co-applied to a Metro Van grant. Results are pending.
- The Curriculum and Pedagogy Working Group, which includes Co-Investigators from LFS and FoEd has been meeting once a month and has been implementing its research agenda accordingly.

UBC University Sustainability Initiative

- The UBC University Sustainability Initiative through the USI Teaching and Learning Office has expressed an ongoing interest in the unfolding of our Project. Its Associate Director, Dr. Jean Marcus, is an active member of Think&EatGreen@School Advisory Committee.

Vancouver School Board (VSB)

- As Partner organization and co-founding member of Think&Green@School, the two VSB-based co-investigators have been involved in all the Project activities, participated in all whole team meetings, and met regularly with the principal investigator and other members of the Coordinating Committee to discuss the key directions of the Project and make the collaboration not just formally working but based on relationships of mutual trust. The retiring Associate Superintendent of Learning Services, and co-investigator, Valerie Overgaard, will join now the Project's Advisory Committee and a new member of the VSB will join the Project as a co-investigator.
- The VSB Sustainability Coordinator has been an active member of the Project's Policy and Climate Change Working group. As a result our Project has been a stakeholder in the development of the Consultations on school food policy of the VSB.

Advisory Committee

- The Advisory Committee of the Project had its second annual meeting on March 23, 2012 and received a complete report of the Project's activities during the year. This body of distinguished scholars and citizens representing academia, environmental and food organizations and parents expressed full satisfaction with the progress of the project and actively addressed assiduous questions to our Coordinating Committee. An important addition to this group was the incorporation of a chairperson of an VSB school Parent Advisory Council.

National Collaborations

- Our Project participated in the drafting of the Civil Society Submission to the UN Special Rapporteur on the Right to Food in preparation for his May 2012 visit to Canada.
- Our Project participated in a joint presentation of the three Canadian CURA projects centered on food at the Canadian Association of Food Studies on May 27, 2012. The presentation was entitled "Navigating the Fork: Overcoming institutional and other systemic barriers to university-community partnership in food justice research."

International Collaborations

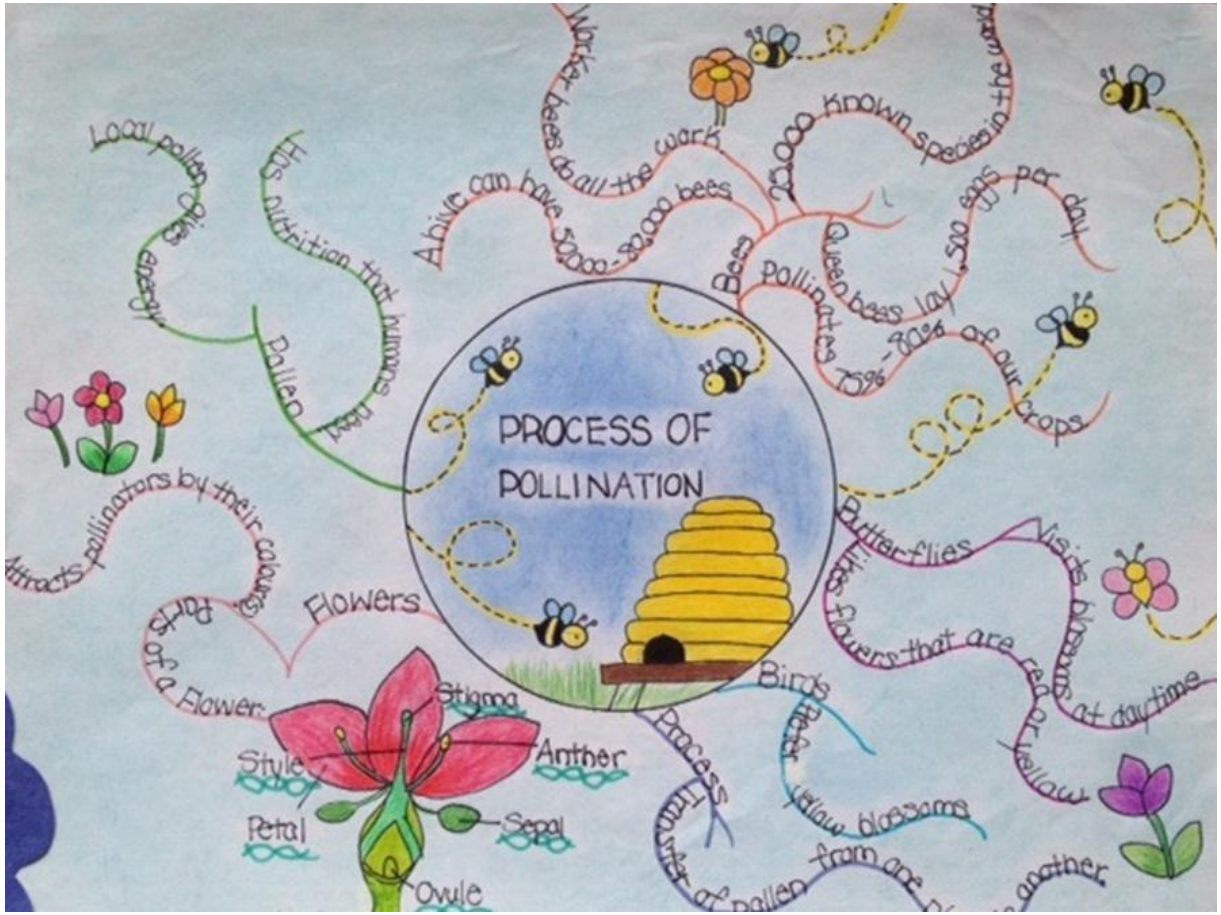
- A successful CIHR research grant application was received through a Think&EatGreen@School collaboration with a team from the School of Population and Public Health and Ecuadorian Universities and agri-food organizations for a Research Program named "Think, Eat and Grow Green Globally" (TEG3) funding application to CIHR ($1,9 million for five years).
- Following two formal visits from a Chilean professor from the Faculty of Agronomy at the Pontifical Catholic University of Chile, Bernardita Ramirez was awarded a grant for a community-based research project that follows the model of our project, with 10 public schools involved, school and family orchard gardens and professional development activities modeled on our Summer Institute. An ongoing Canadian-Chilean collaboration is currently under consideration and will possibly evolve into a joint project.

Monitoring & Evaluation

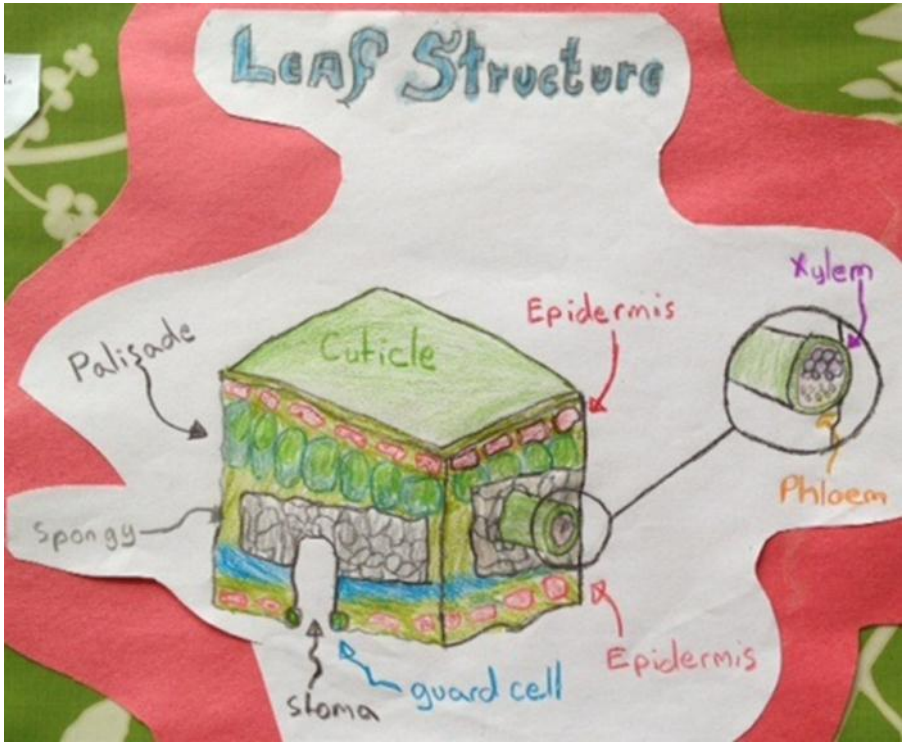
Tyee Collaborative Teacher Inquiry Group

A Teacher Collaborative Inquiry Group was established in September 2011 at Tyee Elementary School. This initiative was undertaken as a pilot project to research a central concern for Think&EatGreen@School: What are the best methods for increasing food and sustainability literacy amongst schoolteachers and students? The inquiry process involves a group of faculty and graduate students from the Curriculum and Pedagogy Working Group meeting with teachers at Tyee to facilitate and study how to support teachers in integrating the theme of food, health and environment in their practices across the curriculum. Participants include: 12 teachers from Tyee, one PAC parent representative, two faculty members from the Think&EatGreen@School project (Jolie Mayer-Smith & Sandra Scott), and two graduate research assistants (Chessa Adsit-Morris & Jamie Schaap). Meetings happen once/month for 45 minutes at Tyee, and are recorded and transcribed to produce detailed records of school initiatives and issues. Garden based initiatives in progress at Tyee include:

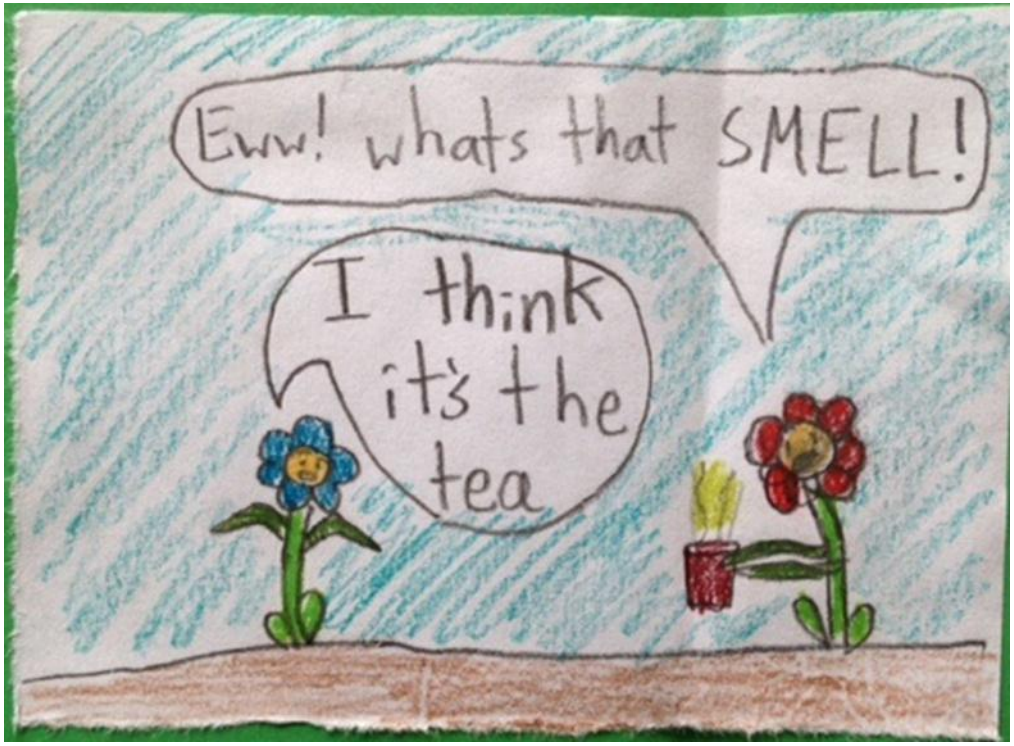
- Establishment of new garden plots through a proposal submitted to the VSB Grounds in December 2011.
- Installation of a new comprehensive composting system capable of handling all of the school's food waste.
- Installation of a rainwater collection barrel to use during the dry summer months.



A pollination web done by a grade 4/5 student in Debbie Adam's class.



A diagram of the biological structure of a leaf completed by a student from Tyee.



A cartoon about making compost tea.

- Participation in the BC Agriculture in the Classroom Spuds in Tubs program.
- Establishment of an indoor planting structure that can be used year-round and shared by various classrooms.
- Participation in the BC School Fruit and Vegetable Nutritional Program.

Research will look at how these initiatives are being integrated into school and classroom activities.

Schools in Transition Study Design

As part of a study on Schools in Transition towards the goals of the Think&EatGreen@School project, a list of local heroes involved in school food system sustainability initiatives in Vancouver is being compiled. Individuals on the list will be interviewed in order to capture lessons learned from their experiences and disseminate their stories to a wider audience.

The second part of the study is a document that reviews three specific examples of integrative food systems education initiatives: The Edible Schoolyard in Berkeley, CA; The Landed Learning Project in Vancouver, BC; and the Edmunds Middle School taste tests in Burlington, VT. It also discusses two alternative education models, the Waldorf and Montessori approaches, which are well situated to significantly contribute to the picture of an integrative food systems education model. This review was completed as part of the Think & Eat Green @ School project, which has the goal of supporting efforts to reconnect public school communities with the sources of their food in order to support food sustainability and food security in the city of Vancouver, BC.

Monitoring & Evaluation

By looking in-depth at these case studies, the document addresses several factors that contribute to long-term success of each models implementation that can be applied to other contexts. These factors are the following:

- Underlying educational purpose.
- Involving students in decision-making, space creation, and real work as a pedagogical practice.
- Using beauty as a means of communicating care and respect to students.
- Utilizing an integrative approach to food systems education funding committed, *compensated* staff.
- A culture of community support.
- And, appropriate size and pace of program development.

School Food Environment Assessment Tool (SFEAT)

To inform the collaborative work of the Think&EatGreen@School project, we developed the School Food Environment Assessment Tools (SFEAT). These tools are helping us learn about the food-related activities, policies and initiatives already underway in Vancouver schools and where future efforts could be focused.

Objectives:

- To gain a baseline understanding of the food environments in Vancouver schools.
- To better understand the needs, interests and challenges of Think&EatGreen school partners.
- To develop indicators to assess where we are making an impact as the project progresses.

How many schools participated in the 2011-2012 school year?

- 9 secondary schools
- 12 elementary schools

How were the data collected and analyzed?

- In November 2011, UBC students from LFS 250 and LFS 350 visited schools after being trained on SFEAT procedures.
- Data were provided by school administrators, food service staff and teachers.
- Additional information was gathered through visits to cafeterias, school stores and gardens and several other sites were food is available.

We are analyzing the data by focusing on six key areas:

1. Gardens and places where food is growing.
2. Composting programs.
3. Availability of healthy food.
4. Availability of environmentally sustainable food.
5. Integration of food-related activities into the classroom and teaching activities.
6. Development of links between food-related initiatives with the surrounding community.

Reflections:

- Many schools have several food-related initiatives up and running.
- There are many opportunities to collaborate with schools interested in developing healthy, environmentally sustainable school food systems.
- Next steps involve further consultation to identify priority areas of action and strategies to increase intensity of engagement with all aspects of the food cycle.

Individual Eating Assessment Tool (I-EAT)

To better understand what and where students in Vancouver schools eat and how students' food

choices are influenced by their school food environments, we have been conducting surveys with grade 6, 7 and 8 students across Vancouver. We developed a web-based survey tool that is now known as the "I-EAT" – the Individual Eating Assessment Tool.

Objectives:

The IEAT tool will provide a deeper understanding of:

- Where, when and how often students procure and consume food on school days.
- The frequency of consuming fruits and vegetables, sugar sweetened beverages, processed snack foods, low fat milk and whole grain foods on school days.
- Students' knowledge, self-efficacy and attitudes related to healthy and sustainable eating and food preparation.
- How participation in and level of engagement with school food programs (including Think&EatGreen@School projects) is associated with students' knowledge, attitudes or practices related to food.

How many schools participated in 2012?

As of June 2012, 26 schools and over 990 students participated in the I-EAT survey.

What will we do next?

Our team of researchers and graduate students are eager to start analyzing the data to better understand what shapes food practices on school days. We will share our key findings with schools, the academic community and Think&EatGreen@School partners as soon as we can.

We thank all of the teachers, administrators and students who have helped make the IEAT data collection a success this year!

Monitoring & Evaluation

VSB Organic Waste Management Initiative

In collaboration with teachers, students, and the VSB Sustainability Coordinator, Think&EatGreen@School has been assessing the needs of teachers and students in developing and maintaining school wide compost collection programs. Necessitated by Metro Vancouver's Integrated Solid Waste Resource Management Plan, the VSB will have to sort all organics from it s waste stream come 2015. In order to support this transition, Think&EatGreen@School is developing a comprehensive resource with information about composting in schools, a short video detailing how and why to compost in schools, as well as short, engaging presentations that can be used by students and teachers to present the importance of composting to others. Interviews and collaboration with student and teacher leaders from David Thompson, Britannia and Windermere Secondary and Strathcona and Queen Elizabeth Elementary have helped craft and develop this evolving school resource. It has been interesting to note that every school has witnessed a profound behaviour change in their schools when students and teachers are shown what happens to their organic waste when it is properly composted. This observation has led us to recommend small on-site composting programs as important educational tools for encouraging and maintaining larger compost collection programs in Vancouver schools.

Focus on Food

'Focus on Food' is the Master's Thesis research project of Think&EatGreen@School Graduate Research Assistant (GRA) Stephanie Shulhan.

The target of the 'Focus on Food' research project is to engage roughly 60 grade 9 to 11 students in small focus group discussions about what is most important to them about food; their opinions and experiences regarding certain food choices and lifestyles; what types of food students tend to eat while at school, and why this is the case. The project provides space for students to give input about the school's food environment, and to share their ideas about the influence of peers, culture, norms, gender, cost, convenience, parents, and values like sustainability and health on the way that they as students eat. This feedback will help the researchers, teachers and practitioners involved with Think&EatGreen@School to get a better idea of what it is like for students to navigate the food system on a day-to-day basis while at school. Students from Windermere, David Thompson, Sir Winston Churchill, and Sir Charles Tupper have participated in focus group discussion meetings where they ate together, photographed their food, and discussed ideas with each other and with UBC researchers. All the students involved have given fantastic input though these focus groups. Their participation, the coordination of the Project's Co-Investigator Sarah Carten, and the help of wonderful teachers, administrators, and staff that have made the focus groups possible, is hugely appreciated!

School Garden Soil Assessment

Victoria Witt (Supervisor: Art Bomke)

Victoria's report provides an evaluation of current soil conditions in raised bed gardens of six schools across the city of Vancouver:

1. Gladstone Secondary
2. Grandview Elementary
3. Kitsilano Secondary
4. Queen Elizabeth Elementary
5. Vancouver Technical Secondary
6. Windermere Secondary.

Soil samples were taken from each of the schools' gardens, sent for testing at Pacific Soil Analysis Inc. (PSAI), and analyses of those soil

tests are discussed in this report. The goals of this project and report were to collect soil samples from the school gardens; obtain site history through school garden contacts; have soils samples tested; interpret soil tests; make recommendations based on inferences of soils samples; and use collected data from the University of British Columbia Farm (UBC Farm) and Land and Food Systems Orchard Garden (LFS OG) as local comparatives. Methods of analysis include soil sampling techniques and data collection, and soil analysis techniques. The chemical analyses performed at the PSAI include: pH; buffered pH (BpH); electrical conductivity (est. E.C.); organic matter (OM), and total nitrogen percentages; available macro and micronutrients: phosphorus (P), potassium (K), calcium (Ca), magnesium (Mg), copper (Cu), zinc (Zn), iron (Fe), manganese (Mn), and boron (B).

> *"The Soil must be kept in good health if the animal is to remain in good health. The same is true of man. Soil science is the foundation of protective medicine, the medicine of tomorrow."*
>
> *- Andre Voisin*

This project and the related findings are meant to contribute to a solid garden history for these selected six schools to provide base soil test levels which garden managers can use to make management decisions. A brief soil history of each school site is also given for readers to better understand how soil is formed, how it works as a growing medium, and to let garden managers determine site locations based on possible soil contamination and use of native versus imported manufactured soils. Limitations of this report are that it only provides a window into the soil site-specific conditions in spring 2011, and testing will need to be done regularly on both the soil and plant tissue to monitor nutrient levels. Also, there is not enough data for adequate levels of some soil nutrients for the Vancouver region to make appropriate recommendations for, thus plant tissue testing can be done if crops show signs of inadequate growth. The report finds the soil of each school garden to be healthy and have only minor unique adjustments to become a balanced growing agroecosystem. Many of the activities required to maintain soil health in the gardens can be incorporated into school curricula.

Directed Studies Work

A directed study was conducted by Clifton Chin, a 4th year Nutrition student investigating the influences and impacts of physical built high school environments as a contributing factor to selecting a preferred dining location. Even with the availability of sustainable healthy food options, if the spatial layout and design of a school cafeteria do not appeal to students, they are less likely to eat there. This study setting is the cafeteria at Gladstone Secondary, where students were recruited for a focus group discussion examining their preferred lunch location (s), on and off campus. The discussion asked students what activities they engaged in during lunch period apart from consuming lunch, where they spent their lunch period, and why might they preferred that given location. These series of focus group questions allowed us to infer and identify built environmental elements that would facilitate some of the activities that students engaged in during lunch period. Each student identified a variety of interior design elements that influence her in their selecting a

Monitoring & Evaluation

dining location. However a common theme that arose in the focus group was the need for cafeterias to facilitate and support the various size and numbers of students in a high school social group. It is hoped that modification to the current built environment of Gladstone's cafeteria can be made so that students will be inclined to spend lunch period there. This is the preferred outcome as school cafeterias will have sustainable healthier food options available as opposed to off campus food service outlets like fast food restaurants where student have access to energy dense, low nutrient foods. Modification to built environments will be another opportunity to support students in their consumption of healthy sustainable foods and contribute to improvements to overall health.

Think, Eat and Grow Green Globally (TEG3)

As indicated above in the section on Collaborations, four TEGS Co-Investigators including the Principal Investigator were co-applicant in a successful CIHR research grant application in collaboration with a team of the School of Population and Public Health and Ecuadorian universities and Non-Government Organizations and a team from Simon Fraser University and the University of Toronto, for a Research Program named "Think, Eat and Grow Green Globally" (TEG3) funding application to Canadian Institute of Health Research. The $1.9 million grant expands Think@EatGreen@School into a research program that examines the effects of pesticides exposure to banana workers in Ecuador and grape pickers in BC's Okanagan Valley; healthy eating in schools in Vancouver and in Ecuador and the changing livelihoods among indigenous communities in the Andes and rural Canada.


roadway

Knowledge Mobilization Activities

Refereed Publications

- Rojas, A., Valley, W., Mansfield, B., Orrego, E., Chapman, G and Harlap, Y. 2011. Towards Food System Sustainability through School Food System Change: Think&EatGreen@School and the making of a community-university research alliance. Sustainability Open Access Journal. *Sustainability* 2011, 3, 763-788. http://www.mdpi.com/2071-1050/3/5/763/
- Rojas, A., Valley, W. and Sipos, Y. 2012: From Inquiry to Engagement: A Reflection on 10 Years of Community-Based Learning and Research on Food Security and Sustainability at the University of British Columbia. *Journal of Higher Education Outreach and Engagement,* Volume 16, Number 1, p. 165-181, 2012. http://thinkeatgreen.ca/reports-publications/published-research/

Conference Presentations

- Canadian Association of Food Studies Annual Meeting, Fredericton. (May 2011). Chapman, G & Rojas, A. "Exploring and creating change in school food systems: Towards healthy, sustainable eating in Vancouver schools."
- Canadian Association of Food Studies Annual Meeting, Fredericton. (May 2011). Mansfield, B. "Food Policy for the Development of Sustainable Food Systems."
- Eco-Systemic Approach to Food Security and Sustainability. University of Machala, Ecuador, (August 26, 2011). Rojas, A. "Participatory Action Research as a pedagogical and transformative method towards the sustainability of local food systems."
- Food for All: A Conference on Poverty and Food Justice. University of British Columbia, Amnesty International. (October 15, 2011). Spiegel, J; Mansfield, B and Rojas. A. "Think, Eat, and Grow Green Globally. A community-based action research initiative in Ecuador and Canada."
- Global Health Conference, Montreal, (November 13-15, 2011). Spiegel, J; Breihl, J. Rojas, A. Orrego, E. Yassi, A. "Community-Engaged Scholarship: Critical Junctures in Research, Practice and Policy."
- Sustainability: 8th International Conference on Environmental, Cultural, Economic and Social Sustainability. Vancouver (January 10-12, 2012). Rojas, A & Valley, W. "The Ecology of Knowledge: Steps towards the Reintegration of Knowledge."
- Sustainability: 8th International Conference on Environmental, Cultural, Economic and Social Sustainability. Vancouver (January 10-12, 2012). Rojas, A; Valley, Chapman, G; Orrego, E. Mansfield, B. "Planting the Seeds of a Sustainable Food System in Vancouver Public School."
- Association of American Geographers Annual Meeting, New York City (February 2012) Black, J. "Examining the Food Environment in Vancouver Schools: Lessons Learned from the Think&EatGreen@School Program.
- Annual Meeting of the American Educational Research Association. Vancouver, BC, April 13, 2012. Mayer-Smith, J. "Researching slow pedagogy in the garden" Presentation for Offsite Symposium: From Knowing to Growing: Garden-Based Education on the UBC Campus.
- Annual Meeting of the American Educational Research Association. Vancouver, BC, April 15, 2012. Gaylie, V. "Eco-Poetic Inquiry: The Poetry of Place."
- Annual Meeting of the American Educational Research Association. Vancouver, BC, April 16, 2012. Gaylie, V. "Environmental Learning and Teacher Education." In Symposium: A Dialogue on Environmental Learning and Experience.
- Canadian Association of Food Studies Annual Meeting, Waterloo, May 25-28, 2012. Chapman, G. & Rojas. A. "Healthfulness and

sustainability of school food environments in Vancouver: Findings from School Food Environment Assessments."

- Canadian Association of Food Studies Annual Meeting, Waterloo, May 25-28, 2012. McLachlan, S.M., Rojas, A., Williams, P., Gillis, D. & Anderson, C. Special Session. "Overcoming Institutional and Other Systemic Barriers to University-Community Partnerships in Food Justice Research."
- Systems View of Life, Center for Ecoliteracy, Berkeley, CA, June 20-22, 2012. Mansfield, B. "Applying Food Systems Thinking for Ecologically-Integrated Approaches to Food Policy in Cities."
- Systems View of Life, Center for Ecoliteracy, Berkeley, CA, June 20-22, 2012. Valley, W. "Cultivating Systems Learners: The Role of Epistemic and Ontological Cognitive Development."
- International Baccalaureate Student conference, University of British Columbia, Vancouver (July 25, 2012). Adsit-Morris, C; Stephens, T; Ahmadi, N and Labow, I. "Towards sustainable and healthy school food systems in Vancouver: The Think&EatGreen@School Project: A student-led interactive workshop presentation of Think&EatGreen@School Project's first two years."
- International Baccalaureate Student conference, University of British Columbia, Vancouver (July 25, 2012). Golob, S. "The Hungry Games."

Reports

- School Activity Report 2011. http://thinkeatgreen.ca/reports-publications/school-reports/
- "Promoting Healthy Eating and Sustainable Local Food in BC: An Action Framework for Public Institutions – Health Authorities, Educational Institutions, Childcare Facilities, and Local Governments" in partnership with Provincial Health Services Authority, Vancouver Coastal Health and the Union of BC Municipalities. June 2011. - http://www.phsa.ca/NR/rdonlyres/6F0B568E-D9FA-4BD0-843F-FD5FE6E031CC/0/FoodActionFramework_FINAL_Dec2011.pdf
- Milestone Report, 2011. http://thinkeatgreen.ca/reports-publications/milestone-report/
- Analysis of Food Environments Surrounding BC Schools: Baseline Report and the Think&EatGreen@School Program. Jennifer Black. Webinar hosted by BC Youth Excel: November 29 2011.
- Think&EatGreen@School Project Annual Report, 2012. September 2012, Vancouver.

Public Presentations

- Carten, S. 2011. How food choices impact the environment and how to reduce the carbon footprint of school lunches. April 11, 2011.
- Rojas, A. 2011. Think&EatGreen@School. Community University Collaborative Project on Food Security in Vancouver Schools and their Institutional Adaptations to Climate Change. Faculty of Education, UBC. April 28, 2011.
- Rojas, A. 2011. Keynote speech, Think&EatGreen@School First Summer Institute, Vancouver, UBC, July 3, 2011.
- Mayer-Smith, J. 2011. From the field to the classroom: Lesson on integrating food, gardening and environment across the curriculum from Intergenerational Landed Learning. Presentation and Workshop at Think&EatGreen@School First Summer Institute, Vancouver, UBC, July 4, 2011.
- Mayer-Smith, J. & Scott, S. 2011. Exploring Science Curriculum for Making Connections

Knowledge Mobilization Activities

across the Food Cycle. Presentaion at Think&EatGreen@School First Summer Institute, Vancouver, UBC, July 5, 2011.

- Workshops at 2011 Think&EatGreen@School Summer Institute, July 4-6, 2011.
- Rojas, A. 2011. Ecosystemic Approach to Food Security and Sustainability. Participatory Action Research as a pedagogical and transformative method towards the sustainability of local food systems. University of Machala, Ecuador, August 26, 2011.
- Rojas, A. 2011. Engaging Sustainability in BC Education. Pacific Institute for Climate Change Solutions, PICS Public Lecture (videorecorded), September 14, 2011. Simon Fraser University.
- Rojas, A. 2011. UBC in the Community. Making every school a space of hope: Think&EatGreen@School. UBC President's Capital Campaign Symposium. Start an Evolution. Panel presentation. Vancouver Convention Centre. October 1, 2011.
- Rojas, A. 2011. Spaces of Hope in the protection of bio-diversity. Inauguration keynote speech. Congress for the Protection of Private Protected Wilderness Areas in Chile. (Espacios de Esperanza en la proteccion de la bio-diversidad Congreso de Proteccion de Areas Privadas Protegidas. Discurso Inaugural), Puerto Montt, Chile, October 19, 2011.
- Rojas, A. 2011. The Think&EatGreen@School Project in Vancouver Canada. Agroecology Movement of Chile. (MACH Chile, Movimiento Agoecologico de Chile), Puerto Montt. October 20, 2011.
- Rojas, 2011. Dialogue with student leaders of universities Puerto Montt and San Sebastian. October 23, 2011.
- Rojas, A. 2011. Think&EatGreen@School Project Overview of the Year. Project Advisory Committee, November 22, 2011.
- Black, J. Analysis of Food Environments Surrounding BC Schools: Baseline Report and the Think&EatGreen@School Program. BC Youth Excel Webinar. November 29, 2011.
- Rojas. A. 2011. Transforming education from powerlessness to hope through Learning with Life. (Transformar la Educacion desde la impotencia a l;a esperanza a traves del Aprendizaje con la Vida.) Quito, Ecuador, Universidad Andina Simon Bolivar, December, 2011.
- Rojas, A. Planting the seeds of a sustainable food system in Vancouver Schools. Nootka Elementary School. January 12, 2012.
- Rojas, A. 2012. Overview of the 2011-2 Year of the Think&EatGreen@School Project. Annual whole team meeting Think&EatGreen@School. Vancouver School Board. February 4, 2012.
- Drewes, E. 2012. "SkillShare: Preparing for the Spring Harvest" Hands-on Workshop with VSB teachers, UBC, March 3, 2012.
- Rojas, A. 2012. Making every school a space of hope. The Think&EatGreen@School Project. UBC, Humanities 101. March 6, 2012.
- Mansfield, B. 2012. "Farm to School Tour," Farm to Cafeteria Conference, Richmond, BC. March 9, 2012.
- Golob, S. 2012. "Farm to University Tour," Farm to Cafeteria Conference, Richmond, BC. March 9, 2012.
- Carten, S.; Mansfield, B.; Millsip, K. and Valley, W. 2012. "Transforming School Food Systems: Living Examples from Vancouver and the Think&EatGreen@School Project," Farm to Cafeteria Conference, Richmond, BC. March 10, 2012.
- Golob, S. 2012. "UBC's Place Vanier: Journey of Growth," Farm to Cafeteria Conference, Richmond, BC. March 10, 2012.
- Rojas, A.; Chapman, G.; Orrego, E.; Mansfield, B.; Valley, W.; Black, J.; Lomas, C. 2012.

"Think&EatGreen@School Project Progress Report and Year Overview." Annual Meeting, Project's Advisory Committee. UBC, March 23, 2012.

- Gaylie, V. Poetry reading with Veronica (& The Cupcakes) at The Vancouver Art Gallery, 750 Hornby Street. Poetry reading and community food-pedagogy. Arts Based Education Research (ABER and ARTS Based Collective Research) Reception, April 14, 2012.
- Workshops at 2012 Think&EatGreen@School Summer Institute, July 3-5, 2012.

Video and Media Presentations

- Think&EatGreen@School. TEACHER, Jan/Feb 2011. Page 20.
- Parent Pro/Being Green. CBC On the Coast. Michelle Eliot's Parent Project Interview with Alejandro Rojas, Principal Investigator of Think&EatGreen@School at UBC's Faculty of Land and Food Systems. Tuesday February 8, 2011 http://www.cbc.ca/onthecoast/episodes/2011/02/08/parent-projectbeing-green/
- Rojas, A. 2011. Engaging Sustainability in BC Education. Pacific Institute for Climate Change Solutions, PICS Public Lecture September 14. Simon Fraser University. http://www.sfu.ca/tlcvan/clients/pics/2011-09-14_VP_Research_PICS_61417/
- Canadian Association of Food Studies, News-letter, Fall/Winter 2011. "Vancouver K-12 schools are getting a leg up in food and sustainability issues thanks to the Think&EatGreen@School Project." Page 8.
- High school garden project grows into full-scale urban farm. TEACHER, Jan/Feb 2012. Page 20.
- Fresh Roots featured in the Vancouver Sun: "Vancouver Technical School's Market Garden to be a Canadian first" The Vancouver Sun, June 13, 2012, http://www.vancouversun.com/life/Vancouver+Technical+school+market+garden+Canadian+first/6776460/story.html
- Food for Thought: Farm to School Program. Vancouver School Board. 2011 http://wildfire.gigya.com/facebook/preview.aspx?fb_sig_api_key=f7667e9ebccf2157d6f15f991a5e3ce9&wid=545428281&p=bHQ9MTMwNjk3MTU4NTI1MiZwdD*xMzA2OTcxNTg3ODQxJnA9JmQ9Jm49ZmFjZWJvb2smZz*yJm89MDI2YmM3YWVjMTZhNDE1MTk*ZDUxYjkxYjgxN2M3MmYmb2Y9MA==&s=1
- Good Green News: Vancouver Urban Gardens. DreamRider Theatre. 2011 http://www.youtube.com/watch?v=dPD3BogYAKw&feature=relmfu
- "Urban Farmers Hope to Grow in School District." The Vancouver Courier. January 4, 2012 http://www.vancourier.com/life/Urban+farmers+hope+grow+school+district/5943963/story.htm
- "Vancity Awards Funds To Innovative Students and Graduates Who Developed A Business That Makes Social and Environmental Impacts in British Columbia". Vancity. April 26, 2012.

University of British Columbia
Faculty of Land and Food Systems
107a-2357 Main Mall
Vancouver, BC Canada V6T 1Z4

Tel: 604 822 9986
Email: info@thinkeatgreen.ca
Web: www.thinkeatgreen.ca