

Annual Report

2012—2013



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Land and Food Systems

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A Year in Numbers



\$40 000

Amount of support to school-generated food system transformation through our Small Grants program since 2011.



44

Number of schools involved in Think&EatGreen@School Project in 2012-2013.



369

Number of UBC undergraduate students who worked directly with VSB schools in 2012-2013 as part of academic community-based experiential learning projects.



950

VSB students participated in the IEAT research survey designed to document what students in grades 5-8 eat and drink during the school day and what percentage of them is currently participating in school food or nutrition related activities.



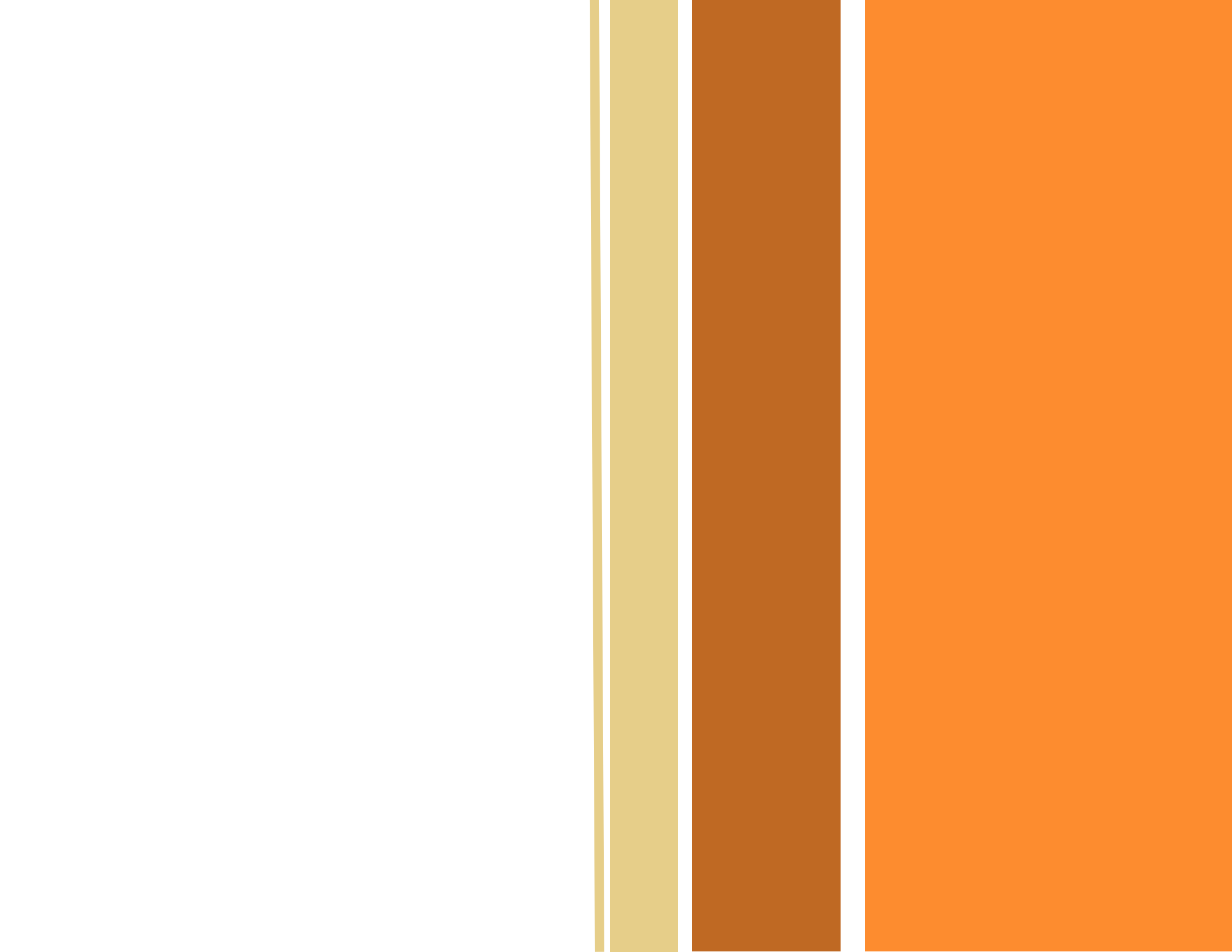
9 000

Estimate number of Red Wiggler worms with a new home in a VSB classroom through our undergraduate-led, vermicomposting bin workshops.



100

Pounds is the estimated weight of the garlic harvested from school gardens that participated in our undergraduate-led, garlic planting workshop.





1

MISSION AND OBJECTIVES

Think&EatGreen@School

“Learning occurred more fluidly as students were able to cross some of the boundaries that are set in the classroom.”

Stephanie Jacques—Teacher

Due to the urgency of our current situation and the need for action in implementing school food system transformation, the **mission** of the proposed research project is *to contribute theoretical understanding (knowledge creation) and practical applications (action and knowledge mobilization) in the areas of food education across the curriculum, multi-level food system changes (in production, procurement, distribution, delivery, preparation, and end products recycling/composting) that will support regional food security with an emphasis on environmental sustainability, [human health] and policy recommendations for schools.*

To achieve this mission, our project team has identified the following **objectives**:

1. Develop and evaluate food-related curricula/ activities focused on food system sustainability and institutional adaptations to climate change, grounded in a food security (Availability, Accessibility, Affordable, Appropriate, Safe, & Sustainable) paradigm;
2. Evaluate with the Vancouver School Board opportunities for policy development and adaptation to increase food security in schools, decrease environmental impacts of school food systems, and promote a sustainable regional food system;
3. Link theoretical learning to practical application to educate university, high school and elementary students, teachers, and citizens

(ourselves included) with a sound knowledge of the relationships between food security, sustainability, human health and climate change;

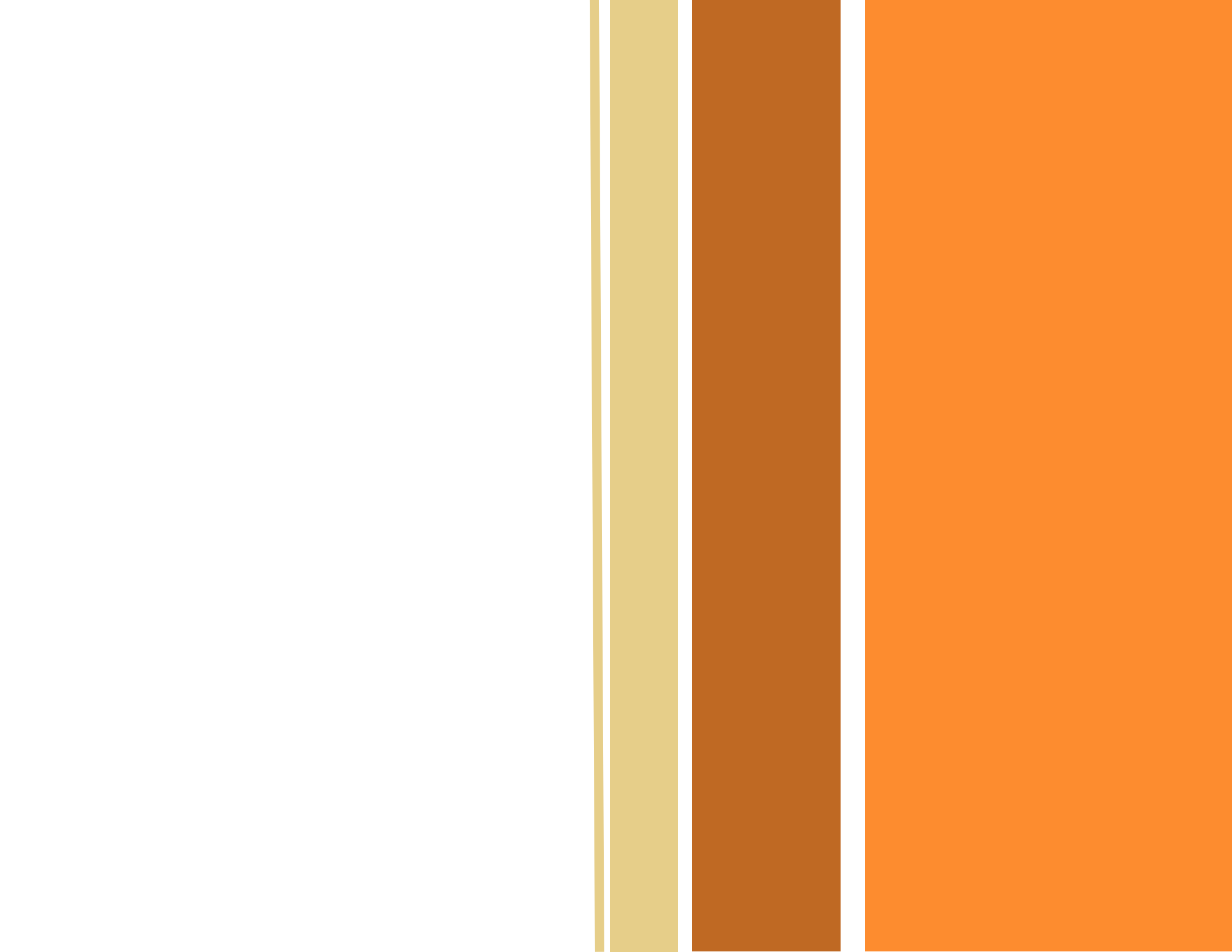
4. Pilot specific Community Impact Projects with engaged school communities and elsewhere, to investigate the adaptations needed to fulfill the above objectives;
5. Further develop the connections between community-based action research and community service learning (also referred to as community-based experiential learning) in creating community-engaged scholarship;
6. Create connections between university and community that will extend beyond this project.

Research Questions

1. What are the best methods for building, managing, sustaining, and integrating into the curriculum school vegetable gardens and fruit orchards?
2. What are the best methods for increasing food and sustainability literacy amongst schoolteachers and students?
3. How can cafeterias and other school food services be integrated in the school curriculum to provide learning opportunities for all students to obtain fundamental skills of planning, preparing, cooking and consuming healthy, nutritious and wholesome meals within an agreeable, community-enhancing and inviting physical space?

4. How can community-engaged scholarship enhance undergraduate and graduate student learning of food systems sustainability?
5. What policy changes can be developed to create a sustainable school food system and at which appropriate level (school, school board, city, province) will these changes need to take place?







2

YEAR IN REVIEW

2012—2013

1.

Mid-term report approved without criticism: Highlights from SSHRCC

One key indicator of success for our project has been the approval by the Social Sciences and Humanities Council of Canada (SSHRCC) of the Mid-Term Report (can be retrieved from <http://thinkeatgreen.ca/reports-publications/reports/>). This report provided our main funder with a detailed account of the first two and a half years of the project. SSHRCC's feedback did not contain any area of criticism and highlighted the Think&EatGreen@School Summer Institute, the Small Grant Program (a seeding program of sharing financial resources with school-initiated projects), the involvement of a high number of graduate students and the importance of their roles as key areas indicating community-engagement.

2.

Key themes of the TEGS annual meeting

On March 15, 2012, our annual whole team meeting focused on the central role of our Community Partners who are most involved in work with Vancouver schools. The remaining time was allocated to discussing and planning work along six fundamental lines of activity:

1. Research: Data Collection and Analysis
2. Summer Institute and Professional Development
3. UBC Projects in VSB Schools
4. TEGS Small Grants
5. Food Policies
6. Future Ideas and Next Steps

The above represent the unfolding of the key activities of the project, providing opportunities for more integrated work among the different working groups and partners in the project. This process, without representing a formal change in the organizational structure of the project, indicates nevertheless, an organic evolution of

forms of organizing the work required to accomplish the activities that have become more central in the project.

An important theme that surfaced in the annual meeting was the question of the future sustainability of the Think&EatGreen@School Project beyond the current funding duration. This is a theme that will be revisited in other events of the project during the coming year, to understand the institutional capacity building necessary to ensure the continuation of the project beyond its current funding base. The team members confirmed and renewed their commitment to continue working together in the future and exchanged preliminary ideas about possible new joint grant applications. The key challenges come from deepening of community engagement and in the question of sustainability of the project. Increasing and deepening **the integration of the whole school food system** (production, preparation, consumption,

recycling/composting, celebration and school food policies) into learning experiences will require new levels of coordination and planning to fully achieve the vision and key objectives of Think&EatGreen@School.

3.

Important advances in research and dissemination work

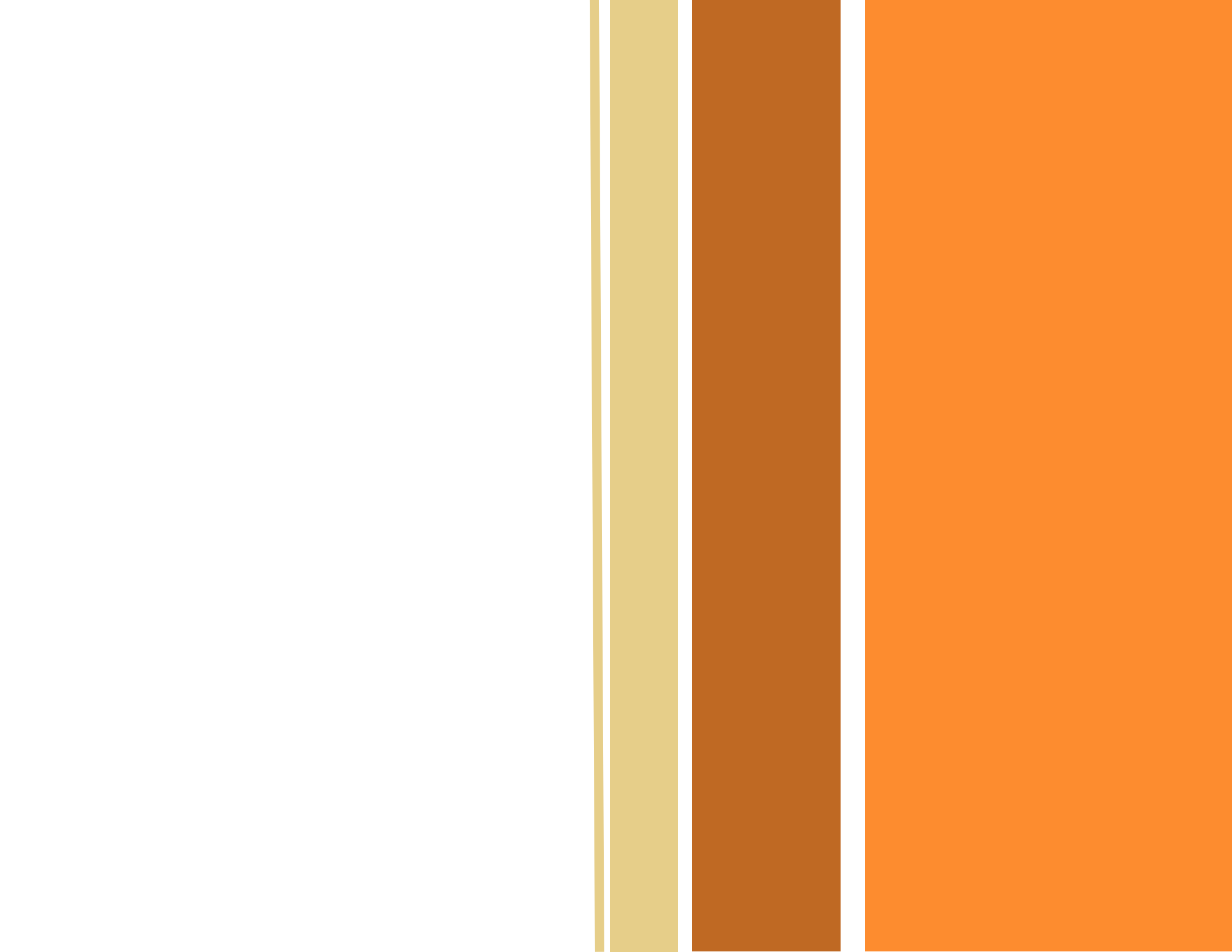
Although our Mid-Term Report and the previous Annual Reports stressed the important scope and impacts of Think&EatGreen@School activities in the school communities through concrete, high impact projects, the Coordinating Committee was aware of the need to strengthen the Research components of our work (action-oriented activities were well established, but academic reporting has been relatively low) and to demonstrate to school and academic communities and the general public that new knowledge is being produced. This is not a serious shortcoming because we are only midway in the duration of the project.

2012-2013 marked a significant progress and now TEGS has significant databases from several research initiatives that have completed the data collection stage and are in diverse stages of data systematization and interpretation. To make further progress in research a special Workshop on Data Integration and Dissemination

took place in late May of 2013 that engaged the UBC-based team in improving planning of research and academic dissemination.

The data bases mentioned above are: the **School Food Environment Assessment Tool (SFEAT)** which describes the availability of healthy and sustainable food in schools as well as school engagement in food based education; the **Individual Eating Assessment Tool (I-EAT)** which assesses student eating habits in grade 6, 7, and 8; the **Collaborative Inquiry Groups**, which aims to facilitate the development of new curriculum and pedagogies for integrating food system education into schools; the **School Self-Assessment Survey**, which aims to monitor the evolution of the schools that have participated in different components of the Think&EatGreen@School project; **Key Players interviews**, administered to people whose names were repeatedly identified by participants in the Think&EatGreen@School network in order to capture lessons learned from their experiences

and disseminate their stories to a wider audience; the reports from and on school initiated projects of the **Small Grants** project, made available for a second year to seed and help create incentives for the formation of school-based teams to enhance their food systems; reports produced by undergraduate student groups from **UBC Courses** involved in TEGS; the **UBC Community Learning Initiative (CLI)** surveys conducted with a number of courses that are associated with Think&EatGreen@School; Reports submitted by Teachers Candidates at the end of their involvement in TEGS-led activities of the Faculty of Education **Community Based Field (to Fork to Field) Experience**, May-June 2013; the **Inventory of Integrated Action Areas**, an ongoing integrative document that all members of the TEGS team have contributed to update; TEGS **Annual and Midterm Reports; Graduate Student Theses** (*Focus on Food* - Stephanie Shulhan's Master's research project; *Towards on Ecology of Knowledge for Cultivating Systems Thinkers* - Will Valley's PhD thesis; Brent Mansfield's Master's on Food Policy, including the process of policy change within the City of Vancouver and the Vancouver School Board; Chessa Adsit-Morris's Master's thesis on pedagogical innovations in eco-art and food system education; *Participation in School Food and Nutrition Programs: Associations with healthy and environmentally sustainable dietary outcomes among Vancouver students in Grades 6-8"* - Teya Stephen's Master's thesis; and *Examining the Associations Between Socioeconomic Status and School-Day Dietary Intake Among Vancouver Children and Adolescents* - Naseam Ahmadi's Master's thesis).





3

PRINCIPAL INVESTIGATOR'S REFLECTIONS

Expanding the Project's "Ripple Effect" and Deepening the Engagement of the Community of Learners into the Activities of the Think&EatGreen@School Project

"Students seem to respect the food more because they were involved with the production. They did not want to waste anything! Their commitment was exciting and astounding."

Christen Burrett—Teacher

Forty four VSB schools participated in several of the key lines of work of the project. 23 schools received UBC undergraduate students who worked in course-based projects jointly created with school-based teams and were delivered by undergraduate students' teams in the schools; 17 schools generated their own projects and received organizational and financial support (through TEGS Small Grants). This year, two meetings with all the recipient schools of TEGS Small Grants were held at Tyee Elementary School and David Thompson Secondary School, revealing a deepening of the school-based TEGS teams commitment to the project. Documenting and reporting of the implementation of the school-generated project and communications between Think&EatGreen@School Coordinating Committee and the Small Grant recipient schools was enhanced this year by the hiring of a staff coordinator for the Small Grants Program, which in turn contributed to the enriching of the data bases of TEGS.

The documentation through the several research activities listed above revealed that a number of schools have been moving from an initial stage of "Inquiry Schools" or "Seed Schools" (that is, schools interested in receiving TEGS action teams or accepting invitations to participate in data

collection activities) into a stage of "Engaged" or "Fruit" schools - that is, schools who are involved in several activities of Think&EatGreen@School and that have achieved some of the most complex objectives of TEGS such as the experiential integration of food systems studies into their curriculum. Although these different "stages" ("Seed or Inquiry", "Fruit or Engaged") are loose descriptors of school participation in TEGS, the availability of more formalized data will allow TEGS to further specify conceptually those designations and refine their explanatory value.

Another important aspect of the ripple effect of the project was the joint offering of the Community-Based Field (to fork to field) Experience between our TEGS team and the Faculty of Education in May-June 2013, offered to 35 Teacher Candidates with several Think&EatGreen@School schools and community partners. Over two 3-week sessions, this initiative reproduced and expanded the pedagogical model of the TEGS Summer Institute, providing the Teacher Candidates with opportunities to teach and learn experientially through the whole food cycle. The Community-Based Field (to fork to field) Experience represents a new level of collaboration between the Faculty of Education and TEGS.

Summarizing, we can say that the 2012-2013 year, the third year of the Think&EatGreen@School project can be characterized as a year of engagement, communication and clarification. We are on-track to fulfill our key objectives and vision. It has also been a year of deepening community engagement and new levels of participation of community-based and area-based partners.

Project Coordinator's Reflection: Integration

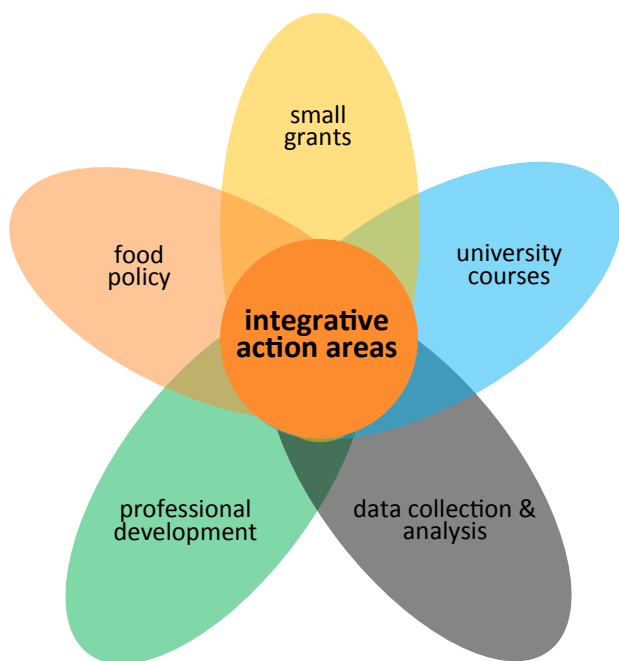


A central assumption of the Think&EatGreen@School project is that intentionally seeking integration will lead to knowledge and actions that will support change towards sustainability. An emphasis on integration requires shifting attention away from isolated parts and towards relationships and connections between the components of our project. And, at the same time, integration requires collaborating with individuals and organizations that have diverse perspectives and experiences relative to our own. The biggest challenge is:

How do we actually work together in a diverse, transdisciplinary setting (that is, a setting in which a combination of academic and community perspectives exist) when we often only work with like-minded individuals and groups?

Initially, we took a traditional approach and structured our working groups along disciplinary lines of expertise. Those qualified in food production made up the Food Production Team. Those qualified in food consumption made up the Food Consumption Team, and so forth with policy and with curriculum and pedagogy. We met in these groups in order to address the project's research objectives set out in our original proposal (see section 1 of this report). But this resulted in reproducing patterns of practice that existed in our institutions – making moving ahead and integration difficult. To address this problem, this year new groups were formed based on the activities that we carry out in schools and in the community, be they action or research oriented. In other words, the integrative nature of the project's food system activities allowed us to bring together diverse teams within the project, and move beyond our traditional lines of expertise. Taking direction from the food system activities, with patterns and relationships derived from natural processes, promotes diversity in our group membership and mutually enriching influences across disciplines.

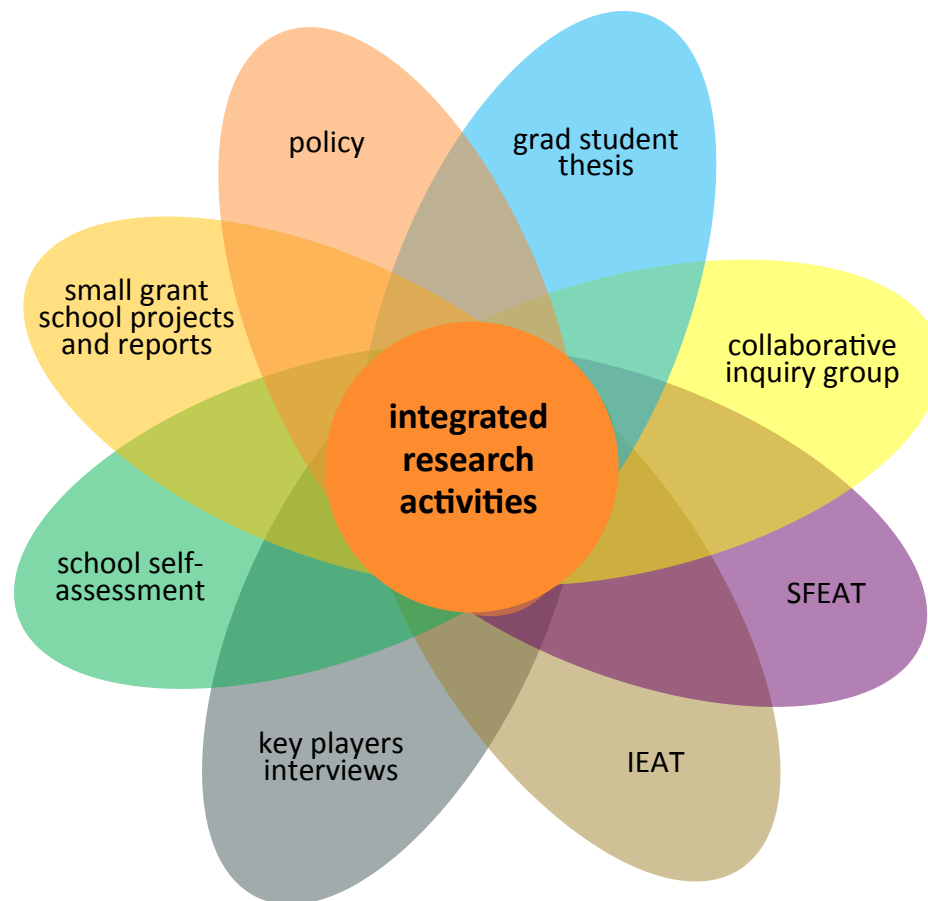
Below is a diagram with our Integrated Actions Areas (Food Policy, Small Grants, University Courses, Data Collection & Analysis, and Professional Development). These activities have required expertise from each of our 4 initial areas of specialization (consumption, production, policy, and curriculum and pedagogy) due to being inherently integrative activities.



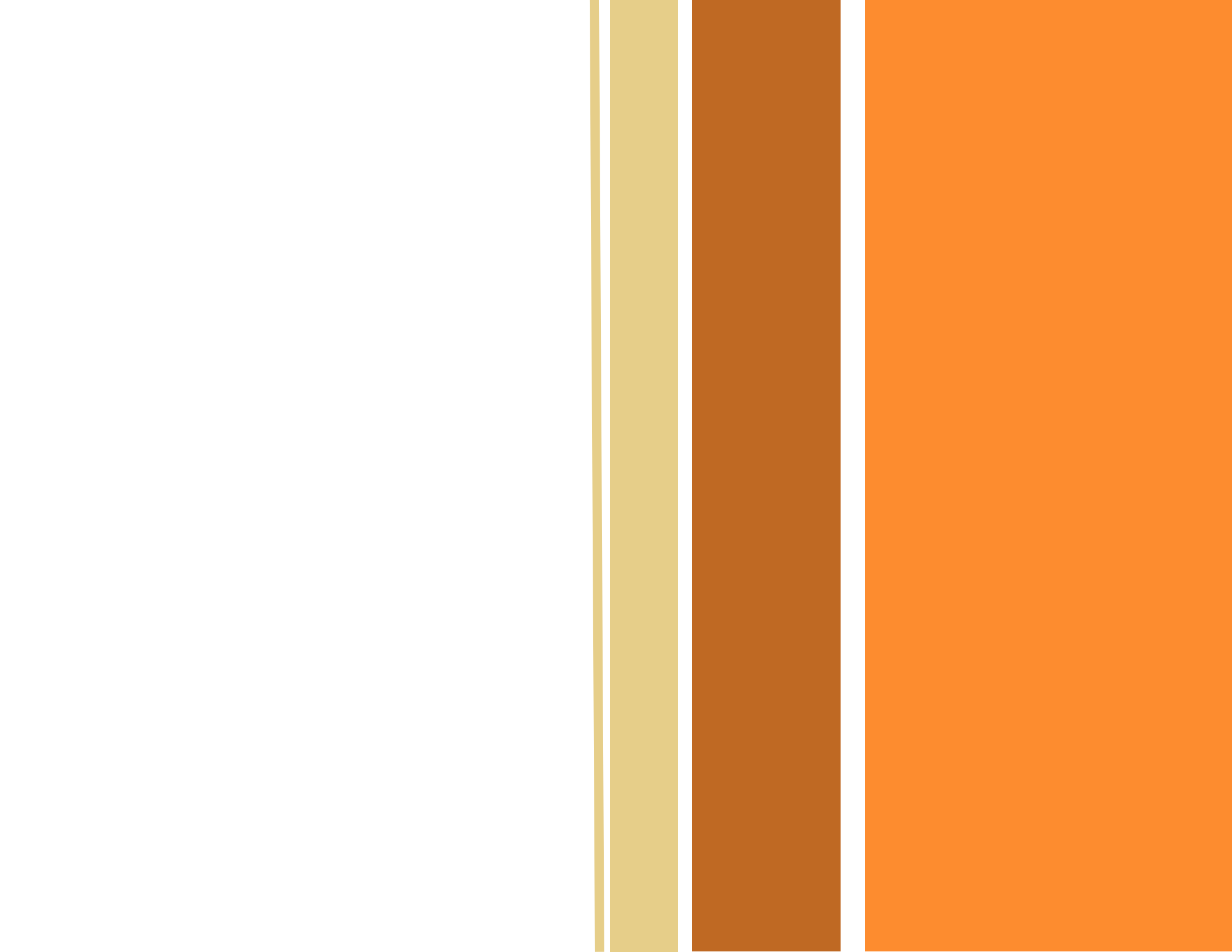
And below is a diagram of our Integrated Research Activities. Again, each activity overlaps with the other, engaging in a reciprocal cycle, informing and learning from each other.

We have structured this year's report based on these integrative areas, beginning with our "Actions" and followed by our "Research". We

hope the richness of the integrative activities becomes apparent and adds clarity to the complexity of what we are trying to achieve as a community of learners: transformation towards healthy, sustainable school food systems.









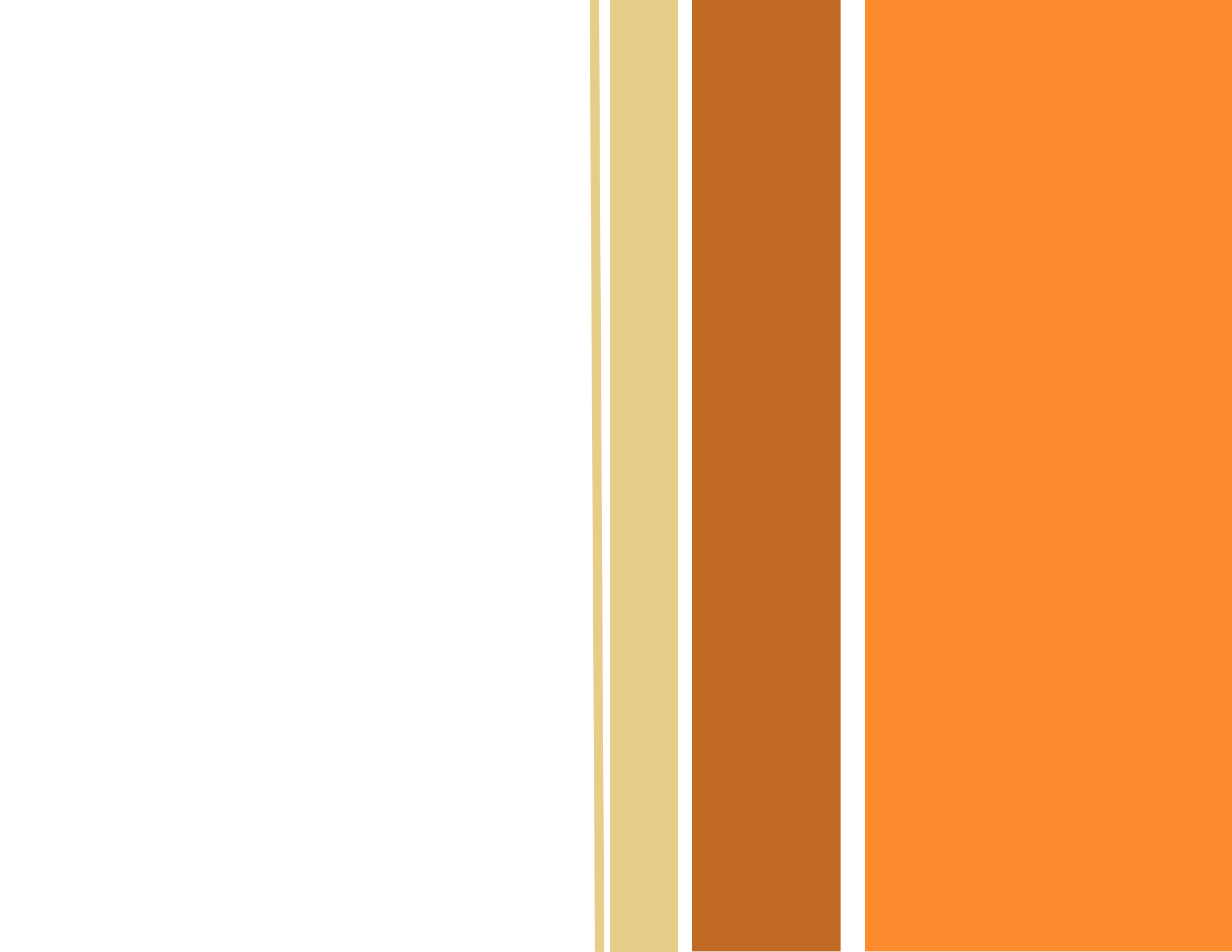
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INVENTORY OF SCHOOLS ACTIVITIES 2012-2013

[illegible]

School	UBC Course							Data Collection & Analysis		
	LFS 250	LFS 350	FNH 473	SOIL 402/502	EDUC 430	Small Grants	PHABC Farm @School	Collaborative Inquiry Group	SFEAT	IEAT
Queen Alexandra Elementary			X			X	X		X	42
Queen Elizabeth Elementary	X (5)		X		X (4)	X				33
Queen Mary Elementary		X	X			X				
Quilchena Elementary										26
Sexsmith Elementary	X (2)	X	X		X (4)	X	X	X		47
Sir Charles Tupper									X	
Sir Wilfred Grenfell Elementary						X				63
Sir Winston Churchill Secondary	X					X	X			
Southlands Elementary										41
Spectrum Alternative	X					X				
Templeton Secondary									X	
Thinderbird Elementary										28
Tillicum Annex Elementary			X	X (2)		X	X		X	
Tyee Elementary	X (6)	X (2)	X		X (4)	X		X	X	22

[illegible]





5

UBC COURSES

“Some kids thrive in the classroom, while clearly others do not. I enjoyed seeing the ones who don’t necessarily embrace pen and paper learning dive into their applied work in the garden.”

Ilana Finkleman—Teacher



A key tenet of the Think&EatGreen@School project is involving university students in food system activities with our partner schools and community organization. There are three broad goals associated with this aspect of the project:

1. To enhance educational experiences of undergraduate students by providing an opportunity to apply theoretical knowledge through hands-on learning in a community setting.
2. To push the boundaries of conventional teaching practices in food system education in the K-12 and university system.
3. To contribute to our community stakeholders' efforts to improve school food systems within Vancouver.

This year, undergraduates from 4 courses from the Faculty of Land and Food Systems and a group of teacher candidates from the Faculty of Education were placed with schools and community partners.

a. Land, Food and Community I (LFS 250)

Course Description

Faculty: Land and Food Systems

Date of Course: September – December 2012

Student Enrollment: 276

An introduction to managed systems and concepts of sustainability; economic, ecological and social components; managed landscapes, agri-food systems, and communities; urban and rural systems; the land, food, nutrition and human and environmental health continuum. Students made 3 visits to their partner schools between September and December and carried out one of the activities below on their last visit.

Completing the Cycle: Vermicomposting in Classrooms

Schools:

- David Lloyd George Elementary
- Edith Cavell Elementary
- Queen Elizabeth Elementary
- Garibaldi Annex Elementary
- Lord Beaconsfield Elementary
- Maple Grove Elementary

According to Metro Vancouver data, 40% of household waste is composed of compostable material (Metro Vancouver, 2012). 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 product of having a specific species of worms, Red Wigglers, process organic waste into 'black gold'. Vermicomposters are 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.

Preparing and Sharing: Food in the Classroom

Schools:

- Grandview/ᑭᕐᕐᕐᕐᕐᕐᕐᕐ Elementary (6 classrooms)
- Sir Winston Churchill Secondary
- Gladstone Secondary
- Laura Secord Elementary
- Norquay Elementary (3 classrooms)
- Queen Elizabeth Elementary (3 classrooms)
- Tyee Elementary (3 classrooms)

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, your group will be responsible for developing and delivering a 40-minute session with school stakeholders (administrators, teachers, students 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 (e.g. tasting, using scissors to cut vegetables) 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

- Prepare and deliver a hands-on activity using the recipe provided by Sarah Carten and Chef Steve Golob. Incorporate elements of plant biology, historical and cultural connections, food safety, nutrition, food preparation skills, and/or issues of sustainability into your presentation.
- Solicit feedback from the school stakeholder on the group's implementation of the activity (i.e. choice of recipe/lesson/activities). These comments should be incorporated into your final assignment.

Planting Garlic

Schools:

- David Livingstone Elementary (3 classrooms)
- Grandview/ᑭᕐᕐᕐᕐᕐᕐᕐ Elementary (3 classrooms)

- Maple Grove Elementary
- Norquay Elementary
- Sexsmith Elementary
- Spectrum Alternative
- Tyee Elementary
- John Oliver Secondary

Garlic is an essential crop for school gardens and school calendars. It is planted in the fall, the spring leaves and scapes can be harvested before the end of June, it is a familiar ingredient in many cultural cuisines, and it's easy to grow. What's not to like? In this activity, your group will be responsible for leading a garlic-planting workshop with school stakeholders. The workshop should include the following:

- An introduction to the physiology and history of the garlic plant.
- Optimal site requirements for growing.
- Collaboratively preparing the site, planting and mulching.
- A monthly calendar for the remainders of the school year indicating stages of growth; when to fertilize; when, what and how to harvest; and recipes for uses of each part of the plant.
- It should be appropriate for your audience.

Specific Tasks

- Meet with primary contact/stakeholder to determine where the garlic will be planted.
- Discuss age- and grade- appropriate activities for the workshop.

- Develop and carry-out garlic planting workshop.
- Produce resource package to leave with stakeholders.
- Obtain feedback on your workshop.



Public Art & the Food System

Schools:

- Henderson Elementary
- Magee Secondary
- Queen Elizabeth Elementary
- Sexsmith Elementary
- Tye Elementary (2 classrooms)

Often, issues of sustainability are limited to discussions and activities in science class. Alternatively, art projects can be equally meaningful for exploring sustainability by engaging and honouring personal experience as a source of knowledge. Public art pieces are useful methods of communicating a theme or message, provoking thought and generating dialogue. In this activity, your group will help create a classroom art piece with your school stakeholders with board game-like components. The purpose of this art piece will be to generate awareness of food systems and sustainability.

Specific Tasks

- Determine the overall message and theme of the art piece.
- Prepare strategy for initiating creation of art stations during the first school visit in October.
- Create components and strategy for board game, to be unveiled in November visit with school stakeholders.
- Communicate the message and theme to the school stakeholders in order for them to become the ambassadors of the piece.
- Participate in the unfolding of the art project.

b. Land, Food and Community II (LFS 350)

Course Description

Faculty: Land and Food Systems

Date of Course: September – December 2012

Student Enrollment: 200

An introduction to tools and skills required for assessing the economic, ecological, social, and technological components of managed landscapes, agri-food systems and communities comprising the land, food, nutrition and human and environmental health continuum. Groups of 5-7 third-year students dedicate a significant amount of course time to planning, developing, implementing and evaluating a food system activity in collaboration with their community partner. Descriptions of the specific activities are below.

Assessing & Developing a Vancouver School's Organic Waste Management Strategy

The student group partnered with Grandview/ḡuuqinak'uuh Elementary School. The school's compost system includes an in-vessel Earth Tub composter and an outdoor 3-bin compost system. Currently, the VSB is planning an organic waste pick-up service to be implemented in the near future. Working with their primary community partner Zarah Martz, the students assessed Grandview's compost components, which lead to the formation of the following research question: *How feasible will it be to implement a more complex compost sorting system into*

Grandview/ḡuuqinak'uuh Elementary, and how can we assist the people involved in this process?

To begin the project, the students conducted primary research, which included informal interviews exploring aspects of compost systems with community partners as well as studying different composting techniques in order to be able to assess the current situation at Grandview/ḡuuqinak'uuh. Ideas were generated in these sessions aiming to help the students, teachers and staff understand composting processes.



The students' results indicate that education is important for an efficient composting system; thus, they created instructional posters for the school's cafeteria and a comprehensive workshop for teachers about composting. For a successful and efficient composting system to exist, the whole school must be well informed and educated so changes, such as the VSB's proposed future organic waste pick-up service, can exist and run smoothly.

The Story of Bread: Exploring the Transformations of Grain Production, Processing, and Baking in Metro Vancouver with Grade 6/7 Students in the VSB

"The Story of Bread" project was designed to teach kids about the lifecycle of bread so that they may learn where their food comes from and build a stronger personal connection to our food system. The LFS 350 students aimed to equip the students with the knowledge of a small aspect of the food system, the creation of bread, so they might be able to apply it to the larger food system. The project was based on a series of short films, developed by Land and Food System alumnus Jacob Slosberg and Steven Breken, focusing on harvesting wheat, processing flour, and baking bread in the Metro Vancouver area. The project was conducted at Tyee Elementary School with Mr. Scott Malin's Grade 7 class to whom the students delivered three one-hour workshops. Their research question was:

"Will educating grade seven students, through three workshops, about the lifecycle of bread increase their ability to make connections in mind maps regarding how food is grown, harvested,

processed, and distributed within food system? In addition, would this result in more detailed food system mind maps than the first administered before our workshops?"

To assess the research question, the LFS 350 students had the Tyee students work in groups of five to make a mind map of the food system at the beginning of the first workshop. A mind map is a brainstorming method, which involves making connections to a main theme. In the last workshop, students worked in the same groups to create a second mind map, which would incorporate any new knowledge they acquire throughout our workshops. The mind maps were



Example mind map before workshop

compared to determine if more connections had been made or if the quality of words used had increased. On average, the students did make more connections on their second mind map and had better quality connections, however the effect was too small to make inferences with any certainty.

Explorations in Classroom Cooking at Queen Mary Elementary

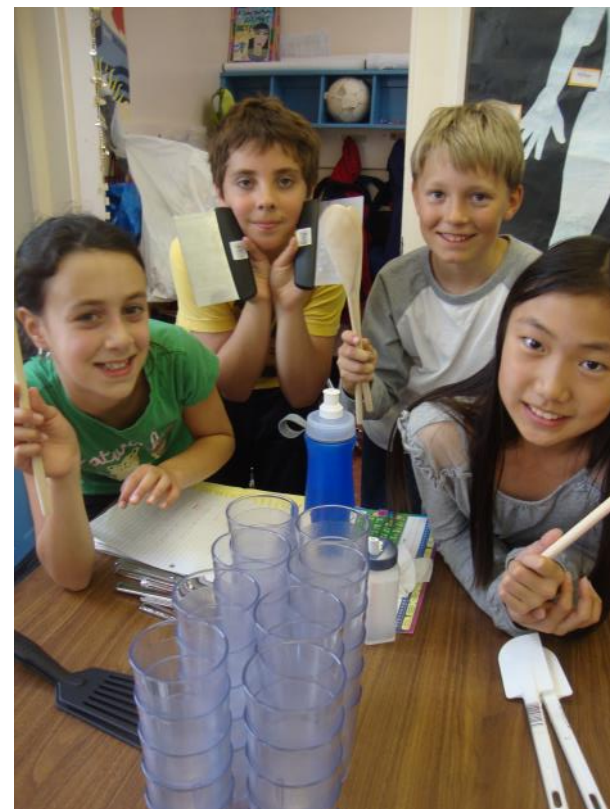
The purpose of this project was to find suitable classroom food preparation activities that would engage children in learning about the food system and teach them new and memorable skills. The study took place in Ms. Maria King's grade 5/6 split classroom at Queen Mary Elementary. Vancouver Coastal Health's community dietician, Ms. Sarah Carten R.D., was also involved in the development stages the project.

The question asked was, "what are some effective, efficient, educational classroom food preparation activities for grade 5 and 6 students?" After obtaining consent from the students' parents, six workshops were held between October and November. Each workshop covered a different aspect of the food system and taught a new skill. Students, workshop leaders, Ms. King, and Ms. Carten qualitatively evaluated the workshops through evaluation forms designed by the LFS 350 student group.

The findings indicated that the students most enjoyed the workshops that involved a lot of hands-on activities and eating. The LFS 350 group recommends dividing the students into small groups and providing a lot of adult supervision to ensure that the students stay on task and stay safe. The recipes and lesson plans, which incorporate the recommendations, are the key output from this project. One limitation of the study is that a baseline survey was not conducted prior to the workshops to see what the students already knew before the lessons.



Example mind map after workshop



Workshop 5: Smoked Tofu Noodle Salad Handout

This is a recipe is a taste of Asia. This recipe makes 6 servings.

Ingredients:

- 1/2 package (200g) of Chinese dried noodles (boiled, drained)
- 1/2 a lettuce head (chopped)
- 2 medium red bell peppers (diced)
- 2 small cucumbers (diced)
- 2/3 package (150g) of Dayspring Smoked Tofu (diced)
- Sweet chilli sauce (as desired)

Optional Toppings: chopped green onions, caramelized red onions, chopped cilantro, roasted almonds or peanuts, and sesame seeds.

Instructions:

- chop all vegetables: lettuce, red bell peppers, cucumbers, and green onions.
- Open the smoked tofu package and dice it into 1 inch cubes.
- In a mixing bowl, toss red bell peppers, cucumbers and tofu in sweet chilli sauce.
- In serving dish, layer: lettuce, noodles and tofu mix and add optional toppings.

Fun Facts!

What are meat alternatives?

Meat Alternatives are foods of non-animal origin that provide high protein and can be consumed to fulfill our 2-3 meat and alternatives requirements (Canada's Food Guide).

How is Tofu made? How is it smoked?

It is made in the same way as cheese, but instead of dairy milk, they use soy milk (from soy beans).

Soya Beans, Nigari (evaporated sea water, used for coagulation in which soy milk can be transformed from liquid to solid), Sea Salt, and

Water. Dayspring smokes the Tofu using only real wood smoke.

What are some different types of Tofu?

- Extra Firm Tofu
- Firm Tofu
- Soft Tofu

- Smoked Tofu
- Dessert Tofu

What can we use Tofu for?

- Salad
- Pizza
- Stir Fry
- Casserole
- Spring Roll
- Sandwich

Instructions for Instructors:

1. Ensure the class is in its appropriate groups and that their tables are clean, cutlery and supplies have been distributed.
2. Have the children wash their hands and, if they have long hair, have them tie it back.
3. Have the students collect their cutlery and tools.
4. Distribute the recipes to the students. Engage their attention by having them volunteer to read out the different steps and ingredients. Ask them if they have any questions.
5. Have one student from each group, the assigned "collector", come up to collect the different ingredients for the recipe: noodles, lettuce, tofu, and vegetables. At this point, the cucumber and pepper are not chopped up. Have the students also collect a knife and cutting board for them to cut these ingredients up.
6. With the ingredients on their tables, do a quick demo to show the proper steps for cutting the vegetables and tofu and mixing the salad.

7. Following the demo, have the students follow the recipe under the supervision of adults at each group (or, have adults move from group to group if there aren't enough). Let them proceed at their own pace, and encourage everyone to try cutting some lettuce, some tofu and some of the other vegetables so that everyone gets a chance to participate.
8. Toss the salad within each group, and have the students split the salad amongst themselves. At this point, there are more toppings and sauces at the front desk that the students can come up and individualise their own salads with. This included onions, cilantro, and sautéed onions. Have the students come up group by group to pick out any extra toppings they might want.
9. As they eat their salads, keep their attention with a quick lesson on how tofu is made. Specifically, the smoked tofu that was used in this recipe. Ask if they have any questions, or if they like the taste of the smoked tofu.
10. Once they are done, have the students assume their various "chef jobs" and allow them to clean up their stations, cutlery, and utensils.
11. Following this, distribute the evaluation forms and have each student fill one out. Encourage them to fill out the evaluation forms by asking them if they're done, if they have any questions, etc.

The Creation of an Edible Garden at University Hill Elementary

This LFS 350 group consists of local and international students who have a multitude of backgrounds in food, nutrition, and health, nutritional sciences, and food market analysis. The purpose of this project was to help our community partner, University Hill Elementary School, compare two potential school garden sites. They are currently using informal gardening practices to enhance student learning, therefore, these findings aid in answering a component of the Vancouver School Board school garden application that they applied for on December 1st 2012. The goal of the project was to evaluate the two sites, thereby leading to the formation of the research question: "What are the benefits and challenges of the two potential garden sites at University Hill Elementary?"

The school currently has a current hot lunch program that introduces diverse and healthy foods into the students' diets and could be enhanced by the presence of a school garden. Over the term, the LFS 350 course introduced readings such as, "Civic Dietetics: opportunities for integrating civic agriculture concepts into dietetic practice," that all relate to the theme of sustainability (Wilkins, 2009). This particular reading states that different disciplines can incorporate sustainability into their practice, such as a dietitian encouraging local food consumption (Wilkins, 2009). The connections of these broader concepts to the project relate the ideas of education and to sustainable and healthy practices that will be supported by a school garden.

The group recommends Site 1 because of acces-

sibility, availability of sunlight and ability for expansion. This location will allow the site to host a compost bin and tool shed so that broader sustainable practices can be executed. Community relationships may be fostered in the school garden, and having it in a more open location will encourage volunteer participation and accessibility for all students.

Tyee Project 1: Cold Frames and Crop Rotation Plan

The teachers at Tyee Elementary School requested help from the Think&EatGreen@School project to enhance their existing garden so that they could produce food year-round. Thus one of the LFS 350 groups came to Tyee Elementary School designed and built two different types of cold



frames on two of the 8 raised garden beds. The LFS 350 students worked with five of the Grade 6 students to construct the cold frames, allowing the students to help measure, cut, and build the frames. They built a wood framed triangle cold frame and an arched pvc pipe cold frame. The

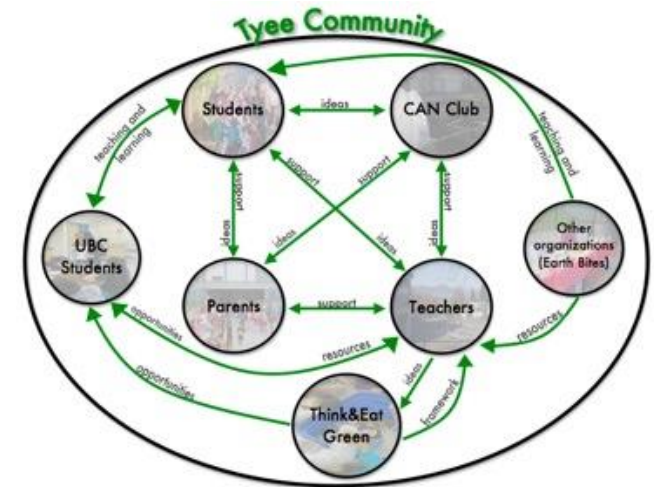
teachers at Tyee asked the LFS 350 students to design two different types of cold frames so that the elementary students could conduct an experiment to determine which design worked the best. Additionally the LFS 350 students created a crop rotation plan for the 8 garden beds. In order to do this the UBC students had each teacher complete a survey to find out what types of edible plants they were interested in growing. Using this information the UBC students created a planting guide for the eight beds that would maximize the space and keep the soil healthy and productive.

Tyee Project 2: CAN Club Video

One group of LFS 350 students were asked to work on a video meant to recognize the efforts that the Tyee Elementary School community, especially the CAN Club, is making to promote a sustainable and healthy school food system. The video would also be available to share their successes with other schools. The LFS 350 students investigated the key factors at Tyee Elementary School that have led to the success of their sustainability initiatives and the CAN Club. The guiding questions included:

- What kinds of activities do the students enjoy?

- Who are the key players in the Tyee community and the initiative?
- Who plays the role of support in the Tyee community?
- What do people within the community identify as being helpful?
- What are some of the gaps that still exist in the initiative?



The LFS 350 students conducted video interviews with Tyee teachers, staff, students in the CAN Club, parents, and community members. They completed their project by putting together a video to promote the CAN Club and what it is all about: "Reconnecting with nature through sustainable practices that help maintain/improve the environment". Three Grade 4/5 students from Tyee Elementary presented the video to six of the intermediate classes at Sexsmith Elementary School in order to inspire the students at Sexsmith to start their own green/garden club. After the Tyee students' presentation, Sexsmith Elementary School successfully created a student Green Team with 60 participating students.



Healthy Fundraising Guide at Sexsmith Elementary

The LFS 350 group placed at Sexsmith Elementary was asked to create a fundraising idea booklet, containing healthy and sustainable fundraising ideas, for the parent advisory council (PAC) and Green Team at Sexsmith Elementary School. The Green Team expressed concern that the current fundraising activities put on by the PAC, such as chocolate sales, hotdog sales, pizza sales, and McDonald happy meal sales, were unsustainable and unhealthy. The LFS 350 students were asked to do research and compile a booklet on some healthy, sustainable, lucrative and kid friendly fundraising ideas that the PAC could implement. The LFS 350 group created a booklet with 12 healthy and sustainable fundraising ideas including: Valentine flower grams, "Strawberry Tea Party", a recycling competition, a "Read-A-Thon", a health pledge ("Become healthier: Give up your favorite junk food"), basket raffles, an art sale, popcorn sales, a walking bus, a cook book sale, a parent breakfast, and a "Build-A-Brick" garden installation. The booklet and fundraising ideas were well received and the Sexsmith Green team used several of the suggested fundraising activities later in the year including the basket raffle and a health-a-thon, which raised over \$2,000.

c. Nutrition Education on the Community (FNH 473)

Course Description

Faculty: Land and Food Systems

Date of Course: January – April 2013

Student Enrollment: 70

This 4th year course introduces theory and methods in nutrition education; factors affecting behaviour modification and health promotion; the practice of nutrition education through education, health care delivery or media systems. Groups of 5-7 fourth-year students dedicate a significant amount of course time to planning, developing, implementing and evaluating a nutrition-focused food system activity in collaboration with their community partner. Descriptions of the specific activities are below.

Tyee: Creating Healthy Snacks with Intermediate Classes

One of the FNH 473 students groups worked with the intermediate classes at Tyee Elementary school to prepare healthy snacks for the students. The teachers at Tyee expressed concern that the intermediate students were bringing individually

packaged, unhealthy snacks to school creating unnecessary waste. Working in collaboration with one of the Tyee parents, the students created their own reusable snack bags, which they were able to decorate using stencils, and prepared two different types of snacks. The students made granola bars with organic whole oats, flax seeds, shredded coconut and chocolate covered sunflower seeds as well as a salad slaw using some produce from the garden. The snacks were prepared with two separate classes and then shared between them, they were very well received by the students.

Recipe: Colorful Granola Bars

1 3/4 cups	organic whole oats
1 3/4 cups	rice cereal
1/2 cup	shredded coconut
1/8 cup	ground flax seed
1/2 cup	peanuts (or roasted pumpkin seeds if there is a peanut allergy)
1/2 cup	chocolate coated sunflower seeds (adds color!)
1/2 cup	dried cranberries (or raisins)
2/3 cup	local honey
1/3 cup	brown sugar
Pinch	salt
1/3 cup	peanut butter (or almond butter)
1 tsp	vanilla extract



Combine oats, cereal, coconut, flaxseed, dried cranberries, peanuts, and sunflower seeds in a bowl and mix together. In a small saucepan, over medium heat, mix honey, brown sugar and salt. Stir until it comes to a slight boil. Remove from heat, stir in the peanut butter and vanilla until incorporated. Pour the warm mixture over the dry ingredients and mix until well combined. Add finished mixture to a greased pan (or you can line the pan with parchment paper) and with another piece of parchment paper press the finish mixture evenly throughout the pan. Place in a safe spot and cover. Let sit for a few hours to let everything cool down and harden. Remove from the pan and cut into bars. Enjoy!

Sexsmith – Health-a-thon

Another FNH 473 group of UBC students worked with the Sexsmith Green Team to design and facilitate a two-week health-a-thon in order to raise money for the new garden being built for the school. The FNH 473 students created guidelines for healthy initiatives/activities the students could do to raise money; these included such activities as:

- Eat a vegetable
- Walk to school
- Ride bike to school
- Eat a piece of fruit

For the Health-a-thon students collected pledges from community members for completing healthy activities during the designated two-week period. The FNH 478 students created promotional materials for the event including: posters that were put up around the school, a

healthy activity guideline list, and a letter that went home to parents describing the health-a-thon. The teachers received prize donations that they were able to give to the students who raised the most money including an iPod for the winner. The health-a-thon raised approximately \$2,000.

Nutrition Workshop at Tillicum Annex Elementary



Thank you Tillicum!

Our group of six UBC nutrition students visited Tillicum Annex to conduct a nutrition workshop for grades 3 and 4. We greatly appreciate the assistance from Leah Dosdall, our teacher liaison, who was also especially keen about spearheading nutrition-related developments for the school. Together with Leah and the opinions of the students through surveys, our group decided to tailor a nutrition workshop to aid in increasing the students' vegetable and fruit consumption. We are very grateful towards the school for having us!

Learning for All!

It was inspiring to see how enthusiastic the students were. They actively participated in assembling their own healthy snacks, learned about vegetables and fruits by colour, and also set their own SMART goals. Through a quick evaluation at the end of the workshop, we saw the potential for the students to increase their vegetable and fruit consumption by providing them with the skills and tools to help achieve their SMART goals.

What we learned!

We gained more experience in nutrition education aimed at a younger demographic. We also learned that clear communication with key stakeholders is very important and a good timeline can also contribute toward smoother operations.

Future Nutrition Endeavors

In order to help the students of Tillicum Annex continue learning we signed them up for Nutrikids, a volunteer program where UBC nutrition students visit Vancouver elementary schools and teach students about nutrition and its importance in health.



Queen Alexandra - Meal Kit Resource Program



MEAL KIT RESOURCE PROGRAM AT QUEEN ALEXANDRA ELEMENTARY

Wouldn't it be great to be able to prepare quick, nutritious and inexpensive meals for your kids after a long day of work? This was the concept that inspired our team of six UBC students to develop a meal kit resource program in collaboration with Queen Alexandra Elementary School. Each meal kit contains all the ingredients necessary to cook a healthy, delicious meal, and will go home to families once per month.

WORKING WITH OUR COMMUNITY PARTNERS

Our team found working with Shelley Chutka, Catherine McCambridge, and the parents and primary caregivers of Queen Alexandra students to be very enjoyable. We greatly appreciated their enthusiasm and openness to our ideas and suggestions. We would like to thank both Shelley and Catherine, who were crucial to the planning and development of the project, for welcoming us and providing the resources and tools needed to launch the program.

OUR LEARNING

We were pleasantly surprised at the multitude of nutrition-focused programs within the school, and the high level of engagement with parents and primary caregivers. We capitalized on this opportunity by involving families in the program. Not only did we learn more about the community Queen Alexandra resides in, but we also found the experience valuable as future nutrition educators. We gained insight into the challenges and benefits involved with tailoring resources to a unique community. Although we had many program ideas, we learned to prioritize needs and to work with what would be feasible and sustainable given resource and time constraints.



Meal kit for parents and primary caregivers to bring home.

FUTURE

Families who took home the first meal kits expressed enthusiasm and were receptive to the program. We hope the program will continue to provide opportunities for increasing skill development and confidence in the kitchen. Stay tuned for eleven more delicious and nutritious recipes over the upcoming 2013-14 school year!



Queen Mary – Adventures in Thinking & Eating Green Passport

Adventures in Thinking and Eating Green Passport at Queen Mary Elementary!

We are a group of six UBC nutrition students who worked with Queen Mary Elementary following the grant they recently received from Think&EatGreen@School. Our team developed a tool complete with teaching resource and student activities to facilitate the integration of Think & Eat Green (TEG) concepts at the school, entitled the *Adventures in Thinking and Eating Green Passport*. The passport allows students to learn carefully selected concepts of TEG: recycling, composting, local food systems, plant growing, healthy eating and food preparation. We would like to thank Michael Atkinson, a teacher at Queen Mary who provided us with helpful feedback, guidance, and resources throughout the designing phase.



We learned that while some teachers and students at Queen Mary already know a fair bit about thinking and eating green; others are less aware of these concepts. This is why the passport activities were designed to be easy to follow and flexible; with each activity accompanied by a concise guide for the teacher. We presented the passport and teaching resource to some teachers at Queen Mary, and they were very excited to start using the passport in their classrooms! Included in our presentation were strategies on how to introduce TEG concepts to students, as well as how to generate school-wide excitement about the passport during its pilot phase from April to June 2013 (through a friendly competition between divisions). We hope the idea is well received by teachers and students alike!

Developing curricular activities is a challenging process that requires constant revisions. We learned the value of carefully developing learning objectives prior to designing student activities in order to ensure they are suitable for each grade and meet appropriate prescribed learning outcomes.

We hope teachers at Queen Mary will be enthused to use this resource in order to create awareness on thinking and eating green at school. The TEG Passport was designed to be a flexible resource for teachers to trial this school year, and fully implement in September. Although tailored to meet the needs of Queen Mary Elementary, we hope this passport can be used in other Vancouver schools to promote Think&EatGreen@School!



For more information, please visit www.thinkeatgreen.ca/

Queen Elizabeth Elementary – Nutrition Education Lesson Plan

Queen Elizabeth (QE) is an Elementary School that is enthusiastic about building healthy and sustainable food systems within the school. The school is very motivated in promoting health through the connection of land, food and community. Presently, QE would like to expand from the environmental practices towards a nutrition education aspect to expand the connection from food and environment to food, health and the environment.

An education plan based on the Health Belief Model was formulated to modify students' perceptions of products with high amounts of added sugar (HAAS) while addressing barriers students may face to assist in changing their behaviour. Increasing awareness and knowledge on nutrition through cues to action can make them more likely to modify their health behaviours.

The goal of the project is to decrease the consumption of foods and beverages with HAAS by school children at QE. A resource for teachers was developed to use as a guide in effectively teaching nutrition education to students, which incorporates a kinesthetic learning style. The resource consists of: (1) Detailed lesson plans; (2) Complementary activities; (3) Recipes for healthy alternatives; and (4) Parent handouts.

Measurable indicators associated with the objectives and outcomes of the project have been developed to create an evaluation plan for the teachers to use to assess the effectiveness of the resource at the end of the school year.

School-based nutrition education should consider

the needs and interests of the students, teachers, and the school. The challenge of overcoming multifaceted barriers that influence behaviours highlights the importance of involving all stakeholders associated to the goal.

Reflection on our work

Continuous communication with the teachers to ensure the progress of the project is advancing according to expectations was essential in meeting the needs of students. This was done through lesson plans catered to the different grades. The development of an ongoing nutrition initiative enhances existing school involvement by creating a connection between food grown in the garden and the fully equipped kitchen to complement students' experience in nutrition.

Learning experiences about our team

A public health promotion is too big a scope for our current project given the allotted timeframe and is not an issue that can be completed by us. It not only requires a health team, but also involves the entire community to achieve success. By focusing on reaching a small population of students it made this project manageable, and acted as a framework for subsequent UBC students to continue expanding the project.

Learning experiences about the community

Although schools may be incredibly motivated to promote health through connections to the land and food, the Vancouver public school system is not providing resources for teachers to effectively teach nutrition to their respective classes. Despite the abundance of relevant external resources, teachers are often overwhelmed by curriculum criteria and lack the opportunity to explore

extracurricular material.

Nutrition education in the community

In addition to following through with an idea, it is important to consider complex multifaceted barriers and interrelated factors that affect change. This is an excellent opportunity for conducting literature research concerning theories and similar past experiences so the current project can be guided based on supported evidence.



d. Sustainable Soil Management (SOIL 402/502)

Course Description

Faculty: Land and Food Systems

Date of Course: January - April 2013

Student Enrollment: 40

This course provides an application of fundamental, unifying, soil science principles in sustainable ecosystem management. Groups of 5 students dedicate a significant amount of course time to planning, developing, implementing and evaluating a soil-focused food system activity in collaboration with their community partner. Descriptions of the specific activities are below.

Our Project Objective

To characterize the soil chemical environment of the Kiwassa Neighbourhood House garden beds, and recommend modifications to enhance plant and human health.

Edible and Non-Edible Native Species - gardens

In alliance with the UBC "Think&EatGreen@School" project and the Vancouver School Board (VSB), the Tillicum Community Annex Elementary School and Kiwassa Neighbourhood House have partnered in re-developing three sections of the school to contain edible and non-edible native species gardens. Following the VSB School Garden Policy, this project aims to enable students, teachers, and community volunteers to expand their knowledge about food and enhance sustainable food production capacity on the school site.



e. Community-Based Field (to fork to field) Experience (EDUC 430)

Course Description

Faculty: Education

Date of Course: Spring 2013

Student Enrollment: 35

Overview

Following the successful completion of a 10-week in-school practicum, all UBC teacher candidates in the Bachelors of Education program then complete EDUC 430, the Community-Based Field Experience (CBFE). In most cases, this three-week field experience occurs outside schools in non-formal learning environments. Research informs us that such "non-formal" educational involvement helps teachers develop a broader, more holistic view of education than a practica limited to classroom settings. The placement locations vary widely from museums, art studios, health organizations such as the Vancouver Coastal Health, outdoor recreational and educational organizations.

35 teacher candidates in the Bachelors of Education program were placed with the Think & Eat Green @ School Project (TEGS) in what we are calling their Community-based Field (to fork to field) Experience, highlighting that the focus of this project is on the complete food cycle of a school food system including: growing produce on-site, harvesting, preparing healthy meals & snacks, sharing food together and composting. Teacher candidates placed with the Think & Eat Green @ School Project were either placed in one of the TEGS partner schools or with one of TEGS community partner organization (including EYA, SPEC, The Intergenerational Landed Learning Project, The Orchard Garden, The UBC Farm & Fresh Roots). There were several options for different types of CBFE placement structures:

1) Teacher candidates serve within the existing structure of the community partner. In this case the teacher candidates would be facilitating activities and lessons already established and run by the community partner. For example at The UBC Farm teacher candidates learned how to facilitate a 'Farm Tour' for visiting elementary or secondary classes visiting the UBC Farm for a field trip.

2) Teacher candidates work with a community partner to create a new component of a partner's work. In this case the teacher candidates will help to establish a new program for their community partner or the school they are placed at. For example the teacher candidates may help create a new educational program around composting or native plant garden. Teacher candidates could also help to plan and facilitate an event such as a green fair or harvest festival.

3) Teacher candidates design educational tools that will be delivered by the community partner. In this case the teacher candidates will do research and create educational tools or programs that will be delivered at a future date. For example the teacher candidates placed at The UBC Farm worked to create activities for future summer camps.

Dates

- Secondary teacher candidates: April 22nd – May 10th 2012.

- Elementary teacher candidates: June 10th – 28th 2012.

Placements

Ytee Elementary School	4 teacher candidates
Sexsmith Elementary School	4 teacher candidates
Queen Elizabeth Elementary School	4 teacher candidates
David Thompson Secondary School	4 teacher candidates
Fresh Roots	2 teacher candidates
Environmental Youth Alliance (EYA)	2 teacher candidates
SPEC	2 teacher candidates
The Orchard Garden	7 teacher candidates
The Intergenerational Landed Learning Project	2 teacher candidates
UBC Farm	4 teacher candidates

Inquiry/Reflection Activities

One of the main goals of the CBFE was to develop, in beginning teachers, an enriched awareness and expanded understanding of the settings in which education occurs. Teacher candidates were encouraged to:

- Observe in a variety of educational settings,
- Participate in aspects of non-formal education which might inform their classroom practice,
- Recognize and articulate educational community links to local public schools,

- Develop questions to frame an inquiry into "places of learning" outside schools, and
- Collaborate with peers to share observations and develop questions.

During their three week Community-based Field (to fork to field) Experience the teacher candidates were asked to keep a journal documenting their experience and complete a number of inquiry/reflective activities. These activities included identifying inquiry questions, reflecting on meaningful and/or teachable moments, and identify barriers or obstacles encountered during their placement. Examples of teacher candidate inquiry questions include:

- How to teach self-esteem, healthy eating, ecological & social awareness and still cover all the information demanded by the curriculum? (Katrina Lo)
- How can I give the students experiential learning opportunities and/or engage them during lessons but provide enough practice time in class? (Roz Mullen)
- What is my educational philosophy and how does it relate to sustainability, gardening, eating local, organic? (Stephanie Jacques)
- What more can I do to make learning fun and support student's creativity? (Ellis Hayman)
- How/is there a way to combine the expectations of others and my own developing philosophy on education? (Ellis Hayman)

The teacher candidates were also asked to identify an inquiry practice(s) or a way for them to reflect and work through some of the inquiry

questions they identified. One teacher decided to write one sentence about her thoughts, questions, and/or epiphanies about Teaching, Learning, and Food (i.e. preparation, consumption, disposal, and/or growing) at the end of each day. Another student chose to focus on writing one sentence per day on the themes: Head, Hands, & Heart. Other teacher candidates wrote poetry, sketched, made short notes, or simply identified more questions that emerged during their CBFE placement. The teacher candidates were also given time each Friday to share their experiences during facilitated activities (such as peer interviews and collective brainstorming activities) and informally while gardening or sharing food together in our weekly potlucks.



Activities complete at placement

<p>Tyee Elementary School</p>	<p>The teacher candidates worked with each class at Tyee Elementary to make garden journals out of recycled cereal boxes and then conducted activities (either a language arts or a drawing activity) in their journals. The students also made snacks with the primary classes (earth day cookies and granola bars), helped sew snack bags for the students with a parent volunteer during Earth Week, planted two dwarf apple trees in the small orchard, and helped with the installation of an eco-art project. The second set of teacher candidates taught a lesson around harvest potatoes that each of the classes were growing and worked with small groups of students to prepare potato salad for a whole school picnic. The teacher candidates also began creating a curriculum document about the native plant garden at Tyee, worked with students to research and write a story about salmon, facilitated garden observation activities, and plant a tea garden with plants such as chocolate mint, lemon mint, spearmint, lemon balm, and lavender that can be dried and made into teas.</p>
<p>Sexsmith Elementary School</p>	<p>The teacher candidates worked with all of the classes at Sexsmith Elementary to design an eco-art calendar in which each student created an environmentally themed piece of artwork. All of the students' artwork was then compiled into a calendar to be sold as a fundraiser for the garden. The calendar included environmental tips, quotes, holidays, and facts that the students researched. The teacher candidates also worked in the garden (weeding, clearing the beds, composting, etc.), and harvested and prepared potatoes for an end of the year harvest celebration as well as worked with one of the classes to make 'Thank You' cards with potato stamps for people/organizations that have contributed to the garden program this year. The teacher candidates also created and taught lessons on nutrition and helped six of the classes prepare a song/skit/poem for a Think&EatGreen@School themed assembly held prior to the harvest celebration. Additionally the teacher candidates helped the Green Team create a short iMove for the assembly about why the TEGS project is important.</p>



**Queen Elizabeth
Elementary School**

The teacher candidates placed at Queen Elizabeth Elementary School worked with a number of classes creating garden journals, cooking snacks (including muffins, garlic bread, potato salad, green salad, etc.), harvesting produce (carrots, peas, radishes, garlic, and 25kg of potatoes), maintaining the compost system (adding carbon materials such as newspaper and turning it over/mixing it) and re-planting beds that were harvested. They helped maintain, organize, and label the gardening equipment in the tool shed and tend to the small orchard onsite by mulching and clearing weeds. The teacher candidates also worked with parent volunteers to prepare for an end-of-year harvest celebration.

**David Thompson
Secondary School**

The teacher candidates placed at David Thompson worked with the culinary arts classes making food journals out of recycled food packaging and discussing food consumption at the different levels of impact in the world. This activity included having the students record their meals and chart the social, economic, environmental, nutritional, and pleasure/enjoyment of their meals. The teacher candidates also conducted a poetry activity in which the students wrote poems beginning with the script found on food containers. The teacher candidates also created a garden blog, worked with students from the Carrot Club to plan activities and goals for next school year, and helped cook food for lunch in the cafeteria with the culinary arts students.

Link to blog: <http://davidthompsoncafeteria.wordpress.com>

Fresh Roots

The teacher candidates placed with Fresh Roots helped to prep the two new school market gardens (at Van Tech & David Thompson) by moving soil, shaping beds, installing the irrigation system, transplanting crops (including kale and greens), and amending the soil. The teacher candidates also developed curricula for their focus area (business education & home economics).



Environmental Youth Alliance (EYA)	<p>The teacher candidates placed at the Environmental Youth Alliance visited a number of school garden programs and worked with a number of various grade level classes of students to prepare for several end of the year harvest celebrations. The teacher candidates helped facilitate a field trip to Stanley Park with several classes, running ecological place-based activities and games.</p>
SPEC	<p>The teacher candidates worked with Ecole Billingue Elementary School in two of the primary classes teaching lessons around the parts of a flower, an art lesson, and read stories to the students. Additionally the teacher candidates harvest vegetables from the small garden located at the school and prepared food (a potato salad, greens salad and salad dressing) with the students for a small harvest celebration.</p>
The Orchard Garden	<p>The teacher candidates placed at The Orchard Garden created a herb garden (with sage, oregano, chocolate mint, lemon mint, spearmint, lemon balm, and verben), helped harvest for a weekly CSA pick-up, created and posted garden signage helping to educate visitors, organized an end of year Summer Celebration for the UBC community, and helped maintain the garden by weeding, turning over beds, tending the compost, and watering.</p> <p>Blog link here: http://theorchardgarden.blogspot.ca/2013/05/the-orchard-garden-from-perspective-of.html</p> <p>And here: http://anoveljournal.wordpress.com/2013/06/26/time-in-a-garden/</p>



<p>The Intergenerational Landed Learning Project</p>	<p>The teacher candidates placed at the Intergenerational Landed Learning Project worked closely with two of the classes that participate in the program (one class from Graham Bruce Elementary and one class from Strathcona Elementary). The teacher candidates spent two days in the schools with their assigned class helping with their school garden, delivering garden-themed lessons, and assisting with general classroom activities. The teacher candidates spent two days per week helping with the program offered at UBC Farm by Intergenerational Landed Learning Project. At the Farm the teacher candidates assisted small groups of students who were learning to tend the gardens they had designed and planted in early Spring. The teacher candidates helped the students learn how to harvest produce, and how to use that produce to make lunch for their classmates. The teacher candidates concluded their CBEF by planning and teaching garden-based activities to the class they were paired with. One activity involved teaching students various types of irrigation systems used at The UBC Farm and how they work.</p>
<p>UBC Farm</p>	<p>The teacher candidates placed at The UBC Farm worked with Farm staff to give 'Farm Tours' to visiting classes of elementary students as well as help plan for the several summer camps (a one week & three week summer camp) that will occur after the CBFE has completed during the school summer break. Additionally the teacher candidates helped organize and create educational materials.</p>

Games & Activities

Recycle Cereal Box Journal Making

Overview

The teacher candidates placed at the TEGS schools worked with classes to create garden journals that could be used for garden observations, life drawing in the garden, language arts

activities in the garden including poetry and narrative, or the journals could be used for an activity around the social aspects of preparing and sharing food, specifically the pleasure (s) of eating food (based on Wendell Berry's article, **The Pleasure of Eating**). Each participating class had all students bring in a cereal box (preferably one larger than a 8.5x11 piece of paper), we

would suggest having a few extra cereal boxes on hand in case some of the students forget to bring in a cereal box or make a mistake and need another box.

Time

The journal making activity will take approximately one hour. There is an option for the students to individualize the cover of their journal through an art activity (painting, drawings, etc) which may extend the amount of time needed or could be completed at another time.

Materials

Please have enough materials for each student:

- Cereal box (or another processed food box such as a frozen pizza box).
- Yarn or twine (students liked different colored yarns).
- Plastic embroidery needles.
- Hole punch (or binding machine if available).
- Paper (we chose to use a half size sheet of paper lengthwise, 5.5x8 inches).
- Paint, colored pencils, and/or markers (to decorate front of journal).

Process

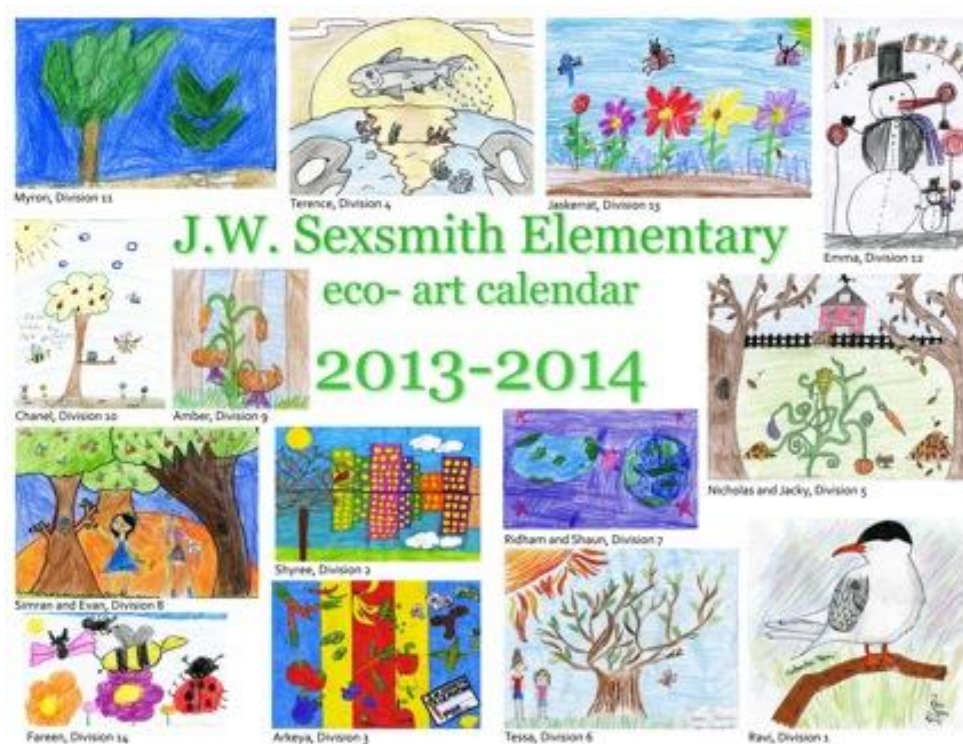
To make the process more efficient pre-punch the paper with 4-6 holes along the left edge of the paper. The journals can be as thin or thick as you would like, we suggest giving each student 20 pieces of paper for the inside pages of the journal. Have the students cut out a cover and back from the cereal box they brought to class; you can either have the students trace the half sheets of paper you've prepared or have the

students practice using a ruler and measure out the size for the cover. Using the prepared paper as a template, have the students mark where the holes are on the covers and punch them through. Once the paper and covers are cut and punched have the students assemble the journal and secure it with two paper clips so that the paper doesn't shift as

they are sewing the binding edge. Give each student two feet of string or colored yarn and allow them to bind/sew the edge however they would like; they can weave through each hole, tie off each hole individually, or loop the string around the edge of the journal all the way along the spine.

Animal Scavenger Hunt

The teacher candidates placed with EYA helped facilitate an Animal Scavenger Hunt that can be played in your garden, local forest park or any green space around. Working in teams of 3-5 the group was given a scavenger hunt sheet, a map with boundaries identified, and a tip sheet (which



included tips/hints on local plant names, a list of invasive species, a list of edible plants, etc.) Example scavenger hunt items included:

- Find a leaf that is soft
- Find an animal with no legs
- Find a plant helping another plant
- Find an animal helping a plant
- Find an animal with more than six legs
- Find evidence of weather

The idea/goal is not that whoever finds them the fastest wins, but simply to get students paying attention to the natural world around us, we are all winners then!

Recipes

Earth Day Cookies

(from: *Garden Eats and Treats*)

- 1 cup Butter
- $\frac{3}{4}$ cup Brown sugar
- $\frac{3}{4}$ cup White sugar
- 1 tsp Vanilla
- 3 Eggs
- 1 cup Whole wheat flour
- 1 cup White flour
- 1 tsp Baking soda
- 1 cup Unsweetened coconut
- 1 cup Oatmeal
- 1 cup Crisp rice cereal
- 1 cup Raisins (or dried cranberries)
- $\frac{3}{4}$ cup Sunflower seeds
- $\frac{1}{2}$ cup Sesame seeds
- $\frac{1}{3}$ cup Ground flax seeds
- $\frac{1}{3}$ cup Wheat germ

Instructions

Preheat oven to 350 F. In a large bowl (or food processor) blend/cream together butter and sugars, add vanilla and the eggs (one at a time); in a separate bowl combine dry ingredients. Gradually add the dry mixture to the creamed butter mixture; then add remaining ingredients. Roll mixture into balls or scoop out with a spoon onto a cookie sheet and flatten with a fork. Bake at 350 F for approximately 10 minutes. For a variation add chocolate chips, nuts, or pumpkin seeds.

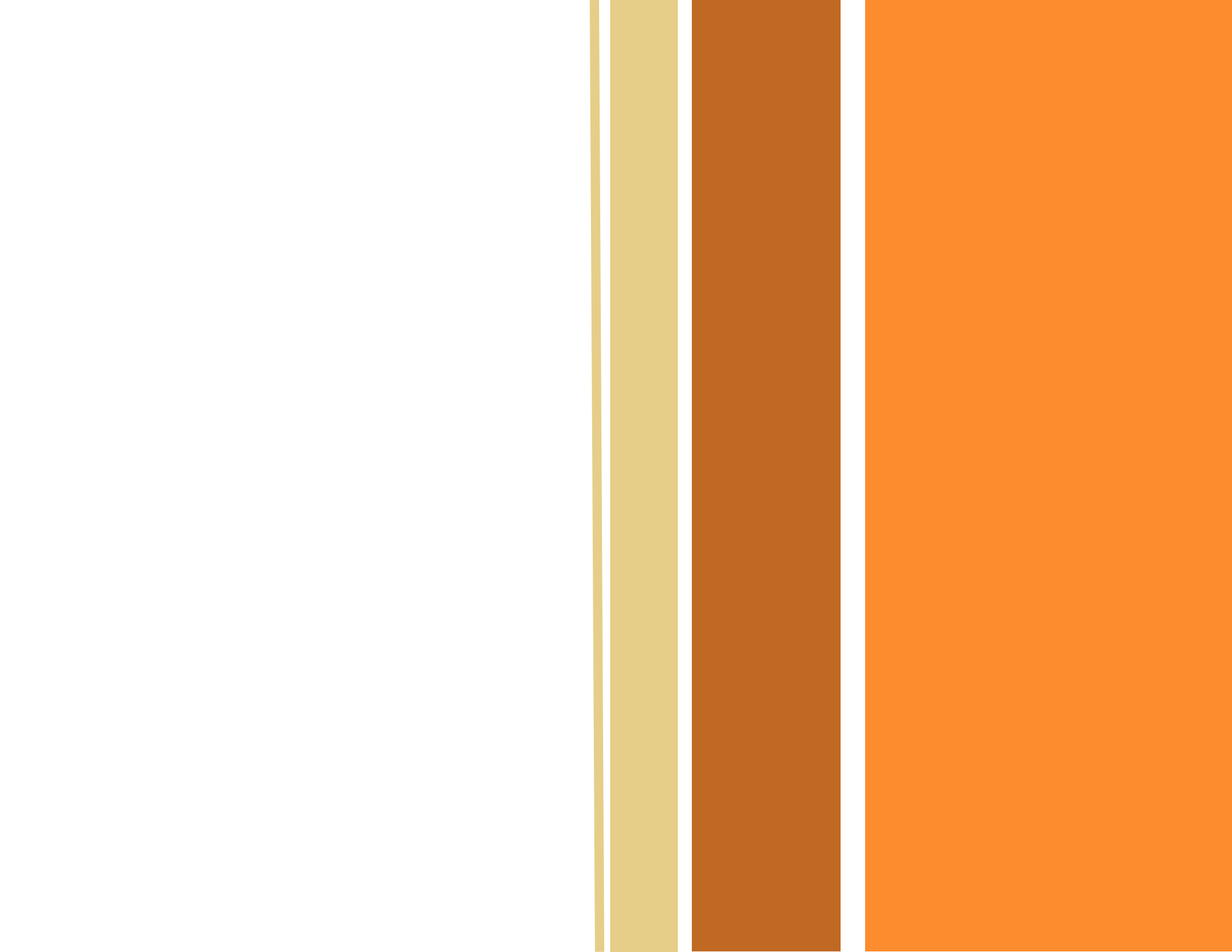


Glory Bowl Dressing

- $\frac{1}{2}$ cup Nutritional yeast flakes
- $\frac{1}{3}$ cup Water
- $\frac{1}{3}$ cup Soy sauce
- $\frac{1}{3}$ cup Apple cider vinegar
- 2 Garlic scapes, diced (or garlic if scapes are not in season)
- $\frac{1}{2}$ cup Olive oil
- 2 tbs Tahini paste
- pinch Thyme

Instructions

In a mason jar (or blender, or food processor) combine all ingredients and mix/shake/blend well. Drizzle over favorite fresh or roasted vegetables. Enjoy!





6

PROFESSIONAL DEVELOPMENT

"I learned about the benefits of applied learning and these are impressions I will take with me into my teaching."

Ilana Finkleman—Teacher

In order to see more food system lessons in schools, educators need to be supported in their knowledge of, and skill development in, the wide-range of activities associated with the food cycle. Our Summer Institute, Pro-D Day events and After School Specials are designed to build participants' confidence in growing, preparing, sharing and composting in an educational setting (e.g. our After School Special: *How to Survive and Thrive with 30 Students, Knives, and Stoves!*)

Summer Institute 2012

Think&EatGreen@School Summer Institute, July 3-5, 2012. We have held two Summer Institutes for VSB teachers and staff. The Think&EatGreen@School Summer Institute focused on finding collaborative solutions to increase the knowledge and understanding of the connections between food, health and the environment across the food system in schools. This three days event provides a combination of plenaries and streamed workshops and hands-on, experiential activities which are relevant to both elementary and secondary schools curriculum, focusing on different components of the school food system including: food gardens and orchards; food procurement, preparation and consumption; curriculum and pedagogical innovations; and school food policies. The activities of the Summer Institute are delivered by

the Think&EatGreen@School UBC professors, graduate students, chefs and staff and community-based, and area based organization partners.

Working with others in our communities is such an important part of making lasting change possible in our school districts. As such we asked participants to try to come as part of district teams, which could include teachers, administrators, district staff and community partners.

The Institutes were aimed at finding collaborative solutions to increase the knowledge and understanding of the connections between food, health and the environment across the food system in schools. Each Institute offered a combination of plenaries and streamed workshops and activities relevant to both elementary and secondary schools and curriculums. Workshops and activities focused on 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. The two Summer Institutes were held at UBC over three days during the first week of July, both in 2011 (July 4-6) and 2012 (July 3-5). In both years, nine workshops and hands-on, experiential activities over three days at UBC followed the different components of the food cycle at school, including making connections to curriculum and pedagogy, as well as policy.

Day 1 – Hands in the soil: food production and composting;

Day 2 – Cooking and eating together: food



preparation and consumption using produce from UBC Orchard Garden;

Day 3 – How to teach and act: integration of the food cycle into curriculum and the development of action plans for schools.

The Summer Institute was successful in providing participants with an atmosphere where they could:

- Strengthen awareness on various components of the school food system including: food

gardens and orchards; composting and sustainable waste management; food procurement, preparation and consumption; curriculum and pedagogical innovations; and school food policies. The participants provided testimonies of the value of “walking the talk” by experiencing through the Summer Institute the entire food cycle.

- Exchange youth leadership success stories.
- Engage in hands-on activities in the garden

and in the kitchen.

- Eat high quality local, organic, sustainable and delicious food mostly harvested by participants cooked by UBC chefs or from local businesses.
- Explore strategies for working with others to create collaborative solutions to increase understanding of the connections between food, health and the environment across the food system in schools.

- Increase the strength of schools teams around Think&EatGreen@School projects and plan activities at the schools for next year.
- Learn from each other's experiences and challenges.

A number of the participants this year had attended the previous Summer Institute and we demonstrated increased confidence in their ability to bring a food focus to their lessons and clear understanding of their role in bringing about a change in the food system in their schools. These participants shared their knowledge and expertise through stories and anecdotes about how they incorporated elements of the food systems into their lessons and curriculum. Their increased engagement and contribution to the Project is apparent in the formation of a community with a shared intention and vision for increasing understanding of the connections between food, health and the environment across the food system in their schools.

To help participants keep their visions and plans for school change moving ahead, every participant at the summer institute wrote a "post card" detailing their plan of actions for the coming school year with regard to activities they would like to develop at their individual schools. The postcard will be sent in September to all the schools that participated develop their own Summer Institutes based on the model already developed for Vancouver.

Participants' evaluations indicated they found every aspect of the Summer Institute excellent. We observed a strong sense of community and collaboration was established as participants worked together in harvesting, cooking, eating

and composting from the UBC Orchard Garden. These activities helped them experience first hand every aspect of the food cycle and created a positive attitude to change and strong belief in the value of hands-on learning to bringing about change in school food systems.

Pro-D Day Events

Our **Pro-D Day events** were held on BC provincial and VSB district designated professional development days, often with multiple offerings from different project partners, all emphasizing multiple aspects of the food cycle!

1 Seeds, Compost, Growing Food and Using It! October 19, 2012

Session Description:

Join in hands-on garden activities and explore curriculum connections to connect your students to the natural world with or without a school garden. Prepare for the growing season ahead by learning to build fertile soil, manage compost, prep, sow, and harvest for the fall and winter, and learn to start seedlings for a schoolyard – school year producing garden. Also included is a workshop on how to use the foods coming from the garden!

This workshop is open to elementary and secondary educators, administrators, and support staff. Activities are subject to slight change to meet the needs of participants. If you attended last year and were hoping to learn more, come back! We will have enough time to ensure participants can attend all workshops offered.

- Ilana Labow, Fresh Roots Urban Farm
- Stacy Friedman, UBC Landed Learning Project
- Marnie Newell, Society Promoting Environmental Conservation (SPEC)

2 Classroom Cooking: How to Survive and Thrive with 30 Students, Knives, and Stoves January 21, 2013

Session Description:

The idea of knives and stoves in young students' hands usually evokes fear. And yet, many teachers and community programs have brought the educational experience of food preparation to their students, safely and successfully. Classroom cooking is a powerful way to transform a child's idea of a vegetable and about what they are capable of eating. This hands-on workshop will provide you with the skills you need to confidently bring food preparation into your classroom, such as equipment selection, integration with learning outcomes, and managing your classroom. Local teachers and Project CHEF and Growing Chefs will share their experiences and wisdom.

- Barb Finley, Project CHEF
- Helen Stortini, Growing Chefs
- Sarah Carten, Vancouver Coastal Health
- Brent Mansfield, Think&EatGreen@School

3 Healthy, Sustainable Eating

September 24, 2012

David Thompson Secondary

2 staff professional development day workshops .
Delivered by: Sarah Carten, RD Vancouver Coastal Health.

Learning Outcomes:

At the end of the workshop, participants will:

- Be able to describe ways in which school lunches (esp. bag lunches brought from home) impact the environment and personal health.
- See 'school lunches' as an appropriate curricular topic/teaching opportunity.
- Have experienced and discussed lesson plans that:
 - ◊ Are fun
 - ◊ Incorporate food education across the curriculum (e.g. through art).
- See themselves as being able to influence the lunches students bring from home through their work with students, parents, and the community.

These learning outcomes are linked to longer term objectives:

- To improve lunches that students bring from home so that they are healthier and more sustainable.
- To increase the likelihood that students will eat these lunches.
- To bring and eat lunches that are healthier and more sustainable.



4 Educating through the Food Garden

May 10, 2013

Sir Wilfred Laurier Elementary

Session Description:

By the end of this session, staff will have determined a variety of ways to meet their prescribed learning outcomes through the use of their school food garden.

Delivered by: Sarah Carten, RD Vancouver Coastal Health.

establishment of a plan for food system learning and program goals for the year.

Delivered by: Sarah Carten, RD Vancouver Coastal Health

5 Embracing Food-based Education - A Whole School Approach

October 4, 2012

Queen Mary Elementary

Session Description:

This session will facilitate a staff-led assessment of the school food learning environment and

6 Healthy Eating

January 2013

Queen Elizabeth Annex – Parent Advisory Council

Session Description:

This presentation will focus on foods that nourish children's bodies and brains. Wondering how to deal with a picky eater? Or how to negotiate sweet treats? Bring your food and nutrition questions to this session.

Delivered by: Sarah Carten, RD Vancouver Coastal Health.



After School Specials

The After School Specials series of workshops are designed to allow participants to engage in specific food system skill development workshops without a huge time commitment. Often held from 4pm – 6pm, these sessions delve deeper in one or two components of a school food system and are timed to coincide with the shifting tasks and opportunities of the season.

1 'Tucking In' the School Garden: Soil Protection and Preparing for Next Season October 24th, 2012

There are many ways to make spring gardening easier, and we can start now! Learn how to keep your soil soft and fertile over winter, and how to use the winter months to prepare for spring. Delivered by:

- Eric Drewes, Think&EatGreen@School

2 Spring Harvest Planning

February 20th, 2013

Vancouver's mild climate allows us to get an early start in the vegetable garden, and harvest many items before school lets out in June. Learn how to work the soil, provide quality compost, and choose the right crops and varieties. Delivered by:

- Alaina Thebault, Environmental Youth Alliance
- Eric Drewes, Think&EatGreen@School

3 Get Growing - Starting Spring Seedlings March 7th, 2013

Begin to envision your spring and summer garden now and learn some low cost techniques for starting seedlings in your classroom or at home.

Delivered by:

- Stacy Friedman, UBC Landed Learning Project
- Marnie Newell, Society Promoting Environmental Conservation

4 Planting for Pollinators April 10th, 2013

Food doesn't happen without the magic of bees! Learn about the importance of native bees, honey bees, pollination, and how to grow your own pollinator garden and build pollinator habitat.

Delivered by:

- Alaina Thebault, Environmental Youth Alliance
- Dolores Altin, Evergreen Foundation

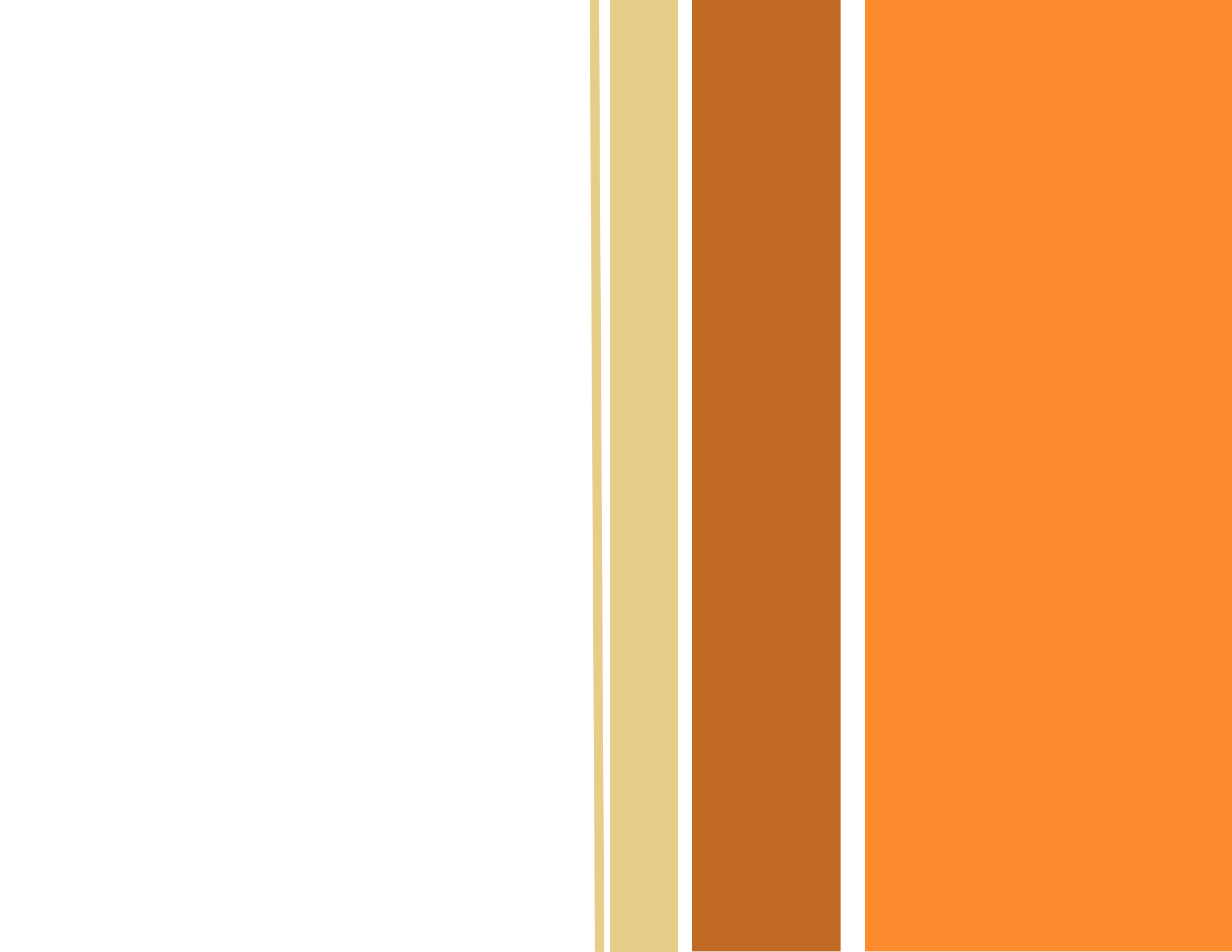
5 Safe Canning Basics with Jamming Demo April 24th, 2013

This session will explore the basics of canning and how you might be able to engage your students in food preservation through canning.

Delivered by:

- Diane Collis, Fresh Choice Kitchens
- Darlene Tanaka, Fresh Choice Kitchens







7

SMALL GRANTS

“Why cook with
children?
Teamwork,
communication
skills, social
responsibility,
engaging hand-on
activity.”

Stephanie Jacques—Teacher



For a second year, Think&EatGreen@School set aside \$20,000 from the SSHRCC Grant to support healthy and sustainable food initiatives in Vancouver schools. Eligible schools could apply for up to \$2,000 each to help with starting, expanding, or improving school projects in the areas of food production, food waste management, food preparation, and teaching and learning activities. Although convergent with Think&EatGreen@School goals, the funded initiatives were self-generated by the school communities. This provided an opportunity for the researcher team to learn directly about how the school communities articulate their needs and priorities, and help inform the process of integration and intensification of research activities. A Small Grant Coordinator research assistant was hired to serve as a liaison person between the schools and the research team, and coordinate relevant activities to nurture a community of learners.

To be eligible for the small grant, schools were expected to demonstrate (as many as possible of) the following:

- A working team of 3 or more committed members, 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 could be included).
- A commitment to initiatives that make connections between different aspects of the

school food system (i.e. growing, preparing and sharing food and managing food waste) and student learning and activities.

- Partnerships (with community-based organizations and/or other schools).
- Willingness to involve UBC students and facilitate their involvement in the development of food system activities and projects at your school.
- Willingness to participate in research aimed at developing a healthy and sustainable school food system.
- Commitment to participate in the project for 2 years.
- Willingness to complete a brief summary report, to share photos of activities and to participate in a final celebration in May or June 2013.

Priority was given to school applications that demonstrated that they are able to satisfy as many of the criteria as possible. Applications with larger teams and projects that emphasize integration within the food system were eligible for larger grants (up to \$2000), and applications that were smaller in scope were eligible for smaller grants.

The Small Grant Selection Committee decided to share the \$20,000 among 17 schools (14 elementary and 3 secondary) including Sir Wilfrid Laurier which received additional \$1000 contributed from the Vancouver Retired Teachers Association.

The selected Small Grant schools participated in the following activities:

- An introduction and orientation event, held on January 16, 2013 at Tyee Elementary School, to provide school teams with an overview of the Think&EatGreen@School research objectives, and opportunities for involvement in research activities, as well as an opportunity for schools to connect with each other and thereby nurture a community of learners.
- A "Think&EatGreen School Food System Brief Self-Assessment Activity 2012-2013" survey, completed online or as a hard copy submitted in-person or by email or mail.
- Hosting the Small Grant Coordinator for at least one school visit, to meet with the school 'Think&EatGreen' team and observe healthy and sustainable food system initiatives .
- Poster text and photos submissions to report on school small grant initiatives.
- A celebration event, held on June 6, 2013, at David Thompson Secondary School, where schools shared their posters –and successes, challenges, and dreams or visions for next school year- and again networked with other small grant schools.

Examples of how the two small grant school events contributed to fostering a community of learners included a couple of schools connecting to visit each others' gardens, a few school team members connecting in an effort to coordinate Professional Development activities for 2013-2014, and a desire voiced to have a communication system in place (e.g. email list or online forum) to connect with other schools to share information, resources, experiences and support for healthy and sustainable school food system initiatives.



In visiting the small grant schools in-person, the Small Grant Coordinator had the opportunity to observe all components of the food cycle in action, from initial new garden planning meetings and a garden visioning event, community garden bed builds (with partnership between and elementary school and a secondary school woodworking program), food production activities including an intergenerational gardening activity, a Bee Symposium with a local bee-

keeper and many learning activities related to bees, food preparation and sharing including a student buddy-class cooking activity, Project Chef in-class cooking which included harvesting rhubarb from the school garden, and Farm To School salad bars which included ingredients from the school gardens and local farms, and composting, from in-class worm bins to 3-bin systems to Earth Tubs, and .celebration events such as an Earth Day Garden Celebration BBQ.

The Small Grant Coordinator also observed the schools forging connections with the wider community, including the support of Think&EatGreen@School community partners, as well as other food and environment organizations, and making efforts to provide students with experiences of the whole food cycle and find means of increasing school community engagement and curriculum integration.

Tillicum Community Annex

The Think&EatGreen@School small grant contributed, alongside other extensive fundraising, to TCA's efforts to provide a school-wide experience of the entire food cycle. Every second Friday is gardening day at TCA. Each class participates in a gardening activity, facilitated either by the EYA Growing Kids animator or the Kiwassa Neighbourhood House Garden Coordinator. The school has dedicated one classroom as an indoor garden, which includes a seed starting rack with grow lights. This classroom was used for a Bee Symposium – organized in cooperation with UBC's Reading Week Community Learning Initiative: two days of bee-related learning activities, with all classes cycling through five stations, with the participation of a local beekeeper who also led a very active recess bee dance activity. The school has been gardening in the Kiwassa Neighbourhood House gardens, and now has four of its own garden planters, installed in May 2013, as a community garden build with Tupper Secondary teacher Russ Evans and his woodworking students. The site selection for the new garden planters benefited from a soil assessment conducted by UBC students in SOIL

402/502. By the end of May, the new garden planters were already being used as part of an intergenerational gardening program, linking TCA students with Kiwassa Neighbourhood House seniors. TCA, which also received a Farm To School grant for its salad bar, offered three salad bar pilots in Spring 2013, coordinated by Kiwassa Neighbourhood House's Food Program Coordinator ; the menu included produce from the garden and from a local (Burnaby) farm. The compost system is a 3-bin system at Kiwassa Neighbourhood House, built by a Templeton Secondary School Youth Action Committee. TCA plans to have another 3-bin compost system built for them by Tupper Secondary next year.

Spectrum Alternate

Although Spectrum already had an established garden space and a Foods program which feeds lunch to approximately 70 students each day, the Think&EatGreen@School funds contributed to the addition of chickens to the system and cold frames to extend the growing season for the school year, with the intent of being able to provide more ingredient for the Foods program, and a 3-bin compost system. Spectrum Alternate offered a new Agriculture and Environment course this year which provided a "locus of student-centred responsibility for the operation of the garden" (Spectrum Poster 2012-13), and served to enhance the integration of

food cycle experiences into the curriculum. The class activities included a weekly chore day to carry out practical garden and chicken care activities and creation of a class blog to document activities. Some examples of curriculum integration included learning about microbes by observing compost life through the microscope and making naan bread with yeast. The class also sowed wheat as part of an EYA "Lawns to Loaves" initiative and then learned more about seeds by making waffles, hypothesizing and observing the differences between whole wheat and white flour, learning about the nutritional differences, and learning about the history of white flour – as well as having the experience of preparing and sharing food together. Building on this year's initiatives, the Spectrum team identified the following future objectives in its final poster report: Integrating the garden into classes beyond Science and Foods; further increasing the amount of produce from the garden used in school lunches;

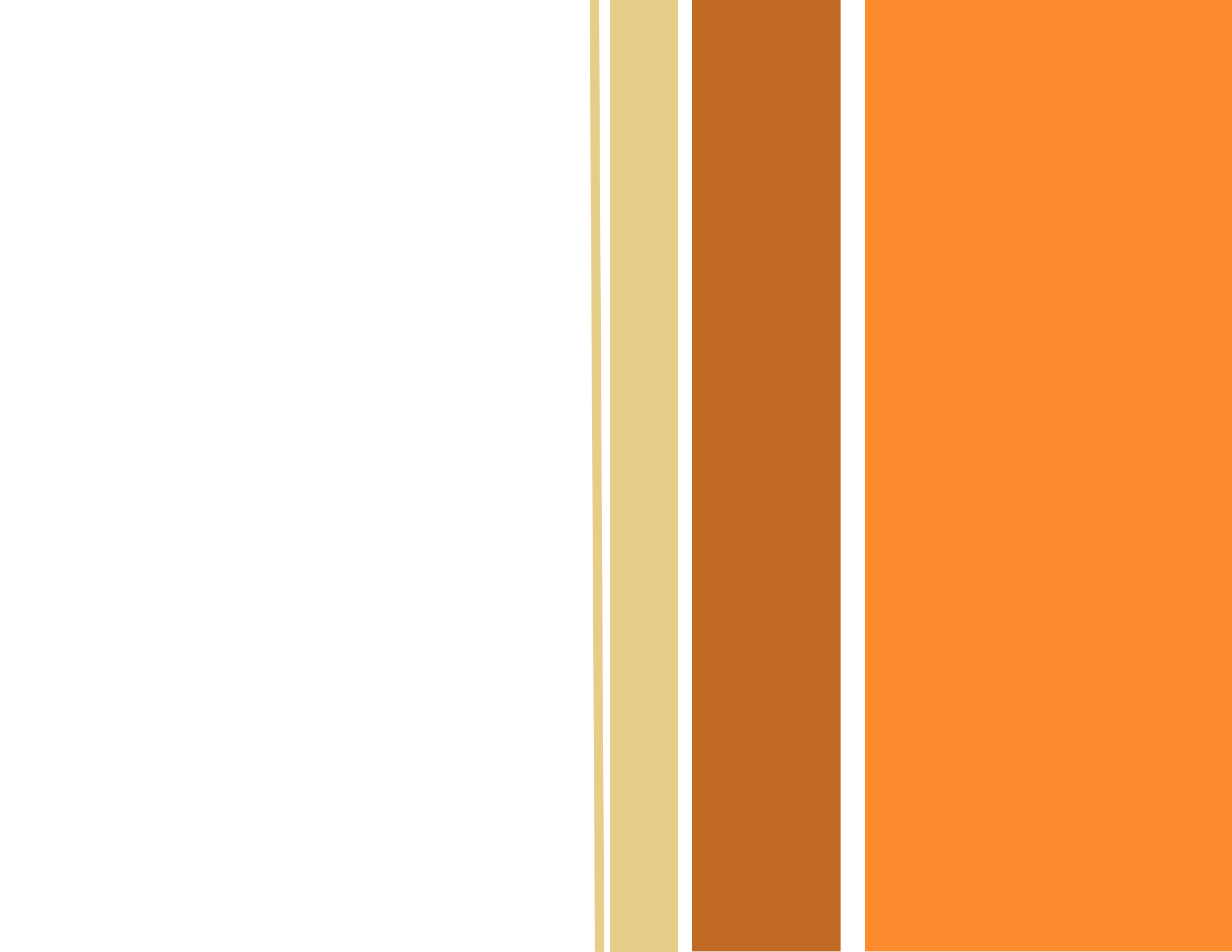


incorporating our fresh eggs in the Fall semester baking class; improving the connections between curriculum and garden activities; and maintaining and expanding our community links.

Examples of initiatives supported by Small Grants in 2012-2013:

- Supplies for new gardens and existing gardens, and indoor growing, and season extension (for improved school year gardening capacity, e.g. cold frames, greenhouse repairs).
- Supplies for chicken coops.
- Costs of moving gardens for seismic upgrades.
- Compost bin construction and maintenance.
- Field trips (e.g. to Richmond Sharing Farm).
- Equipment/tools/supplies for food preparation and sharing and food for salad bar pilots.
- Seasonal cooking workshops and menu planning for cafeteria staff.
- Project Chef programs.
- Gardening and food preparation workshops, and school staff capacity-building workshops, by food and environmental organizations (e.g. Foodwisdom, World In A Garden).
- Garden pottery student projects.
- Food celebrations (e.g. harvest parties).
- Food system (curriculum) resources (books).







8

POLICY

Policy Development and Support

“Students are knowledgeable about healthy eating habits and recognize the benefits of eating organic foods that they have grown themselves.”

Teacher
—Queen Elizabeth Elementary



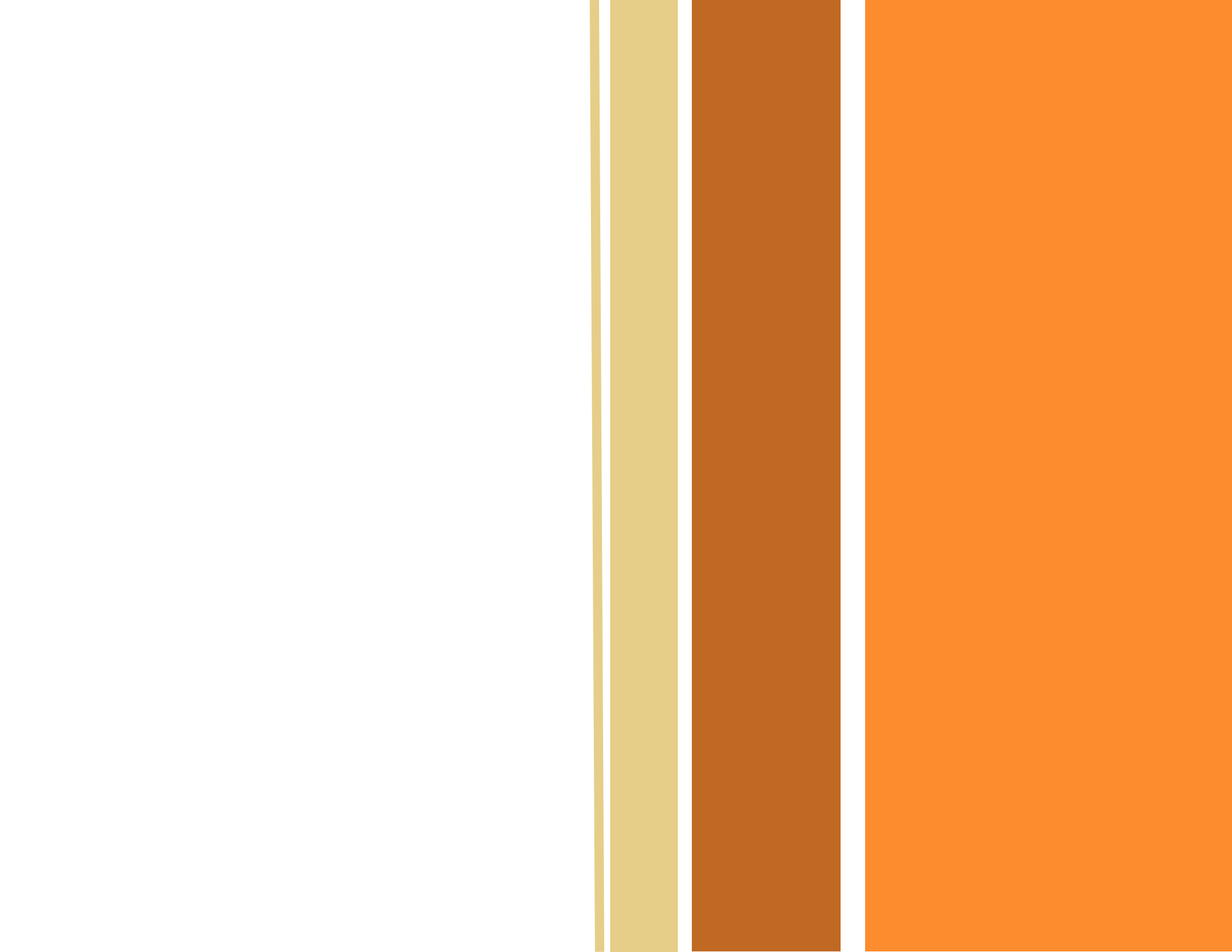
Through the Food Policy Working Group and other consultations, the project supports the development of policies that seek to enable more healthy and sustainable school food systems. We continued to be heavily involved in conversations within the Vancouver School Board relating to the development of a Food Action Plan as a component of the district's Sustainability Framework as well as on-going discussions on fine-tuning the process around implementation of the School Food Garden Policy. In addition, Think&EatGreen@School helped to support the Sustainability Coordinator of the VSB in securing funding for a project to explore the feasibility of growing food on VSB land to be used in cafeterias, meal programs and curriculum-based programs in schools.

Through funding secured by Farm to School Greater Vancouver and PHABC, two research reports were commissioned to explore best practices and opportunities for increasing local, sustainable and healthy food through district-wide procurement. The two reports, “Research into Local Food within School Districts Across North America” and “Scaling Up Local Food Procurement in Greater Vancouver Schools: Recommendations following an analysis of programs, policy and practice,” prepared by

consultant Darren Stott, helped to inform the work of the Farm to School Greater Vancouver Steering Committee in securing additional funding to undertake a School Food Procurement Learning Lab with the Vancouver School Board starting in the Fall of 2013. The focus of the Learning Lab is to explore opportunities to increase local, sustainable, and healthy procurement. Through this process, local food procurement leadership, expertise, and skills within the institutional sector will be built; necessary policy and regulatory changes will be identified; and purchasing practices will be changed. Key learnings will be distilled and shared amongst school districts and used as the basis for food procurement advocacy endeavours.

Finally, Several members of our Food Policy Working Group participated in the PHABC Farm to School BC Provincial Task Force to create a strategic plan for sustainability for farm to school activities across the province.







9

COMMUNITY PARTNER INITIATIVES

Community Partner Initiatives

“Building rapport
with students got
me up every
morning.”

Roz Mullen—Teacher



Our community partners have a long history of providing exceptional food system education in Vancouver. Considered the roots of the

Think&EatGreen@School project, the wisdom of these diverse organizations manifests itself in hands-on programming as well as informing our research activities. Here is a brief summary of their activity in the schools and community. For more information about each organization, we encourage you to visit their websites.

1

Environmental Youth Alliance (EYA)

Through their Growing Kids Program, EYA works to support schools to imagine much more than the 4 walls of a classroom. Food gardens and green spaces on school grounds provide powerful lessons about natural and human created systems. Healthy garden ecologies support an understanding of reciprocity, stewardship, balance and harmony. Outdoor learning grounds provide students with opportunities to apply what they learn in the classroom to the realities that shape their community. The journey a school grown salad takes from seed, to food, to soil serves as a metaphor for another way of knowing the world, one that is based upon ecological, integrated cycles rather than linear,

isolated throughputs. Each year, EYA supports schools in the Vancouver School Board through a number of free services: experiential workshop delivery K-12 classrooms; garden expertise and consultation; plants, seeds, soil, tools, and human energy; community engagement; garden sustainability planning; professional development opportunities; support for student lead garden clubs; and curriculum support and development. In 2012-13 they did amazing work to support numerous schools including Gladstone Secondary, Britannia Secondary, Tupper Secondary, Spectrum Alternative, Sexsmith Elementary, Hastings Elementary, Henderson Annex, Tillicum Annex and many more.

2

Society Promoting Environmental Conservation (SPEC)

Through their School Garden Project, SPEC does amazing work to use school gardens to engage students, teachers and school communities at Bayview, General Brock, Grenfell, L'Ecole Bilingue, Queen Elizabeth, Queen Elizabeth Annex and Thunderbird Elementary schools and Kitsilano Secondary school. These school gardens have educated school children, teachers, parents, administrators and the community about urban agriculture. Through the program, school children learn about food security and how to grow their own organic fruits and veggies, while teachers learn to incorporate fun and thought provoking food system topics into their curriculum. Discussing food issues has proven to be a powerful way to engage children in various science, social studies, math, and health and nutrition topics already written into the BC curriculum. The project strengthens students' connec-

tions to the environment and can make their school experience both meaningful and memorable.

3 Public Health Association of BC (PHABC)

Farm to School is a school-based program linking schools with local farms. These programs close the distance between farm and fork and bring local, nutritious and sustainably produced foods into our schools. 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.

The Farm to School Greater Vancouver Steering Committee, including representatives from Think&EatGreen@School, the Vancouver School Board and Vancouver Coastal Health, decided to support farm to school activities this year through several broad areas:

- Supporting and expanding Farm to School in individual schools.
- Researching how to scale up and evaluating Farm to School district-wide.
- Generating enthusiasm and public awareness of local foods through promotional events such as the Youth Localvore Cook-Off.

Four schools in Vancouver continue to operate farm to school programs with a number of different models:

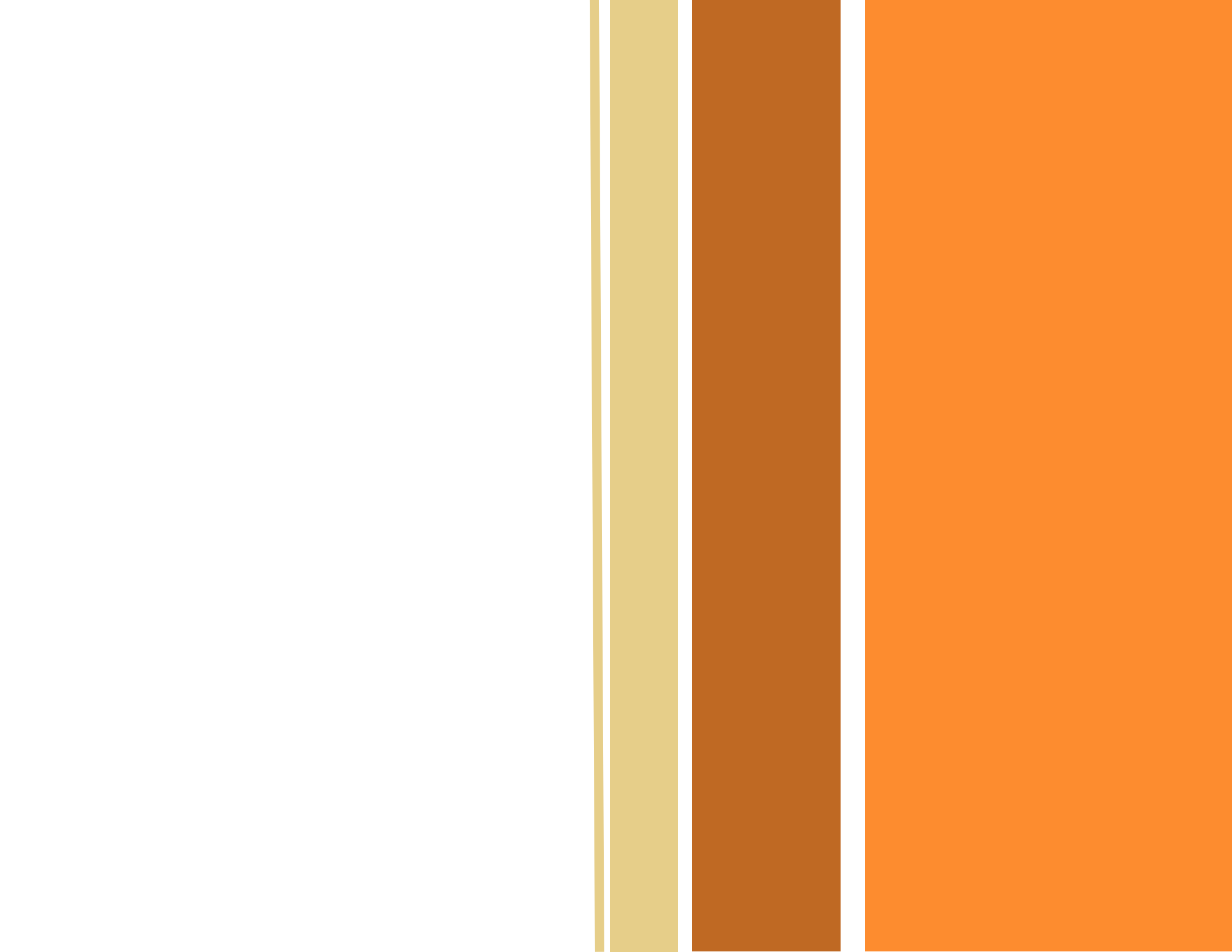
- Grandview Elementary - a subsidized school lunch program.
- Sexsmith Elementary - a classroom cooking model.

- Graham Bruce Elementary - a new lunch program.
- Churchill Secondary – integration into a high school cafeteria.

Planning and implementation grants were given to Tillicum Annex and Queen Alexandra Elementary to look at developing a farm to school program in their school.

Additional funds were secured for 2013-14 to undertake a School Food Procurement Learning Lab with the Vancouver School Board to increase local, sustainable, and healthy procurement through the first School Food Procurement Learning Lab process in BC.







10

RESEARCH, DATA COLLECTION & ANALYSIS

“Teaching outside
is easier for
students and
teachers. Theory:
the distracted
students will be
distracted any-
where. Fresh air
helps all.”

Roz Mullen—Teacher



As a federally funded research program, the Think&EatGreen@School project is devoted to knowledge production and mobilization activities as well as developing hands-on skills in the community. This section provides a brief summary of the academic activities undertaken in 2012/13.

a. Collaborative Inquiry Groups

The Teacher Collaborative Inquiry Group is one of the research components of the *Study of Schools In Transition* towards the goals of the Think & Eat Green @ School Project. This initiative was undertaken to address a central research concern for Think & Eat Green @ School: What are the best methods for increasing food and sustainability literacy amongst schoolteachers and students? The initiative set out to facilitate and study how to support teachers in integrating the theme of food, health and environment in their practices across the curriculum. The objectives of this collaborative inquiry were to:

1. Explore how a collaborative inquiry could advance the development of best methods for increasing literacy about food systems in schools.
2. Learn about how to create and maintain a close and productive school-university partnership.
3. Understand what teachers recognize integration of food, environment and health in the curriculum; and

4. Determine what pedagogical innovations teachers adopt to support the integration of food, environment and health into the curriculum?

The Teacher Collaborative Inquiry Group consisted of faculty and graduate students from the Curriculum and Pedagogy Working Group of Think and Eat Green @ School meeting and a group of self-selected teachers. In 2011-12, one school, Tyee Elementary initiated a Teacher Collaborative Inquiry Group. Participants included: 8 teachers from Tyee, one Parent Advisory Council (PAC) representative, one Faculty member from the Think & Eat Green @ School Project (Dr. Jolie Mayer-Smith), and one Graduate Research Assistant (Chessa Adsit-Morris). In 2012-13 Tyee Elementary continued and expanded its Teacher Collaborative Inquiry Group to include its entire staff of Y teachers. In both years, meetings at Tyee were scheduled once per month for 45 minutes. Meeting time was devoted to discussions of teacher's plans for implementing activities related to food, health, and environment into the curriculum and practices of the children and teachers. In 2012-13 a second school, Sexsmith Elementary School, established a Teacher Collaborative Inquiry Group and hosted monthly hour-long meetings facilitated by one Think & Eat Green @ School Graduate Research Assistant (Chessa Adsit-Morris). All meetings in both years were recorded and transcribed to produce detailed records of school initiatives and issues.

At Tyee and Sexsmith the teachers initiated a series of pedagogical innovations in their schools and classroom lessons that involved students in learning about food and the relationships among food, health and environment.

At Tyee, over two years, the teachers initiated the following activities in their school and classroom lessons:

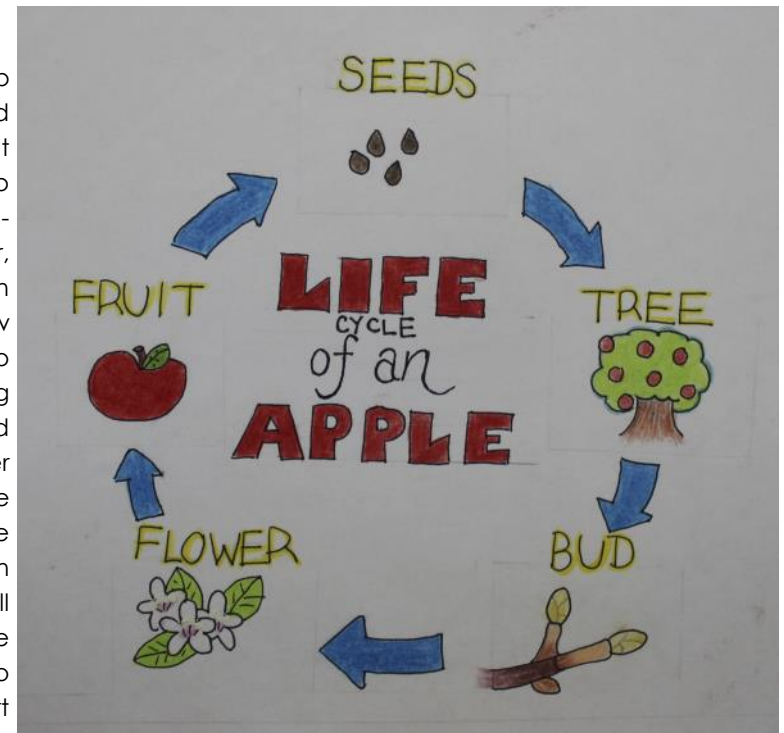
- Designing, building, planting, and maintenance of garden beds.
- Development, tracking, and measurement of a 3 bin compost system.
- Introduction of BC Agriculture in the Classroom Spuds in Tubs program.
- Initiation of a Pocket Market where students sell produce and hand-made crafts.
- Involvement of students in writing eco-poetry.
- A school wide curriculum fair showcasing food-system student projects.
- Teaching lessons on and building Mason bee homes.
- Introduction of the BC School Fruit and Vegetable Nutritional Program.
- Paper making with natural dyes.

Curriculum Connections

Tyee Elementary School was gracious enough to host the Think&EatGreen@ School Project's Mini-Grant Meeting on January 17th, 2013. The teachers at Tyee were excited to be able to share the activities, experiences, and curriculum resources they have developed with other schools interested in gardening and healthy, sustainable food. At the January 17th event the Tyee teachers set up a curriculum resource table and posted student work on the walls of the auditorium. The curriculum materials ranged from plant identification games, to leaf geometry puzzles, to hands-on learning materials.

CAN Club

The CAN Club is a student lead club that facilitates activities around sustainable practices that connect children with nature. The CAN Club facilitates such activities as the creation of a yearly eco-art calendar, establishing and maintaining mason bees, taking care of the new compost system, making snacks to sell at the pocket markets, hosting lunchtime games and activities, and fundraising to install a rainwater barrel for summer watering. In the Winter several students from the CAN Club made a visit to Sexsmith Elementary School to present to all of the intermediate classes there about the CAN Club in order to inspire students at Sexsmith to start their own green/garden/compost club. The Tyee students started their presentation by showing a video created by a UBC 350 student group (<http://www.youtube.com/watch?v=tiKaln97BWA&feature=youtu.be>). The LFS 350 students conducted video interviews with Tyee teachers, staff, students in the CAN Club, parents, and community members about the CAN Club activities. The completed video illustrated the impact of the CAN Club its main goal: "Reconnecting with nature through sustainable practices that help maintain/improve the environment". After the Tyee students showed their video they talked about some of the activities the CAN Club does, why they are important, and how much fun the students have participating in the CAN Club activities.



Each year Tyee Elementary School creates an eco-art calendar to sell as a fundraiser for the CAN Club activities. Working with a parent volunteer, Tyee starts making the artwork with each class in early Fall. The parent volunteer hosts an all day hands on workshop with the Grade 7 class, working with another parent volunteer, using two macs and a scanner, they teach the Grade 7 students some graphic design skills and how to use Photoshop, dividing the Grade 7s into teams to curate placement of artwork, search important calendar dates, write content (which consists of monthly green tips and interesting environmental facts). The calendars get printed in early December so that they are ready to sell for Christmas. Tyee sells the calendars for \$15

each or two for \$25. Sales (both pre-orders and cash) are done by the CAN Club. The CAN Club (with a parent volunteer) set up a table during events where parents come, they also send home a notice to parents describing the project and envelopes so that the students can collect pre-order payments.

This year the CAN Club decided to use some of the funds it had raised to bring Ron Hirschi (a biologist and children's book writer, <http://www.ronhirschi.com>) to Tyee to facilitate activities around salmon (because Tyee is a type of Chinook salmon) and healthy stream systems. One of the Grade 1/2/3 classes participated in the Salmon Hatching program in which they raised salmon from eggs to smolts inside the classroom and then released the young salmon into one of two active salmon streams in Vancouver (either in Stanley Park or Musqueam Creek near UBC). The students studied the life cycle of the salmon, its basic/fundamental needs, and the anatomy of a salmon. During Ron's visit two of the classes (a Grade 1/2/3 & a Grade 4/5/6 class) went on a fieldtrip to Spanish Banks and Musqueam Creek to study the salmon habitat and migration. At Spanish Banks Ron brought a large net, and with a student volunteer, dragged the net through the surf to catch-n-release specimens to learn about the ecology of the different tidal zones. After the tidal zone activities the group traveled around UBC onto Musqueam territory to visit Musqueam Creek (where some of the young salmon raised in schools across Vancouver had been released) to catch-n-release some young salmon and trout that are still living in the creek. Ron used a



Plexiglas viewer so that the students could safely look at the specimens they caught with the net.

On the second day of Ron's visit we hosted a school wide literature and art event in which students worked with Ron to create a 'big book' story with illustrations. The 'big book' project is an activity where students create a story and decorate large foam board pages (4' x 3'), once the pages are completed they are connected together to form a large accordion fold out 'big book'. The story written by the

students at Tyee followed the lifecycle of one of the salmon they hatched in their classroom.

One of the finished pages (isn't it amazing!!) completed by a Grade 1/2/3 class. See drawing in next page.



At Sexsmith, the teachers initiated the following activities in their school and classroom lessons:

- Creation of 10 new school garden beds.
- Weekly cooking activities (2 classes each week, rotating 4 times).
- Informal 'farmer visits' by experts from a local organic food organization (Fresh Roots).
- Lessons on vermicomposting.
- Scientist in Residence working with two classes on decomposers.
- Lessons on mason bees and composting.
- Fieldtrips to Farmer's on 57th.
- Initiation of of BC Agriculture in the Classroom Spuds in Tubs program.

The Student Green Team

The Sexsmith Green Team decided to try to create a student Green Team to get the students more involved in the Think & Eat Green @ School activities. After a visit from a few students from Tyee Elementary School who are part of the CAN Club (a student club focused on sustainable initiatives) 60 students from Sexsmith were interested in participating in a sustainably themed club. The newly formed student Green Team started meeting in February and decided to take on three tasks: setting up a Green Team website, starting a baking club, and hosting two sustainability themed assemblies. The healthy baking club was facilitated by two of the Sexsmith teacher in which the students met after school to bake healthy muffins and cookies that are sold after lunch to raise money for the Green Team. They had their first bake sale and sold \$90 worth of baked goods. The Green team reported

that coordinating the baking club is quite a bit of work but the students were very enthusiastic about it. The Green Team is hoping to be able to start buying ingredients in bulk and getting donations so that they can make more of a profit.

The student Green Team also put together two sustainability themed assemblies for the whole school, an Earth Day assembly and an end-of-year harvest celebration assembly. At the Earth Day assembly there were three teams of students that presented to the school. The first group presented about the history of Earth Day, it was very successful presentation; they dressed up in suits and did a skit. The second group of students did a presentation on recycling and had a quiz on waste free lunches at the end; they gave out prizes for correct quiz answers. The third group designed a spoof game show that the Sexsmith student audience really enjoyed. There were four groups of students that presented during the end-of-year harvest celebration assembly. One of the groups, working with UBC teacher candidates placed at Sexsmith during their Community-based Field Experience (CBFE), created a video about "Why the Think & Eat Green @ School Project Activities are Important". Another group of students created a harvest song to the melody of Old MacDonald and another wrote a poem about the garden. After the assembly the students were able to have a potluck lunch in which they ate potato salad made from the potatoes they grew in the Spring.

Thursday Lunch Program

Sexsmith entered into its second year facilitating a Thursday lunch program in which pairs of classes prepare and share lunch. Working with six

parent volunteers the teachers set up six cooking stations in which groups of students prepare a pre-planned meal. This year some of the recipes included corn and black bean salsa with hummus and pitas (which was extremely successful) they also made a barley soup, tofu vegetable stir-fry, and black bean burritos. The program materials are funded by the students, each student pays \$5 for lunch (this fee will be reduced to \$4 next year). All the students bring their own utensils as well as tupper ware to take home any leftovers. This year the Green Team had the students prep and set up the cooking stations the day before in order to cut down on prep time and create more time for eating and clean-up. The teachers would like to work on creating more curricular connection next year (specifically including writing activities and democratic voting activities) and also discussed sending the recipes home with the students to promote healthy eating at home.

These new pedagogical activities at Tyee and Sexsmith represent teachers' "expressions of integration". Through our Collaborative Study Group activities and discussions with the teachers involved with us at Tyee and Sexsmith we have gained insights into how to create productive school-university partnership and support teachers' curriculum and pedagogical innovations.

The following are key insights we have learned from our work to date with schools:

- Collaborative inquiry is a dynamic and emergent process. Structure and timelines can be proposed for such work, but not imposed.
- Listening, observing, and validating the work of teachers empowers and encourages

curriculum and pedagogical innovation.

- Trust and open communication amongst partners are essential elements for success and continuation of collaboration.
- Innovation in practice and knowledge creation happens through sharing of ideas and mediation.
- Providing opportunities, encouraging teachers to engage in experimentation, and supporting these activities contributes to professional development that can advance significant change and innovation in schools.
- Building community and establishing productive patterns of communication learning to change requires significant investments of time. Adopting new practices in schools happens slowly over time, and needs to be valued by all parties. There needs to be time for building common language, trust, goals, and culture of understanding.
- Similar to the slow food tradition there is a slow pedagogy tradition that needs to be honored and supported in university-school collaborative partnerships.

b. School Food Environment Assessment Tool (SFEAT)

About SFEAT

The School Food Environment Assessment Tool (SFEAT) is an interview and observation framework designed to help us learn about school food systems from school administrators, food service staff, and direct observation of schools. Our research team examined aspects of the

entire food cycle, including school food gardens, availability of healthy and environmentally sustainable foods, and composting. We assessed how these elements were integrated with school curriculum and how school food policies support healthy and sustainable food systems. In the 2012/2013 school year, we visited an additional 7 elementary and 6 secondary schools, reaching a total of 34 schools since the project began in 2011.

What will we do next?

Data analysis is currently underway and our research team will share the findings with the VSB, Think&EatGreen@School stakeholders, and the academic community as soon as the results are ready.

Thank you to school administrators and food service staff who participated in the interviews!

c. Individual Eating Assessment Tool (IEAT)

About IEAT

The Individual Eating Assessment Tool (IEAT) is an online questionnaire that was designed to document what students in grades 5-8 eat and drink during the school day (either during school hours or on their way to or from school) and what percentage of students in grades 5-8 are currently participating in school food or nutrition related activities. In Spring 2012, 950 students in 20 elementary and 6 secondary schools participated in the IEAT survey study.

	% of students reporting daily intake
Vegetables	42
Fruit	50
Whole grains	35
Meat and alternatives	56
Low fat milk or soy beverages	46
Sugar-sweetened beverages	30
Packaged snack foods (e.g. potato chips, cookies)	20
Energy-dense processed foods (e.g. pizza, hot dogs)	15

* Either during school hours or on their way to or from school

Preliminary findings

- Less than 1/2 of students reported daily intake of fruit, vegetables, whole grains and low fat milk or soy beverage daily during school days.
- Almost 1/3 reported drinking sugar-sweetened beverages and 1/5 reported eating packaged snacks daily.
- Over 1/3 of students purchased food at an off-campus limited service food retailer at least once per week.
- Around 1/5 of students reported participating in growing food, 1/3 in food preparation activities and 1/3 reported composting at school.
- More grade 8 students than grade 5-7 students reported participating in learning activities related to food.

Take home message

The majority of Vancouver students are not consuming fruit, vegetables, whole grains or low fat milk each day at school, although many students are consuming sugar-sweetened beverages, minimally nutritious snacks and foods purchased off-campus daily. Schools can play an important role in supporting healthy eating habits and providing opportunities to learn food skills.

What will we do next?

Our preliminary findings were reported to participating teachers and principals in June 2013: <http://thinkeatgreen.ca/2013/07/09/preliminary-report-from-tegs-food-practices-on-school-days-study/>

Our research team continues to analyze data to examine how dietary intake and food purchasing practices are shaped by a various factors including food insecurity, socioeconomic status, acculturation, and gender. We will continue to share our findings with schools, the academic community and Think&EatGreen@School partners as the analyses are finalized.

We thank all of the teachers, administrators, and students who have helped make the 2012 IEAT data collection a success!

d. Key Players Interviews

A component of the Study of Schools In Transition towards the goals of Think&EatGreen@School

A list of 30 “local heroes” or “key players” involved in school food system sustainability initiatives in Vancouver has been compiled from a preliminary listing of 80. Individuals on the latter list whose names were repeatedly identified by participants in the Think&EatGreen@School network formed the actual sample of 30. These people were interviewed using a semi-structured interview guide in order to capture lessons learned from their experiences and disseminate their stories to a wider audience. 22 in-depth interviews were conducted, and transcribed in the Fall of 2012-Spring 2013. They are currently being systematized for preliminary analysis.

Specific Objectives of the Schools in Transition Study

1. Explore and identify strategies for creating, managing, sustaining, and integrating food system components into the curriculum, including: vegetable gardens and fruit orchards, food procurement, preparation and consumption, and food system waste management (recycling and composting). **(Addresses TEGS Research Question # 1)**
2. Explore how the inclusion of these food system components into the curriculum can help to provide sustainable and healthy meals at school. **(Addresses TEGS Research Questions # 3)**
3. Explore how to identify the best approaches for increasing food sustainability literacy amongst schoolteachers, students and school

communities. **(Addresses TEGS Research Questions # 2)**

4. Explore how cafeterias, lunch programs and other school food services can be integrated into the school curriculum to provide learning opportunities for all students to obtain fundamental skills and experiences of planning, preparing, and consuming sustainable and healthy meals and food system waste management (recycling and composting). **(Addresses TEGS Research Question # 3)**
5. Explore how the Think & Eat Green @ School Project can demonstrate and enhance community-engaged scholarship in food systems sustainability learning for undergraduate and graduate students. Explore how the project also potentially increases the capacity of the university as a whole to learn from interdisciplinary, participatory research models. **(Addresses TEGS Research Question # 4)**

Research Questions

To fulfill the above listed Specific Objectives 1 to 4, this specific study intends to respond to the following research questions:

1. What motivating factors influence the involvement of school community members and other individuals who are identified as leaders in the development of programs and practices pursuing the above Specific Objectives in Vancouver public schools?
2. What experiences do key players recognize as expressions of the integration of food, sustainability and health into the curriculum?

3. What pedagogical innovations do key players adopt to support the integration of food, sustainability and health into the curriculum?

e. Focus on Food

Stephanie Shulhan's Master's Research

Sixty grade 9 and 10 students in four secondary schools participated in small focus group discussions about what is most important to them about food, and their opinions and experiences regarding food choices and ways of eating. The goal was to give us a better idea of how students decide what to eat while at school and in general; what their opinions are about topics like fast food, dieting, vegetarianism, sustainable eating, and healthy eating; and what it is like for students to navigate the food system on a day-to-day basis.

Preliminary findings

Many students said they would like to eat more veggies, fruits, and “real” foods in order to be healthy and feel good. However, convenience is important when they feel rushed. Students brought up topics like Genetically Modified Organisms, pesticides, animal welfare, food advertising, organic food, and eating local. Many said that foods labeled ‘organic’ or ‘natural’ seem like good choices, but they were not always sure what these terms mean.

Many students asked critical-thinking questions like, “How do we know that organic is better for the environment?” They also noticed that “fast food is everywhere!” and that this is a challenge for healthy eating.



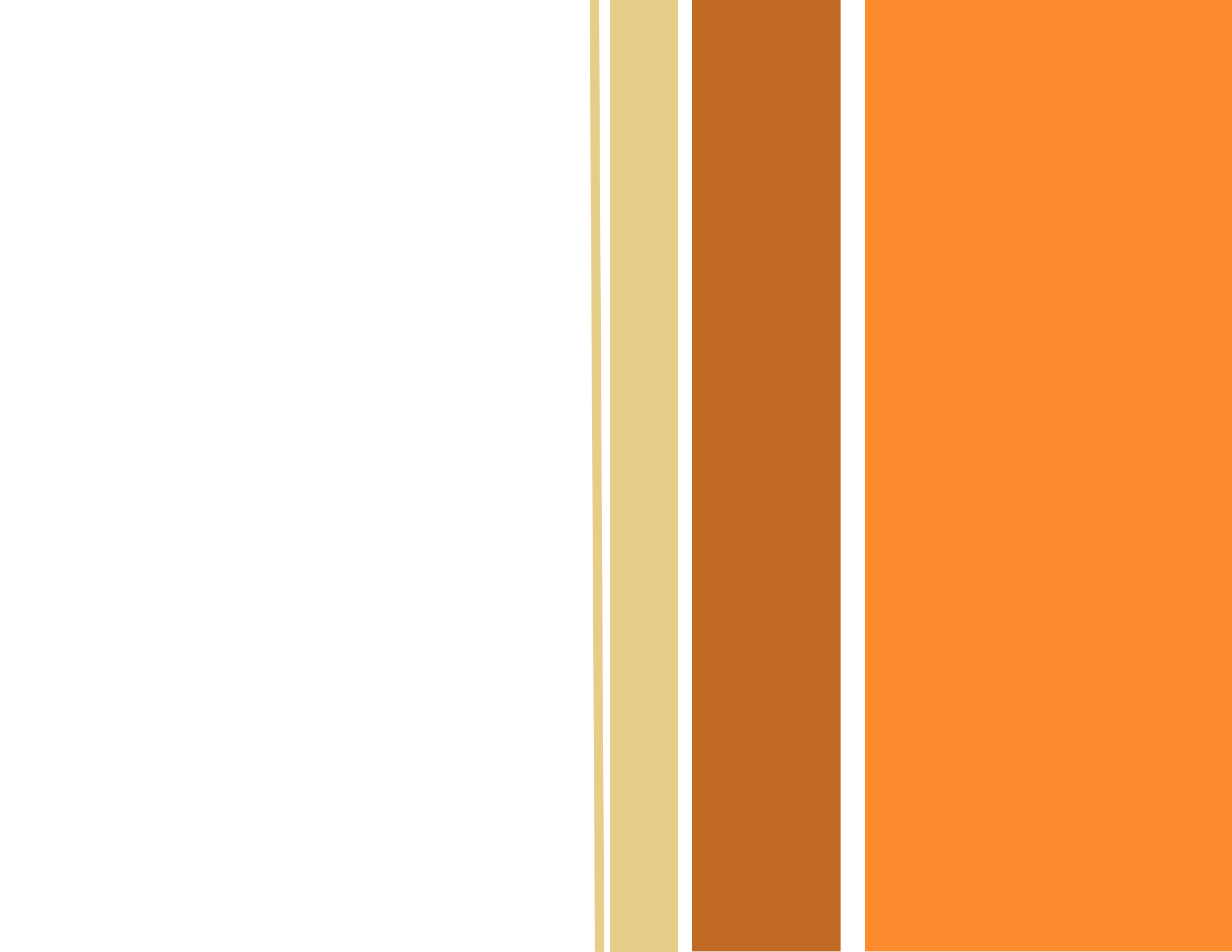
They also shared some smart tips, for example: keep a refillable water bottle and a healthy snack nearby (like in your locker at school) - just in case you need them.

Take-home message

Many students are curious about food-related issues that affect them. Schools can continue to help students learn about contemporary food issues during class, clubs, and extracurricular activities.

Thanks to everyone who participated in or helped with this study, including students, teachers, administrators, and school staff! We will

continue to share our findings with schools, the academic community and Think&EatGreen@School partners as the analyses are finalized.





11

KNOWLEDGE MOBILIZATION ACTIVITIES

Refereed Publications

- Mansfield, B. & Mendes, W. 2013. "Municipal Food Strategies and Integrated Approaches to Urban Agriculture: Exploring Three Cases from the Global North." *International Planning Studies* 18(1): 37-60.
- Rojas, A., Valley, W., Bomke, A. & Skura, B. 2013. Flashlights in a Forest – exploring paradigmatic boundaries. In Harmon, A. (Ed.) *Teaching Food Systems and Sustainability in Nutrition Education and Dietetic Training: Lessons for Educators*. Hunger and Environmental Nutrition (HEN) and Dietetic Educators and Practitioners (DEP) Practice Groups of the American Dietetic Association. Pages 8 to 11.
- Rojas, A., Valley, W., Bomke, A. & Skura, B. 2013. Environmental Ethics: Flower of Values – a tool to identify and map ethical values and their influence on sustainability research. In Harmon, A. (Ed) *Teaching Food Systems and Sustainability in Nutrition Education and Dietetic Training: Lessons for Educators*. Hunger and Environmental Nutrition (HEN) and Dietetic Educators and Practitioners (DEP) Practice Groups of the American Dietetic Association. Pages 13 to 17.
- Rojas, A., Valley, W., Bomke, A. & Skura, B. 2013. The Household Food System. In Harmon, A. (Ed) *Teaching Food Systems and Sustainability in Nutrition Education and Dietetic Training: Lessons for Educators*. Hunger and Environmental Nutrition (HEN) and Dietetic Educators and Practitioners (DEP) Practice Groups of the American Dietetic Association. Pages 33 to 35.
- Skura, B., Rojas, A., Valley, W., Bomke, A. 2013. Sensory Evaluation of Milk Products and Milk Alternatives. In Harmon, A. (Ed) *Teaching Food Systems and Sustainability in Nutrition Education and Dietetic Training: Lessons for Educators*. Hunger and Environmental Nutrition (HEN) and Dietetic Educators and Practitioners (DEP) Practice Groups of the American Dietetic Association. Pages 33 to 35.
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- Rojas, A., Valley, W., Bomke, A. & Skura, B. 2013e. Using Zea as a Learning Experience. In Harmon, A. (Ed) *Teaching Food Systems and Sustainability in Nutrition Education and Dietetic Training: Lessons for Educators*. Hunger and Environmental Nutrition (HEN) and Dietetic Educators and Practitioners (DEP) Practice Groups of the American Dietetic Association. Pages 93 to 95.
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- Rojas, A. 2012. Polycultures of the Mind: The End of the Peasant and the Birth of Agroecology. In Dirlik, A., Prazniak, R. and Woodside, A. (Eds) *Global Capitalism and the Future of Agrarian Society*. Paradigm Publishers, Boulder and London. Pages 255-278.
- Rojas, A., Sipos, Y., & Valley, W. 2012. Reflection on 10 Years of Community-Engaged Scholarship in the Faculty of Land and Food Systems at the University of British Columbia-Vancouver. *Journal of Higher Education Outreach and Engagement*, 16(1), 195-214.

Conference Presentations

- Rojas, A. 2013: **Session Organizer. Session Participants:** Alejandro Rojas, Brent Mansfield, Elena Orrego, Will Valley, Jolie Mayer-Smith, Joshua Edward, Teya Stephens. Working for Healthy & Sustainable Food Systems in Vancouver Public Schools. Canadian Association of Food Studies. June 2-5, 2013. Victoria, BC.
- Rojas, A. & Valley, W., 2013: Towards an Ecology of Knowledge for Food Systems Education. Panel Presentation. Canadian Association of Food Studies Conference. June 2-5, 2013. Victoria, BC.

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- Rojas, A. 2013: **Session Organizer. Session Participants:** Alejandro Rojas, Will Valley, Elena Orrego, Jolie Mayer-Smith, Chessa Adsit-Joshua, Edward, Naseam Ahmadi, Teya Stephens, Cayley Velazquez, Stephanie Shulhan. *Think&EatGreen@School: A Community-University Research Alliance Working for Healthy & Sustainable Food Systems in Vancouver Public Schools Symposium XII: Home Economics/Family Studies/Human Ecology /Family and Consumer Science Education: Issues and Directions*. Richmond, BC.
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- Think&EatGreen@School Project. Midterm Report. Submitted to the Social Sciences and Humanities Research Council of Canada (SSHRC). July 2012.

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- Rojas, A. Inauguration Keynote Speech: Think&EatGreen@School and the Faculty of Education Enhanced Practicum. University of British Columbia, May 22, 2013.
- Rojas, A. 2013. Think&EatGreen@School Project Progress Report. Overview of the 2012-Year Overview. *Whole Team Annual Meeting*. Vancouver School Board. March 15, 2013.
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