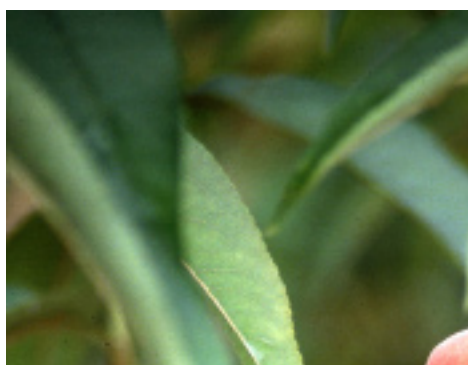


# Britannia Urban Garden (BUG) Project

## Final Report to the Recreation Foundation of BC



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## 1. Introduction



I am very pleased to present our final report on the Britannia Urban Garden Project better known as BUG to the Recreation Foundation of British Columbia. The original funding proposal was scaled back as per the final grant awarded with RFBC funds used to coordinate build days and develop a series of in-class workshops and learning opportunities for students at Britannia Secondary School. These built student's skills and knowledge in the area of urban food growing.

The Britannia Urban Garden Project has been enormously successful and enthusiastically embraced by students, teachers and administration alike. In fact, the school principal has remarked that the BUG Project is now a very important program at the school, with food growing curriculum now being taught to three classes.

This year we were able to dig in and build our new gardens following a previous school year of intensive garden planning and design. These new gardens are now providing an outdoor classroom space for new multidisciplinary learning as well as new programming space for the Britannia Community Centre (on the same grounds as the school) to offer food growing workshops to the general public.

>> Photo documentation of the project can be seen at:

<http://www.flickr.com/photos/gwfc/sets/72157629386735112/>  
<http://www.flickr.com/photos/gwfc/sets/72157627593976091/>



Students involved in the garden project have described many new learnings. Moreover, students participated in an experience, that for many who had never planted a seed before, held an earthworm, composted kitchen scraps, or eaten food freshly picked from the garden, was a true eye opener. As one student learned:

***“These gardens are community gardens and this whole experience has brought me to realize a greater sense of community. I knew why I wanted to be a part of the garden project from the beginning: I wanted to make a difference and help protect the environment, but this garden has provided me more than. I’ve learnt more than just how to garden, but I’ve also learnt about community and the way a garden can unite people in the school, community and those who are dedicated to making a difference.”***





School gardening projects have been reported to expand student's awareness of the natural world and promote their cognitive, social, and personal development. Outdoor learning in the natural environment can make an important contribution to learners' behavior as well as motivation and sense of achievement. Many students participating in the BUG Project were keen to get outside (anything to get out of their desks perhaps) and their curiosity and willingness to engage demonstrated their interest in food growing. As the project evolved, it was apparent that many students looked forward to the garden work.

## 2. Project participation

Approximately 50 students from grade 8 – 10 classes participated. Special effort was made to engage two alternative school programs with “vulnerable” students learning outside the mainstream system. These students showed the most enthusiasm, perhaps because they respond better to an informal style of teaching.

Most exciting is how fast the garden project has been taken up as a regular classroom program. In other words, food growing is now embedded in class curriculum and supporting a variety of illiteracies including: science; nutrition; carpentry; math; socials and more. We also had requests from other classes to participate, though we were already at capacity in terms of teaching time.

In addition to student involvement, the project has led to important partnerships. Interest in helping this garden grow will further support the garden's long-term sustainability through resource sharing.

- o Grandview Woodland Food Connection - project facilitator
- o Britannia Secondary School and Community Centre – hosts and teaching support
- o Environmental Youth Alliance - gardening instructors and mentors.
- o EastSide Family Place – community garden members
- o Britannia Seniors - community garden members





### 3. Results of the Project



For the purposes of this evaluation, this report will focus on three key short-term outcomes that RFBC funding has helped to achieve. In terms of expected outcomes, the BUG Project has successfully met its objectives and more. Given that this is really the first year that the garden has been growing, the school has jumped in and gotten engaged with many students gaining important new skills and knowledge as well as the building of physical capacity for the school to grow its own food.

The following outcomes will be discussed below.

1. Participants have multiple and creative opportunities to engage in and build their food growing skills and knowledge.
2. The capacity of the school to meet its own food needs and help to supply healthy fresh produce to the cafeteria increases.
3. Britannia School and Community Centre are able to offer a range of food growing opportunities to the wider community.

#### >>> 3.1. Participants have multiple and creative opportunities to engage in and build their food growing skills and knowledge.



Regular food growing workshops were organized throughout the year with urban agriculture themes and topics that connected ecological and sustainability theory with hands-on experience – connecting the hands in the dirt with the brain. Students were invited to think about how our ecological, social, cultural and political realities impact our everyday actions, the impact of the simple act of eating, and developing a better understanding of one's relationship with nature and food in particular. An example of many of the activities included:

- o Constructing garden beds (hauling soil)
- o Preparing a winter garden – leaf collection, mulching and winter crops
- o Setting up indoor grow lights and growing seedlings in the classroom
- o Learning about bees and building Mason Bee hives in the woodshop
- o Building a wildlife pole complete with butterfly and bat homes and Mason Bee hives
- o Constructing a three bin composting bin, learning about and helping with school cafeteria waste composting
- o Planting pollinator and native perennial gardens





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- o Planting espalier and other fruit trees
- o Participate in the Lawns to Loaves program planting wheat for urban grain production
- o Lots of seed planting – what to grow when, why and how
- o Growing food for medicine (healing foods)
- o Healthy eating choices

These topics have provided students with new insights and experience that have built their confidence to grow their own food. Students involved in the gardening workshops commented on a variety of new knowledge and skills learned, ranging from how to plant seeds to how to use a shovel. It is also hoped that the program has also empowered participants in knowing they can create change in the city. As one student said,

***“I have never really been too into the gardening thing, but I thought I’d give it a shot. I’ve come to realize that gardening is a great way to help the environment and to learn something about yourself in the process. It is also a really nice and calming activity.”***

So what did other students learn? Here are some answers:



- ***I learned that weeds can be healthy for the garden. I learned bees can be friendly, and I learned that plants always start with two leaves or something***
- ***How to dig***
- ***I learned about how meaningful plants really are***
- ***I learned about plants that can make medicines***
- ***I learned that some bees do not have stingers and are native to BC***
- ***I learned different kinds of plants***
- ***What is good for plants and what is not***
- ***Bees are interesting***
- ***About food and grains in the garden***
- ***All plants start off with 2 little leaves***
- ***How to plant properly***
- ***How to grow food***
- ***Planting cover crops enriches the soil***
- ***That we need to grow more food***
- ***I learned that there are less farmers today. Is interesting because I thought that there would be a lot***
- ***I learned how we can lose a type of seed and fruit by terminator seeds***



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- *How to plant food because otherwise we would not have known*
- *Large scale organic agriculture would be stimulus to the economy as well as job creation*
- *Gardening needs lots of love and care*
- *That worms don't like types of oils on human hands*
- *I learned that Mason Bees could determine what they want to have, like how many boys or girls. Not many things can do that*
- *You need to keep the beds of planted seeds warm by putting a layer of leaves to be a blanket*
- *The different ideas and aspects which need to be considered when planning a garden*
- *Learning what an espalier tree is*
- *Timing and seasons for planting*

Successful engagement that builds student's sense of ownership or attachment to the garden necessitates making learning interesting and fun. This is important in our approach as it is of little use in building the long-term sustainability of the garden if students don't want to participate.

I especially like these two comments.

*"It was extremely fun and I felt like I was really helping in improving and maintaining Britannia's image. Shoveling was much harder than I expected but I did feel much better due to the mini exercise I experienced and just with the knowledge that I managed to help out even a bit. "*

*"Being outside, working in the garden was refreshing, regardless of the weather and it made me realize how nice getting fresh air into my lungs was as opposed to the stuffy air in my room; it made me want to be outside more often."*

It is not too difficult to make outdoor learning fun. For most students, just getting outside is half the fun and teaching in a garden setting can offer a wide variety of activities as mentioned above. The teachers involved especially appreciated the new tactile, physical learning opportunities the garden program has provided with the project very topical and well linked to various academics – socials, science and math.







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Overall, student feedback showed that they enjoyed the garden project. The following are student reflections on what they enjoyed most about the garden project:

- *The reward that we got from planting the seeds*
- *Just growing stuff*
- *I like working and keeping busy and I like making the beds for the plants*
- *I enjoyed building the compost bins*
- *I enjoy the fact that I'm kinda giving back to the community and learning how to care and nurture for a plant from when they are little babies to when they are all big and grown*
- *Building the garden...sooo fun*
- *Raking the flower beds*
- *The woodwork*
- *I liked taking pictures on Ian's camera*
- *I enjoyed cutting wood*
- *I liked to dig*
- *I liked that everyone helped*
- *Seeing something grown out of nothing*
- *I enjoyed building the Mason Bee hives*
- *I liked getting my hands dirty. It made me feel like I made a difference*
- *Building the bee houses*
- *Everything*
- *Using the shovel*
- *The fact that it is outdoors*
- *Getting outside and being able to grow food*
- *I liked playing with the worms*
- *I enjoyed getting out in the garden... just getting my hands dirty is really fun*
- *I enjoyed the slide presentation*
- *Being outside*
- *Learning new things*
- *Playing with worms*
- *Everyone helped out by digging and that*





### **>>> 3.2. The capacity of the school to meet its own food needs and help to supply healthy fresh produce to the cafeteria increases.**

We talk a lot about capacity building in the community development field. This can include the capacity of individuals or organizations to build new skills and knowledge to make positive change in their lives. An equally important aspect to capacity building is the building of the physical infrastructure, as an asset that can support programming and social change. RFBC grant money was also used to buy material resources for the garden project.

As mentioned above, this past school year has been the year of digging in, of implementing a garden plan that was developed during the previous school year. This year saw the second and largest of three garden areas at the school developed. Temporarily named the Streetfront Garden, when it is fully built out, it will encompass over 8000 sq ft including a mini orchard, compost demonstration area, cafeteria food growing area, community garden plots, wildlife pole, hoop greenhouses, outdoor learning area and seating, shade garden, native berry bush garden, pollinator gardens, and educational signage.

What started out as an empty space is now a vibrant and alive garden. All of these garden elements provide for the many learning opportunities as discussed above.

A second key goal in this project is to provide at least some food to the cafeteria as well as a space that can compost kitchen waste. Perhaps the food produced for the cafeteria is not a great amount...yet, but we hope that it will help build awareness of healthy eating. The cafeteria lets people know they are eating food that came from the garden. On the food waste end of things, our new composts have been able to compost all the uncooked kitchen waste, diverting hundreds of lbs of food waste from the landfill. While we are yet to measure this amount, we expect it will be significant.







### >>> 3.3. Britannia School and Community Centre are able to offer a range of food growing opportunities to the wider community.

The Britannia Community Centre now has its own food garden space to finally begin to offer food growing or urban agriculture workshops. As such, the gardens are enriching the community programming, bringing in new community centre users and generating new sources of income, which is very exciting.

These new Britannia Gardens will serve as an important learning and garden demonstration space for East Vancouver. Already a series of free gardening workshops have been planned for this spring (one workshop already completed at the time of this writing). These workshops include composting, children's gardening, and beginner and advanced gardening. Plans are also underway to develop a fall permaculture workshop series.

## 4. What did we learn



A frequently mentioned success of the project was the realization of how involved the principal and staff at the school were with respect to the project. Their enthusiasm was a key driver in the process, and that internal support was highlighted as crucial to this type of project.

Teachers also commented on the variety of workshop formats that were used that contributed to the apparent learning by students. One teacher commented that he learned ***“that what works best with youth in terms of learning is not to spend time on traditional theory or jargon....to focus on the fact that everyone has valuable insights to add.”*** He continued by noting that the teaching approach ***“which focused on participation... is much more effective...the diversity of tasks kept everyone busy”***. Others mentioned that ***“teaching based on activity or doing rather than the planning of objects”*** and that ***“hands on activities...keep[ing] concepts as concrete as possible, especially if time is short”*** was a good approach to teaching or discussing garden learning. The program was ***“results orientated with tangible outcomes such as seeing things grow”***.



Finally, group dynamics were an important part of the project. Teachers noted that ***“small group work seemed to have worked”***. The resounding feedback from these teachers is that they were eager to have more of their students involved in the project. They expressed the desire to explore different ways to engage the students in future projects like this one, or for the remainder of this project. They also suggested that ***“mentoring of younger students by older students”*** as well as ***“engage[ing] the knowledge from other experts alongside the students”*** could have been useful.

Students also provided feedback on what they did not like about the project. The majority of dislikes were ***“working in the cold and rain”***, ***“getting dirty”***, ***“the hard work”*** and finally the insects for a few. At times we worked hard especially when moving large piles of dirt and some students, especially the boys, liked this work. Still, it is important to provide a good mix of activity to keep the students engaged. Fortunately with gardening, there is lots to do. Many students also seemed to have enjoyed constructing the compost bins and bee hives. Growing seedlings indoors under grow lights was fun for some who were keen to watch the plants grow. Some students even adopted their own plants that they helped nurture. Indoor growing is an area that we could certainly try to expand as this worked well.



## 5. What are the next steps as a result of the project

The BUG Project has thus far been a tremendous success. The positive feelings for the gardens that have been generated through this program have inspired both students and teachers to get more involved. As one student has said:

***“The new garden by the Streetfront portable is now pretty much near completion, it is looking great and I am glad to see all the planning and efforts from the previous year growing right before my eyes. I am definitely glad that I participated in this project. I am helping preserve the environment and I am glad that I am part of the team that is building a foundation on which the gardens can flourish at this school many years from now.”***





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RFBC funding has enabled us to put into place a foundation of food growing curriculum and workshops in the school. This has been critical in building support and buy in for the BUG Project among everyone at the school who now see the tremendous learning opportunities offered. We are confident that the project will continue to grow and evolve with increasing involvement of both the school and community centre. As we grow, we will:

- o **Continue to expand the garden over time including new community garden plots for community residents.**
- o **Continue to involve both the Grandview Woodland Food Connection and the Environmental Youth Alliance and to provide mentoring, teaching, and curriculum development for the next few years.**
- o **Incorporate a Biology 10 and Culinary arts 11 class next year into the garden program.**
- o **Build the Garden Club involvement.**
- o **Foster community involvement by organizing a variety of urban agriculture workshops offered through the community centre.**
- o **Seek additional funding to build the school garden educational program.**
- o **Continue to seek out project partners that can bring knowledge and resources to the BUG Project.**

Thanks,  
Ian Marcuse, Community Food Organizer  
Grandview Woodland Food Connection

