

The Richmond School District Sustainability Initiatives Report 2009-2010



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Sustainability Grant Reports 2009-2010

Overview of Sustainability in Richmond

Overview

The Richmond School District has been engaged in Sustainability Initiatives since 1998 when the Environmental Stewardship Policy was adopted. Over the past twelve years, the district has grown and developed the depth and breadth of its understanding and incorporation of environmental sustainability practices. Regular school activities now include gardening/greening projects, Eco-clubs, composting, recycling, walk to school days and litter-less lunches.

In Spring 2008, Environmental Stewardship was adopted as a new Developmental Objective. The overarching question is: ***How can we behave responsibly towards the natural world?***

The policy states:

“The Richmond School District has been a leader in the introduction of energy conservation measures and in the development of student leadership programs that promote behavioral change for environmental sustainability. It has formed a Sustainability Secretariat to consolidate and integrate existing programs while establishing a solid groundwork for an expansion of its efforts and more extensive implementation of its environmental stewardship policy. It is also preparing to meet its new mandate to become carbon neutral. Steveston-London Secondary School is expected to soon become the first secondary school in Canada to achieve a LEED Gold Standard for environmentally sustainable construction.”

A newly developed committee of leaders, called the Sustainability Secretariat was formed to understand and meet the needs of the district.

Update:

As of early May 2010, a motion from the Board Chair, Linda McPhail, was approved to “*review Policy 602.14.1 Environmental Stewardship and consider updating to include a statement on and or guidelines for school and community gardens*”

AND FURTHER THAT staff, working with stakeholders and community partners, review and update “The Procedure for Tree Planting and Greening of Schools”.

To date, a group of staff from the Maintenance and Operations and Curriculum and Education, are working together to review and recommend changes that will include guidelines, regulations and best practices for all future sustainability projects. It is expected that the updated document will be completed by Fall 2010.

Summary of Sustainability Activities

Various projects and activities have taken place throughout the year. The goals of these initiatives were to:

- **Foster a greater development of knowledge & understanding around the issues related to Sustainability;**
- **Build a sense of community for like-minded individuals dedicated to Sustainability;**
- **Provide networking opportunities between school communities and community organizations**

Below is a summary of the District Sustainability activities that happened throughout the year:

Sustainability Kickoff

On Oct. 15, 2010, approximately 125 people attended the annual Sustainability Kickoff. At this event, school teams had the opportunity to:

- Watch the VANOC award winning video “Hurtin’ our Planet” by Darrick Lee and Michael Darnel (students from McMath and Richmond Secondary Schools).
- Brainstorm and take stock of current school environmental sustainability initiatives.
- Identify school-wide sustainability goals and strategies for successfully achieving these goals.
- Network with other schools, teams and individuals around sustainability initiatives and projects.

After the Sustainability Kickoff, teams went back to their schools to further their sustainability initiatives and projects. The school teams also continued to network with each other by attending the monthly Sustainability Cafes. At the end of the year, schools showcased their successes at the annual Green Gala.

Sustainability Cafe

After the Sustainability Kickoff, the collaborating opportunities continued with monthly Sustainability Café meetings. The purpose of this network was to provide students, staff, parents and community members with the opportunity to get together to explore issues related to Environmental Sustainability. At each Café, different school projects/initiatives were highlighted and various community resources shared. Each month also focused on specific topics, which included: Gardening/Greening, Composting, Transportation, Waste Management and Energy Conservation.

The Eco-wise Online Assessment Tool, was also introduced and schools were invited to use this tool to evaluate and track their success in five areas: Teamwork & Leadership, Energy Conservation, Gardening/Greening, Waste Management, and Transportation.

Green Student Leadership Clinic

In November 2009, approximately 25 grades 6-10 students attended a three-day clinic, which focused on giving students the knowledge, strategies and skills to become environmental sustainability leaders in their own schools. There were three main themes to the workshops:

- What is Sustainability and Climate Change
- How Do I Make A Difference
- Social Marketing and Action Planning

After the clinic, students went back to their own schools and tried to engage their peers in sustainability projects and initiatives. Many of these students were part of their school Green Teams that participated in the monthly Sustainability Cafes.

Mother Earth Week/Earth Hour

During Earth week, there were a variety of school-based activities. Schools participated in projects including:

- **MacNeill** students sowed the seeds for the 2010 edible plant garden.
- **McKinney** had a Waste Reduction Day on Earth Day.
- At **Tait** Elementary students & staff are going to have an Earth Day Assembly before going out and cleaning up our neighborhood for Earth Day on Friday April 23.
- **Brighthouse** had a walk to school day and a neighborhood clean up.
- **McRoberts** hosted workshops and Eco-plays throughout the week.
- **McMath** celebrated with a week of our Ecolympics, focusing on Powering out.
- Homma had a paperless day, Garbage free lunch day, and a lights out campaign.
- At **Woodward**, an Urban Impact Tour was arranged for the Grade 4/5 students.

- **BC Green Games**

Ferris Elementary, MacNeil Secondary and McMath Secondary schools submitted their projects to showcase their Sustainability projects and initiatives. The three projects showcased how students and staff can be involved to behave in a sustainable way towards the environment.

To view the projects, please go to:

Ferris Elementary School: A Green Year

<http://2010.bcgreengames.ca/component/project/?id=305>

MacNeill Secondary School: Eco Power Green Team 2010 Edible Plants

<http://2010.bcgreengames.ca/component/project/?id=217>

McMath Secondary School: McMath Natural Club "Going Green Going Global"

<http://2010.bcgreengames.ca/component/project/?id=286>

Congratulations to Ferris and McMath who were both 2010 winners of the BC Green Games.

To view the gallery of project and for more information about submitting future projects, please go to: www.bcgreengames.ca

Green Gala

The annual Green Gala was the culminating event for the schools that received Sustainability Grants. Schools had the opportunity to share their environmental success stories. Projects were presented in a variety of ways: power point, video, student presentations, poems, stories and letters. It was truly a spectacular showcase of how sustainable Richmond schools are!



Overview of Sustainability Grants

The Richmond School District has supported local school projects with grants since 2004. The purpose of the grants is to provide opportunities for schools to explore innovative ways to be sustainable.

This year, twenty-one schools were honored with twenty-two \$500 grants (one school received more than one grant) for their school-based Sustainability Initiatives). The Sustainability Grants have had a positive impact on attitudes and behaviors of the whole school community. It has allowed schools to take ownership and move deeper into the issues related to Environmental Sustainability.

There were sixteen elementary schools and six high schools participating in Sustainability projects. Each school team consisted of teachers, administrators, students, parents and community partners.

The projects varied but fell into five general categories: Gardening/Greening, Waste Reduction & Recycling, Greening, Composting and Eco-clubs. Schools were asked to create a plan that actively engaged the school community. These schools then tracked their progress in variety of ways including surveys, testimonials, participation, etc.

Each participating school was also asked to use the newly developed Eco-Wise that helped track progress. School teams completed a self-evaluation of the key areas (Teamwork/Leadership, Waste Reduction, Energy Conservation, Gardening/Greening, and Transportation) at least three times a year. This year, schools received a Star rating in three of the areas, Teamwork/Leadership, Waste Reduction and Energy Conservation. Next year, the two other categories, Gardening/Greening and Transportation will be further developed for the school assessment.

The culminating event for these projects was the Green Gala where each school made a small summary presentation about the success of their projects.

Overview of School Sustainability Projects (2004-2010)

School	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Boyd						x
Burnett					x	x
Cambie						
MacNeill		x	x (2 projects)	x (2 projects)		x
McMath		x			x	x
McNair				x (2 projects)	x	
McRoberts	x	x	x	x (2 projects)	x	
Palmer				x	x	
Richmond				x	x	x (2 projects)
Steveston-London				x	x	x
Anderson				x		x
Blair						
Blundell					x	
Bridge			x			
Brighthouse					x	
Byng			x	x	x	
Cook						
Currie						
Debeck	x			x	x	
Diefenbaker				x (2 projects)	x	
Dixon				x	x	
Errington					x	
Ferris	x		x	x	x	x
Garden City	x	x	x	x (2 projects)	x	x
Gilmore				x	x	
Grauer		x		x (2 projects)	x	x
Hamilton					x	x
Homma					x	
Kidd						
Kingswood						
Lee						
Maple Lane			x	x		X
McKay						

Continued...	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
McKinney						x
McNeely		x				
Mitchell	x				x	
Quilchena			x	x	x	x
Spul'u'kwuks	x (2 projects)		x	x	x	x
Steves						
Tait	x	x		x	x	
Talmey	x	x				x
Thompson				x	x	x
Tomsett						
Westwind						x
Whiteside					x	
Woodward					x	x
Wowk						
Learning Services Dept.						x
Total projects	10	8	10	26	27	22

ECO-WISE Tool Assessment Results

This was the first year that the Eco-Wise Assessment Tool was used to help School teams monitor their Environmental Sustainability progress. Schools were rated in three areas: Leadership/Teamwork, Energy Conservation and Waste Management. To qualify for a star rating, the minimum requirement was for school teams to complete the Leadership/Teamwork part of the Eco-Wise Tool.



School	Leadership/Teamwork	Energy Conservation	Waste Management
Burnett	★	★	★
MacNeill	★	★	★
Richmond	★	★	★
Anderson	★		
DeBeck	★	★	★
Ferris	★	★	★
Garden City	★	★	
Grauer	★	★	★
Hamilton	★		★
Maple Lane	★	★	★
McNeely	★	★	★
Qullchena	★	★	★
Talmey	★	★	★
Thompson	★	★	★
Westwind	★	★	★
Woodward	★	★	★
Spul'u'kwuks	★	★	
McMath	★	★	★

Special congratulations to Gilmore and McKinney who were also participating Eco-Wise Schools. Each of these schools received a special certificate acknowledging their achievements. Well done!

Each year, schools will have the opportunity to reassess themselves in the five areas (Teamwork/Leadership, Waste Management, Energy Conservation, Gardening/Greening, Transportation) and build on their progress from year to year.

For more information about the Eco-Wise Tool, please go to:
<http://142.33.49.132/fmi/iwp/cgi?-db=ES&-loadframes>

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ANDERSON ELEMENTARY SCHOOL

Composting

School Sustainability Team Members:

- Dolores Fuchs and the Enviro-Club (made up of students from K-7)
- Grade 1/2 French Immersion Teacher

School Sustainability/Context:

At Anderson, we were already recycling all the beverage and food containers.

Year(s) of District Support:

1 year: 2009-2010

Goals/Objectives:

- Greatly reduce the amount of waste that we send to landfills as a whole.
- Educate the students, staff, and greater community about the impact that each individual has on the environment, and simple things they can do to decrease that impact.
- Show that the cost of composting is equal to or less than that of the present garbage disposal.
- Make sure the compost is not contaminated by more than 10%.
- Obtain on-going support from Henry Anderson students, staff, and community
- It is true that compost is still a form of waste, but by increasing student and community awareness of this waste we will hopefully be able to reduce the overall production of it as well.
- Students gain firsthand experience of environmental stewardship and responsible citizenship, outside of the classroom.
- Henry Anderson will begin to form a culture for its green practices and for preparing well-rounded, socially responsible students.
- Students will be active participants in decreasing our community's greenhouse gas emissions and increases our recycling rate.
- Henry Anderson Elementary learned:

What's compostable?

All food scraps and food soiled paper: kitchen trimmings, plate scrapings,

coffee grounds and filters, tea bags, meat, bones, fish, dairy products, baked goods, napkins and paper lunch bags. It is extremely important that everyone at the school do their part to make sure that only compostable items are placed in the stainless steel pails.

What's not compostable?

Styrofoam, plastic, metal, snack bags, liquids, and glass are examples of other non-biodegradable items.

Findings

Composting at Henry Anderson School has addressed sustainability practices within our school and community and has encouraged our students and their families to make responsible, sustainable choices in their daily lives. Implementing this program within Henry Anderson School has begun the education all students and staff on what items are and are not biodegradable. We have also encouraged staff and students to reduce their overall waste, and live in a more sustainable way. Composting at Henry Anderson School has begun to address and change the current waste disposal practices of our school to a more sustainable, responsible disposal system. It is our hope that we will not only be able to make a smaller ecological impact on our community, but be a positive example to other schools and our community at large. We have shown that our project is a success as we are continually striving to show that the cost of composting is equal to or less than that of the present garbage disposal.

Future Plans:

Upcoming Henry Anderson events will encourage families to reduce school commute related greenhouse gas emissions by reducing car trips and using alternative modes of transportation like walking, bicycling, riding the bus or carpooling more often.

The goal is to have as many Henry Anderson families encouraged to walk, bike or use other alternative transportation to come to school. In addition, we would like to strive for community activities like walking school busses, collaborative art projects and contests that raise awareness about the viability of walking for transportation. The purpose of these events is to encourage families to try to experience the benefits of walking and biking to school.

After our community experience of having shared a walk with family and friends on Walk to School Days, the hope would be that many families continue the tradition and make it a regular activity. It is a great opportunity for families to try a different approach to commuting to school.

Budget:

With our \$500.00, we spent our money on purchasing the stainless steel buckets from Lee Valley - For greater storage capacity our school purchased the large pail measuring 8-1/2" high by 9-1/2" diameter and holding up to 6 litres. We purchased 20 pails (one for every classroom K-7 and one for our Staff room).

Each pail \$20.00 x 20= \$400.00 PST \$28.00 GST \$20..00

Grand Total - \$448.00

With the remainder of the \$52.00 our school purchased the two larger compost containers that the students go to empty out their classroom food scraps.

Home Depot \$32.14 PST \$2.25 GST \$1.61 Grand Total \$36.00 x2 = \$72.00



BOYD SECONDARY SCHOOL

Schoolyard Gardening

School Sustainability Team Members:

- Scott Merwin – Leadership Teacher
- Mimi Matsuo – Greenthumbers Teacher
- Amy Lang – Greenthumbers Teacher
- Barbara Raynor – Principal
- Greenthumbers Club – Student Group

School Sustainability/Context:

Recycling of paper and cardboard
Recycling of drink containers

Year(s) of District Support:

1 year: Current Year

Goals/Objectives:

- To create a self-sustaining feedback loop which entails composting, gardening, and water barrels to supply vegetables and worms which may be sold to purchase new supplies and continue building the garden.
- To impact student and community behaviors in regards to composting, gardening, environmental stewardship, and healthy community and lifestyles.
- To build a sense of community, participation, respect, and responsibility.

Findings:

3 garden plots were built by the students, planted and harvested

Greenhouse was used for the first time in growing all seedlings

Large cedar compost bin has been constructed and is awaiting approval before being installed.

Positive feedback from the parents walking by

Involvement from the community center to maintain gardens through their summer programs.

Future Plans:

Install compost bins

Expand garden beds

Implement composting program in classrooms in September

Recycling of paper towels

Budget:

Soil

Cedar for beds and compost

Gardening tools

Mesh wire for rat proofing

Building supplies

Hose

Wheelbarrow

Reflections & Advice:

Project has met with very positive results from the people in the school and parents. The community center is now jumping on board and is keen on helping as well. Ian Lai of Terra Nova provided excellent help and guidance. Rona and Rod's Lumber supply have been very generous in helping with donations.

The project has been stalled for months now due to poor communication with the district, but have recently had a very encouraging meeting and it looks as though we have a great resolution and plan to move ahead as a "test" project which will hopefully help future projects move ahead more collaboratively with open dialogue between yards crews and the school

BURNETT SECONDARY SCHOOL

Green Team

School Sustainability Team Members:

Burnett Green Team:

- Amy Rodgers (President)
- Jamuna Yoganathan (Vice President)
- Chloe Chow (Secretary)
- Tiffany O (Treasurer)
- David Jhinku (Events coordinator)
- Raafia Jalal (Marketing Coordinator)
- Iris Chau (Webmaster)
- Celine Au (Editor)
-

School Sustainability/Context:

This was the second year of our Green Team, with a mostly new executive council as many of the old council members had moved on to Student Council. The year before we had set up an E-Waste competition, simple gardening and paper recycling. At the start of this project we had completed our Alternative Energy Campaign along with several sessions at our school's conference day.

Year(s) of District Support:

This was the second year.

Goals/Objectives:

- The objective for this year was to expand the Green Team for numerous reasons. The first one was to include as many grades as possible for the continuation of the Green Team. The second reason was to better reach and educate a mass number of people.
- Another goal this year was to do several educational campaigns. The two we focused on were the Alternative Energy Campaign and the Electronic Waste Campaign.
- Our major goal was to create opportunities for our members to become active in their school.

Findings:

At Burnett we realized that the more people aren't always the merrier. It was hard to control and include our over 100 members. Members didn't get their expected hours as we tried to include everyone, and give everyone equal chances to participate. We found the size too large. This confused many of our plans and became our focus rather than what was important – the environment.

Future Plans:

Next year we plan on educating first within the Green Team. This means using outside media such as books, dvds and speakers to communicate the importance of eco-awareness. Our new vision is to educate Green Team first, and create changes in everyday living of our members before changing our school. By opening and teaching just one person, that one person can go on to teach another, creating a chain link reaction. We want our members to be every day role models for our school.

Budget:

The Grant money was used in a variety of things throughout the year. It was used to buy materials for our conference session (making posters), for prizes to promote activity in the campaigns and for general gardening supplies.

Some of the money was saved for the start of next year to help the new execs running the Green Team. It will also be used in any summer or pre-school events the Green Team hosts.

Reflections & Advice:

Our advice is to focus on educating a small group (maybe 20-30 members). These can become green ambassadors to the school, but first they must be living what they preach. If you teach a small group of dedicated members then they teach others just in their everyday actions.

Our Green Team this year learnt some very important lessons, which will go to make next year a very green and productive year.

FERRIS ELEMENTARY SCHOOL

Zero Waste Challenge

School Sustainability Team Members:

- | | |
|--------------------------|----------------------|
| • Kevin Lyseng | Teacher /Facilitator |
| • Rick Gibbs | Administrator |
| • William-Zhaoguo Xie | Parent / PAC Chair |
| • Rose Anan / Jiri | Custodian |
| • Students of Division 7 | |

School Sustainability/Context:

- Large scale composting was taking place (all 24 classes are composting!)
- Successful beverage container recycling program in place
- 8 classes involved in sowing seeds and growing of food
- 9 raised vegetable gardens created in the inner courtyard
- Vermicomposting and EM Bokashi composting has previously taken place in a variety of classes
- School wide paper recycling program has operated for many years

Year(s) of District Support:

- | | |
|---|-------|
| • Fostering a Sustainable Green Club | 04/05 |
| • Re-Defining, Re-Thinking and Re-Using our Courtyard Gardens | 06/07 |
| • Leading Ferris to a “Greener” Future (3 year application) | 07/08 |
| • Re: Connecting to our Courtyard Gardens (year 2 of 3) | 08/09 |

Goals/Objectives:

- to continue to analyze the volume and composition of our waste
- to continue to reduce the school garbage by targeting the sources of waste
- to reduce the compostable waste produced in classes
- to introduce a reverse lunch to the school timetable
- to engage a business to supply the school with metal mesh baskets as a means to dry paper towel which can be recycled in paper recycling
- to introduce the new recycling large blue box to the school
- to continue to introduce lifecycle of the Coho salmon to the school
- plant maple, dogwood and fruit trees in the school yard to provide shade, source of food and create animal habitat

Findings:

- H1N1 scare caused a spike in the use of paper towel that ended up in the garbage (48% by composition by weight of our total garbage)
- engaged Ikea in donating 25 Metal Mesh Baskets
- introducing 26 Ikea baskets to classes has reduced that composition to 30% - and at least a 5 Kg / day difference to the garbage
- the reverse lunch + new RSB recycling program + metal mesh baskets has cut our garbage in half in the last year
- more students displayed more interest in visiting our salmon (egg/alevin/fry)
- students are enjoying the colour and shade that the trees are providing (using them for games, soccer goals, obstacle course)

Future Plans:

- to reintroduce EM Bokashi to part of the school community (intermediates)
- to introduce solar cone composting / digesting method to a couple of intermediate classes
- to formalize the Reverse- Lunch Schedule
- to continue to measure garbage / recycling throughout the school
- to continue to encourage litterless lunches
- to continue to work towards zero waste

Budget:

Field Trip to Release the Salmon and visit Vancouver Landfill	\$250
Solar Cone Digester	\$200
Seed Potatoes	<u>\$ 50</u>

Reflections & Advice:

The Reverse Lunch – schedule change made a large change in reducing the amount of garbage and it helped the students eat more of their lunch because they were hungry from going immediately out to play after the 12:05pm lunch bell.

There are different sources available for sustainability programs but it means taking the time to find out about them and applying to them.

Developing relationships with stores is another way to make your grant dollars go further.

This year we recycled over 25,000 beverage containers (4000 milk). This

provided us with an additional \$1000 to support sustainability initiatives in our school.

We had a very successful year in obtaining support from our PAC, Ikea, Urban Impact, the School District, winning two cash prizes: BC Green Games Competition and the Eco Voyageurs Junior K-5 Competition.

To view the Ferris Green Games winning entry please go to:

<http://2010.bcgreengames.ca/component/project/?id=305>

GARDEN CITY ELEMENTARY SCHOOL

Fitness Fridays/Waste Reduction

School Sustainability Team Members: (Name & Positions)

- Elizabeth Nasu - Gr. 3/4 Teacher
- Stella Santiago - Gr. 2/3 Teacher
- Jackie Cavers - Gr. 4/5 Teacher
- Danny - Gr. 7 Student
- Abigail - Gr. 7 Student
- Bonnie - Gr. 7 Student
- Jessie - Gr. 6 Student
- Kirsten - Gr. 6 Student
- Susan - Gr. 5 Student
- Erika - Gr. 5 Student
- Jason - Gr. 4 Student
- Nicole - Gr. 4 Student
- Rebecca - Gr. 4 Student
- Christina - Gr. 4 Student
- Noreen - Gr. 4 Student
- Mahnoor - Gr. 4 Student
- Alvin - Gr. 4 Student

School Sustainability/Context:

- Recycling Drink Containers
- Recycling Paper
- Composting Fruit and Veggie Scraps
- Fitness Fridays – Students walk, carpool or get dropped off close by to prevent idling

Year(s) of District Support:

- 2007 / 2008
- 2008 / 2009
- 2009 / 2010

Goals/Objectives:

The Gone Green Eco-Team voted in September to work on the issue of Global Warming for they feel that this is an issue that is most important to them. They continued the monthly Fitness Friday events and offered Re-usable water bottles as prizes. One Friday a month (or every other month),



the entire Garden City School Community was encouraged to walk, ride or scooter to school. We are a dual track Montessori school so we have a lot of families who live far away and need to drive their children to school. We encouraged those students to carpool and then get dropped off 1 or 2 blocks away so that our parking lot is not crowded and cars are not idling in the parking lot. Students who did these things

received a C.A.R.E. coupon (Care and Respect for Everyone) from the Eco-team and they entered it in a draw to have a chance at winning a re-usable water bottle. We chose re-usable water bottles as prizes to draw attention to the amount of plastics and petroleum oil used in plastic drinking containers.

The Gone Green Eco-team also worked on a Recycling Plastics and Tin Campaign to help the school become aware that they can now recycle plastics that are numbered 1 through 7 as well as tin cans. The Gone Green Eco-team members gave presentations to classes, made posters, made a movie and gave announcements over the P.A. in order to communicate this information with the entire school. They drew attention to the amount of plastics that people just litter on the ground or get dumped in our oceans each year.

We were able to have one major Litter-less Lunch event as well as another one that was part of our Earth Day Celebration. We have a Reversible Lunch program where our students go outside first and then come in 25 minutes later to eat. Students left their lunches out on their desks and they analyzed what kind of waste was generated by each lunch and awarded points accordingly: 5 points for a re-usable container, 3 points for things that were in recyclable containers, and -2 points for things that have to be thrown in the garbage. I make a spreadsheet for each division, calculated the points and the class with the highest average, won a pizza party.

We continued with our composting fruits and veggies program as well this year. Classes would select a special helper or two to take down their

compost bucket and dump them in our large compost bins in our courtyard.



Findings:

Our Fitness Fridays still remain a successful, community-building event. Our parking lot only gets a few cars coming through which is amazing for there is usually quite a line to get in the lot on regular school days. Teachers and staff are out at the crosswalks helping students cross the street. We play music and Eco-team members hold signs and give out stickers to those students who walk or get dropped off a block or two away.

Many students participated in our Litter-less lunch event, approximately 2/3 of each class population. We offered a pizza party to the class that won but that ended up costing quite a bit of money. We were only able to have one more Litter-less lunch event as part of our Earth Day Celebration but we didn't really emphasize it because we didn't have any prizes to offer because of lack of funds.

Future Plans:

Even though I think our Eco-team did a very good job of raising awareness about using re-usable containers, you still find quite a few plastic baggies around the school from students' snacks (especially during recess). An Eco-team member explained to me that her mother doesn't really want to send along re-usable containers for snacks in the lunches because kids want to play and where are they supposed to put the containers. I'm hoping to work with the Eco-team help raise even more awareness about the importance of waste reduction and healthy snacks, and especially work with our parent community on ways to support these initiatives.

I would like to find ways to motivate the students more intrinsically rather than give extrinsic prize rewards when it comes to doing our best to live in more of a sustainable manner. I think that this will take time as these things become habits and ways of life.

Next year, our team has mentioned that they wish to focus more on

composting, waste reduction and saving energy.

Budget:

So far, we've spent \$337.37 on stainless steel water bottles and a pizza party for 2 classes that won our Trash-less Tuesday event by creating the least amount of garbage.

Reflections & Advice:

To make things a little more consistent this year, our team met every Wednesday at lunch. I always dislike taking up children's play-time but for the most part, most members came to our meetings. Many of the students were in Grade 4 and it was wonderful to experience their enthusiasm but it was challenging to keep them focused. I really hope that our four Gr. 6 members stay on the team next year so that we have some solid leadership. I was lucky to have a couple of teachers share in the responsibility of supervising the meetings for I found this aspect of the meetings quite challenging. Some students would need supplies and then when I would go off to get them, other students would get off task. Our staff is shrinking by 3 members next year so I am worried about whether or not I will still receive help for our team.

Many of our team members really enjoyed Earth Day for we did a variety of activities and for those that went, they really enjoyed attending The Green Gala and getting a sense of what other schools are doing. I also felt that they could see that they were part of an important larger, district community of people who are working hard to make positive changes for our school and planet overall.



GILMORE ELEMENTARY SCHOOL

Terra Nova Garden Project

<p><u>School Sustainability Team Members:</u></p> <p>Teachers: R. Vint, S. Wyatt, S. Aldcroft, J. Becker, D. Tobin, S. McDonald Administration: L. Crosby, R. Mason Parent Liason: K. Douglas</p>
<p><u>School Sustainability/Context:</u></p> <p>Drinking container recycling</p>
<p><u>Year(s) of District Support:</u></p> <p>3rd year</p>
<p><u>Goals/Objectives:</u></p> <ul style="list-style-type: none">• To plant, maintain and harvest a garden• To demonstrate sustainable transportation
<p><u>Findings:</u></p> <p>Students continue to develop their skills in this area, and are becoming more independent and knowledgeable in the areas</p>
<p><u>Future Plans:</u></p> <p>To create/expand gardening at our school site, including a composting program.</p>
<p><u>Budget:</u></p> <p>The money was spent on garden seeds, garden tools, and some supplies for cooking as part of the program includes cooking food from the garden</p>
<p><u>Reflections & Advice:</u></p> <p>We have had a really good time with the Terra Nova project. It has certainly taught the students where their food comes from and what it takes to grow their own food. Similarly, it has taught the staff that gardening is a possible, fits in with the curriculum and has many benefits. Likewise, cycling there has introduced students, parents and staff to an entirely new way of looking at</p>

transportation. Kids have learned to ride, not just for pleasure, but as a way to get around that doesn't pollute and improves their fitness. They have also learned that they can do it the rain too. At this point, I am thinking of ways to bring the garden to us, rather than us always going to the garden, and making some of these greener actions part of our everyday experience. Thus, being green isn't something we do once a month as a field trip but something we do everyday. Also, I think it is time for us to do more on our own, not relying on Ian Lai's help.

SO as far as future grants, I personally wouldn't apply for a grant for the garden again. I think we have learned enough to say that it is time for us to move on with that project on our own. Rather, if we were to apply for a grant again, we would be looking at new opportunities that would build on what we have learned; opportunities that maybe we wouldn't be able to do if we didn't have a short infusion of money.

What will that look like? I am not sure. We will need to build a team to focus in on what we want to do. I know that we will be looking at establishing some type of garden program at our school and using this to initiate other initiatives like composting. Like I said before, the Terra Nova experience has been excellent for helping us get to the point of feeling like we can do something on our own and be really successful, but for our school, I am anticipating that we won't be including that as part of our grant next year if the grants were to continue. That said, the program was great, and I would recommend it to other schools based on our experiences.

GRAUER ELEMENTARY SCHOOL
Reducing the Footprint of Grauer School



Grauer Elementary

Reducing the Footprint of Grauer School

<p><u>School Sustainability Team Members:</u></p> <p>B. Gawa Teacher. M. Singh- Custodian K. Dawson- StrongStart N. Silva-Teacher 10 students Grade 4-7</p>
<p><u>School Sustainability/Context:</u></p> <ul style="list-style-type: none">• recycling of juice boxes• composting lunch wastes• native garden plantings• upkeep of inner school courtyard garden• goldfish pond maintenance• use of water collection barrels• solar paneling for operation of pond pump
<p><u>Year(s) of District Support:</u></p> <p>2007, 2008, 2009</p>
<p><u>Goals/Objectives:</u></p> <ul style="list-style-type: none">• Increase knowledge base of students, staff, families and community members of actions required in relation to sustainability issues:

-through the use of student input in regular sustainable news articles in monthly Grauer Newsletter

-visual signage in school and school yard related to sustainability of environment, regular i-Movies and presentations from Grauer School Eco Team at school assemblies.

- Promote and exhibit current sustainability activities in school and community

- recognition of energy conservation and waste management behaviors among students, classes, community at assemblies in newsletters, and during school morning announcements.



Findings:

With ongoing review to school and community members of composting, recycling and energy conservation we were able to reduce Grauer's daily garbage and reduce our energy costs. During and after our Litter Free Lunch days, students continue to use washable lunch containers and reusable drink containers.

The custodian noted significantly reduced amounts of lunch garbage. An garbage and recycle audit was not completed but is in the plans for next year. Students were eager to help the Grauer Eco Team make an impact towards Sustainability at Grauer. Recycling generated enough funds to send one student to Outdoor Ed. Camp.

The energy consumption at Grauer was reduced significantly in the areas of electricity – lights, computers, heat.

Unfortunately, Grauer’s heater/furnace system does not perform efficiently and we experienced MANY days where the heat was too high and it was hot at the school. As a result, Grauer’s energy conservation efforts were not as obvious as they could have been.

The flowers and vegetables grown from the rich compost generated from collected green waste are a highlight of the Grauer ‘Wild Side’ courtyard. Vermi- and Bokasi composting techniques created an interest amongst the public and people are asking questions about the school’s Green initiatives.

Repetitive, regular messages to the school population were the key to stressing the importance of ‘Reducing the Footprint of Grauer’.

Future Plans:

Continued targeted awareness of environmental issues to school and community

Continue reduction of paper and plastics (classroom and school)

Several garbage and recycling audits to monitor progress and change.

Promote awareness of choice to walk to school and reduce car travel to school.

Budget:

\$200 - new fish pond pump to accommodate fish population explosion and

maintain algae production

\$150 - garden equipment, -rakes, weed rakes and shovels, composter barrel filters, containers for vermi-composting and bokashi composting.

\$130 - fish food and 3 pond plants

\$30 - as yet unspent

Reflections & Advice:

Composting and recycling has been very successful. Involving the community (Strong Start, interested parents, daycares) helps connect the school to the community with a common goal. We believe involvement from the city would further strengthen Sustainability incentives in the Richmond community and schools. Many schools cannot compost due to inaccessibility to contained areas within the school. However if the City picked up compost from schools at the curbside, schools could educate students on the values of reducing garbage and making composted soil. This education would carry over to students' homes. (Just as seatbelt safety and smoking education has in the past.) Students would also educate parents and Richmond homes would most likely increase their involvement in composting.



HAMILTON ELEMENTARY SCHOOL

Go Green

School Sustainability Team Members:

Andrew Ferguson - Vice Principal
Sue Iversen – Librarian, Earth Day Coordinator
Tia– Gr 7
Olivia– Gr 7
Wynonna– Gr 7
Emma– Gr 6
Vanessa–Gr 7
Jonathan–Gr 6
And more. . . .

School Sustainability/Context:

We had previously begun a school wide recycling project and initial stages of a school greening project. We have put in place a tradition of marking Earth Day with clean-up projects, tree planting, and environmental education projects.

Year(s) of District Support:

2

Goals/Objectives:

- We have been working to increase the numbers of students using active transportation on a regular basis.
 - ~ Walking Wednesdays
 - ~ 1st Walking School Bus on Earth Day
 - ~ Anti-idle education (sticker/signage campaign in Fall 2010)
- Continue the next phase of our greening project (on hold due to challenges with scheduling with maintenance)
- Reduce energy and paper consumption –photocopying, computer printing (only work created by students-original), refillable white board markers, turning off lights, etc.

Future Plans:

Expand our Walking School Bus network. Increase the scale of our Greening and Cleaning (enrolling in an “Adopt-a-Street” project).

Budget:

We have utilized some funds for our “Active Transportation Rewards” and the majority is earmarked for trees and related materials when they are able to be planted.

Reflections & Advice:

We need to avoid a sense of “comfort” because we are doing some positive things and continue to look for more ways to change our lives and reduce our impacts.

SCHOOL BOARD OFFICEE – LEARNING SERVICE **DEPARTMENT**

Richmond School District's Science and Sustainability
Development Team

School Sustainability Team Members:

Rosalind Poon - SBO
Allisa Ritchie – McMath
Michael Wolfe - MacNeill
James Yeung - MacNeill
Linda Mei – TOC
Ming Chee - student teacher

Emy Lai – City of Richmond
Michelle Reid – Palmer
Diana Klein - Green Bricks
Fiona Zawadski - Green Bricks
Kamneev Singh - TOC
Tamera Hunt - McNair

School Sustainability/Context:

There were many activities happening throughout schools (ie. recycling, composting, gardening. etc.), but nothing systemic with the Science teachers who have teach about Water Systems on Earth in Grade 8 and Sustainability of Ecosystems and Energy Transfer in Natural Systems in Grade 10. By integrating the ideas of Sustainability into the curriculum, teachers could integrate the big ideas of behaving responsibly towards the natural environment into their everyday teaching through powerpoint presentations, hands on activities and online/print resources.

Year(s) of District Support: One

Goals/Objectives:

- To create authentic, teacher made toolkit/resource book for Science 8-10 teachers.

Findings:

- Teachers really enjoyed the hands-on workshop and links to content
- A great Green Bricks Learning Resource book and online resource (<http://www.greenbricks.ca/program/richmond.php>) were created with the input from the secondary science teachers
- Teachers wanted more time to collaborate with others in their schools

Future Plans:

- Offer this ProD at additional ProD days for 2010-2011-encourage teachers to look at the Science curriculum from a Sustainability lens
- Encourage the teachers who attended this workshop series to share the resources with other teachers in the school/department

Budget:

- Teaching Green – The Middle Years Hands on Learning for Grades 9-12 - \$150.16
- Rough Guide to Climate Change – 121.52
- Workshop snacks for sessions - \$30.00
- Sustainability iMovie recording tapes- \$11.18
- Green Gala (presentations) - \$78.72

Reflections & Advice:

- It was great to have the workshop lead by two external experts – an structural engineer and teacher. The collaboration gave a unique perspective to the science curriculum.
- The teachers enjoyed the process of sharing and discovering different resources.
- A resource book wwas created that
- Based on the feedback from the Science teachers last year, Sustainability was an area of focus that the teachers wanted support in. Despite a good core group of teachers that attended the workshop series, the attendance was low. I wonder how we might best support the teachers in the implementation of the harder to teacher PLOs.
- The workshops were offered on the afternoon of the ProD days. Again, this was the preferred timing based on the Science Teacher's survey last year. It seems that we are always competing with other activities/workshop
- Looking at the science curriculum from the lens of sustainability is very topical – students can relate to it; it has meaning
- We encourage more teachers to attend more Science workshops/networks to create a culture a sharing. Too many teachers are working in isolation and feeling overwhelmed with the content. It would be nice to think about the big ideas and what is important.

MACNEILL SECONDARY SCHOOL

2010 Edible Gardens of MacNeill

School Sustainability Team Members:

- Michael Wolfe - Green Team Leader
- Carol-Lyn Sakata - Principal
- Eldon Lin - Student Leader (Grade 9)
- Mattias Schenk - Student Leader (Grade 8)

School Sustainability/Context:

- A Greenhouse and lawn were in place on the school grounds
- A cart and wheelbarrow were available, (in November they were stolen)
- Shovels, pond liners, water pump, bricks, and planting trays were found in storage
- Recycling was in place, but no composting on site
- Most importantly, MacNeill already had an Environmental Science course in place for students in grade 8 and 9

Year(s) of District Support:

- First year on the current project
- Financial support came in previous years for other projects at MacNeill

Goals/Objectives:

- To educate our community on the potential to locally grow our food
- To grow a diversity of food crops with a total plant quantity of 2010 by June 2010
- To use the farm project as a springboard into future growing seasons at MacNeill

Findings:

- There is a huge range of gardening abilities across the intermediate grades
- Tall fences does not deter vandalism, locks on greenhouse doors may result in broken panels if intruders want in
- Greenhouses on the North side of the school is very moist inside, unfit for growing
- Student commitment varies during the year. Club activities should be offered every day from the end of school for 90 minutes to welcome the flexible schedules
- Direct supervision and teaching is required during transplanting and sowing seeds
- The school district supplies soil that is low in organic matter and nutrients
- School-wide composting is a challenge and requires over 20 buckets spaced about daily

Future Plans:

- Garden maintenance throughout the summer of 2010
- Expand the garden beyond the 300 square meters
- Organize a harvest party for early September to recruit new volunteers
- Build wooden planter boxes for community members
- Acquire a solar panel to power the pond pump and greenhouse heater wires

Budget:

Item	Quantity	Cost Per Item	Total Cost
Seeds, Seedlings, Berry shrubs, Fruit trees	Many, from multiple nurseries in Richmond	Depending on the plant	\$400
Tools, Wheelbarrow replacement	Many, second-hand	Depending on the tool	\$100

Reflections & Advice:

- Learn by doing
- Starting the Eco-POWER Green Team led to volunteers, who make PA announcements
- If vandalism occurs, treat it lightly and carry on
- Supervise all activities and recommend ways to improve gardening techniques
- Students enjoy digging ponds and want ponds for fish and pond life observations
- I would like to have soil tested for future gardens and food consumption

PHOTOS:



MAPLE LANE ELEMENTARY SCHOOL

Towards Zero Waste

School Sustainability Team Members:

Heidi Priestley (teacher)
Club members (students in grades 6 & 7)
Jessie Gill (custodian)

School Sustainability/Context:

- 3 bin recycling → juice boxes, cans, plastic bottles (Encorp)
- Bokashi system throughout school
- paper recycling in every class
- Walking Wednesdays

Year(s) of District Support:

Three

Goals/Objectives:

- to continue education surrounding Bokashi, and all types of recycling
- to continue education about the new level of container recycling (School District contract)
- to introduce & educate students and parents on packing eco-friendly, litterless recess snacks & lunches
- to significantly reduce our brown paper towel contribution to our school's waste stream (by drying them overnight in mesh containers & then to recycling).

Findings:

- Bokashi and paper recycling systems have been going well (just minor education needed when plastic shows up in bins).
- More education & re-education has been needed with the new level of recycling of all other containers (it tends to be a bit of a "catch-all")
- Fun challenges (and some prizes) are probably needed to get more consistent use of litter-free lunches & recess snacks
- During Morning Messages, our call to "Use only 50% of your classroom lights now that it's lighter outside" has been having some decent results. Teachers & some students are now thinking about why they have all their lights on. It is weather-dependent, though.

- It's been hard to get the paper towel recycling going. There are other items, not just damp paper towel, thrown into waste bins in the bathrooms. It's more automatic to empty paper towel waste into "garbage" rather than "recycling". We realized we had to have another waste container for the non-paper towel waste. However, it's almost to the breaking point with all the different bins needed vs. **one** waste container (yes, the bad alternative).

Future Plans:

- continue & streamline Bokashi/container/paper recycling systems so they becomes virtually automatic
- to implement a paper towel recycling mentality in students & staff
- to plant a bee-friendly/local species/xeriscaped garden in a front plot
- to focus on improving our Walking Wednesdays
- to consider replacing the many recycling bins with one stackable bin tower in classrooms

Budget:

6 x 32" E-Z Reacher (long handled tongs) Janitor's Warehouse **\$21.01**
 6 x \$21.01 = \$126.06 → plus taxes → **\$143.71**
 6 Bokashi bags approximately \$20 each → **\$120**
 4 blue recycling bins (Canadian Tire) \$4.99 each → 19.96 +taxes→ **\$22.36**
 8 mesh "laundry bags" (Dollar store) \$2.50 each → \$20+taxes→ **\$22.40**
 1 Worm Tower (Worm Factory 360) → **\$191.41 inclusive**

Total → \$499.88

Reflections & Advice:

It's easy to get overwhelmed by all that could be done in the ways of turning more green. Perhaps, we would be more effective if we chose 2 or 3 solid, clear, accomplishable goals, and focus our energy on fewer goals (have an Action Plan). One goal could be primary-oriented (i.e., cleaning up schoolyard, drawing "lights out" faceplates, tending a worm composter); another goal could appeal to intermediate students (i.e., litterless lunch challenges, anti-idling campaign, gardening). It's also important to keep an eye on recruitment – the eco club needs to be sustainable!

Showing the school how they are doing in terms of waste reduction is good PR. We should plan to have occasional sharing assemblies, post graphs showing progress, and creative ways of showing "Before" & "After" progress.

Ideally, the green initiatives would have the support of school staff so the eco

club is not viewed just as a special-interest group. It is also a great idea to present your green plans to the PAC so they understand what you want to accomplish.

McKINNEY ELEMENTARY SCHOOL
Reduction/Gardening

School Sustainability Team Members:

Dawson
David
Rayne
Mia
Tina
Ethan
Katie
Karen

Mrs. McDonnell
Mrs. Cornejo
Mrs. Ngo
Mrs. Charnell

School Sustainability/Context:

Nothing

Year(s) of District Support:

First Year

Goals/Objectives:

- To initiated a waste reduction strategy for the school and community.
- To introduce students to healthier lifestyles by trying to grow some berries and vegetables.

Findings:

Students have embraced the “new idea” of trying to bring less garbage to school & by recycling more plastics. Now more classes have started composts in their classes and we are looking forward to spreading it in the fall. Students are in the progress of reaping healthy rewards from their food gardens. we picked and ate our first strawberry last week. Students are excited, motivated and there are new members joining all the time!

Future Plans:

Next year we are going to have litterless lunches every Tuesday with a draw for those students who bring less waste. We would like to start recycling electronics as well!

We are going to plan and develop more gardening areas outside for community use as well. We are also going to learn to make pies from the grains we are growing and berries and rhubarbs.

Water will also be a focus next year.

Budget:

Hose reels: \$ 200.00

Seeds and blueberry bushes: \$150.00

Recycling bins for every class: \$150.00

Shovels and trowels: \$100.00

Reflections & Advice:

We need to accommodate the waste reduction strategies by increasing the outside recycle bin pick up. We are recycling so much that it does not fit into the bin that is picked up only once a month, so it is ending up in the garbage! It is disheartening for the students!

McMATH SECONDARY SCHOOL

Ecolympics 2 The Legacy Continues

School Sustainability Team Members:

McMath Natural club
Sponsors: A Phillpotts (worms, water, and coordinator)
Doug Fowler (gardening)
Ornella Svalestuen (walk to school wed.)
Jennifer Law
Leif Haensel (bokashi)
Honorary member: Alex Campbell (for all his support)

School Sustainability/Context:

Recycling, anti idling, powering out.

Year(s) of District Support:

2 (this is our second)

Goals/Objectives:

We hoped to continue with the Ecolympics during 2010 (which encouraged powering out, recycling, and local water use), expanding it to look at other activities including:

- *reduction and composting of lunch waste*
- *increased and appropriate recycling*
- *walking / biking to school*
- *gardening*

Findings:

Our greatest success was getting more staff & students involved by breaking up our activities into sub groups: recycling, gardening club, walk to school Wednesdays. Mr. Haensel started the Bokashi composting as well.

Changes in habit are hard to break. Walking to school / recycling etc. is a learned new habit that we have to take on!

Future Plans:

We want to improve on what we started, choose one form of composting to do well, continue / expand our walk to school Wednesdays with the HOV lane, make better signs for composting and recycling, continue with local water promotion, and continue to do our recycling well.

Budget:

Worm bins, Paper bags, pails for compost, water filters and pitchers, misc. = \$178.94

Seed potatoes for garden = \$8.41
\$30

“Bling your bottle” stickers = \$30

Garlic for garden = \$19.78

2 compost bins from city = \$50

Bokashi composting supplies = \$65

Garden tools & gloves, misc. = \$72.75

Recycle towel bins, worm composter supplies, misc. = \$84.28

Reflections & Advice:

The biggest hurdle in implementing our ideas is time. There is no prep. for a sustainability teacher (let alone 5) and a 30 minute meeting with students a week is hardly enough time. Mr. Campbell granted us one TOC day so Phillpotts could purchase items, write grants, and set up things but it was a busy day. Maybe having 2-3 pull out days a year for one enrolling sponsor teacher is a feasible way of doing everything. We're thinking of having an in school field trip to plan and set up twice a year with students and 1-2 club sponsors.

****For a visual including pics of the above stuff in action, check out our BC Green games winning video at:**

<http://www.bcgreengames.ca/component/project/?id=286>

QUILCHENA ELEMENTARY SCHOOL
Quilchena Goes Green

School Sustainability Team Members:

Helen Kwan – Grade 3/4 teacher
Hermia Ting – Grade 3/4 teacher
Brenda Gordey – Grade 1 1/2 teacher
Denise Tong – Kindergarten teacher
Sara Bird – Kindergarten/Grade 1
Ian Lai – Parent
Makela/Samantha/Sarah/Kyleen – Bokashi students
Megan Zeni – Resource/LA
Ric Pearce – Principal

School Sustainability/Context:

This is our sixth year working with Mr. Lai at the Terra Nova Gardens. Our front garden was prepared last year. We have begun recycling fruit/vegetables/table scraps with Bokashi.

Year(s) of District Support:

Five years

Goals/Objectives:

An essential part of the environmental education for sustainability vision is students learning to achieve a better understanding of the world in which we live and provide opportunities for them to be empowered to create a sustainable future. Within this vision, students' knowledge, skills, values and actions are enhanced through active, self-directed learning and ethically responsible citizenship. When students leave school, they should have an understanding of, and concern for, stewardship of the natural environment, and the knowledge to contribute to ecologically sustainable development.

Findings:

Through the Terra Nova Garden Project our students not only learn about tilling, planting, weeding, watering and harvesting. They also learn social responsibility, stewardship, history, and culture of a rich Richmond agriculture. The students had the opportunity to apply math (weighing, calculating % of yield) and science (understanding the role of insects, weather, seasons, growth) but more importantly they learned about

community building, by planting and harvesting food for themselves and for those less fortunate.

- We have purchased Bokasi composting

A team of students have collected the waste each school day and on an average have composted 12.7 kilograms every two weeks for a total of 460 kilograms (1058 lbs.) in a year

- Conducted Trashless Tuesdays and Thursdays

In a survey conducted in September 2009 and then again in April 2010, there was an increase of 48% of students that were bringing trashless lunches

- Working in cooperation with both Rosalind Poon and Glenn Bussey to coordinate the year's Professional Development

Three of our Pro D days centered around Environmental issues to use in the classroom

- Maintained our status as a member of the Terra Nova School Project
Four classes have gone to Terra Nova Gardens on a bi-weekly rotation, harvesting crops, turning gardens over, weeding, learning about plant varieties and planting their plots.

Actions Taken to Address Goals (cont.):

- An Eco Team has been created that conducted random garbage checks. There has been a decrease of 73% of garbage found on the school field. (i.e. Week 1 – 3.71 kilograms Week 30 – 1.2 kilograms)

- According to the Satisfaction Survey, question 28 (are you learning how to do things to care for the environment?) 92% of Grade Fours and 96% of Grade Sevens answered positively

- Monitor Quilchena's Electrical Consumption History

- The staff and students have been diligently turning off the lights when they are not in the room or gymnasium. All computers and printers are shut down at the end of the day or when not in use. We have dropped our electrical us by 4% this year.

Plans for 2010-2011:

We will continue to support and improve our existing recycling programs (paper, juice containers, plastic containers, pop and juice cans) and our Energy Saving Programs (lights off campaign, energy surveys). The proposal will more than compliment the existing programs as we will be working extensively with Ian Lai of the Terra Nova Garden and Sharing Farm Projects at the Terra Nova Community Gardens at the end of Westminster Hwy. We will be planning and then planting a variety of perennials in our

front garden.

Budget:

Bokashi	\$75
Buckets for Recycling	\$20
Gradenig supplies	\$150
Flowers/plants	\$120
Total	\$365

Reflections & Advice:

Without sounding too “corny” you can see by looking at the students faces and listening to their voices that the goals are being met with every visit out to the garden. The students are full of excitement, wonder and appreciation. They are extremely proud of what they plant, grow and harvest. This project has already, and will continue to, change and create life long habits in those involved in the program. As a staff we came to a common agreement through many discussions, that there can be few more pressing and critical goals for the future of humankind than to ensure steady improvement in the quality of life for this and future generations, in a way that respects our common heritage—the planet we live on. Education for sustainable development is a lifewide and lifelong endeavour which challenges individuals, institutions and societies to view tomorrow as a day that belongs to all of us, or it will not belong to anyone.

RICHMOND SECONDARY SCHOOL

Composting

School Sustainability Team Members:

Mike Eastwood – Teacher Sponsor
Joyce Lin – Student Leader
Laura Lam – Student Leader
Diana Pan – Executive
Lotem Halevy - Executive

School Sustainability/Context:

Recycling (cans, bottles, paper), minimal composting, fledgling garden.

Year(s) of District Support:

Two

Goals/Objectives:

The primary goal was to upgrade the composting facilities at Richmond Secondary to remove more compostable material from the waste stream. This entailed putting appropriate composting infrastructure (i.e. buckets for collection, composters, volunteers to manage the operation) in place and educating the student body about the program and its importance.

A secondary goal was to improve the co-ordination between the school's Green Team and the cafeteria group to optimize composting. The cafeteria currently produces up to 5 kg of compostable material per day, but much of it goes into the regular waste stream due to lack of composters. Additionally, the cafeteria staff also manage the garden and can use the organic products of composting to fertilize the plants growing there.

Findings:

Twelve stainless steel compost buckets were placed strategically around the school in early March and members of the Green Team attended homeroom classes of all grades to educate them about the buckets. Initially, collection was slow as students either forgot that the buckets existed or were too used to disposing of organic material in the regular garbage cans. An average of 2 kg of compostable material was collected per week from the buckets, and it was transferred to a rolling composter by Green Team members.

Future Plans:

At the Team’s most recent meeting, it was agreed by all members that further education of the student body was necessary to improve compost collection at the school. Three main ideas were proposed: 1) posters “advertising” the buckets and explaining their importance; 2) further visits to homeroom classes to discuss the school’s composting program; 3) PA announcements at the beginning of the year to remind students to dispose of compostable waste in the buckets.

Budget:

12 Stainless steel buckets (6 L) at \$24.63/each= \$295.56

Future plan is to buy 2 rolling composters @ \$99/each with the rest of the grant money.

Reflections & Advice:

This year’s Green Team was heavily loaded with senior (Grade 12) students and as such, many members are worried about continuity to next year. Other schools attempting similar programs must focus on getting participation from all grades, particularly younger ones. This should not be too difficult given that at many elementary schools (e.g. Ferris), sustainability is a high priority in the curriculum and many students enter our school with a high level of environmental awareness.

SPUL'U'KWUKS ELEMENTARY SCHOOL

Terra Nova Schoolyard Project

School Sustainability Team Members:

- Donnie Henderson - classroom teacher
- Teresa Stevens - classroom teacher
- Joseph - student
- Alisha - student
- Vivian - student
- Samantha - student
- Larry - student
- Edward - student
- Jasmine - student

School Sustainability/Context:

This year four classes have participated in the Terra Nova Schoolyard garden project. The classes, ranging from grade one to grade six, visited the garden for scheduled activities with Ian Lai. During October and November each class visited the garden twice. In January Ian came to the school and baked bread with each of the classes. The ingredients included grains that were harvested at the garden. In February the twice monthly visits resumed. The students have been involved in harvesting, weeding, soil preparation, planting and tending garden plots. In the fall and in the summer the students harvested, cooked and tasted the fruits (and vegetables) of their labour.

Year(s) of District Support:

This project has been supported by the district for four years.

Goals/Objectives:

The goals and objectives of this program are to enable children to make the connection that food grows in the earth and to experience the cycle of seed to plate. When children make this connection they are more able to understand the concept of sustaining the planet. It is a vehicle to deal with the phenomenon of nature deficit disorder that is increasing common in these times of screen fixation.

Findings:

Each year the students involved in the project demonstrate an increased understanding of the interconnected web of life global environmental concerns. This year a group of students involved in the garden project initiated a green group in the school.

Future Plans:

We plan to continue with the garden project so that each year new groups of children can participate in this vital connection to the earth through the hands on experience of planting, tending, harvesting, cooking and eating nutritious organic food. We also plan to continue to support our new green team as they work on their chosen slogan: Think globally, act locally.

Budget:

Irrigation Supplies - \$200

Teaching Materials - \$100

Bee boxes - \$50

Food supplies for the cooking aspects of the program - \$150

Reflections & Advice:

This program creates an environment that inspires a value of fresh food, healthy eating habits and personal and social responsibility that will last a lifetime for the children and adults involved

A group of students who have been visiting the garden initiated a Green Team at the school. They focused on two projects, a school side lights out program and increasing the collection of recyclable containers on the playground during recess and lunch. This is an exciting new development sponsored by Teresa Stevens and Donnie Henderson.

STEVESTON-LONDON SECONDARY SCHOOL

Greenhouse Garden/School Garden

School Sustainability Team Members:

- Chris Burke – Eco-Club President
- Andrea Shearer – Teacher-Sponsor, Eco-Club
- Lou Mitsis – Science Teacher

School Sustainability/Context:

- Recycling
- Gardening (Life Skills Garden)

Year(s) of District Support:

Three: 2007/2008-2009/2010

Goals/Objectives:

- Research and plan greenhouse – structure, equipment, plants
- Purchase equipment & plan greenhouse
- Plant and harvest crop in school garden

Findings:

- Researched greenhouse (too big a project to build this year)
- Extended existing garden and gardening resources
- Planted and harvested new vegetables
- Created signage to foster awareness of sustainable gardening techniques and the value of local food production

Future Plans:

- Plan greenhouse
- Create raised beds and fencing for vegetable garden
- Create a more sustainable watering system
- Start weekly composting program in the cafeteria

Budget:

- Sprinkler
- Composter
- Seedlings and seeds
- Manure
- Soil
- Trays & stakes
- Lumber (for edging the garden)
- Small gardening tools

Reflections & Advice:

The greenhouse was more than we could accomplish given the size of our team. The size of the project required a large, dedicated team of students as well as teachers. In future, with the same sized group (or anticipating group shrinkage) we would confine ourselves to more realistic projects.

TALMEY ELEMENTARY SCHOOL

Beautification and Awareness Project

School Sustainability Team Members:

- Bill Juhasz – principal
- Brittani Hislop –teacher
- Various other student volunteers (e.g. student council, classrooms)

School Sustainability/Context:

- Some recycling: bottles, paper (not full awareness)
- Energy Conservation (turning off lights)
- Walk/Carpool to school week plans

Year(s) of District Support:

1

Goals/Objectives:

- Beautify the school
- Build Community Team
- Involve a number of people
- Raise awareness
- Teach students about gardening
- Space for science projects such as weather vane, precipitation gauge etc.

Findings:

- The front of the school has been updated with the addition of some time, care and new/relocated plants. It has added a welcoming and friendliness element to our exterior.
- Those who were involved in the project showed much enthusiasm, such as the parents donating spare plants from their own gardens.
- The District Grounds Crew was fantastic in supporting this initiative. They prepared and planted much of the gardens.
- Teachers had wanted to be able to use the courtyard for student projects, but did not find it appealing to do so as it was in disarray. Now that it is cleaned up (though not completed nicely yet...) teachers are eager to grow things (mother's day presents, student education) and use the courtyard more frequently.

Future Plans:

- Raising the profile of activities in order to increase PAC involvement (i.e. more presence on website, in newsletters)
- Put up an arbor (was too expensive...perhaps we will build one)
- Plant some low maintenance plants in the courtyard
- Organize the recycling in our courtyard

Budget:

All of the money was spent on low maintenance, long-term plants for around the school.

Reflections & Advice:

- We feel pleased with the way our school appearance has improved.
- The courtyard use has increased and is quite enjoyable.
- The changes that are the easiest to be sustained are great to introduce into a small school where many students and teachers are involved in many aspects of its community.

THOMPSON ELEMENTARY SCHOOL

Composting



School Sustainability Team Members:

Janet Trahey-Grade 6/7 teacher and Eco-Tiger sponsor teacher
Birgitte Biorn-principal

School Sustainability/Context:

- recycling paper and juice boxes
- planter boxes-gardening
- gardening at Terra Nova
- turning lights off in rooms when not needed or vacated
- Trashless Tuesday
- Tracking on eco-wise tool

Year(s) of District Support: 3



Goals/Objectives:

Our school goal this year was sustainability

Goal: To increase students' awareness of the environment and their impact on it. To also improve their ability to behave responsibly towards the natural world.

Objectives: Over the past two years we have been involved a great deal with environmental activities and we feel that we would like to have this be a greater focus. We also feel that by looking at how to better care for our environment, students will transfer that understanding to those around them and the social responsibility associated with that.

Findings:

We filled one compost bin to capacity and have had others using our building (Strongstart) asking for a compost bucket to add to our collection. IN some classes it has definitely become a habit to compost and in the staffroom the bucket is often full.

Future Plans:

We would like to continue composting and use the compost in our planting beds. We would also like to continue to garden in our planter beds and look at ways to collect seeds from what we grow to sustain our gardens and not have to buy new seed each year. Take advantage of grant money offered from outside agencies to get a greenhouse for underused courtyards. We would also like to in the future begin a community garden in our neighbourhood.

Budget:

- compost aerator-\$35.00
- concrete pieces for under the composter-\$20.00
- chicken wire-\$15.00
- trash cans for wet paper towels-\$30.00
- vertical shed-\$200 (still to purchase)
- seeds and plants (\$100)

Reflections & Advice:

Initially, we met some resistance to having compost buckets in classes for fear of rodents or fruit flies, but the program is working so well these pests are minor annoyances. It is great to see our garbage output is much less and our gardens blooming with flowers and soon to be vegetables. It would be nice to have a list of other schools and their contacts in order to problem-solve and get advice. I have used it twice; once to contact McMath about seed potatoes and to contact Ferris and Terra Nova gardens about fruit flies in compost.



WESTWIND ELEMENTARY SCHOOL

Waste Free Lunches

School Sustainability Team Members:

Servjit Hayre – Teacher
Hilary Wright – Teacher
Andrea Philpotts – Parents

School Sustainability/Context:

We have some things happening around the school – but it is not very cohesive, and without a school wide focus, some classes do more than others, and some take very little initiative to be “green”. At Westwind, we were already recycling juice boxes, have a “Walk to School Wednesday” initiative, and have two classes with worm composting.

Year(s) of District Support: Current year 2009-2010

Goals/Objectives: We hoped to use education and positive leadership (from club members, and staff) to get our students to pack waste free packed lunches. By the end of April 2010, we hope to reduce post lunch garbage by 33%. We hope to encourage students to pack lunches using reusable containers by offering students a chance to win “a laptop lunchkit” every time they pack a trashless lunch.



Findings:

We had many challenges in our plans. Initially, we wanted to raise awareness of how much garbage each division creates. We purchased a scale to weigh the garbage, but realized our reverse lunch hour did not leave us enough time to collect data as students did not finish eating in classes until 12:55 and our custodian collected garbage from 1:00 – 1:20 before she left. Also, weighing garbage is not an accurate measure of being waste free as plastic weighs less than a banana peel, which will eventually decompose. Thus, we started measuring garbage a different way. We put tape markers on the garbage cans and estimated how much garbage each class had – $\frac{1}{4}$, $\frac{1}{2}$, etc. We calculated totals after one week, and found that the primary classes produced less waste. Once awareness was created, we were able to show the school how much garbage was being created, and challenged them to bring “litterless” lunches on Tuesday. We called this Trashless Tuesday and presented the idea at an assembly. Next, our green team members went class to class to talk it up. Each time a student brought a trashless lunch, they would be entered in a draw for a “laptop Lunch”. Once child in each class would win one. We tracked how many students brought trashless lunches on Tuesdays for five weeks. Our primary classes were outstanding with participation ranging from 85 – 100%, whereas our Intermediate classes were not as good. Our school-wide garbage decreased by 50% on Tuesday from 2 bags to 1 bag. We had a draw for the laptop lunches during an assembly and were able to reinforce the importance of Trashless Tuesday. We haven’t changed every student’s behavior, but we have seen a significant increase in the use of reuseable containers and students re-using their plastic

Ziploc bags. Some students have even purchased the lunchkits.



Future Plans:

We will continue with our Trashless Tuesday initiative. We have posters around the school, and will continue to put it into the monthly calendar as a reminder for parents as well as announcements for teachers/students to write it into the school agenda. We will approach the PAC about ‘greener’ options for Food Day packaging and ask for their assistance on food days – perhaps they could go around and pick up all the plastic. We may ask them to consider a fundraiser around greener lunch choices. Lap top lunches offers such a program – but we may look for Canadian option.

Budget:

We used the grant money to purchase the laptop lunchkits from Laptop Lunches.com. The cost of the lunchboxes including shipping and additional taxes was \$474.

We also purchased a garbage can on wheels to use when collecting plastics from each class. (cost \$21)



Reflections & Advice:

This is definitely a worthwhile goal – but it was difficult for us to monitor lunch waste with our reverse lunch schedule. Since our students eat at the end of the lunch hour, this does not leave much time to collect data. Our custodian must collect all the garbage before she is off duty at 1:30. Furthermore, the green team members came from several different classes in the school and needed to be back in class by 1:00. It was also challenging to check how many students brought trashless lunches – my 8 green team members worked in pairs to visit each class and track student participation on a class list. They found it difficult to get to all the classes in our short lunch hour. As such, we enlisted the aid of the lunch monitors in the primary classes. Lastly, classes that did well, were classes where the teachers were also passionate about our goal and reminded students, discussed class results and role modeled it. It would be much easier to have “green monitors’ in each class who collect class tallies, remind the class about trashless lunches, check the classes recycling of plastics/juice boxes, etc.

WOODWARD ELEMENTARY SCHOOL

Bees, Where have they gone?

School Sustainability Team Members:

Renata Hyrman
Derek Cherry
Woodward Staff

School Sustainability/Context:

- 1) recycling paper and drink containers
- 2) last year we built a courtyard garden everyone shares
- 3) we're a bronze star school on the ecotools website
- 4) student council projects local and global
- 5) September theme will be 'sustainability at Woodward'

Year(s) of District Support:

One

Goals/Objectives:

- 1) plant fruit trees to observe annual cycle of trees and the importance of bees to the food supply
- 2) expand varieties of plants in our community garden

Findings:

There are many steps in the planting of fruit trees that involves all three stakeholders at the school level. We have asked our principal to submit a work order to CUPE to purchase, bring and plant our trees where they will be most appropriate. We have not heard back about when this might happen and how the trees will be selected. Hopefully we will be notified when our turn comes up.

Future Plans:

We are in process of using our Fine Arts grant to make nature tiles to decorate our courtyard with clay creations by the students.

Budget:

We have not been able to spend our grant money yet.

Reflections & Advice:

I've spoken with the teacher at Ferris (can't remember name) and he warned me about planting without full cooperation of stakeholders. I was thinking foolishly about purchasing and planting myself. Patience is the apparent key to this plan so here we wait for our turn. Every school should have a garden and fruit trees so children can be more aware of where food comes from and how important the other organisms are in our survival.

