

Farm to School 2013

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Section 1. Introduction

Farm to School is a project based out of Macdonald campus that has the goal of educating children in science using the agriculture, nutrition, entomology, and environment fields. To achieve this goal, our team of university students develops modules that compliment the elementary school curriculum in Quebec. The modules are designed with educators in mind. They clearly indicate the estimated duration of the activity and the competencies they correspond to. As our project deals primarily with experiential and nature based learning, the modules also indicate the season in which they can be most successfully carried out. This seasonal, outdoor education provides an effective venue to increase the curiosity of students in the natural sciences.

According to the Montreal Gazette, science education in the province is lacking; teachers struggle to maintain the interest of their students, who in turn often find the subject difficult and complex. Agricultural education in elementary schools is already underway in various parts of the United States, as well as other countries. Farm to School drew inspiration from these initiatives to create a similar educational impulse in the Quebec system. As university students, our intention was to help fortify the science curriculum by sharing the knowledge we have obtained through years in higher education.

Section 2. Review of the Proposal

The project proposal identified the need for a reconnect between individuals and their food sources, particularly at the elementary school level. We set the goal of sharing with younger students the knowledge we have gleaned from our years in higher education in our respective fields. We aimed to do this through a series of measures:

1. The establishment of a permanent garden plot for the students of Joseph Henrico – our pilot school-. The students would then be able to use the produce grown on the plot for entrepreneurial purposes, as they have been designated an entrepreneurial school by the *Commission Scholaire Marguerite- Bourgeois*.
2. Hands on learning activities resulting from the creation of educational modules by the Farm to School team members. These modules should be easily integrated into the existing curricula.
3. Workshops on the Macdonald Campus where concepts covered in the modules are expanded upon and the modules themselves carried out by university students.

The stakeholders for this project were designated as the Joseph Henrico faculty and staff, who would be able to self run the project in a certain capacity once the garden plot was established.

The budget requested from SPF averaged \$1040 for the 2013 academic year. These costs were composed primarily of salaries. Given the links between various clubs and projects on Macdonald Campus, including the Out of the Garden Project, the Macdonald Student run Ecological Garden and the McGill Apicultural Association, we anticipated that most of the tools, equipment and the rental for the garden plot would be given in kind support.

Section 3. Meeting our Indicators of Success

2013 was an extremely successful year for Farm to School. We started with one pilot school that was interested in developing modules with us. Before the end of the summer, Dorset Elementary School had also expressed interest in the project and arranged to attend a workshop on the Macdonald Campus. Ultimately, there were two sets of stakeholders for the 2013-year: The faculty and staff of Dorset Elementary School and Joseph Henrico. The following sections detail the concrete actions that were carried out to address the impact metric.

Garden Plot

A separate garden plot was established in the Macdonald community garden for each of our two stakeholders. The gardens were established during the 2013 summer with a variety of crops planted, including tomatoes, strawberries, and varieties of summer squash. The tomatoes were transplanted by the students of Joseph Henrico as part of a workshop describing the crop's needs. In the months following the transplanting and planting activities, the students were also able to come to their plots and harvest the produce themselves. Professor Begg's own plots were also used for demonstrative purposes during some of the workshops. The plots were obtained in kind support and were maintained by the members of the Farm to School team.

Hands on Activities

Within the hands on activities, one of our sub indicators of success was the number of Mac students enrolled in the AGRI 382, the course associated with the project. During the winter semester of 2013 only two students were registered. This number went up to seven for the fall semester of the same year, plus three or four individuals who volunteered during the day activities. A total of thirty-four modules were written during the academic year, all of which are available on the website or in the final stages of translating to both English and French – the final stage. The bilingual nature of the modules ensures that they are accessible to as many educators as possible. They span a variety of subjects, grossly bunched into the four domains previously discussed in the introduction, and require or encourage long-term student involvement, are interesting to elementary school students and are low resource demanding.

Workshops on Macdonald Campus

Following a semester of activities at Mac campus, we have determined that it is an ideal educational platform for the initial development of the modules. Teachers can then adapt them to their classrooms. Seven activity days were held on the Macdonald Campus between the beginnings of summer and the end of the fall semester in 2013. Each day consisted on average of four workshops and activities, each spanning around 45 minutes. During each day, different modules were presented and worked out with the visiting classes. Journalists

from the McGill Reporter and the Montreal Gazette joined us on separate occasions to document the activity days.

A table detailing the activities and their associated costs follows. It should be noted that an additional activity was carried out with children during one of the Ste Anne farmer's market. Although an example of community outreach, the team members carried out this activity as a way of advertising the project, and introducing children to the concept of farm to school while their parents shopped.

Table 1. Tasks and associated Details

Task	Date (start and finish)	Details	Costs	Status
Activity: Sub irrigated Planters demo and construction	May 27 8:30-12:30 pm	Demonstration to instruct the students on how to construct sub irrigated planters which were then used for the next task.	•Materials for the activity: In kind support •Salaries -prep time included-: •Total- 10.5 hrs* \$12= \$126.00	Completed-Successful
Activity: Macdonald Campus Day Event	May 31 8:30 am-12:30 pm	Dorset Elementary School Visit <i>Apiculture workshop</i> <i>Aquatic insects</i> <i>Pollination</i> <i>Grafting in tomatoes</i>	•Hired entomologist: \$100 •Salaries -prep time included-: 7 hrs* \$12=\$84	Completed-Successful
Activity: Joseph Henrico Fest	June 8 4:00- 8:00 pm	Plant sale aided by members of Farm to School	•Salaries- prep time included-: 8 hrs* \$12= \$96 •No additional costs	Completed-Successful
Activity: Macdonald Campus Day Event	June 17th 9:00 am- 12: pm	Joseph Henrico Elementary School visit to campus <i>Apiculture Activity and Bingo Bee</i> <i>Insects</i> <i>Use of grafting in tomatoes</i>	•Bingo Bee Materials: In kind support/ previous purchases. •Salaries -prep time included-: 8.5 hrs* \$12 = \$102.00	Completed-Successful
Activity: Macdonald Campus Day Event	September 24th 8:30 am-11:30 am	Joseph Henrico Elementary School visit to Campus <i>Insect physiognomy</i> <i>Agriculture harvest</i> <i>Herbs</i>	•Salaries -prep time included-: 10 hrs*\$12= \$120	Completed-Successful
Activity: Macdonald Campus Day Event	September 25th 8:30 am-11:30 am	Saint Remi Elementary School <i>Insect physiology</i> <i>Agriculture harvest</i> <i>Herbs</i>	•Salaries -prep time included-: :10 hrs* \$= 120	Completed-Successful
Activity: Macdonald Campus Day Event	October 31st 8:30 am-11:30 am	Joseph Henrico Elementary School visit to campus <i>Jelly making demonstration.</i> <i>Workshop on decomposition and compost.</i> <i>Workshop on pumpkins and harvesting</i>	•Jelly making tools: In kind support •Grocery goods to illustrate the use of pectin: In kind support •Salaries -prep time included-: 10 hrs* \$12= \$120	Completed-Successful
Activity: Macdonald Campus Day Event	Late November, early december	Dorset Elementary School visit to campus	•Materials: In kind support	Anticipated

Other Indicators of Success

Outside of the factors already mentioned, other events marked the success of the project. Overall, the equivalent of twelve of hours went into the preparation and delivery of the activity days. This does not include the time that the students put into meetings, and the research and construction of modules and the website. Our website is an indicator of success in itself, as it is a user friendly and paper-free educational platform. Additionally, Farm to School has become a club as well as an SPF initiative. As such, coordinating positions became necessary in order to keep all aspects of the project running smoothly. The funds granted by SPF have allowed the creation of two or three of these positions, depending on the club needs. A description of the coordinating responsibilities and costs associated with the activity days follow.

Task Breakdown for the Coordinators

The coordinators are responsible for the primary contact with the schools participating in the project. The following is a breakdown of the tasks associated with the coordination position:

- PR with elementary schools and coordinating events days with elementary teachers.
- Follow up via surveys after the activity days.
- Ensuring that the teachers have access to the modules prior to the activity day, in order to evaluate their students while the activity is being carried out at Mac.
- Set up a schedule for the events day with the Farm to School university student and volunteers.
- Supervise the creation of the modules, and ensure that all the materials required for the activities are available.

Table 2. Estimated Costs for a 4-Hour Activity Day*

Estimated Cost of a 4 Hour Activity Day:		
Components:		
Salaries	Number of Coordinators	Total Salaries for the Day (Total Costs)
<i>•Preparation (meeting with teachers, coordinating with fellow students) 2-3 coordinators* 2hours</i>	2	\$144
<i>•Salaries (2-3 coordinators* 4 hours)</i>	3	\$216

*Following several activity days, we determined four hours were the optimum amount of time. It seemed to be easier for the teachers to coordinate shorter visits, and the elementary school students maintained focus and interest in the activities.

This project has brought together individuals from several departments; students from nutrition and dietetics, environmental sciences, life sciences, and agriculture came together to create a plethora of diverse modules. These modules created in the AGRI 482 class ensure the viability and longevity of the Farm to School Project.

Section 5. Conclusions

Farm to School has met the indicators of success this semester and more and more schools express interest in the involvement of farm to school. Dialogue has been commenced with two more schools for potential involvement with the project, and we expect this trend to continue in the upcoming semesters as the modules become more widely available. The modules themselves require long-term involvement from both parties, due to the ecological and agricultural nature of the activities. Elementary school students can observe and participate in each of the life stages of the component or system being observed.

Most importantly, the activities engage the elementary school students. The children actively participate and question. They leave the activity day with a tangible summary of key concepts and or an educational “goodie bag”. The teachers are also pleased with our deliverables, and several educators who shared their classrooms with us last session were active participants this semester as well. One of most beautiful aspects of this project is the amount and diversity of people that are positively educated by it. The community outreach with educational initiatives is always astounding, as the educators, children and parents continue networking and contributing ideas. We are confident that given the excitement and dedication with which both elementary and University students approach Farm to School, it will continue being a sustainable project in the years to come.

Appendix 2. Further Information

The Farm to School website is available at www.farmentoschool.wix.com/home.

The website is still in its developmental stages. As such it is currently only available in French and not all of the modules are available. The other modules and other language option will soon be made available.

The article written in the Gazette regarding one of our activity days can be found at the following link:

<http://westislandgazette.com/news/story/2013/09/26/macdonald-college-provides-kids-with-a-few-lessons-from-the-farm/>