CUISR:

Community – University Institute for Social Research

Project Greenhorn: Community Gardening

by Paula Grosso & Jodi Crewe

Building Healthy Sustainable Communities

Community-University Institute for Social Research

CUISR is a partnership between a set of community-based organizations (including Saskatoon District Health, the City of Saskatoon, Quint Development Corporation, the Saskatoon Regional Intersectoral Committee on Human Services) and a large number of faculty and graduate students from the University of Saskatchewan. CUISR's mission is "to serve as a focal point for community-based research and to integrate the various social research needs and experiential knowledge of the community-based organizations with the technical expertise available at the University. It promotes, undertakes, and critically evaluates applied social research for community-based organizations, and serves as a data clearinghouse for applied and community-based social research. The overall goal of CUISR is to build the capacity of researchers, community-based organizations and citizenry to enhance community quality of life."

This mission is reflected in the following objectives: (1) to build capacity within CBOs to conduct their own applied social research and write grant proposals; (2) to serve as a conduit for the transfer of experientially-based knowledge from the community to the University classroom, and transfer technical expertise from the University to the community and CBOs; (3) to provide CBOs with assistance in the areas of survey sample design, estimation and data analysis, or, where necessary, to undertake survey research that is timely, accurate and reliable; (4) to serve as a central clearinghouse, or data warehouse, for community-based and applied social research findings; and (5) to allow members of the University and CBOs to access a broad range of data over a long time period.

As a starting point, CUISR has established three focused research modules in the areas of Community Health Determinants and Health Policy, Community Economic Development, and Quality of Life Indicators. The three-pronged research thrust underlying the proposed Institute is, in operational terms, highly integrated. The central questions in the three modules—community quality of life, health, and economy—are so interdependent that many of the projects and partners already span and work in more than one module. All of this research is focused on creating and maintaining healthy, sustainable communities.

Research is the driving force that cements the partnership between universities, CBOs, and government in acquiring, transferring, and applying knowledge in the form of policy and programs. Researchers within each of the modules examine these dimensions from their particular perspective, and the results are integrated at the level of the Institute, thus providing a rich, multi-faceted analysis of the common social and economic issues. The integrated results are then communicated to the Community and the University in a number of ways to ensure that research makes a difference in the development of services, implementation of policy, and lives of the people of Saskatoon and Saskatchewan.

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Abstract

Project Greenhorn is a community-based research project initiative between the Child Hunger and Education Program (CHEP) and the Community-University Institute for Social Research (CUISR). Project Greenhorn's objective is to encourage gardening and help new gardeners overcome barriers when starting garden projects. From May to August, 2002, interviews, focus groups, questionnaires, and a literature review were conducted.

The Project Greenhorn Research Study consists of background information on the importance and benefits of gardening, six case studies of successful gardening programs found in schools and organizations within Saskatoon, a comprehensive list of community, youth, and school gardens in Saskatoon, as well as a list of important resources and published materials.

The study found that few garden projects take place in less affluent schools and communities in Saskatoon. Identified barriers to gardening include a lack of water, supplies, space, human and financial support, and gardening knowledge and resources. This project's final report remedies the last barrier by supplying a comprehensive gardening guide to aid in the implementation of garden projects. Moreover, it is hoped that this study will aid CHEP in future programming to better achieve its goals.

Introduction: Project Greenhorn

> Food Security exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (1996 World Food Summit in Rome).

It was only a few generations ago that most Canadians lived in rural areas. People knew from where their food came and the conditions under which it was produced. Today, however, most live in cities and have lost this vast amount of knowledge and control over the food system. Today, food is treated solely as a commodity, ignoring its relevance to community and culture.

From where does food in a supermarket originate? Under what conditions was it grown? Where was it packaged? Which company packaged the produce? These are questions that may be asked when browsing supermarket aisles, but most have no idea how to find the answers. By establishing backyard, community, and school gardens, it is possible to once again become connected to and gain some control over the food system, while pursuing a healthy diet and lifestyle.

The current global food system is not environmentally sustainable. How much of the earth's ecological footprint is determined by the current food system? Because food comes from all over the world, vast amounts of energy are used to process, package, and ship it to mass scale distributors and supermarkets all around the globe. Furthermore, most food is heavily packaged with Styrofoam, plastic, and cardboard. If an inventory of our garbage was conducted, how much waste would be found to be created by such packaging? Because most purchased produce is not local, community economies are not being supported as much as possible. Strong local economies sustain and help build communities. As large resale companies move in, how many small local stores have gone out of business? By growing and processing one's own food or buying it from local farmers and local stores, greater self-sufficiency can be achieved, while also contributing to global environmental sustainability.

The History of Project Greenhorn

Project Greenhorn is a community-based research project initiative between Child Hunger and Education Program's (CHEP) Community Gardening and the Community-University Institute for Social Research (CUISR).

CHEP is a non-profit community-based organization that works to achieve solutions to hunger and improve access to nutritious food for all. Examples of CHEP programs include: the Good Food Box, Kids CAN, Children's Nutrition Programs, Collective Kitchens, Food Security for Young Families, Pathways in Motion, and Community Gardeners.

CHEP Community Gardening is a program that works to improve access to food by connecting people to garden space, contributing seeds and tools needed for maintaining a garden, linking people to community and school gardens, organizing social gatherings such as the annual Bean Bash, and facilitating workshops on ecologically sustainable gardening, maintenance, harvest, and preservation. CHEP Community Gardening also emphasizes the importance of gardening in relation to current environmental issues. It has worked with schools, community organizations, seniors, and community members in planting vegetable and native plant gardens in Saskatoon.

CUISR is a partnership between a set of community-based organizations and a large number of faculty and graduate students from the University of Saskatchewan. CUISR's mission is to serve as a focal point for community-based research and to integrate various social research needs and experiential knowledge of community-based organizations with technical expertise available at the University. CUISR's goal is to build the capacity of researchers, community-based organizations, and citizenry to enhance quality of life.

The Project

Having worked with schools and community organizations, CHEP realizes that there is considerable and diverse interest in gardening. People want a connection to the land and the food on their table, to be active in the current food system, and to explore alternatives. People want an opportunity to meet their neighbours, participate in community gatherings, and feel a sense of community pride. Teachers want to engage children and youth in the food system and the environment in a hands-on manner and try creative approaches to teaching. Children want to grow things and reap the rewards of their hard work. Seniors want to alleviate feelings of isolation and engage in an activity that enables them to perform physical activity that is both spiritually and mentally fulfilling.

There are many resources out there on gardening, but most people do not have the means or time to put them together nor know how to plan a garden. CHEP believes that a means of building capacity within the community, encouraging people's interests and enthusiasm in gardening, and supporting those who would like to start gardening, but do not know how, would be to create a package that summarizes information and tailor it to the community's needs.

By conducting an inventory of successful local initiatives of community, youth, and school gardening, as well as develop a community education tool built around gardening activities, CHEP and the community will be better able to respond to this interest in ways that support community development approaches. To this end, Project Greenhorn has the following goals:

- to establish an inventory of Saskatoon's different community and school gardening projects;

- to engage community members, youth, and school personnel in focus groups and interviews regarding gardening;
- to research current information available to community and school groups about gardening and food security issues; and
- to tailor the "Greenhorn" package to Saskatoon through community consultation.

Research Design

The evaluation of community, youth, and school gardening in Saskatoon can be divided into two separate sections: an inventory of gardens and gardening programs and supports in Saskatoon, with specific case studies of success stories; and a resource section based on people's identified needs. The research design consisted of a variation of the following research techniques.

Initial contact was made with school principals and teachers, community-based organizations, and community associations. Letters introducing the project and a sample of interview questions were sent out in advance of telephone contact. Initial phone contact provided the basic information for the inventory piece and determined which projects required a phone interview or an on-site visit to view the garden.

Interviews were conducted with key people at schools and organizations (depending on initial contact), and adults gardening at identified community gardening sites (Riversdale, City Gardens, various housing and seniors' complexes, and CHEP backyard sharing sites). Interviews provided detailed information about the structure, methods, and goals of each gardening project and program, and about resources and networks used. Interviews also offered an opportunity to share advice on successful and unsuccessful methods, barriers faced, and what was needed to overcome such barriers.

Questionnaires were sent to community associations and used for phone interviews. Due to time constraints, a letter identifying the project and questionnaires were sent to community associations to provide information about the community, youth, and school gardening in each particular neighbourhood.

Focus groups were held with youth at schools and in community programs at the Core Neigbourhood Youth Co-op and White Buffalo Youth Lodge. These focus groups provided an opportunity to learn about school gardens from the students themselves and share advice and thoughts on gardening's importance.

A literature review was undertaken of gardening manuals and articles, pedagogical studies and curriculum-related activities, funding opportunities for schools and organizations, and gardening and other support organizations. Once people's needs and their ideas on the contents of the Project Greenhorn manual's resource section were identified, a literature review provided detailed gardening and pedagogical information and a list of funding and organization resources for groups and schools to utilize.

The Benefits of Gardening

Many people have fond childhood memories that involve gardening or playing outside. The thought of making mud pies, gathering worms to drop down the back of a sister's dress, picking berries, or planting seeds can bring a smile to many people's faces. Gardening, however, holds many other benefits: it contributes to building healthy communities, cities, and schools; it fosters community involvement, intergenerational interaction, and reconnection to the land; it increases access to food security; it engages students and contributes to and broadens the learning process; and it provides opportunities to get some physically, mentally, and spiritually fulfilling exercise.

Why People Should Garden

Healthy communities

Community Gardening helps rebuild local neighbourhoods by: getting neighbours to talk to one another and build networks and friendships; creating opportunities for neighbours to work together to improve the community in which they live and to beautify the neighbourhood through establishment of various gardens and green spaces in previously barren or vacant lots; instilling pride in one's community by creating a positive community image; and promoting community safety.

Healthy cities

Strong communities, of course, help build strong cities. Gardens help enrich communities and cities by: reducing crime and violence; enhancing property values; promoting tolerance by bringing together people of different ages, income levels, and social backgrounds; reinforcing inter-cultural understanding and awareness, as gardening is, for many new immigrants to the city, a way to link to their past and culture by using their traditional gardening methods and seeds; creating an excellent recreational activity; and providing food security for the region by increasing access to safe and affordable food.

Healthy schools

Gardening can also contribute to schools by: beautifying school grounds and adding to everyone's enjoyment of the garden; providing an opportunity for school involvement in the community and participation in community development; allowing for interaction between students, teachers, parents, and the community; being an opportunity to create schools in which students, their families, and teachers will take pride and feel ownership, and build a sense of community and co-operation, thereby creating a community focal point year round and emphasizing a sense of place; and helping integrate youth into community life.

Physical and mental well-being

Gardening of any kind also has many personal benefits: allowing those who live in apartments or lack space in their own backyard to experience the joys of gardening;

reducing stress, fear, and anger; teaching people a new hobby; introducing people to new friends and neighbours; lowering blood pressure and reducing muscle tension; increasing one's personal food security by providing a means of coping with limited food budgets; improving the quality of one's diet; allowing people to eat fresh and organic produce at a low cost; creating family activities; and providing for many seniors some form of recreational activity and breaking feelings of isolation.

Why is Gardening a Great Teaching Tool?

Gardening is an excellent opportunity for teachers to explore students' different pathways of learning and teach in a holistic fashion. The garden can be used before, during, and after planting to teach and explore various aspects of the curriculum.

- It provides children with opportunities to see the environmental changes that they can make with their own hands.
- It provides an opportunity to study historic and current global and local environmental issues, as well as the processes of resolving them, thereby creating environmentally literate citizens.
- It is a pathway to diverse ideas and assumptions that are central to different worldviews: ideas about resources, progress, rights, responsibilities, and the meaning of life.
- It provides children an opportunity to learn about the food system and where food comes from and promotes healthy eating.
- An outdoor classroom provides a place to engage students in their natural environment.
- It is experiential and hands-on.
- It supports multiple intelligences for those who tend to work independently, co-operatively, creatively, scientifically, physically, linguistically, and/or visually.
- It allows learning opportunities that connect classrooms with communities and link learning to issues in the "real world." It allows students to participate in tackling problems and serving real needs within the community.
- It is inherently interdisciplinary. Although gardening most obviously fits into a science curriculum (ecology, biology, chemistry), teachers should not be afraid to use the outdoor classroom (garden) as a learning space to teach other subjects, such as Visual Arts, Mathematics, Language Arts, History, Native Studies, Environmental Studies, Geography and Land Transformation, Economics, and Nutrition.

Gardening and the study of plants and the food system are already a part of Saskatchewan's science curriculum. Core Units in the Saskatchewan Curriculum Guide include plants, senses, plant growth, weather, habitats, plant structures and adaptations,

earth (soil studies), cells and systems, plant diversity, plant structures and function, ecology, and ecosystems.

Gardening can complement existing curricula in many ways, for it:

- Complements the nutrition segment of the curriculum by teaching students about foods' origins, harvesting vegetables and processing foods, having a fall harvest feast, and encouraging healthy eating habits.
- Integrates plant studies with ecosystem studies by examining the complex interactions between animals, soil, and plants within the garden.
- Makes mathematics lessons fun and hands-on by using and applying math concepts such as addition and subtraction (measurement), estimation, geometry, statistics, and probability, perimeter, circumference, diameter, volume, angle, ratio and scale, and data collecting (charts, tables, graphs).
- Enhances chemistry classes by exploring soil pH levels, mass, and density of compost and soil in the garden.
- Integrates language arts by having students keep gardening journals and write assignments on what they have grown in their garden, research on vegetable and native plant history and use, and write poems about their outdoor classroom.
- Enhances art classes by using the outdoor classroom as inspiration for art projects, bean and seed collages, drawings and water colour paintings, murals for the garden, photography of the garden, designs for and maps of the garden, drawings of what the garden might look like over time.
- Complements history and cultural studies classes by studying changes in prairie landscapes and traditional uses (both pioneer and Aboriginal) of plants and animals. Are these plants still used today? This could be supplemented with a field trip to a naturalized area or a garden.
- Teaches environmental issues hands-on by examining organic gardening and composting.
- Complements computer literacy sections by allowing students to create a website of their garden.
- Enhances the agriculture core units within the social studies curriculum by learning about horticulture hands-on. It enables teaching what kind of plants and vegetables can grow in Saskatchewan, how crops are harvested, how soil is prepared for crops, sustainable agriculture, and the challenges and problems facing farmers today.
- Creates fun and creative projects and practicum placements for high school work education projects.
- Enhances high school outdoor education classes with gardening projects and hands-on practicum opportunities.

Models of Success (6 Case Studies)

The following school and youth gardening projects have overcome several common problems in setting up their gardens. The secrets of their success involve their approaches, structure and organization, networks and community connections, and overall enthusiasm.

Victoria School

The native plant garden and outdoor classroom at Victoria School connects students with nature and helps foster positive relationships between the school and the community. The garden is bustling with activity as children play, pick strawberries, feed birds, and look at the beautiful flowers. Gardening at Victoria began seven years ago when Jacqueline Kurmey and her grade 4/5 class started a Butterfly Garden as a class project for National Wildlife Week. The environment club was formed shortly thereafter, and in 1997-1998 the garden club was established. The outdoor classroom was created in the spring of 2000. For more information and pictures of the students and their garden, visit them online at http://schools.spsd.sk.ca/Victo/eclub/garden.html.

Reasons for success

The Victoria School project has been successful for many reasons. Having gardening as part of an extracurricular activity allows for a structured time when students can help maintain the garden. It allows teachers to plan activities for the garden without worrying about a set curriculum and respects their limited time because the gardening is done as a recreational activity during lunch. Most importantly, the club setting fosters pride in students' work, encourages teamwork, and provides opportunities to create garden specific projects (such as a website). One Saturday in June, garden club members, teachers, and parents had a clean-up day. They painted the trap door in the green classroom and the bench facing their garden with a mural. On the back, the children wrote, "Please respect our green classroom."

Teacher interest and involvement has also been crucial. As with all good projects, there needs to be wide participation from both students and teachers. Victoria School has been lucky to have dedicated and enthusiastic gardeners amongst their teachers. Wendy Thomson's grade 3 class has been especially focused on the garden (she also heads the garden club). They have participated in the garden club, drawn amazing watercolours of native plants, written inspiring poetry, and helped maintain the garden website.

Many schools have concerns about summer maintenance. Victoria School has dealt with this dilemma by dividing summer garden responsibilities amongst garden club members and their parents. Before school ends, each student is scheduled to care for the site for one week.

Designing the garden to overcome vandalism was also critical. Individuals often raise concerns about putting time and energy into something that might be destroyed. However, the native plant garden at Victoria School has faced little vandalism. There are several reasons for this: the garden is clearly defined by wooden stumps and boulders; plants and grasses are clearly identified by signs; pathways and stepping stones indicate proper walking areas; garden club members keep watch during recess; the whole school is educated about the garden project and its purpose; and the outdoor classroom (of which the native plant garden is a part) is made visible by painting the benches and posts, which clearly marks the area as a place of learning where respect is required.

If a school garden is to be successful, it needs the support of the community. Ramsay King, Master Gardener for the Broadway Business Improvement District, has helped with the design, landscaping, choice of appropriate plants, and digging of the Victoria School garden. Parents also help during special clean up days and during the summer. The program has benefited from the following sponsors: Toronto Dominion (TD) Friends of the Environment; Canadian Wildlife Federation (Wild Education); Dutch Growers; Sawyer's Tree Services; Miller's Native; City of Saskatoon; Frank Remai; Lydia's Restaurant; Greystone Centre Co-op; Saskatoon Public School Board; and Prairie Plant Systems.

In general, it is the commitment and participation from diverse member of the community that have contributed to the Victoria School gardening project's success.

Princess Alexandra School

Princess Alexandra School has been successful primarily because of their community connections. The school has worked with CHEP Community Gardening for several years. CHEP staff have worked with students to help start seeds indoors, plant at the Riversdale Community Garden, and paint murals to beautify the site. CHEP has provided a space, tools, and seeds for the school. Princess Alexandra has been quite resourceful at using services available in the community to limit project costs.

Teachers at Princess Alexandra have also integrated gardening into the curriculum. Ana Fafanoff's class has completed various art projects and started seeds indoors. Other examples include using gardening stories for reading time and using gardening as a school project. In late spring, a large group of students planted their own garden at the Riversdale Community Garden site. The children enjoy themselves immensely at the garden, watering, helping with planting, and especially looking for and picking worms.

Holy Cross High School

The garden project at Holy Cross High School is an impressive example of students' capability to initiate and accomplish ambitious projects. In 2002, a group of students decided that they wanted to plant a garden to donate produce to the Friendship Inn as

part of their Christian Ethics class. Students were enthusiastic because this project had a concrete purpose and visible results. Many students were amazed by how much food they were able to produce.

Plans for continuing the project are underway and quite extraordinary. With help from parents (one of whom is a landscape architect), the students want to create a social green space for themselves and their friends. Plans include planting fruit trees, building tables and benches, and developing permanent raised beds to expand the existing garden.

Nutana Collegiate

The Seeds of Strength Project for the Grade 9 Transition Program at Nutana Collegiate has integrated gardening into the curriculum's Work Education portion. During the last five weeks of class, students learn about native plants and their habitats, plant identification, basic gardening, community development, and alternative art forms. Because of the project's hands-on nature, students build on skills that enable them to work at the Riversdale Garden and Core Neighbourhood Youth Co-op, allowing their new skills and knowledge to gain a practical and focused application. During summer months, two students are given an opportunity to work at the CHEP Riversdale Community Garden.

Because the project is a partnership between Nutana Collegiate, CHEP Community Gardening, and the Core-Neighbourhood Youth Co-op, teachers and students receive support from these organizations. Support includes seeds, tools, educational materials, workshops, fieldtrips, project ideas, and activities. Additional funding is provided by TD Friends of the Environment and the Community Initiatives Fund (a provincial funding program).

Core Neighbourhood Youth Co-op

The Core-Neighbourhood Youth Co-op's (CNYC) garden project began in 1999. Youth own and are responsible for tending the garden and selling the produce at the downtown Saturday Farmers' Market. Ownership of this project allows youth to have a great deal of input into what gets planted, how they want to promote their project and sell the produce, and how money is reinvested into CNYC. In the past year, for example, its members decided to take some produce home to promote good nutrition, and that it would be more efficient to invest their fundraising energy into more lucrative projects such as compost bins made out of recycled materials.

For many of the youth at CNYC, the garden is their major access to fresh produce. For example, there are no grocery stores in the Riversdale neighbourhood, and trips to supermarkets are sometimes limited. As a result, community members often have to shop for necessities at local convenience stores where fresh produce is rare.

The Core-Neighbourhood Youth Co-op also works with other community organizations and networks. They have received funding from Social Services, the Community Initiatives Fund, TD Friends of the Environment, and other environmental organizations and business ventures, and worked with organizations like White Buffalo Youth Lodge.

Riversdale Community Garden

The Riversdale Community Garden has become a local landmark. As people stroll by, they comment on how much they like the garden, the difference between gardens over the past two years, and how much they enjoy seeing green space in their neighbourhood. The garden was initiated by CHEP Community Gardening three years ago and is leased from the Chinese Cultural Association on two abandoned City of Saskatoon plots.

The Riversdale Community Garden has overcome several challenges and celebrated many successes. One of the key successes has been diverse forms of community building. Many of the site's gardeners live in the area and others who have walked by have expressed interest for the following year. The garden is divided into individual plots, communal plots, and educational/demonstration plots. Schools and community-based organizations have used the site to garden and engage youth on the food system, nature, and environmental issues. Furthermore, the garden is a safe space for youth in the neighbourhood. Children often come by to help with the gardening, visit, or pick berries. CHEP staff members are on-site at specific times, engaging community members in their work.

The Riversdale garden has also succeeded in building a sense of community among the gardeners. A specific schedule has been set up where gardeners take turns watering the garden, and people come out periodically to help with the workload. There have been various gatherings and workshops held to beautify the garden. Gardeners go on various CHEP-sponsored field trips around Saskatoon, have picnics and barbeques, and attend workshops on square foot gardening, saving seeds, and canning and preserving. At the end of the year, there is a Bean Bash, where gardeners get together to try different recipes with produce from the garden. As well, there is always a community gathering to celebrate the year's success.

Identifying Barriers and Concerns

Given the level of interest apparent in gardening, one would expect to see gardens in every corner of the city. Nevertheless, research has identified many concerns of community members and barriers that need to be overcome before gardening programs can expand.

Access to Water

One of the barriers to gardening is an adequate water supply. A source of water on site is essential for a successful garden project. Schools have dealt with this issue by planning their garden only near water sources. The Riversdale garden maintained by CHEP followed another model by creating a partnership with a local neighbour and thereby exchanged access to water for a Good Food Box every month.

Support Systems

The problem is compounded by a general lack of human and financial resources of various sorts (teacher and parent involvement, funding, and community networking). With teachers, for example, time is always an issue as they already need to follow a highly condensed curriculum and supervise existing extracurricular activities. Schools that have initiated and established a successful garden program did so by working the garden projects into already existing structures (i.e. creating a club format to allow teachers to use the extracurricular time and by integrating the garden program into the existing curriculum and using school learning time). Funding for many schools in core neighbourhoods that do not have extensive budgets, nor parents or people in the community who can donate funds, is always a concern. Funding opportunities are available, but interested parties need access to them. Creating and distributing a list of available funding sources so that community members can easily access the existing funds would be quite beneficial. A strong garden committee in schools (which is representative of the school) and dedicated parent volunteers are needed to research funding and grant opportunities and fill out application forms and proposals. It is obvious, then, that a lack of parent involvement in school activities and teacher interest can severely limit a garden project. Many people are needed to take care of the garden during summer months, and a garden project needs enthusiasm from many levels to carry it through and continue momentum throughout the year. Many participants in the focus groups and interviews stated that what they lacked were support systems, such as organizations and people, guides and manuals, lesson ideas and plans, as well as knowledge of where one can find these resources. Networking—using the human and organizational capital available—can support people who are starting a project and need constant support and advice on what to grow, how to grow it, and where to get the necessary tools and supplies. With a community network that is readily available, an enlightening and fulfilling endeavour can quickly become a frustrating experience.

For the contacted schools that did not have a garden established, fear of vandalism was one of the main barriers. Individuals often raised concerns about putting time and energy into something that might be destroyed. Many schools and community gardens have dealt with this situation with relative success. Victoria School has clearly defined their garden space with wooden stumps and boulders. Plants and grasses are clearly identified by signs. Pathways and stepping stones indicate proper walking areas, and

garden club members keep watch during recess. The outdoor classroom (of which the native plant garden is a part) is also made visible by painting benches and posts. This clearly marks the area as a place of learning where respect is required. Most importantly, the entire school is involved and educated about the garden because the garden club is representative of students from grades 3-8.

Knowledge

One of the other main barriers identified by schools and organizations who had not initiated garden projects was a lack of gardening knowledge and experience. For many, establishing a garden is a daunting task. Knowing where to begin and what such a project entails helps make the process seem less insurmountable. People need to know where they can grow particular plants, what care these plants need, what type of soil with which they are working, when to plant and harvest, and how to design a garden for success and incorporate learning, playing, safe, and child friendly designs. Many organizations that give funding (such as Evergreen) also have experts available to support schools and communities eager to try. The problem seems to be, first, realizing that these supports exist, and then finding and connecting with them. Any community capacity conducted in the future needs to address this.

Lack of Supplies/Equipment

Even when there is interest, water, community support, and funding, basic equipment and supplies are required to start a garden. Funding often does not cover basic tools. Therefore, connections must be made with local groups that are already gardening, neighbours, local garden stores and businesses, and parent volunteers in schools. Tools can be shared or donated, but this requires a good deal of investigation and networking.

Space

Another common reason for not establishing a garden was a lack of space or land. However, one can still work with limited space. Container gardening or hanging garden bags are only a couple examples. The Core Neighbourhood Youth Co-op and Holy Cross High School both have their entire vegetable gardens in large plastic containers (old garbage bins cut in half). Although these solutions overcome a shortfall of good gardening land, some sort of space is still essential. When no location is available, it should be remembered that garden space does not necessarily need to be on site. Princess Alexandra School and White Buffalo Youth Lodge, for example, do not have a garden on site, but instead use the Riversdale site maintained by CHEP staff and volunteers.

Although such suggestions should not simply be used as a checklist to success—each situation will require different needs—it provides a framework with which to begin to identify who and how CHEP needs to support in order to build community capacity to increase their food security and promote biodiversity in the Saskatoon area.

Conclusion

"We would love to garden next year." "Wow, I had never thought of that before, that's a great idea." These are only a few responses from principals, teachers, and organization directors when confronted with the idea of setting up a garden. It is apparent that there is a great deal of interest out there. Many schools and groups have already discussed how this could work, what they would want to achieve, and what they would need to set up a garden or gardening program.

It is impressive to see that there are so many schools and organizations in Saskatoon that are gardening and creating interesting solutions to the challenge of food security in the city. Elementary schools with gardening programs stress a variety of initiatives such as beautification projects, recreational gardens, native plant and outdoor education classrooms, and vegetable gardens. While these gardens are also used to enhance existing science and health curricula due to the large number of garden clubs, green teams, and special school projects, the momentum seems to be student-centered.

Expanding the CHEP Outreach Program

At present, high schools have proportionately less gardening programs than elementary schools. The programs that do exist are more closely tied to curriculum needs and expectations. The momentum is not as student-centered in high schools as in primary schools, nor is the agenda. Furthermore, and perhaps more importantly, while there are many schools gardening and incorporating food security issues into their programming, the number is still proportionately small. Only 14 elementary schools and 5 high schools are gardening in some capacity. Further, this study has identified that a disproportionate number of schools in more affluent neighbourhoods are gardening (see **Appendix F**). Although such programs can be used to build leadership amongst youth, only organizations already involved with CHEP or with an environmental focus are gardening. There are many housing complexes in Saskatoon neighbourhoods that could benefit from garden space and community gardens. The organizations, communities, and housing complexes that are gardening, nevertheless, have a long history and have done extensive work with CHEP. Therefore, to reach CHEP's goals, future programming for CHEP's Community Gardening needs to consider outreach to other schools, youth organizations, and housing complexes in less affluent neighbourhoods where issues of hunger, nutrition, and food security are pressing concerns. CHEP has other programs that already reach into these Saskatoon neighbourhoods. It is apparent that the community gardening program needs to be expanded to become another vehicle of support in such areas.

Appendix A. Introductory Letter and Interview Questions for Schools and Organizations.

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Friday May 31st, 2002

Dear Principal:

The Child Hunger and Education Program (CHEP) works with the Saskatoon community to achieve solutions to hunger and to improve access to nutritious food for all. CHEP Community Gardening is a program that works to improve access to food by connecting people to garden space, contributing seeds and tools needed for maintaining a garden, by linking people to community and school gardens, and by facilitating workshops on ecologically sustainable gardening, maintenance, harvest, and preservation.

We need your help in providing information for our inventory

Project Greenhorn

Is a community-based research project between CHEP and the Community-University Institute for Social Research. The expected outcomes of Project Greenhorn will include:

- a detailed inventory of existing programs around gardening in the City of Saskatoon and area
- a handbook/activity guide that can be used as a resource for community, school, and youth groups. The handbook will include the how-to's of creating a community/ school garden as well as varying activities for children, youth, and adults.

We need your help

Community input is critical to making this project a reality. In the following weeks, I will be contacting you and asking for a few minutes of your time.

What we would like to know:

- What kind of gardening programs and initiatives currently exist at your school/ organization?
- Do you have a garden (vegetable, flower, or native plant), garden at another site, have gardening as part of the curriculum/programming?
- What are some of your goals regarding your gardening curriculum/program?
- What community resources do you currently access?
- What are some impediments to a more extensive gardening program within your school/organization?
- Based on some of your identified barriers, what do you need in order to enhance or establish a gardening program?

As a community-based organization, we fully realize just how busy people are at this time of year. We appreciate your time and dedication to making this project a reality.

Sincerely,
CHEP Community Gardening
xxx-xxxx

Questions for Project Greenhorn

Name of Organization/School:_____

Contact Person:_____

Date:_____

Gardening programs and initiatives at your organization/school

1) Do you have a garden? (vegetables, flowers, or native plants?)

2) Do you garden at another site? If yes, where do you garden?

3) Do you have gardening as part of your programming/curriculum?

4) If yes, please describe what activities you do and how gardening fits into your programming/curriculum.

5) What are some of your goals regarding your gardening program/curriculum?

Community Resources

6) What community resources do you currently access (e.g. written materials, videos, community-based organizations)?

7) Do you work with community organizations? If yes, which organizations do you work with?

Barriers

8) What are some impediments to a more extensive gardening program within your school/organization?

9) Based on some of your identified barriers, what do you need in order to enhance or establish a gardening program?

10) Part of Project Greenhorn is to create a Community Green Package (handbook) for community, youth, and school organizations based on the community's identified needs. The handbook will include the how to's of creating a community/school garden as well as varying activities for children, youth and adults. What kind of activities or information would you like to see in such a handbook?

Appendix B. Classroom and Youth Focus Group Questions.

School:_____ Date Visited:_____

Individual

1) Why do you like gardening?

2) What do you like most about gardening?

Group

1) Do you think all kids should learn about plants and gardening at school?

2) Why is it important to learn about gardening at school?

3) If a newspaper reporter came by your school and wanted to write an article about school gardening, what would you show them in your garden? Of what in or about your garden are you the most proud?

4) Now that you are experts, we need your help for our "How to Garden Manual" that we are creating for community groups, youth groups, and schools. What advice would you give other kids who want to start gardening in their school?

Do's *Don't's*

Appendix C. Interview Questions for Gardeners.

Name:_____ Garden located:_____

How long have you been at this garden?_____

1) Why do you like gardening? What are the benefits of gardening?

2) Why did you decide to have a plot at the community garden?

3) What are you growing in your garden?

4) How has having a space to garden benefited you personally?

5) What are some barriers impeding more community gardens and access to gardens in Saskatoon?

6) What is needed to enhance already existing community gardens?

7) Part of this project includes creating a community green package (manual) for community, youth, and school organizations based on the community's identified needs. The manual will include the how-to's of gardening, creating and organizing a community/school garden, as well as varying activities for children, youth, and adults. What kind of activities or information would you like to see in such a handbook?

Appendix D. Introductory Letter and Questionnaire for Community Associations.

Room 210, 230 Avenue R South
Saskatoon, SK S7M 0Z9
Ph. (306) 655-4635 * Fax (306) 655-5512
www.chep.org

Dear Community Association:

CHEP Community Gardening is a program that works to improve access to food by connecting people to garden space, contributing seeds and tools needed for maintaining a garden, by linking people to community and school gardens, and by facilitating workshops on ecologically sustainable gardening, maintenance, harvest, and preservation. CHEP Community gardening strives to respond to the growing interest in the CHEP community gardening program in and outside the core neighbourhoods in Saskatoon.

We would like your help in providing information for our inventory

Project Greenhorn

Project Greenhorn is a community-based research partnership between CHEP and the Community University Institute for Social Research. The expected outcomes of Project Greenhorn will include:

- a detailed inventory of existing programs around gardening in the City of Saskatoon and area,
- a handbook/activity guide that can be used as a resource for community, school, and youth groups based on the community's identified needs.

The handbook will include the how to's of creating a community/school garden, as well as varying activities for children, youth, and adults.

Please fill out the following questionnaire and return to CHEP . If you cannot mail this questionnaire, we will gladly pick it up. As a community-based organization, we fully realize just how busy people are at this time of year. We appreciate your time and dedication to making this project a reality.

Sincerely,
CHEP Community Gardening
xxx-xxxx

Questions for Project Greenhorn

Gardening programs and initiatives in your community

1) Are there any community and/or youth gardens in your community (vegetables, flowers, or native plants)?

2) What kind of community and/or youth gardens exist (vegetable gardens, flower gardens, native plant garden)?

Community Resources

3) What community resources are currently accessed (e.g. written materials, videos, community-based organizations)?

Barriers

4) What are some impediments to more extensive community and/or youth gardening initiatives within your community?

5) Based on some of your identified barriers, what do you need in order to enhance or establish a gardening program?

6) Part of Project Greenhorn is to create a Community Green Package (handbook) for community, youth and school organizations based on the community's identified needs. The handbook will include the how to's of creating a community/school garden as well as varying activities for children, youth, and adults. What kind of activities or information would you like to see in such a handbook?

Appendix E. Partially Annotated Curriculum Supplements.

Bell, Anne. "Pedagogical Potential of School Grounds." *Greening School Grounds: Creating Habitats for Learning*. Gabriola Island, BC: New Society Publishers, 2000, pp. 9-11.

Bizecki Robson, Diana. *Plant Quest 1: Woody Plants of the Boreal Forest*. Saskatoon, SK: Saskatchewan Environmental Society, 2000. This is a guide for conducting workshops and activities. Students learn to identify different woody plants, use descriptive terminology, and discover potential uses for native plants.

Blass, Rosanne and Jurenka, Nancy J. *Beyond the Bean Seed: Gardening Activities for Grades K-6*. Teacher Ideas Press, 1996. This collection has activities for using a garden once it has been planted, making it a truly integrated learning tool. Includes activities in math, language arts, and history.

Brown, Maggi. *Growing Naturally: A Teacher's Guide to Organic Gardening*. Crediton, Devon: Southgate Publishers Ltd., 1996. This aid helps teachers explore organic gardening with their students. It includes links to the curriculum, and suggested activities.

Caduto, Michael, J. *Keepers of the Earth: Native Stories and Environmental Activities for Children*. Saskatoon, Saskatchewan: Fifth House Publishers, 1989.

Caduto, Michael, J. *Keepers of Life: Native Plant Stories*. Golden, CO: Fulcrum Publishers, 1995.

Collyer, Cam and Holmes, Randee. *All Hands in the Dirt: A Guide to Designing and Creating Natural School Grounds*. On-line resource: (www.evergreen.ca). This series is a step-by-step instruction manual for creating naturalized areas in school grounds.

Degler, T. *Canadian Junior Green Guide*. Toronto: McLelland and Stewart Inc., 1990. This is an easy to read handbook in the fight against various environmental problems. Pages of experiments, activities, and information for children aged 8-14 years are included.

Egana, John and Kerby, Barbara. "Greening High Schools: Leaping Subject Barriers." *Greening School Grounds: Creating Habitats for Learning*. Gabriola Island, BC: New Society Publishers, 2000, pp. 34-36.

Evergreen Staff. *Guide to School Ground Naturalization: Welcoming Back the Wilderness*. Scarborough, Ontario: Prentice Hall Canada. This is an Evergreen Foundation guide to the process of planning, implementing, and maintaining a naturalization project. This resource includes planning and fundraising, suggested project themes, case studies from across Canada, and a resource guide to assist with project development.

Glaze, Dave and Wilson, Kay. *Exploring the Boreal Forest: Understanding an Ecosystem*. Saskatoon, SK: Saskatchewan Environmental Society, 1991. This publication is designed for grades five and six and explores the boreal forest ecosystem (plants and animals) in a fun, hands-on fashion.

Grant, Tim and Littlejohn, Gail, eds. *Greening School Grounds: Creating Habitats for Learning*. Gabriola Island, BC: New Society Publishers, 2000. This provides step by step instruction for numerous schoolyard projects and design options. This series also includes outdoor activities, curriculum links, and pedagogical and behavioural benefits.

Green Teacher. Issue 61, Spring, 2000. This issue contains an article on building structures (like garden sheds) with straw. A second article discusses discouraging vandalism in schoolyard spaces and gardens.

Green Teacher. Issue 65, Summer 2001. This issue features teaching about food systems and starting school gardens, both indoors with hydroponics and outdoors. It includes a board game and ideas for various activities.

Harmon, A., Harmon, R., and Maretzki, A. *The Food System: Building Youth Awareness Through Involvement*. Pennsylvania: Pennsylvania State University, 1999. This book suggests classroom activities and community and personal initiatives, as well as serves as a guidebook for educators, parents, and community leaders.

Haslam, M., Mendiratta, A., and Barndt, D. *The Global Food Puzzle: Where Do You Fit Into The Picture?* Toronto: The Tomasita Project Production, 1999. This is an interactive educational video focusing on women's work and knowledge and alternatives to the dominant food system. A written guide includes questions and activities for the classroom.

Jardine, Margaret, B. *My School Has a Garden: Ideas for Primary Level Learning Related to a School Curriculum*. Toronto: Toronto Board of Education, 1991. This booklet is sub-divided by seasons, providing an educator with ideas for autumn, winter, and spring.

Keaney, Brian. *English, Science, Geography and Mathematics in the School Grounds*. Winchester, UK: Learning Through Landscapes, 1993. This series explores the possibilities of using the school grounds as an inspiration for science and environmental education, as well as cross-curriculum activities in math, English, art, history, and geography.

Keaney, Brian and Lucas, Bill eds. *Bright Ideas: The Outdoor Classroom*. Warwickshire, UK: Scholastic Publications, 1992. This book covers a holistic approach to learning and offers many curriculum suggestions. Both subject specific activities as well as cross-cultural themes are included.

Ocone, Lynn. *Guide to Kid's Gardening: A Complete Guide For Teachers, Parents, and Youth Leaders*. Rexdale, Ontario: John Wiley and Sons Inc., 1990. This guide contains seventy activities that teachers can use to make a school garden and food production a meaningful learning experience.

Savage, Candace. *Get Growing: How the Earth Feeds Us*. Boston: Douglas and McIntyre Ltd., 1991. By covering the history of farming and the role of food in human survival, children learn what can affect food production.

Wilson, Kay. *Exploring the Grasslands: Understanding An Ecosystem*. Saskatoon, SK: Saskatchewan Environmental Society, 1994. This publication serves as a teaching unit for grade six. It contains information about the grasslands ecosystem (native plants) and community, past and present. It provides suggestions for fieldtrips, activities, and conservation.

Children's Gardening Books

Briggs, Martin, Jacqueline. *The Green Truck Garden Giveaway: A Neighbourhood Story and Almanac*. Toronto, Ontario: Maxwell MacMillan Canada, 1997.

Chandler, Clare. *Little Green Fingers*. Vancouver: Whitecap Books Ltd., 1996. This children's book includes sections on how plants grow, taking cuttings, and how to grow various types of gardens in different locations. Illustrations tell children what they need for each project

Handelsman, Judith F. *Gardens from Garbage: How to Grow Indoor Plants from Recycled Kitchen Scraps*. Connecticut: Millbrook Press, 1993. This contains instructions for growing houseplants, from potatoes, garlic, avocados, lentils and more.

Hickman, P. *Birdwise*. Toronto: Kids Can Press, 1988.

Hickman, P. *Bugwise*. Toronto: Kids Can Press, 1990.

Hickman, P. *Plantwise*. Toronto: Kids Can Press, 1991.

Kite L., Patricia. *Gardening Wizardry for Kids*. New York: Barron's, 1995. This great book contains the history and folklore of our favourite vegetables and herbs, science experiments, and craft projects.

Magazines and journals

Green Teacher Magazine: Education for Planet Earth.

The Native Plant Society Newsletter.

Outdoor Classroom Newsletter (Evergreen Foundation).

The Saskatchewan Environmental Society Newsletter.

Organizations

Environmental organizations/supports in Saskatoon

Meewasin Valley Authority (665-6887)

Saskatchewan Environmental Society (665-1915)\

Saskatchewan Outdoor Environmental Educators Association (SOEEA) (http://www.soeea.sk.ca/)

Waste Reduction Council (936-3242)

Environmental organizations/supports in Canada

Association for Canadian Educational Resources (ACER): www.acer-acre.org.

Canadian Network for Environmental Education and Communication: www.dal.ca and www.dal.ca/^stanet/database/eecom.html.

Canadian Wildlife Federation: www.cwf-fcf.org.

Ecological Schoolyards: www.ecoschools.com (contains links to eco-school resources and case studies).

Evergreen Foundation (learning grounds and common grounds): www.evergreen.ca. This website contains teachers' curriculum guides, lists of resources, and funding opportunities.

National Wildlife Federation: www.enature.com and www.nwf.org/schoolyardhabitats/

World Wildlife Fund Canada: www.wwfcanada.org.

People resources

Ken Boyd (Saskatchewan Outdoor Environmental Educators) (882-2655)

Crystal Clarke (CHEP Community Gardening) (655-5379)

Melanie Elliott (Extension Division at the University of Saskatchewan) (966-5484)

Kathryn Gerein (Native Plant Society) (668-3940)

Marsha Klein (Brightwater and Board of Education) (683-8323)

Annette Yarmovich (Horticulture Society- Young Gardeners Program) (382-8210)

Appendix F. Community, Youth, and School Gardens in Saskatoon.

Elementary Schools

Bishop Klein School
Contact: Betsy Kelly
1121 Northumberland Avenue

Type of garden: perennial bed in the front of school and vegetable garden in the City Plots.

Grade: all.

Structure: no formal club. In the spring, all students plant one flower. Older students (grade 6) help on planting day. Grade 7 students have a plot at the City Gardens, where they plant vegetables.

Goals: beautify the school; teach skills; open students to the world of gardening; and add to nutrition classes.

Activities: planting flowers and vegetables; creating stepping stones for the school garden; and helping with garden maintenance.

Curriculum: complements nutrition and art classes.

Resources used: City Greenhouses, Floral Acres Greenhouse.

Buena Vista Elementary School
Contact: Ken Marland, 683-7140
1306 Lorne Avenue

Type of garden: native plants, lilacs, and trees at off-site garden location at Lorne Avenue and Eighth Street**.**

Grades: 2/3.

Structure: special class project.

Goals: to beautify the community; commemorate special members of the community; and participate in an environmental project.

Activities: planting native plants, such as prairie rose, buffalo berry, cinquefoil, choke-cherry, and wolf willow; planting 400 bulbs and 150 Royalty lilacs; site maintenance (collecting garbage, watering); and writing and distributing a project newsletter.

Curriculum: special class project.

Resources used: Saskatoon Rotary Club; City of Saskatoon; and Dutch Growers.

Caswell Hill Community School
Contact: Principal David Wipf, 683-7160
204 30th Street W.

Type of garden: small butterfly garden.

Grade: group of several classes planted in 2000/2001.

Structure: extracurricular.

Goals: teach students about simple gardening, how to transplant, and ecosystems.

Activities: plant flowers.

Curriculum: science curriculum for various grades.

Resources used: none.

Dundonald School
Contact: Principal Brian Carle/ Lori Dunlop, 683-7200
162 Wedge Road

Type of garden: small, tiered flower beds inside school entrance.

Grades: all.

Structure: extracurricular.

Goals: beautify school.

Activities: planting flowers; Lori Dunlop helps students water and take care of the flower beds.

Curriculum: n/a.

Resources used: none

Greystone Heights School
Livia Buck, 683-7140
2721 Main Street

Type of garden: native plant garden and vegetable gardens in the front. The project has existed for 6 years.

Grades: all.

Structure: Garden Club (15 members).

Goals: create an outdoor classroom for students to perform hands-on activities and projects.

Activities: planting flowers; planting vegetables in the front; starting seeds indoors; outdoor classroom; bird studies; composting; and fall harvest and celebration.

Curriculum: the outdoor classroom is used by teachers as a space to teach curriculum on ecosystems, science, and as a quiet reading time.

Resources used: grant from Shell Oil and community member donations (plants and bulbs).

Lakeridge Elementary School
Contact: Principal Lynn Carle/ Marsha Klein, 683-7320
305 Waterbury Road

Type of garden: native plant garden in a raised bed.

Grade: 3.

Structure: classroom activity.

Goals: create an outdoor classroom in playground area with easy access for students and using native wild plants (prairie and riparian); add to the school yard's bio-diversity; engage students in stewardship project; and lead hikes in garden to help develop connection/ownership/respect during school wide construction fair for parents and students.

Activities: each student chooses a native plant that they want to see in the garden; students research, draw, and learn about their chosen plant; planting native plants; making pathways and placing wood stumps for the outdoor classroom; fundraising activities: recycling and white (green) elephant sale for plants; construction fair for parents and students to view the garden; and student-led interpretive hikes of the garden during the construction fair.

Curriculum: plants (grades 3/4): uses, diversity, structure; earth (grade 3): soil study; math: measure perimeter/map of garden; language arts: write about garden, lead interpretive hikes; science (ecology): learn about connections, interdependence, needs; arts: painting and drawing flowers, stepping stones.

Resources used: Evergreen Foundation (Learning Grounds); Schoolyard Naturalization project (Sterling McDowell Foundation research grant); Millers plants; Meewasin Valley Authority; Native Plant Society of Saskatchewan; Saskatoon Public School Division; and University of Saskatchewan.

Montgomery Elementary School
Contact: Principal Linda Graves, 683-7370
3229 Caen Street

Type of garden: small native plant garden in front of school.

Grades: all.

Structure: special activities with the Environment Club "Green Team," but caretaker predominantly takes care of garden maintenance.

Goals: appreciation of the outdoors and vulnerable ecosystems, and learn about native plants and perennials.

Activities: n/a.

Curriculum: n/a.

Resources used: n/a.

North Park Wilson School
Contact: Kathy Probert, 683-7380
1505 9th Street E.

Type of garden: perennial bed, container gardening, and a native plant garden.

Grades: 2/3.

Structure: classroom activity and special project.

Goals: beautify the school (welcoming); involvement of the students to avoid vandalism of school property; and work with parents and enhance community links.

Activities: plant perennials; special one day planting of the native plant garden (all students participated); and painting containers.

Curriculum: art and science.

Resources used: Evergreen Foundation (learning grounds); STF fund; Sterling McDowell fund; and community members.

Open School—Alvin Buckwold
Contact: Neil Anderson, 683-7100
715 East Drive

Type of garden: native plant garden on-site, and root crop vegetable garden off-site.

Grades: 1-7.

Structure: classroom activity and part of the curriculum.

Goals: for children to have hands-on experience with life skills such as gardening, engage children in an activity that creates something tangible in the end, create and promote self-sufficiency, and partake in a cultural experience.

Activities: researching planting techniques; planning where and how to plant a garden; planting root vegetables in the garden and planting native plants on-site at the school for a butterfly garden; maintenance of the garden on both sites; and harvesting vegetables.

Curriculum: Language, Social Studies, class projects.

Resources used: CHEP volunteers.

Princess Alexandra Community School
Contact: Anna Fofanoff/ Vera Robertson, 683-7480
210 Avenue H S.

Type of garden: vegetable garden off-site.

Grades: 1 and 3/4/5 split.

Structure: classroom activity and special school outing to plant off-site at the Riversdale community garden.

Goals: learn about plants and gardening, and get involved in the community.

Activities: starting seeds indoors; artwork/mural; and planting bedding plants and seeds outdoors at the Riversdale community garden.

Curriculum: art; science; and field trips and special school/class project.

Resources used: CHEP-Community Gardening Program; City of Saskatoon (Greenhouses); and Horticulture Department (U of S).

St. Edward School
Contact: Principal Wendy Busa, 668-7333
1002 Avenue P N.

Type of garden: flower bed in front of school.

Grades: all.

Structure: special school project every spring.

Goals: building community and beautify school.

Activities: start seeds indoors, then K-8 split up with staff members to plant flowers.

Resources used: City of Saskatoon (Greenhouses).

Sutherland Elementary School
Contact: Principal Nancy Burkell, 683-7460
1008 Egbert Avenue

Type of garden: perennial flower garden.

Grades: certain classes, but predominately grade 7/8.

Structure: special classroom activities.

Goals: beautify school.

Activities: grade 7 and 8 dug area for garden, planted bulbs, and created stepping stones for garden.

Curriculum: science.

Resources used: parents.

Victoria School
Contact: Wendy Thomson/R. Gunnings, 683-7470
639 Broadway Avenue

Type of garden: heritage garden (butterfly) in front, and a native plant garden in the schoolyard (outdoor classroom).

Grades: 3-8.

Structure: Green Club (garden club) and work done by Wendy Thomson's grade 3 class.

Goals: outdoor classroom provides a safe environment to study nature up close and involves as many as possible in looking after gardens (students, staff, community members).

Activities: Green Club meets every Tuesday over the lunch hour; maintenance of the garden (planting, weeding, water, digging); painting benches and peace pole; and outdoor classroom maintenance.

Curriculum: individual classrooms study plants and seeds; grade 1: seeds and plants; grade 3: parts of plants; grade 4: farming and harvest; grade 6: how plants grow; and outdoor education.

Resources used: Evergreen Foundation (learning grounds); Destination Conservation; and Broadway Business Improvement Association (Ramsay King).

Westmount Community School
Contact: Principal Eileen Deneiko, 683-7490
411 Avenue J N.

Type of garden: flower beds in front.

Grades: 3-5.

Structure: garden club.

Goals: community enhancement; student self-esteem building; teamwork skills building; and knowledge about gardening and plants.

Activities: maintenance of garden (planting, weeding, watering, and digging).

Curriculum: science.

Resources used: n/a.

Secondary Schools

City Park Collegiate
Contact: Janey Funk, 683-7550
820 9th Avenue N.

Type of garden: Greenhouse—bedding plants (ready for fall 2002).

Grades: all.

Structure: class offered in horticulture and Entrepreneurial Studies.

Goals: construct greenhouse; become a member of Growers Association of Saskatchewan and sell bedding plants at the Farmers' Market; connect to Aboriginal businesses and networks; secure work placement for Aboriginal students; and build on partnerships with the community.

Activities: constructing greenhouse; starting seeds indoors; maintenance of greenhouse and plants; marketing of plants and advertisement of City Park Greenhouse; and selling plants at the Market.

Curriculum: horticulture and entrepreneurial class offered at City Park and work education program.

Resources used: Indian/Metis Education Grant from Saskatoon Tribal Council; Daygrow greenhouse; Gardenscape; and Growers Association of Saskatchewan.

Farm School (alternative education program)
Contact: Gord Martell, 668-7056; Dave Dust, 668-7474

Type of garden: vegetable garden.

Grades: all.

Structure: classes in horticulture and farming.

Goals: allow students to see concrete successes and take pride in their work;

build on teamwork skills; and use practical application of what they learn in class.

Activities: planting and maintaining a garden.

Curriculum: alternative education program/horticulture class that allows at-risk students to apply skills that they have learned over the course of the year with hands-on activities that help build confidence and teamwork.

Resources used: Knights of Columbus and Bishop Manny Foundation.

Holy Cross High School
Contact: Margaret Laten, 668-7900
2115 McEown Avenue

Type of garden: vegetable container garden.

Grades: all.

Structure: extracurricular project.

Goals: produce food for the Friendship Inn and make an impact in the community; and build permanent raised beds, compost bins, and a green space for students to enjoy and visit (with tables and fruit trees).

Activities: planning the garden; cutting city garbage bins into gardening containers; planting seeds; garden maintenance (weeding and watering over the summer); fall harvest; bringing produce to the Friendship Inn; and building networks between students and Friendship Inn staff.

Curriculum: extracurricular, but can go towards requirement of Christian Ethics class.

Resources used: parents (one is a landscape architect).

Nutana Collegiate

Contact: CHEP Community Gardening, Crystal Clarke, 655-5379; Core Neighbourhood Youth Co-op: Kelly Balon, 665-3889

411 11th Street E.

Type of garden: cut flower container garden at Nutana School; native plant garden at CHEP Riversdale Community Garden; and container gardening at Core Neighbourhood Youth Co-op.

Grades: 9 (Transition Program).

Structure: work education program and special "Seeds of Strength" project in partnership with CHEP Community Gardening and the Core Neighbourhood Youth Co-op.

Goals: community service and involvement; skills that they may never have been taught before; personal growth, leadership building, ownership, responsibility, and teamwork; and students learn how to identify indigenous plants in our eco-system, appreciate the importance of native plant conservation, and study Aboriginal uses of these plants.

Activities: planting bedding plants (at all garden sites); painting containers (special graffiti workshop); garden maintenance; and field trips to Brightwater, Saskatoon Grasslands, Wanuskewin, and northern Saskatchewan to harvest and taste wild edible native plants.

Curriculum: work education class.

Resources used: TD Friends of the Environment Foundation; CHEP; and Core Neighbourhood Youth Co-op.

St. Joseph High School

Contact: Principal S. Chad, 668-7800

115 Nelson Road

Type of garden: naturalized landscape (native plant garden).

Grades: all.

Structure: used by several classes to teach the science curriculum.

Goals: restoration of natural prairie landscape; xeriscaping and promoting an environmentally friendly garden model; learning about environmental issues and philosophy; and using the naturalized landscape garden as an educational centre for other schools.

Activities: help with maintenance of the garden, which is also used by classes to teach the science curriculum.

Curriculum: science.

Resources used: Meewasin Valley Authority; Tree Canada; and University of Saskatchewan (groundskeepers).

Youth Programs

Brightwater Science and Environmental Program (Saskatoon Board of Education)

Contacts: Marsha Klein, 683-8323 and 373-4169

Type of garden: native plant garden.

Grades: late elementary and high school.

Structure: outdoor education centre for the Public School Division.

Goals: provide a unique opportunity for students to learn the curriculum through an integrated studies method in a natural setting; learn about prairie ecosystems and native plants; and learn about traditional indigenous knowledge of ecosystems and plants.

Activities: Brightwater program guide emphasizes activities for pre-visits, on-site, and post-visits; activities vary depending on grade and project initiated (each class does a different project); and hikes around the site, planting, and other hands-on activities.

Programming: Brightwater aims to complement the core units in the science curriculum and the 6 Common Essential Learnings are emphasized.

Resources used: Public School Division.

Extension Division: Ecology Camp For Kids

Contact: Melanie Elliott, 966-5484

Kirk Hall Rm. 400

University of Saskatchewan

Type of garden: native plant garden (off-site) at Grasslands.

Grades: non-specific.

Structure: part of programming.

Goals: appreciate native areas' intrinsic value, and restoration of natural prairie landscape.

Activities: contract with Ducks Unlimited where campers plant native shrubs and grasses in a naturalized area (sage, chokecherry, Saskatoon).

Programming: ecology, general environmental philosophy, and wild wetlands (plant buffer zone).

Resources used: Prairie Conservation Action Plan.

Funders: TD Friends of the Environment; Saskatchewan Outdoor Environmental Education Association; SaskPower; Ducks Unlimited (Green Wing); Mountain Equipment Co-op; Nature Saskatchewan; University of Saskatchewan; Hewlett Packard; Saskatchewan Centennial Fund; Weyerhaeuser Canada; and Saskatchewan Lotteries Trust Fund.

Horticulture Society (Young Gardeners Program)
Contact: Annette Yarmovich, 382-8210

Type of garden: off-site (seed program).

Grades: all.

Structure: special Horticulture Green Gift Day (public displays and gardening packages given away) and public/school presentations.

Goals: learn to grow a garden, enter annual garden show, and create a display.

Activities: participants are given gardening packages containing seeds, bedding plants, bulbs, and basic instructions and explanations; presentations in schools; and participants can enter annual garden show to compete for a prize.

How it fits into programming: promote and teach children about gardening.

Resources used: schools; Gardener magazine; and Garden line (website).

Core Neighbourhood Youth Co-op
Contact: Rob or Erin, 242-4097 and 665-3889
414 Avenue B S.

Type of garden: container vegetable and herb garden.

Grades: 1-12.

Structure: drop-in community centre where youth from core neighbourhoods have an opportunity to become involved in economic ventures with an environmental theme; and youth are voting members in a working co-operative in which they share the profits from their products.

Goals: introduce youth in the core communities to environmental issues such as recycling and gardening; have youth benefit from participation by receiving monetary payment; have CNYC become self-sustaining by recycling and reusing materials; develop projects that continuously involve active participation with local businesses and community organizations; maintain contact with other like organizations that focus on youth skill building, employment, and empowerment; develop business

management and development skills; produce enough for co-op member consumption (take home) and contribute to sales and the snack program; and integrate more of a nutrition program with the gardening project.

Activities: grows vegetables and herbs for co-op members, community members, and area business people; start seeds indoors; youth help plant and maintain garden (weeding, watering); painting containers; and creating plant pots.

Programming: introduce youth to environmental issues, such as organic gardening and food security, and allow youth to benefit from their participation by receiving monetary payment.

Resources used: Social Services (Community Initiatives Fund); TD Friends of the Environment; and CHEP Community Gardening.

White Buffalo Youth Lodge

Contact: Karen Pine Cheechoo (Director), 653-7676

602 20th Street W.

Type of garden: container gardens on-site, and a vegetable garden at the CHEP Riversdale Community Garden.

Ages: 5-18.

Structure: sign-up club (drop-in centre).

Goals: learn about plants and growing, and gain an awareness of where food comes from; supplement nutrition/snack program; and learn about the community.

Activities: planting; garden maintenance (weeding, watering); and harvesting.

Programming: helps build on children's skills and patience; helps build community; sign-up club promotes physical, spiritual, mental, and emotional health; complements the cooking and nutrition workshops; and promotes and fosters cross-cultural understanding and appreciation.

Resources used: CHEP and partners, including Saskatoon Tribal Council, Saskatoon District Health, City of Saskatoon, and Metis Urban Self-Government Council of Saskatoon.

Yarrow Youth Farm

Contact: Government of Saskatchewan, 933-7259

122 3rd Avenue N.

Type of garden: green house, annual, and vegetable garden.

Ages: 12-18.

Structure: youth offender facility—one of the activities that can be chosen within the set program.

Goals: expose youth to a work environment; learn valuable life skills; watch things grow and learn about the food system; and therapeutic opportunities.

Activities: planting annuals and vegetables in the greenhouse; garden maintenance; and harvesting garden vegetables for internal consumption, donation to the Crisis Nursery and Interval House, and sale to employees.

Programming: choice within the work program and part of the life skills program for the young offenders.

Resources used: volunteers from Master Gardeners Program (Horticulture Society).

Community/Environmental Organizations

CHEP–Community Gardening Program

Contact: Crystal Clarke, 655-5379

Room 214, 230 Avenue R S.

Types of gardens: Riversdale community garden: individual and communal plots, youth gardens, native plant garden; City Community gardens: vegetables and herbs; Community Garden in Charlottetown Park off Laurier Drive; Westridge and Sturby Place housing complex: vegetable garden; and various backyard gardens (participants who have garden space partner with those who do not have access to a garden).

Ages: all (children, youth, adults, seniors, and families).

Structure: community, container gardening, and backyard garden plots.

Goals: develop a community-based network that supports community and backyard gardening; increase people's access to food security in Saskatoon; provide access to land and tools for those who would like to garden; develop successful neighbourhood gardening that will encourage long term food growing; develop diversity in growing initiatives; develop communications and resource exchange between rural and urban growers; develop an educational component that supports ecologically sound community gardening; and develop celebration of food growing among families and communities.

Activities: link people to land (community garden or backyard garden sharing); provide containers for balconies and small spaces; provide seeds, bedding plants, and tools for growing and maintaining a garden; hold workshops about how to plant, tend, harvest, cook, and preserve food; organic gardening; link with other community and school gardeners; approach schools to establish children's growing projects

and workshops; go on field trip to gardening-related sites around Saskatchewan (rural and urban) and help organize other group activities, such as barbecues and potlucks; and lobby and organize with the City of Saskatoon to establish a reasonable number of gardening sites that meet community needs.

Programming: promotes CHEP's mandate to work with communities to achieve solutions to child hunger and improve access to nutritious food; enhances CHEP's vision of a community where nutritious food is always available for everyone, no matter their circumstances; care for the environment; support for farmers; access to local food production; and knowledge about making healthy food choices.

Resources: community volunteers and partnerships with Core Neighbourhood Youth Co-op, White Buffalo Youth Lodge, and Nutana Collegiate.

Funders: TD Friends of the Environment; United Way; Robertson Stromberg; City of Saskatoon; Saskatoon Foundation; and private donations.

Native Plant Society
Contact: Katherine Gerien, 668-3940
www.npss.sk.ca

Type of garden: off-site native plant garden at Brightwater.

Ages: all.

Structure: outdoor classroom for native plant instruction.

Goals: build awareness and appreciation of native plants and their ecosystems; show how plants evolve and adapt to their environment; learn about the difference between native and non-native plants; develop resources that will focus on the collection and transfer of information about native plants and their ecosystems; facilitate research on native plants and their ecosystems; and promote responsible use of native plants and their ecosystems.

Activities: work with Brightwater staff on native plant garden; host field tours, workshops, and an annual conference; provide marketing services for native plant material suppliers and service providers; provide a voice for native plant conservation and habitat management; publish the latest information in a quarterly newsletter; maintain a native plant directory of resource people, suppliers, and service providers; and provide liaison with similar agencies in the northern great plains.

Programming: partnerships with Public School Division to promote awareness of native plants.

Resources used: Saskatchewan Council for Community Development; Brightwater site and staff; Ducks Unlimited; and Community Adaptation and Rural Development in Saskatchewan (CARDS).

Housing Complexes

It is hard for many of seniors to leave their homes. Gardening gives them an opportunity to be outside, socialize, share their harvest, and promote a sense of community in their new homes.

Eamer Court/Cosmopolitan Centre

Contact: Pam

Type of garden: community vegetable garden.

Age: seniors.

Structure: facility available for residents.

Number of gardens: 24.

Klinkskill Manor

Contact: Rhoda Vokin (Site Manager), 668-2751

Type of garden: community vegetable garden.

Age: seniors.

Structure: individual plots available for residents.

Number of gardens and families: 7 (one garden is built waist-high for those with disabilities).

Scott Forget Tower

Contact: Francine (Site Manager), 668-2739

Type of garden: community vegetable garden.

Ages: seniors.

Structure: individual plots available for residents.

Number of gardens and families: 18.

Sturby Place

71 Sturby Place, Saskatoon

Contact: Emma and Frank Kawa (garden coordinators)

Type of garden: community vegetable garden.

Ages: adults.

Structure: facility available for residents.

Number of gardens and families: 22.

Sutherland House

Contact: Debbie Nele (Site Manager), 668-2742

Type of garden: community vegetable garden.

Ages: seniors.

Structure: individual plots available for residents

Number of gardens and families: 3.

Westridge Centre

Contact: CHEP Community Gardening, Crystal Clarke, 655-5379

Type of garden: vegetable community garden.

Age: all.

Structure: one big plot for CHEP community gardeners.

Number of gardens and families: 2.

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