Grounds for Learning

Stories and insights from six Canadian school ground naturalization initiatives

Part of the Tool Shed Series

Toyota Canada Inc. and its Dealerships — Proudly supporting outdoor classrooms in Canadian schools.
Evergreen and Toyota Canada Inc. with its Dealerships are working together to ensure that children’s school environments are as nurturing as possible. The Toyota Evergreen Learning Grounds Program represents a commitment to contribute positively to the health and well-being of future generations by educating children about the importance of restoring and preserving the environment. Teachers, students and community members are invited to participate in a nation-wide effort to reclaim Canada’s school grounds and to create healthy learning environments.

**Toyota Evergreen Learning Grounds Charter**

The Evergreen and Toyota Canada Inc. partnership represents a shared commitment to positively contribute to the improvement of school grounds and the natural environment in order to enhance the emotional and physical development of Canada’s children.

We believe that the provision of educational resources and the support of caring citizens will transform school grounds into healthier, more dynamic places for learning.

We believe that by combining Toyota’s commitment to corporate social responsibility with Evergreen’s ecological restoration practices we will enhance our combined reach and the quality of business, community and learning.

We commit our organizations to lead by example, and to provide measurable and meaningful resources and support to Canada’s schools and to the communities in which we work.

It is our sincere intent to foster a new spirit of community involvement and environmental stewardship within the hearts and minds of Canada’s future: children and youth.

Geoff Cape, Executive Director, Evergreen
www.evergreen.ca

Yoshio Nakatani, President, Toyota Canada
www.toyota.ca

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Evergreen’s mission is to bring communities and nature together for the benefit of both.

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Introduction

The landscape is changing. A new vision for Canadian school grounds has been emerging over the past 15 years. School grounds across the country are becoming places where kids can find spiders and insects, seek refuge from sun and wind, witness the lifecycle of frogs in their pond, identify native tree and wildflower species and celebrate the natural and cultural diversity of their community. It is a vision of healthy places for play, stimulating hands-on learning environments and strong links between school and community.

*Grounds for Learning* shares the stories of six school ground naturalization initiatives across the country. Schools from Vancouver, Edmonton, Winnipeg, Barrie, Montreal and Halifax were selected because they are representative of the wide variety of school ground projects happening in Canada. Their stories have been woven together with photographs, quotes and quick facts, to inform and inspire both schools that are just starting out as well as those already underway. You’ll learn about unique ideas, key decisions, and how they found the resources to make it all happen.

Evergreen recognizes all the hard work that goes into these projects and congratulates the schools profiled in this book as well as the hundreds of other pioneering schools across Canada that have cultivated their own grounds for learning.

“*We must build landscapes that heal and empower, that make intelligible our relations with each other and the natural world.*”

Alex Wilson, *The Culture of Nature*
When graduate students Illène Pevec and Tracy Penner put forward a proposal to transform the school ground at Grandview/?uuqinak’uuh Elementary School, administrators responded with enthusiasm. They saw it as a great opportunity to make the school a more vibrant part of its high-density, inner-city neighbourhood.

To help foster stewardship and involvement, Illène and Tracy organized planning workshops involving students from every class, plus teachers, parents and other community members. Students said that they wanted water on the site, a hill to climb, and flowers and berries. Teachers likewise wanted a water feature as well as a covered outdoor classroom to handle the abundant West coast rain, and parents and neighbours wanted a community gardening area where they could plant flowers and food. Since 53 per cent of the school population is First Nations students, participants also stressed the importance of honouring this significant cultural influence.

All of these suggestions were incorporated into the final design of the project. A dissipation pond (one metre deep by 15 metres long by 10 metres wide) was excavated and edged with crushed oyster and clam shells to look like a coastal beach front. With only a few inches of standing water except during or immediately following a rainfall, the pond met safety concerns and channelled rainwater away from the sewer system.

Earth dug out for the pond was used to create a large mound (four metres high by 15 metres wide by 20 metres long) where students now run, tumble, slide, build sand castles and wave at people riding by on the Sky Train. “From the mound, students are very in touch with their landscape,” remarks Tracy. “It gives them a different perspective. They can see farther and gain a sense of where they fit into the bigger picture.”
Honouring the First Nations

For the outdoor classroom, teachers suggested a traditional First Nations long house that would echo the long houses of the West coast. Architect Bruce Carscadden donated his services and designed the structure, adapting a Coast Salish architectural style and using Douglas-fir for cross beams and western red-cedar timbers as decorative side planks. (While the First Nations students at the school are from many parts of Canada, the Coast Salish originally inhabited the area.) The long house was carefully laid out in the cardinal directions with the front door facing north and the rear door facing south; it was sited near the dissipation pond, recalling a Coast Salish fishing village.

Students and other community members played an integral role in the project. One class of First Nations students designed and helped to build patios incorporating Coast Salish weaving patterns. They visited the Museum of Anthropology to research and record patterns and invited weavers to speak to them about the meaning and art form of weaving from a First Nations perspective. Transcribing the weaving patterns onto graph paper, they designed the brick paving pattern and helped to lay the bricks for the patios.

Students from Grades 2 to 7 also participated in the creation of totem poles for the entry to the long house. The poles were designed by community elder Ramona Gus of the Nuu Cha Nulth Nation. Students watched apprentices carve the poles and then, under the guidance of Ramona, helped to paint them. The entire process, which took place on site, was based in a distinctive cultural tradition.

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Illène was amazed by the serenity that came over the students as they took part. She was struck by their attention to detail, their willingness to follow instructions and their ability to work cooperatively: “The kids were utterly mesmerized by the process of painting. It was like they were meditating. They never misbehaved. They never put their brush in the wrong colour. Watching them be so attuned to the process of painting the totem pole was like watching a sacred process.”

Weaving Culture and Place

Cultural revitalization and ecological revitalization have proceeded hand-in-hand at Grandview/?uuqinak’uuh.

Students planted a hummingbird and butterfly garden and a wild bird habitat, using almost exclusively native trees, shrubs and herbs. With the help of the Environmental Youth Alliance and the Master Gardeners, they also planted an ethnobotanical garden featuring plants traditionally used as food, materials and medicines by First Nations. Ethnobotanists Brian Compton, from the University of British...
Columbia, and Nancy Turner, from the University of Victoria, provided vital assistance with the preliminary research and planning. Students researched the Latin, common and Coast Salish names as well as the historical uses of the plants included.

On their own, students actively look for flowers, seeds, butterflies and birds in their gardens. Attuned to the smallest details, they know when the flowers are coming up, and when their seeds are let go. Their favourites include the edibles and berries in the ethnobotanical garden. As they gather blueberries, thimble berries, salmon berries and Saskatoon berries, they gain a hands-on appreciation for the place of these plants in the First Nations cultures of the West coast.

Reaching Out to Other Cultural Groups
Illène is optimistic about the future of the project. One of the goals, she explains, is to put in place programs that will appeal to a wider variety of people and encourage their involvement. Much will depend on funding opportunities. The school received, for example, an adult literacy grant, which led to a journal-writing program based in the garden. It attracted primarily seniors from the neighbourhood, immigrants who were ready to tackle their literacy problems and had much to offer in terms of gardening knowledge.

Garden plots have proven to be one of the most popular vehicles for community participation. There are now 24 plots on the school ground, where people grow vegetables difficult to find in supermarkets. First Nations, Vietnamese, Chinese, Japanese, Middle-Eastern and people of European descent all plant, weed and harvest their organically grown crops together. Parents have started a community garden association and, with Illène, are organizing classes in cooking, nutrition, herbal remedies and exercise, all based in the garden.

"Every recess I go outside, I work outside, doing whatever has to be done, and whoever wants to join me can join me. It's just kids who want to be there. And I just love my interchanges with the kids at that time, when it's just purely their choice to be involved in whatever needs to be done. Every single day there was anywhere from three to eight kids who would come to work with me. There is always somebody who wants to do something. It's wonderful to see them engaged. It's wonderful to see kids who have a hard time focusing in class out digging and planting and feeling proud of what they've accomplished."

Illène Pevec
Programme Coordinator
Helping people connect to each other in these various ways will be key to sustaining interest in the school grounds. “The most important element,” remarks Illène, “is the cooperation at all levels of community. Cooperation of kids, teachers, neighbours, gardening organizations, funders, corporations—the cooperative effort is what has made it possible.”
Belgravia Elementary School, Edmonton, Alberta:

*Ecoliteracy Through Project-based Learning*

The Outdoor Learning Centre at Belgravia Elementary School is the result of extensive student consultation, planning, and hands-on involvement. With the guidance of the principal, teachers, parents and local experts, a student committee surveyed the entire school population and worked out a design based on their input. It included a pond, gardens, quiet social areas, and bird and bat houses. Student volunteers, working on design teams, further refined the plan. A Grade 3 class prepared a three-dimensional representation of the site, which became a means for getting feedback from the school and surrounding community.

**Cultivating Ecoliteracy**

Students at Belgravia Public School are developing both an understanding of ecoliteracy and a sense of place. For example, sense of place is being fostered through the creation of four berms, each of which, when completed, will include plant communities typical of Alberta. Students have planted one berm with alpine shrubs and ground cover to represent the mountain region. They planted another with trees and shrubs characteristic of the boreal region. When studying and playing on the berms, students find plants that they might encounter elsewhere in the province, and so have an opportunity to become more intimate with the ecology of their home place.

Developing ecological literacy also involves learning to understand natural cycles and the interdependence of all living things, including the role and influence of humans in the landscape. To help cultivate this understanding, one berm was designated for growing wheat.
using three different seed strains from the 1800s and early 1900s (supplied through the non-profit organization Seeds of Diversity). This helped students learn about the crops grown by early European settlers in the area, as well as the importance of preserving genetic diversity in food crops.

Students experienced the full cycle of wheat production as it was carried out by pioneers—they planted it, cut it, stooked it, threshed it, ground it, and eventually made bread out of it.

According to a Grade 8 student: “Kids don’t realize how much work a garden is, how much it takes to get food on your plate. To understand, you have to go right from planting to harvesting.”

Parent and teacher, Barry Edgar concurs on the benefits of such experiential learning: “If you get kids out, actually doing things, it’s better than reading or talking about it. It involves the whole kid. Kids learn differently and remember better. They use more of their brain and body. They also learn that the world isn’t covered in grass and concrete.”

Adults benefit in a similar manner. As parent Kim Sanderson explains, the school system is set up for abstract learning. “Teachers learn that way in universities and are expected to teach that way in schools. Many of them don’t have the ecological literacy to pass on.” With school ground projects, however, teachers have an opportunity to take small steps and gain more confidence about teaching outdoors: “Project-based learning is a powerful tool. Unfortunately, the school system does not support it in any big way. That’s why outdoor classrooms are so valuable.”
The Resident Naturalist

To encourage and assist teachers in the Outdoor Learning Centre, the school hired a resident naturalist, Sarah Cashmore. Sarah works with the student nature club once a week and helps teachers whenever they need her.

Her goal is to enable students to more fully appreciate what is out there: “I try to get them right into the pond and looking at the invertebrates. We’ve been classifying plants and we’re making a field guide to the plants. It increases their understanding of what they’re seeing and builds a connection to natural areas and to the earth in general. It’s a healthy thing for them to do, especially city children.”

The nature club, led largely by students in Grades 4 to 6, sets its own agenda for the outdoor classroom. So far they have made bat boxes and bird nesting boxes, organized clean-up projects, fed birds through the winter, done some planting, and invited a guest speaker to talk about attracting birds. Keen to share their knowledge with the rest of the school, they decided to research and present interesting nature facts over the intercom once a week. In order to involve the younger students, they also organized a pond study and a nature games day in which over half of the school’s students participated.

Sarah believes that students are developing an understanding of the bigger ecological picture. They are learning about the ways of animals and what they can provide for them. One fall day, when the students discovered that the sunflowers they had planted were completely covered with chickadees and house sparrows, Sarah recalled that, “The kids were absolutely in awe. They started collecting the seeds and putting them all around for the birds to eat.”

“I like being in the garden, because everything is growing and is so beautiful. We read out there and we do art work. Just being there and seeing all the flowers is great. It’s kind of open, and you feel not squeezed into a school.”

Grade 6 student

“I like being able to say that I helped organize and learn about making a garden. In the future if I ever wanted to do that at a school I have the knowledge to manage and run one and plan one.”

Former student
A Sense of Community

Kim Sanderson is confident that, with the encouragement of the resident naturalist, teachers and students will become accustomed to teaching and learning outdoors. In this way, ecological literacy will be cultivated and, he hopes, disseminated within the broader community. “As we work outside, weeding and planting,” he explains, “people come forward, offering to help. Neighbours want to be involved. Some have adopted spots in the school ground and take care of them.” They share their horticultural expertise while learning more about the natural communities of Alberta alongside the teachers and students.

Initially, some area residents expressed concern about surveillance and safety in the school ground, especially with regard to the pond. Taking the time to explain and publicize the project and to engage the community has been key to its acceptance. One particularly successful event was a story-telling night, held around bonfires in mid-October. Teachers brought in fire pits, parents cut firewood, and students roasted marshmallows while listening to the story-tellers. All had an opportunity to experience first-hand the outdoor classroom’s potential as a learning and community-building resource.

“Even if people say it won’t ever happen, you always have to believe that it will happen. I know with the pond we had a lot of problems. But we got our pond. And you just have to work around them. And you have to believe that it’s actually going to happen.”

Former student
Windsor School, Winnipeg, Manitoba: 

Towards Community Engagement and Empowerment

When Ted McLachlan’s eldest son was studying spiders in kindergarten, his class went out to the school ground to find some. They searched in vain. Not a single spider could be found on the barren asphalt that surrounded Windsor School. The incident set in motion a school ground transformation project that continues to expand and evolve. The key impetus, for teachers and parents equally, has been to move all aspects of the curriculum outside.

Through the Home and School Association, a group of interested parents and teachers came together to discuss a possible plan of action. The British “Learning through Landscapes” curriculum materials were invaluable in demonstrating the potential for turning the school ground into an integrated outdoor classroom. A plan of the existing school ground was drawn up and distributed to all of the students for their input. Specifically, students were asked, “What changes do you want to see?” The intent was to involve them from the outset so that the project would better respond to their needs and desires and so that they would develop, through meaningful participation, a sense of their own power to promote change.

The message back from the students was clear. They wanted relief from heat and noise in the school ground and they wanted things to do, such as to grow vegetables and berries.
The parent-teacher committee decided to divide up the asphalt with large planter boxes, one for each class from kindergarten to Grade 6. The boxes would be used for growing everything from beans to shade trees. They would also help define the available space and provide seating for classes outside. Students were consulted about the placement of the planters and their ideas were incorporated into a new plan.

**The Community Contributes and Benefits**

It took the parents, teachers and students two evenings to build the planter boxes. There were about 40 volunteers the first evening, and twice as many the next. The social, hands-on nature of these gatherings seemed to attract people who were not inclined to participate in committee meetings. Ever since, the active support of the community has remained vital to the project.

In return, the project has benefited the community in many ways. Van loads of beets and carrots, grown by the students, were donated to a local food bank as part of a “Grow a Row” initiative. One planter situated near the primary students’ entrance became a favourite gathering spot for parents who enjoy sitting there when they drop off or pick up their children from school. As the project gained momentum, students undertook extensive plantings of bur oak, elm and ash on adjacent property shared with the local community club. With each successive effort, the ties between the school and the community have been strengthened.
Mapping the Community

The latest phase of the project, a community “Eco-count” perhaps most vividly expressed this growing sense of engagement. With the guidance of parent Paul Fieldhouse, the students organized a school-wide effort to map things of interest in their community. Once they decided what to look for (sounds, cars, wildlife, trees, bicycle routes, pollution...) they set out with maps, clipboards and parent volunteers to comb the neighbourhood.

According to teacher Lisa Bunkowsky, this exercise was “to encourage the kids to stop and take time to look at their community with pride. We just happened to be heading out the morning that there was recycling, and it was a sea of blue boxes. So many families were recycling, and it was really neat to see the kids look at their community in a different way. Light bulbs started going off as they noticed things they never had before.”

Out of this mapping process emerged a desire on the students’ part to paint a mural and create a game based on their community. Artist Cameron Cross was hired to work with every class to design a part of the mural/gameboard. Then, with the help of parents, the students painted the design on the asphalt, amid the planter boxes: a brightly coloured 13 metres by 20 metres map of their community, including rabbits, swing sets, slides, buses and trees. Roads represented the game path and multiple choice questions about the history and make-up of the community were kept on game cards.

“The mural is a stepping stone,” explains Ted. “With this game kids are more likely to be engaged in observing and thinking about their community. First of all, they did it. They painted it and they take care of it. Kids are now looking at this place as their community. And they’re proud of it. They’re proud of it for its obscure details and for the little things that only children would notice and care about.”
Empowerment and Sustainability

Over the years, students have increasingly become more active in the project. It is no longer something they participate in simply because they are asked to. It is something that they themselves want to do, and in some cases, to lead. The big stumbling block was realizing that the school grounds belonged to them. Now that they have been empowered to take leadership, the project has taken off. Entirely on their own initiative, for example, students set up a school-wide composting and recycling program.

Teachers and parents have been similarly inspired. Ted remarks that “in terms of community participation, they understand that the parks and school grounds are theirs, and that if they wait for somebody else to do things, nothing is going to get done. If they get involved in a constructive way, however, they see that they can change the facilities and the environment that their kids learn in.

For us, building the planters was one of the key things. People saw that changes could be made, and that they could be done well.”

Ted now considers empowerment to be the key strategy for sustaining the project: “If you haven’t empowered the students and parents to see that things can happen, you don’t have sustainability in the school ground. Sustainability comes through community empowerment and the whole notion that people are involved from the grassroots. Everybody is now asking what will happen next year.” Future possibilities include a gazebo, a pond, a cordoned-off site for long-term experiments, a social area for senior students, and full-spectrum lighting for the school building itself. As students participate in planning sessions, set priorities, and take responsibility for implementing ideas, they will, to a great extent, be leading the way.
The school ground project at St. Monica’s Catholic School keeps growing and growing. Originally, the project was conceived as a teaching garden at the back of the school property. Participants planted native trees, shrubs and herbaceous plants to develop a woodland, a meadow and a cedar hedge to attract wildlife. Today, the project also includes a butterfly garden, a pond and a patio garden, and winds through outdoor portables in an area dubbed “Shadow Lane.” Over the years, such ornamental plants as daffodils, hyacinths, tulips and crocuses have also been added.

Teacher Rita D’Antonio explains the impetus for change: “When we first started we felt it was important to bring back wildlife that depended on native plants. But when the naturalization was completed, kids needed to have something to do besides maintain it. There needed to be a planting experience for kids. They needed to see the flowers bloom. That’s what Shadow Lane offers. It was a barren area between two portables. It is a delightful place now.”

Kendra Merrick, a landscape architect, was the parent volunteer who spearheaded Shadow Lane. Working closely with her daughter’s Grade 3 class, she oversaw its design and implemen-
tation. At the students’ request, it was set up as a place for them to play at recess. Situated in the heart of the school ground, Shadow Lane features park benches and hardy, attractive native plants to sustain the wear and tear of daily use. Other plants, donated by parents, were added every year so that each new class of Grade 3 students had planting to do.

The Environmental Education Prep-time Teacher

Shadow Lane provided students with ready access to a naturalized area during their free time. Three years after the project’s inception, however, few teachers were making use of the school ground as an outdoor classroom: its educational potential had yet to be fully realized. In response, Rita gave up her position as a Grade 5 teacher to become the school’s first outdoor environmental education prep-time teacher. (Prep-time teachers replace each regular classroom teacher for 40 minutes per week so that they can prepare lessons. Usually prep-time teachers lead classes in music, physical education or computers.)

Now at St. Monica’s every student, from kindergarten to Grade 6, spends 40 minutes per week outdoors with the environmental education prep-time teacher. The school ground is the setting for lessons on seed dispersal, weather, insects, flower structures, animal habitats, medicinal purposes of plants and more. Kindergarten students take part in tactile and exploratory activities. Grade 1 and 2 students have ‘magic spots’ where they go every week to observe seasonal changes.

“We can cater to the kids whose interests don’t lie in soccer games and baseball games, who can’t handle those social settings. They have something else to do. There are a variety of opportunities that naturalization opens up for all children.”

Rita D’Antonio, Teacher

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The Bird’s Eye View

| School Population | 770 |
| Grade Levels      | JK – Grade 8 |
| Main Project Features | Butterfly garden, woodlands, pond, large rocks, shade trees, sunflowers, spring bulbs, seating areas, two sunshelters, summer maintenance schedule of school families, tree nursery, bird feeders, birdhouses, bat boxes |
| Project Size (square metres) | 4820m² total of all gardens Ecological Garden: 40m x 50m = 2000m² Shadow Lane: 12m x 10m = 120m² Whispering Wetlands: 30m x 20m = 600m² Patio Garden: 20m x 10m = 200m² Front Garden: 2m x 100m = 200m² Magic Wildlife Mansion: 1500m² First Holy Communion Place: 200m² |
| Funding to Date | $25,000 |
| Date Project Started | October 1994 |
Such hands-on experiences encourage students to set questions for themselves rather than simply to respond to questions set by teachers. It incites their curiosity. Students who have adopted trees in the school ground often want to know more about trees in their own backyard. Sometimes their questions form the basis of a school project, that are often taken up on the students’ own time.

Rita explains her underlying philosophy: “It is very important that we foster a sense of stewardship for our planet. We need to become more aware citizens of the earth. If kids can experience the wonders and the beauties of it, they long for the knowledge to understand it. And that leads to action. They live every day with the earth and when they get older, they will have to make decisions about it.”

Older students delve into more controversial issues, like hunting, water use and pesticides. Their experiences outdoors allow them to process information in ways that are more meaningful to them. When studying pesticide use, Grade 6 students had opportunities to explore, classify and become acquainted with various ‘pests’ outdoors. Through games, experiments and other activities they gained a deeper understanding of the potential impacts of pesticides on a natural community. They also phoned lawn care companies to hear their perspectives. It was important for them to hear all sides of the issue, insists Rita, so that they could form their own educated opinions.

Holistic, Cross-curricular Education in the Outdoor Classroom

The outdoor classroom lends itself well to holistic, cross-curricular approaches to education. Grade 1 and 2 students look at seasonal changes through the natural sciences, visual arts

Milestones

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</table>
(sketching, pastels), and language-based activities (journal writing). Older students focus more on science and math skills such as measurement, observation and note-taking.

In preparation for the annual Science Fair, Rita used the outdoor classroom to familiarize students with the scientific method. During January she set up experiments in the snow as a model for their own experiments. By measuring, testing and examining a profile of snow, they were later able to implement scientific procedure. The word back from parents was that the hands-on outdoor experience really helped the students to carry out their own projects.

Holistic, cross-curricular approaches to education can prove challenging to implement, especially if the curriculum is geared to subject-specific learning outcomes, as it is in Ontario. One opening that has worked for Rita has been to use the outdoor classroom in conjunction with the First Steps Language Program. In accordance with the program, students at all grade levels learn six different genres of writing every year—for instance, narrative writing, report writing and procedural writing. By taking up one or two genres as the prep-time teacher, Rita has been able to alleviate the load of the classroom teachers. She taught all her students procedural writing, for example, by forcing root bulbs with them and then having them write about the exercise afterwards.

St. Monica’s outdoor classroom is a place where students can experience and understand the natural world from a variety of perspectives. Whether they are running through the trees, watching butterflies, or sitting quietly with friends, they enjoy a school ground where learning and celebration go hand in hand. Witnessing the pleasure they
take in the outdoors is what Rita treasures most about the project: “When I walk down the hall I am continually being stopped by children who want to share with me a nature experience that they have had. I watch how they celebrate the wonders and it fills me with great joy. Their eyes are being opened up. They're making the connections and bringing them into their own hearts.”
School ground naturalization is part and parcel of what school is all about at Les Petits Castors Alternative Public School. For six years students, teachers and parents worked together planting trees, shrubs, and flowers in the school ground. Then the school had to be relocated. Upon arrival at the new site, the school community immediately set about planning its transformation. “Students and teachers wanted to pick up where they had left off,” remarks parent, Diane Joubert. “They figured school goes along with designing and planting a garden. The outside was very important to them.” It wasn’t always this way, adds Diane. A sense of ownership for the school ground evolved gradually through years of hands-on involvement.

Diane instigated the original project when her daughter was in Grade 1. An occupational therapist with a background in the environmental sciences, she was concerned about the bare lawn-and-asphalt school ground and about the potential health and environmental impacts of the pesticides and synthetic fertilizers being used there. Hoping to improve the situation, she put forward a proposal to plant an arboretum.

The project began with the planting of 32 different native species of trees and shrubs, including
maple, oak, ash, pine, spruce, elder and serviceberry. Over the years, as the project expanded, participants erected bird houses, set up a composting program, removed 546 square metres of asphalt and filled the area with more trees, shrubs and flowers.

By involving students in an outdoor project, parents and teachers wanted to strengthen their ties with nature and help them become more aware of the importance of respecting and preserving the web of life. “We are one with nature, but we have a tendency to think we are separate,” explains Diane. “By planting trees, students see that the trees are living and that they contribute so much. They realize that they had better care for nature, because it is part of them.”

People often think about the environment in terms of pollution and depressing crisis scenarios, but naturalization turns this around, claims Diane. “It’s a positive way to think about nature. People really enjoy it. They see apple cores turn into compost and they begin to understand that everything comes from nature. It’s wonderful.”

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**Milestones**

**Site 1: Papineau, Longueuil**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project planning begun, with a grant proposal subsequently completed:</td>
<td>Fall 1994</td>
</tr>
<tr>
<td>Phase I of the project begun, with trees planted by the City on the school property:</td>
<td>May 1995</td>
</tr>
<tr>
<td>Students and parents from two schools involved in planting native trees, shrubs and plants:</td>
<td>October 1995</td>
</tr>
<tr>
<td>Shrubs damaged during the winter, replaced with the assistance of students; birdhouses built by students; exhibition “Birds in my school yard”; flowerbed created in front of the school; mulching done by students:</td>
<td>May 1996</td>
</tr>
<tr>
<td>Winter protection of plants, done by students; data collection:</td>
<td>October 1996</td>
</tr>
<tr>
<td>Worm composting begun and integrated in the school curriculum:</td>
<td>January 1997</td>
</tr>
<tr>
<td>15 trees donated by the City, temporarily planted in the front yard:</td>
<td>May 1997</td>
</tr>
<tr>
<td>Phase II of the project begun, with the removal of asphalt in an area of the backyard:</td>
<td>June 1997</td>
</tr>
<tr>
<td>Transplantation of 14 trees in the backyard; visit from an environmental study group from the Colégio Brasilia interested in our project; involvement of three schools in the project:</td>
<td>October 1997</td>
</tr>
<tr>
<td>Trees and shrubs planted in the backyard:</td>
<td>May 1998</td>
</tr>
<tr>
<td>Bulbs planted, weeding done, site name contest completed, together with activities performed by students in the “Little Gardeners’ Club” and the “Compost-making Club”:</td>
<td>Fall 1998</td>
</tr>
<tr>
<td>Project on ‘standby’ following news of school being transferred to another location; educational activities continued via “Little Gardeners’ Club” and the “Compost-making Club”:</td>
<td>1999-2000</td>
</tr>
</tbody>
</table>

**Site 2: Lavallée, Longueuil**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>School moved to a new building, again shared by another school:</td>
<td>Summer 2000</td>
</tr>
<tr>
<td>Tree nursery and flowerbed created:</td>
<td>May-June 2001</td>
</tr>
</tbody>
</table>
Project-based Learning

Since the project’s inception, Diane has taken responsibility for the environmental education program at Les Petits Castors. With workshops involving six to eight students at a time, she has explored such topics as tree identification, photosynthesis, spiders, bats, seed banks, indoor germination, and worm-composting. The school ground has provided an ideal site for cross-curricular, multi-grade activities and projects.

Every year, as part of the school’s project-based approach to education, classes at Les Petits Castors explore a particular theme. All students choose questions and research topics related to the theme, and then work in groups together with students from various grades who have a similar interest. One year the school’s theme was Birds in My School Yard. Students researched particular species, prepared artistic representations of their habitats, built bird houses and created games, questionnaires and colouring books, all related to the theme. At the year’s end, they presented their projects to the school community. All students, school personnel and families were invited to attend.

The year that the school changed locations, the theme was Me and My Environment. A group of Grade 5 and 6 students, who missed their arboretum, inquired about the possibility of setting up another one at their new school. Together with students from all grades, they investigated possibilities, sorted through options and worked out a design. They calculated how big the area would have to be to include one tree for each student, spaced one metre apart. Then they figured out where to plant the trees—where they wouldn’t get stepped on, where they wouldn’t be in the way of electrical wires and where they wouldn’t be buried under too much snow. Finally, they made a three-dimensional model to better visualize how things would look and devised a feasible long-term implementation plan. “The students knew that it would take a few years for the trees to look like trees,” comments Diane. “The oldest ones had five years of experience at the last place, and so they had that long-term perspective.”
Meanwhile, the younger students at the school also wanted to improve the look of their play area. Since it was too late in the year to arrange for funding, they asked for donations from parents and staff. They also germinated seedlings indoors to plant in the spring. After a parent volunteer removed the sod from the area to be planted, they created a garden with daisies, brown-eyed Susans, iris, anemone, bleeding-heart, bergamot, mint, chives, strawberries and more. They now love to play there during recess and lunch time, and whenever they get the chance.

**Transforming the Concept of School**

In recent years, Les Petits Castors has received considerable attention for its cross-curricular, project-based approach to education. It is being held up as a model in Quebec, where the school system is undergoing many changes. According to Diane, the school ground and related curricula at Les Petits Castors have helped greatly to promote project-based learning alternatives.

To have been able to touch so many people, she contends, is the most rewarding aspect of the project. “Neighbours offer plants and flowers. Families come to walk their dogs. We have developed close ties with the Biosphere in Montreal. We have had visitors from all over, even from as far away as Brazil. It’s amazing. So many people can no longer imagine a school without shrubs and trees and a garden outside. These places are part of their concept of what a school is. I’m sure they will always want to have plants growing near them.”
Dartmouth High School, Dartmouth, Nova Scotia: Meeting the High School Challenge

What’s special about the school ground project at Dartmouth High School? “The fact that it’s at a high school,” says Rhea Dawn Mahar, Atlantic Region School Ground coordinator for the Tree Canada Foundation. “High school naturalization projects are very rare, and this one is working really well.”

Indeed, high schools are organized in such a way that school ground projects are often difficult to implement. The curriculum tends to be divided strictly according to subject matter. As individual students move daily among several classes, teachers and credit courses, it can be a challenge to envision, much less accommodate long-term, outdoor, hands-on projects.

A Grassroots Collaboration of Students and Staff

The key to success at Dartmouth High School has been the innovative collaboration of students and staff. The project began when student Stephanie Bigg and teacher Mike McCurdy invited

<table>
<thead>
<tr>
<th>Milestones</th>
<th>Date</th>
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<tbody>
<tr>
<td>Completion of first courtyard, Maureen’s Memory Garden:</td>
<td>Spring 1997</td>
</tr>
<tr>
<td>Survey of plant and animal species and soil conditions completed to help with plans for the rest of the school ground:</td>
<td>September 1997</td>
</tr>
<tr>
<td>Planters constructed at front doors:</td>
<td>October 1997</td>
</tr>
<tr>
<td>Bird feeders erected and identification charts established for monitoring:</td>
<td>November 1997</td>
</tr>
<tr>
<td>Greening indoors with potted plants in the foyer:</td>
<td>March 1998</td>
</tr>
<tr>
<td>Construction of greenhouse began:</td>
<td>June 1998</td>
</tr>
<tr>
<td>Pond added to Maureen’s Memory Garden:</td>
<td>Spring 1998</td>
</tr>
<tr>
<td>Awarded the Elaine Burke Environmental “Go for Green” Award:</td>
<td>Spring 1998</td>
</tr>
<tr>
<td>Thistle Street pathway started:</td>
<td>Fall 1998</td>
</tr>
<tr>
<td>Spartan courtyard finished and time capsule buried:</td>
<td>Spring 1999</td>
</tr>
<tr>
<td>Tool shed completed in the large quad:</td>
<td>Fall 1999</td>
</tr>
<tr>
<td>Received a 1999 Nova Scotia Government Environmental Award:</td>
<td>Fall 1999</td>
</tr>
</tbody>
</table>
Rhea to speak to the teachers about transforming the school ground. As part of a course credit in leadership, Stephanie then proceeded to set up the project and garner the support of students and staff. “She did all the work to get things rolling. She got the whole school involved,” recalls Rhea.

The most interested students and staff formed Grassroots, a group whose mission has been to restore and beautify the school ground. After much planning, the group was sparked into action by the sudden death of one of its members, teacher Maureen Taggart. To express their mourning, they set about creating the Memory Garden.

The Memory Garden graces one of three inner courtyards at the school. Where once there were only paving stones, cement benches and one tree, there are now gardens, a pond and comfortable seating. “We wanted to create a place that would have been pleasant for Maureen,” explains teacher Linda Lever. “The idea was to change the courtyard into a quiet reflection area where one could sit and read, meditate, play an instrument, and escape the hustle and bustle.”

Once the Memory Garden was established, Grassroots tackled the second courtyard. They felt that students needed a spot where they could eat, be noisy and socialize. They approached the Student Council, and with the support of students and staff, designed and created a garden with planter boxes, picnic tables and a time capsule. Now known as the Spartan Courtyard, it is well frequented by students.

Bird’s Eye View

<table>
<thead>
<tr>
<th>School Population</th>
<th>1,150</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade Levels</td>
<td>Grades 10 to 12</td>
</tr>
<tr>
<td>Main Project Features</td>
<td>Memory garden, raised planters, pond, bird feeders, pathways, greenhouse, seating/benches, courtyard gardens, archway, time capsule</td>
</tr>
<tr>
<td>Project Size (square metres)</td>
<td>3 courtyards (quads)</td>
</tr>
<tr>
<td>Date Project Started</td>
<td>Spring 1997</td>
</tr>
<tr>
<td>Funding to Date</td>
<td>$6,500</td>
</tr>
</tbody>
</table>
In the third courtyard, Grassroots decided to construct a greenhouse. One Sunday afternoon, with the help of about thirty student volunteers, they laid out the plastic, set up the spines, and erected the structure. “For me, the event symbolized how well the kids have responded to the project,” comments Linda. “We put out a general call for help and all these volunteers arrived.” Ever since, the greenhouse has been used by biology, business, cooperative education and special education classes who grow plants for their studies, for the school ground, and for selling at a local market (as part of an entrepreneurial program).

The Unique Contribution of Athletic Teams

“The great thing about teenagers,” remarks Rhea, “is that they are not satisfied to just sit around and talk. They want to do something.” While teachers have acted as overseers of the school ground project, students have participated in all aspects of the planning and provided the bulk of the labour.

One significant and rather unique contribution has been the involvement of athletic teams. Every year Grassroots approaches school teams and their coaches with a list of tasks that need to be done, such as weeding, pruning, mulching, and moving soil. Each team then volunteers to perform a chosen task. One of the more physically demanding tasks, for example, was accom-
plished by the football team. To bring heat and electrical wiring underground to the greenhouse, team members pick-axed and dug a trench through asphalt and gravel from the school building to the greenhouse. One year, after a student was killed in a skate-boarding accident, the girls’ volleyball team designed and planted another memorial garden at the front of the school.

“According to coaches, involvement in these sorts of activities has been a great morale booster for the teams,” remarks Rhea. At this semestered school, where it is difficult for classes to take on long-term projects, the recruitment of athletic teams has also helped to ensure the year-round participation of a broad cross-section of students.

**Present and Future Benefits**

One of the ways in which the project has benefited the school has been the reduction of vandalism. Linda notes that there is far less spray painting than there used to be and little destruction of plants. She suggests that, through their involvement, students are developing a sense of pride and ownership: “Hundreds of students participate in the project each year. They are proud of the way the gardens look and they like to spend time there. It is something that they can see and enjoy. When students come in for Grade 9 orientation, they are always amazed, and so are their parents.”

Now that the transformation of the inner courtyards is well underway, Grassroots has turned its attention to the rest of the school ground. Work has begun in the parking lot area, with the removal of cement barriers and some of the asphalt, and with the planting
of rose bushes, vines, and other perennials. Another part of the school ground has been left to return to a wilder state. Already there are interesting and attractive trees and wildflowers, many native to the area, and a swampy bog with bull rushes.

To take better advantage of this wilder site, future plans include building an amphitheatre for English classes and developing an interpretive pathway for biology classes. As the project evolves, the hope is to enhance ties with the curriculum while further restoring habitats and beautifying the school ground.
Evergreen is a national non-profit environmental organization with a mandate to bring nature to our cities through naturalization projects. Evergreen motivates people to create and sustain healthy, natural outdoor spaces and gives them practical tools to be successful through its three core programs: Learning Grounds (transforming school grounds); Common Grounds (working on publicly accessible land) and Home Grounds (for the home landscape). We believe that local stewardship creates vibrant neighbourhoods, a healthy natural environment and a sustainable society for all.

**Toyota Evergreen Learning Grounds Program**

Learning Grounds brings teachers, students and neighbours together to transform traditionally barren asphalt and turf school grounds into natural outdoor classrooms. By planting trees, shrubs and wildflowers, planning meadows or ponds and creating murals, sculptures, vegetable gardens and other theme areas, the learning opportunities literally come alive. These outdoor classrooms provide students with a healthy and safe place to play, learn and develop a genuine respect for nature and each other.

**Evergreen Tool Shed**

The Tool Shed is an integrated collection of resources designed to inspire, educate and guide students, teachers, planners, community groups and individuals through all stages of a school, community or home naturalization project. The Tool Shed series includes guide books, instructional and inspirational videos, fact sheets, case studies, newsletters, research reports and an on-line registry. For the latest information on Evergreen’s Tool Shed resources, check out our Web site at www.evergreen.ca.

Evergreen is funded by the generous support of individual Canadians, foundations, businesses and various government agencies. Major funding partners include:

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**Special thanks to the R. Howard Webster Foundation.**