

## About Evergreen's Learning Grounds Program

Learning Grounds was established in 1993 to bring students, teachers and neighbourhoods together to transform barren asphalt and turf school grounds into natural outdoor classrooms. Over 1,000 schools from coast-to-coast have enhanced the opportunities for learning and play on their grounds by planting trees, shrubs and wildflowers, planning meadows and ponds, and creating murals, sculptures, vegetable gardens and other theme areas.



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LEARNING GROUNDS

Evergreen is proud to have Toyota Canada as the title sponsor of the Toyota Evergreen Learning Grounds Program. This partnership is helping more schools create sustainable hands-on change on their grounds.

 *Part of the Tool Shed Series*

*Nature Nurtures* is part of the Learning Grounds Tool Shed series. The Tool Shed is an integrated collection of resources designed to inspire, educate and guide schools through all stages of a school ground naturalization project. The Tool Shed includes guidebooks, videos, newsletters, research reports and an online registry.

For all the latest information on Evergreen's Tool Shed resources, check out our Web site at [www.evergreen.ca](http://www.evergreen.ca).

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EVERGREEN

# Nature Nurtures: Investigating the Potential of School Grounds

Executive Summary\*

 *Part of the Tool Shed Series*

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## About this Report

*Nature Nurtures: Investigating the Potential of School Grounds* is a comprehensive review of the literature pertaining to school ground naturalization. The report was commissioned by Evergreen, a charitable organization whose mission is to bring communities and nature together for the benefit of both. *Nature Nurtures* explores the range of benefits that result when the whole school community participates in improving their school ground. In particular, the benefits of introducing natural elements such as meadow, woodland or food growing gardens that stimulate both play and learning, are examined.

## Nature Nurtures has three objectives:

1. To increase general awareness of the benefits of naturalizing school grounds and the importance of the school ground environment in the context of childhood;
2. To promote and encourage school ground naturalization by evaluating and documenting the environmental, economic, social and health benefits that it provides; and
3. To provide school board administrators, principals, teachers, parents and other interested parties with justification for undertaking school ground naturalization projects.

*Nature Nurtures* considers the benefits of school ground naturalization from the perspective of students, teachers, schools and communities. Costs are also considered,

although the literature contains minimal evidence of this aspect of the issue. The full report includes annotations of 40 of the most recent and relevant books and articles and a full bibliography.

*The main finding of the report is that the literature supports a broad-based claim that school ground naturalization has demonstrated potential to improve the education and health of Canadian children.*

## School ground naturalization defined:

Also referred to as school ground transformation, development, and the creation of learning grounds, school ground naturalization is defined as:

*"A process involving students and teachers, and often administrators and community volunteers, in the collaborative improvement of school grounds for the purpose of addressing the healthy physical, social, emotional and intellectual development of students. Central to this process is creating more natural conditions through the introduction of trees, shrubs and wildflowers that are native to the area."*

## A Growing Phenomenon

In the year 2000, more than 1,000 Canadian schools (~10 per cent) are involved in school ground naturalization. This growing list of Canadian initiatives mirrors similar initiatives being undertaken in many countries in the Western world. Much of the activity can be linked back to two

\* For a full copy of *Nature Nurtures: Investigating the Potential of School Grounds*, please contact Evergreen at 1-888-426-3138 or at [www.evergreen.ca](http://www.evergreen.ca).

decades of naturalization activity in Britain, where now more than one third of public schools have ongoing school gardening, planting, building or outdoor development projects. School ground naturalization is presented as one of the most persistent contemporary echoes of the Progressive Education Movement of the 1930s.



## The Literature

Foundation documents in the literature of school ground naturalization are *Learning Through Landscapes: A Report on the Use, Design, Management and Development of School Grounds* (Adams, 1990), and *Special Places; Special People: The Hidden Curriculum of School Grounds* (Titman, 1994), both of which include description and qualitative analysis of projects in the United Kingdom. These are supplemented by works by American playground researchers such as Robin Moore and by research in the area of environmental psychology by investigators including Stephen and Rachel Kaplan and Roger Ulrich.

Recent estimates indicate that Canadian elementary school students spend as much as a quarter of their day on school grounds and that these places pose threats to child health and safety. The Canadian Hospitals Injury Reporting and Prevention Program, for example, reports that 53,000 children were injured on playgrounds in Canada between April 1990 and August 1995. Of these injuries, 62 per cent

occurred in school, daycare or preschool grounds, and 38 per cent occurred in public parks. Nearly 3,000 of these children required hospital admission. Of equal significance in school ground research from the U.K., however, is the “hidden curriculum” of school grounds, meaning the subtle yet powerful cultural messages conveyed by conventional expanses of asphalt and grass.

The literature discussed in this report affirms the importance of outdoor environments for development in middle childhood and the benefits to academic performance, social skills and general health that arise from the active participation of students, teachers, parents and community members. Featured throughout the report is the most comprehensive and current study, *Closing the Achievement Gap*, a 1998 American nationwide exploration of the environment as an integrated context for learning (EIC). This study, carried out by the State Education and Environment Roundtable, explores the experience of students, teachers and administrators in 40 elementary, middle and secondary schools that all have the inclusion of the natural environment as a curriculum element.

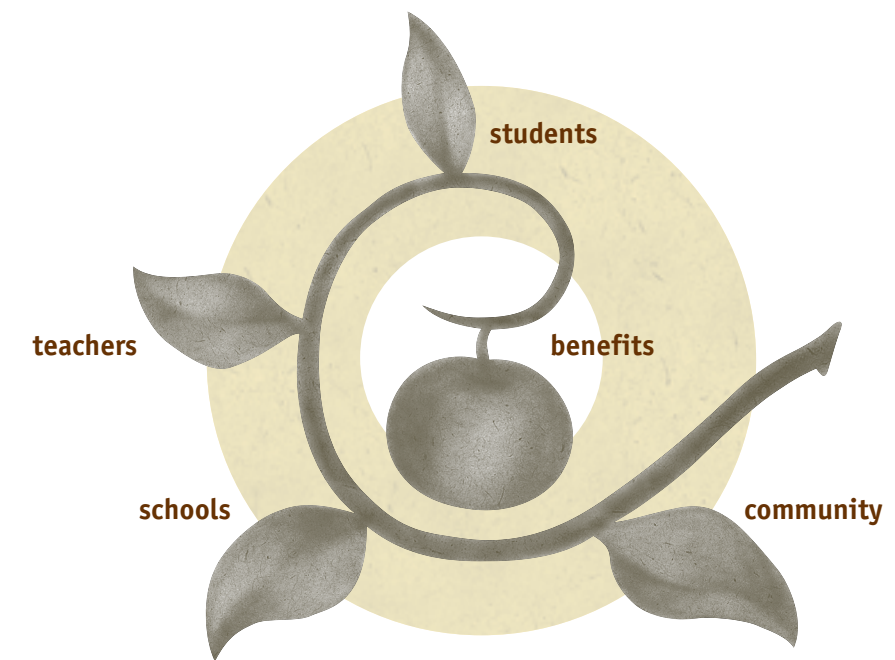
In a written survey, more than 100 teachers involved in the EIC project overwhelmingly affirmed student improvement in the following areas of achievement: standardized test scores; grade point average; behaviour; engagement and enthusiasm; ability and willingness to stay on task; adaptability to various learning styles; and civility toward others (for each of which 70 to 98 per cent of educators reported student improvement following EIC activity).

## The Benefits

In summary, the benefits of school ground naturalization are grouped into four layers:

1. Those related to shifting from conventional discipline-bound teaching to integrated, experiential project-based teaching;
2. Benefits connected to rethinking curriculum and learning in the minds of students, teachers and parents – a shift that necessarily involves appreciating school grounds as a place of overlap between school and community;
3. Benefits from including nature in curriculum; and
4. A layer of social and community benefits tied to the health and well-being of people and environment alike.

**The literature clearly indicates that naturalized school grounds create benefits that flow through to all concerned.**



### For Students

- ✦ more meaningful play and learning
- ✦ a safer and less hostile outdoor environment
- ✦ more gender neutral play spaces
- ✦ lower exposure to toxins
- ✦ experiential learning opportunities
- ✦ improved academic performance
- ✦ greater pride and ownership in learning
- ✦ a chance to participate in democracy
- ✦ better understanding of cultural differences
- ✦ creation of a sense of place

### For Teachers

- ✦ new curriculum connections
- ✦ increased morale and enthusiasm for teaching
- ✦ new reasons to go outside
- ✦ increased engagement and enthusiasm for learning
- ✦ reduced discipline and classroom management problems

### For Community

- ✦ stronger sense of community
- ✦ increased community satisfaction
- ✦ banked social capital
- ✦ relation of healthy land ethic/environmental citizenship
- ✦ better community health
- ✦ active involvement for parents in children’s school
- ✦ healthier natural environment
- ✦ possible financial savings

### For Schools

- ✦ curriculum connections
- ✦ reduced disciplinary referrals, absenteeism and dropouts
- ✦ reduction of antisocial behaviour on school grounds
- ✦ better connections to community
- ✦ increased pride in school
- ✦ restorative experience

## Conclusion

From a review of the literature, *Nature Nurtures* finds that school ground naturalization is a worthwhile expenditure of energy, time and money. This research supports the anecdotal evidence Evergreen has heard and witnessed from thousands of committed teachers,

parents, students and others involved in improving their school ground. However, *Nature Nurtures* also raises questions for further inquiry, including a suggestion that more domestic research be done to quantify costs and benefits in a Canadian context.