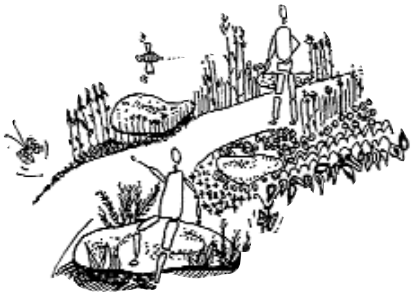
Pathways

Pathways help to separate areas on your school grounds that serve different functions. They also provide a boundary to areas that should not be walked through and they can be designed to function as features for informal play.

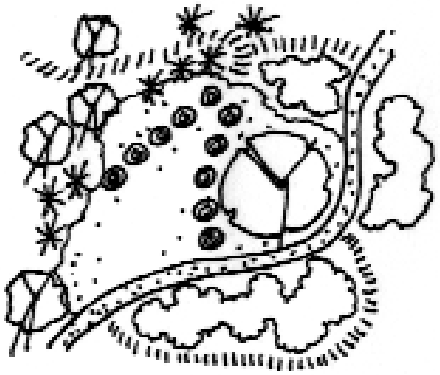
Design details

Tips for Designing Pathways on Your School Grounds

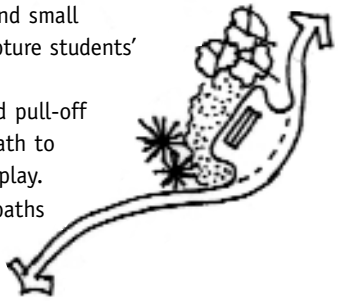
- Provide a variety of path choices to suit the areas on your school grounds and to enhance variations for play and exploration. For example, provide a wood chip trail through your woodland, stepping stones through your butterfly garden, a stone dust path to the shade shelter, a mown path through the meadow and a boardwalk through the marsh.



- Observe where natural paths occur and the patterns students typically make to move around the school grounds.
- Plan for pathways that lead to, intersect, or run adjacent to play settings.



- Design pathways in the form of intersecting circles to allow for continuous movement and hide-and-seek games, and to avoid the confusion that may happen on dead end paths.
- Provide a number of accessible path options to link activities on your school grounds. Accessible paths can be made from a number of materials as long as they provide a level, continuous surface for all users.
- Include pathways that provide above grade vantage points (e.g. a bridge over water or spanning hills and small depressions) to capture students' interest.



- Include seating and pull-off points along the path to rest, read signs or play.
- Create designated paths for tricycle riding and cart pulling.
- Involve the whole school in the design and construction of the pathways. Groups of students can help remove sod, carry buckets of gravel and help to draw and layout the path.
- Remember to take into account that shrubs and trees adjacent to the path may eventually overgrow the path. Either plant trees and shrubs well back from the path based on their growth requirements or make your path a little wider to accommodate the growth.

Pathways Chart

Type	Advantages	Disadvantages
Concrete	• Wheelchair accessible • Functions as a sidewalk	• Cannot be easily installed by students • Requires proper mixing, pouring and finishing • Water can collect if not leveled properly • Relatively expensive • Results in scraped knees when children fall
Asphalt	• Wheelchair accessible	• Requires work to prepare site for proper lying of asphalt (gravel sub-base) • Subject to frost heaving in winter and becoming sticky in extreme heat • Adds to the heat effect at schools • Results in scraped knees when children fall
Brick, tile or concrete pavers	• Wheelchair accessible, if constructed properly • Can be used in rows or other patterns to define edges (garden, path, activity areas) • Permeable, allowing for infiltration of ground water	• Needs to be set on concrete to avoid frost heaving and maintain optimum wheelchair access. (Pavers set on sand can be used in areas where wheelchair access is not a requirement)
Crushed stone	• Wheelchair accessible • Versatile • Colour can be added for interest	• Needs to be constructed properly using a 15-centimetre (six-inch) gravel subgrade and 10-centimetre (four-inch) base of crushed stone • Can be expensive to construct properly, unless donation of materials is possible • Requires maintenance and repairs to ensure a level surface • May require an edge depending on where it is located • Can be dusty
Wood decking	• Accessible • Versatile — can be used as a walkway, bridge or boardwalk • Natural look and feel • Interesting texture and sound	• May be expensive to construct unless you can get donations of material • Requires skilled help to cut and fit the decking pieces
Wood chips	• Natural • Does not get muddy so can be used in all seasons • Interesting texture and sound • Doubles as mulch • Inexpensive — can usually get for free from municipalities or tree companies • Cool to walk on • Easy to construct	• Needs topping up every year • Not wheelchair accessible unless small tightly compressed pieces are used • May require landscape fabric underneath to control weed growth • The mold created from decomposing wood chips may be a problem for children with allergies • May require edging so wood chips do not spread out over the lawn
Grass	• Mown paths though natural meadows help to reduce soil disturbance compared to constructed paths • Easy to maintain • Inexpensive • Soft surface • Good for low traffic areas	• Turf grass areas wear quickly with constant use and becomes muddy with rain • Edges need to be maintained • Difficult for wheelchair access

Types of Pathways

1 Boardwalks

Boardwalks were the first sidewalks used in towns and helped people avoid having to walk on muddy dirt roads. Boardwalks used on school grounds allow clear passage in otherwise wet or muddy areas. They can join existing paths or be used as a section along a path where water is a concern. They can also be used around ponds and wetlands or for aesthetic reasons.

Harry R. Hamilton Elementary School

Building Your Boardwalk

- Use cedar or pine-planking. Space boards far enough apart to allow water to drain off, but no wider than 1.2 centimetres (1/2 inch) so heels of shoes do not get caught.
- Use pine supports under the planking that are treated and will not rot when wet.
- Make your boardwalk at least 1.2 metres (48 inches) wide.

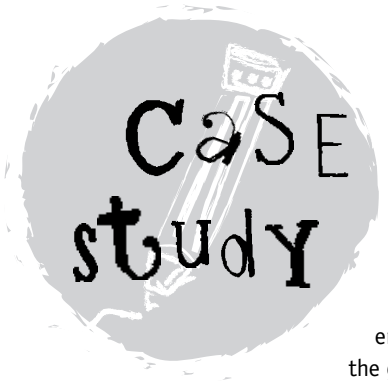
Kawartha Heights Public School

2 Bridges

Bridges provide intrigue on the school grounds for most children, whether they span a watercourse, hill, dry gully, or small depressions in the grass. It has been found that small bridges no longer than a few feet will satisfy the needs of young children, while more challenging structures such as rope and Burma Bridges can be created with older students. Incorporating an element of play with the bridge expands its use from something to just pass over to something that invites exploration and inspires awe.

Building Your Bridge

- Make sure your bridge is sturdy and safe. You do not need an engineer's stamp for a bridge on a school ground, but you do need to build it properly. Perhaps a parent or someone in the community has some expertise to lend.
- Use horizontal pressure-treated support beams made of heavy timber to provide a stable base for your bridge. Because they are on the underside of your bridge the treated wood is not cause for concern The support beams should typically be either 2' x 6' or 2' x 8' depending on the size of your bridge.
- Use cedar or pine-planking for the walking surface of your bridge. Space boards far enough apart to allow water to drain off, but no wider than 12 millimetres (1/2 inch) so heels of shoes do not get caught.
- Build your bridge at least 120 centimetres (48 inches) wide.
- Include a handrail for safety. The height of the handrail must be built to building code requirements of 105 centimetres (42 inches). The spacing between the vertical rails must not exceed 10 centimetres (four inches).



Maurice Cody Public School, Toronto, Ontario

The school grounds at Maurice Cody Public School are full of natural and built areas to explore. Between the discovery garden and formal playground a swing bridge made out of tires can be found. The tires provide a safe railing for the bridge as well as objects to play in and around. The bridge is made of pine planks and the tires are secured with sturdy rope to two posts at each end of the bridge. The posts have been cemented in the ground to provide added support for the bridge. The bridge also forms a great entrance to the play area, continuing the journey from the discovery gardens.

Maurice Cody Public School

Garden Paths

3

Garden paths are smaller versions of nature trails. They let you explore the different gardens on your school grounds, whether they are butterfly gardens, vegetable gardens, scented gardens or container gardens. They can take you around a garden area or through it, depending on your needs and how the garden will be used.

L'école Bilingue

Creating Your Garden Path

- Use stone dust, wood chips or mown grass for perimeter garden paths as well as between container and vegetable gardens.
- Make formal paths two metres (six feet) wide so two people can pass each other, they are wheelchair accessible and for cutting the grass.
- Use log rounds, bricks or stepping stones for informal paths through garden areas.

Nature Trails

4

Nature trails allow students to explore all areas of the school ground without trampling sensitive areas or having to cross through active play zones in search of quiet activities. Nature trails can support a number of interesting activities with pull out spots for reading, group gatherings, nature study and loose parts play (see the *Loose Parts Play* Fact Sheet for more details). Some schools have created a nature guide with activities for plant identification to use while walking the nature trail. One advantage of nature trails is their year-round versatility. Classes can use the nature trails to snowshoe or ski, identifying trees as they go.

Creating Your Nature Trail

- Follow existing footpaths where possible.
- Use wood chips or other natural materials that will not require heavy labour to install, possibly disrupting the natural site. Ten to 15 centimetres (four to six inches) of woodchips will provide a solid walking surface.
- Use trail markers or signs at the start of the trail to make it easily accessible and identifiable.
- Make sure your trail will not be wet during spring melts. Consider either raising the grade level of the trail five to 10 centimetres (two to four inches) or building a boardwalk through those areas.
- Allow the trail to meander around trees and different landforms.
- Create your trail as two to three intersecting circles, or as one perimeter circle depending on the size of the area and the number of activities planned along the way.

Ossington Old Orchard Public School

5

Recreation Trails

Recreation trails can function the same as nature trails but allow for structured exercise programs like cross-country running, relay running or skiing. The recreation trail does not need to go through a natural area, but keep in mind that the shade and cool temperatures in natural areas provides a healthier environment to exercise in.

Westvale Public School

Creating Your Recreation Trail

- Locate your trail around the perimeter of your school where it will not interfere with active play zones, quiet areas or structured play areas.
- Design your trail as one large loop. Too many loops and turns could become confusing. If your trail makes use of part of a nature trail make sure that section is clearly marked.
- Build the trail two to 2.5 metres (six to eight feet) wide for running and physical activity.
- Create secondary loops within the main trail that divide the trail to accommodate different age and use levels.
- Make the trail fun as well as physically challenging by providing activities or obstacle challenges along the trail.
- Make sure you walk your students through the course before using it to make sure everyone knows the route.

Codes and Safety Standards

Guidelines for Accessible Paths

- Minimum width of 110 centimetres (44 inches) for single use, to 220 centimetres (88 inches) for two wheelchairs to pass.
- No changes in level that exceed 60 millimetres (1/4 inch).
- Maximum slope of five per cent (1:20), although one to two per cent is ideal.
- Surfacing must be of non-slip materials (e.g. asphalt, stone dust).
- A 185 centimetre (74-inch) wide "passing space" must be provided every 30 metres (100 feet).
- Headroom of at least 200 centimetres (80 inches) must be provided along the entire length and width of the path.

Where to go from here?

Sources for this fact sheet

Herrington, Susan. "Playgrounds as Community Landscapes." *Built Environment*, Volume 25, Number 1, 1999.

Moore, Robin C., Goltsman, Susan M. and Iacofano, Daniel S. *Play for All Guidelines: Planning, Design and Management of Outdoor Play Settings for All Children*. Berkeley, California: MIG Communications, 1987, 1992.

Pennington, Gary. "Benches, Bridges and Other Beautiful Things." A section in Grant, Tim and Littlejohn, Gail (eds.), *Greening School Grounds: Creating Habitats for Learning*. Gabriola Island, BC: New Society Publishers, 2001.
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Example projects

Harry R. Hamilton, Mid Sackville, Nova Scotia: (902) 864-6815
Kawartha Heights Public School, Peterborough, Ontario: (705) 742-7521
Maurice Cody Public School, Toronto, Ontario: (416) 393-9240
Westvale Public School, Waterloo, Ontario: (519) 746-6724