Schoolyards Count!

Does your schoolyard promote activity, learning and nature?
Be part of our check-up on the health of Ontario’s school grounds.
Citizen Science to Understand Ontario Schoolyard Quality

Research demonstrates schoolyards can contribute to students’ health and learning. Schoolyard quality makes a difference to physical activity levels and learning opportunities.

We are reaching out to schools across Ontario to help us understand how our schoolyards ‘measure up’. As members of Ontario school communities – through school councils, health and physical education classes, healthy-schools or eco-schools committees, even as individuals – we are asking you to take an hour to use a standardized ‘audit tool’ to assess the quality of your own schoolyard, and to answer some questions about how it is used and developed. The data you collect can inform discussions about priorities and goals for your schoolyard.

Please, share your results with us. If you are using the online tool, your answers will save automatically when you enter them. If you are using a pdf printed from the web, you can send the completed tool and survey to the address at the end of the tool.

Your work as citizen scientists will help us create a comprehensive picture of schoolyard quality and use across Ontario. By sharing it, you will fill in the picture on the overall state of Ontario’s schoolyards – what are their strengths and weaknesses? How are they changing? Are there big differences in schoolyard quality across Ontario? How often are students getting outside?

This project is a partnership between Ophea — a leading healthy schools organization in Ontario — and a professor at Wilfrid Laurier University. It is funded by the Social Sciences and Humanities Research Council.
Schoolyards Count!
Research Brief:
Why we’re doing this

Healthy schoolyards > Healthy schools > Healthy kids
Decades of research demonstrate that school playgrounds are an important part of students' learning, social development, physical and mental health, and environmental knowledge and attitudes.¹

There is plenty of bad news about young people's health, physical inactivity and access to nature:

• North American children are at risk of being the first generation with a life expectancy shorter than that of their parents.²

• Only 35% of school-age children and youth get the recommended one hour of moderate to vigorous physical activity.³

• Mental health issues in children and youth are very common, with 15-21% of children and youth experiencing mental health symptoms that interfere with daily activities.⁴

• Almost a third of Canadian 5- to 17-year-olds are overweight (19.8%) or obese (11.7%).⁵

• Just 37% of children between the ages of 11 and 15 play outside for more than two hours each day.⁶

Schools are a great place to make a difference in these statistics. Both achievement and well-being are core purposes of the Ontario education system.⁷ Overall well-being includes cognitive, emotional, social, and physical elements. During the school week, children and youth spend half their waking hours at school – so schools share responsibility for getting them outside and active on those days.

Active outdoor time in well-designed, well-equipped schoolyards can contribute to improvements in all aspects of student well-being. Teaching and learning, strong curriculum, and positive relationships all matter a great deal. Another key factor to boosting long-term health and learning is the built environment – particularly outdoor spaces – which are an essential component of comprehensive school health.⁸

Schoolyards are a key resource for student's well-being. Perhaps most importantly, they provide routine opportunities for the active outdoor
play in nature. In 2015, an expert panel position statement described active outdoor play as “essential for healthy child development.” Key findings from their systematic evidence reviews on the risks and benefits of active outdoor play were that “children who are outdoors move more, sit less and play longer,” associated with an array of health benefits, and that “outdoor play is less risky than you think.”

Outdoor time in ‘everyday nature’ like parks or schoolyards, not just remote wilderness areas, has also been shown to relate to more positive environmental attitudes and values as well as improved socio-emotional outcomes, better attention, and more positive peer relationships – key aspects of well-being and learning. A team of experts in paediatric neuroscience and exercise science recently affirmed that “in addition to physical health benefits, physical activity also improves cognition, brain function and mental health.”

Unstructured play may contribute particularly to developmental and social-emotional outcomes such as problem-solving and creativity – while supervision and organized activities may bolster activity levels and curricular learning, suggesting that both forms of activity matter. Outside of school hours, schoolyards may offer important recreational opportunities to the surrounding community.

Schoolyards and inequality?
There is a growing concern that rising inequality in family incomes and wealth may be contributing to unequal school environments, even within the system of public education. In particular, recent research has identified a yawning – and expanding – ‘fundraising gap’ between rich and poor schools: a 2017 study showed the 10% of Ontario schools that fundraised the most raised 49 times what the 10% that raised the least did. In 2008, the ratio was 25:1.

Current fundraising guidelines permit virtually unlimited fundraising for items that ‘complement, but do not replace’ public funding. This broad definition of what can be funded by enthusiastic families with resources means that playground quality may reflect schools’ fundraising capacity even more than classroom learning resources.

Ontario research has identified a number of areas of inequality in learning opportunities and resources, even within a public school system committed to ‘ensuring equity.’ To date, however, the research on inequality in schools in Ontario has focused on the more academic aspects of schooling, rather than issues of the physical environment or well-being. This study will help answer a recurring question that has garnered considerable media attention: is there a gap in playground quality between high and low-income schools?
Standardized measures relate playground quality to levels of physical activity

Public health research shows that observable differences in playground quality – particularly, the number of health-promoting features such as basketball hoops, painted hopscotch markings, or playing fields – is associated with levels of physical activity in children.21

Audit tools have been established as an appropriate way to measure the built environment. These tools can be used to collect data beyond what would be available in databases or satellite images, including presence of individual pieces of equipment or markings, standards of maintenance and overall ‘feel’ of environments.22

There are a number of standardized audit tools that have been created to assess the quality and condition of parks and schoolyards, with demonstrated impact on levels of physical activity.23

Data on school playground quality for Schoolyards Count! will be collected using the SPEEDY schoolyard audit instrument, a validated audit tool with established reliability.24 SPEEDY is an audit tool that was specifically designed for schoolyard quality assessment.

As part of the design and validation of the tool, researchers audited 92 urban, suburban, and village schools in Norfolk, England. Students in those schools wore ‘accelerometers’ which tracked their levels of physical movement. Accelerometer data showed that students whose schools scored relatively poorly on the audit tool were less likely to be physically active than students in higher-scoring schools.

The SPEEDY Tool has been used in both elementary and secondary settings. Other researchers have used adapted versions to include questions about learning environments such as gardens (Harrison, Sluijs, Corder, & Jones, 2016), and it has been adapted as a basis for international comparisons (Broyles, Drazba, Church, Chaput, 2015).

For this study, we will not be measuring students’ activity – but using the tool to assess their opportunities for activity and learning. Participants will also be asked to complete a short survey about outdoor time, fundraising, and playground grants received at their school.

What is citizen science, and why is this the best approach for this project?

Citizen-science is an increasingly well-established approach to collecting data at a level of scale and detail unavailable to regular research teams. It would be prohibitive for a research team to criss-cross Ontario assessing the quality of schoolyards! By engaging communities
to assess their own schoolyards, and upload the data, we can create a comprehensive picture of unparalleled detail.

Citizen science *also* contributes to stronger communities by engaging citizens as data collectors, intervention-planners, monitors of the work of public institutions, and effective knowledge mobilizers.25 Citizen-scientists can communicate what they’ve learned in a way that gets more attention from decision-makers and media. As one researcher noticed, citizen science research often compels action in a way that a straight ‘facts and figures’ report simply cannot.26

*Ultimately, this research will use the collective work of citizens get data that goes beyond anecdotes about differences in schoolyard quality, to inform policy around playground planning, fundraising and philanthropy in this area.*

### The partners
Ophea is a not-for-profit organization, led by the vision that all children and youth value and enjoy the lifelong benefits of healthy, active living. Since 1921, Ophea has been working to support the health and learning of children and youth in schools and communities across Ontario, through partnerships, education and advocacy.

Dr. Kelly Gallagher-Mackay is an Assistant Professor at Wilfrid Laurier. She is the former research director of People for Education, a parent of two children in public schools, and the author of *Pushing the Limits: How Schools Today Can Prepare Our Children for the Challenges of Tomorrow* (nominated for the Donner Prize for Best Canadian Public Policy Book, 2017).
Schoolyards Count!

Audit Tool and Survey
An online version of this tool and survey is available at www.ophea.net/schoolyardscount and in French at www.ophea.net/fr/Prioritécoursdécile

WEATHER  ☐ Sunny and Clear  ☐ Overcast/Raining  ☐ Snowing

NAME OF SCHOOL _____________________________________________

NAME OF SCHOOL BOARD _______________________________________

CONTACT NAME _______________________________________________

CONTACT EMAIL (optional) _______________________________________

DATE (dd/mm/yy) _____ / _____ / ______
Access to the school

1. Please locate each entrance to the school grounds, assign it a number, and record whether it is for pedestrians, cyclists (or other human-powered wheels), or cars (tick all that apply), and if there is roadside parking available.

<table>
<thead>
<tr>
<th>Pedestrians</th>
<th>Cyclists, etc.</th>
<th>Cars</th>
<th>Roadside parking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrance 1</td>
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<td>Entrance 2</td>
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<td>Entrance 3</td>
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<td>Entrance 4</td>
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<tr>
<td>Entrance 5</td>
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</table>

2. On the adjacent roads, are there any speed limits over 40 km/h?  

The surrounding area

Are the following visible from any of the entrances:

3. A bus stop (school buses or public transit)  

4. Cycle lanes:  
   a) Separated from the road  
   b) On the road

5. Sidewalks:  
   a) On both sides  
   b) On one side of the road only

6. A marked pedestrian crossing (e.g. zebra/pelican/light controlled crossing) to assist access to the school

7. Traffic calming (e.g. speed bumps, width restrictions, traffic islands)

8. Signage:  
   a) School warning signs for road users  
   b) Road safety signs (e.g. “look both ways”)  
   c) Route signs for cyclists
9. How would you describe areas around the school where parents in cars might stop and drop their children off:

- None
- Adequate
- Congested
- Very Congested

10. How would you describe areas around the school where parents might legally park their cars:

- None
- Adequate
- Congested

The School Grounds

Please indicate how many of the following are present, and rate their quality:

<table>
<thead>
<tr>
<th>#</th>
<th>Good</th>
<th>Adequate</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Bright or florescent markings on play surfaces (e.g. hopscotch, animals, foursquare)</td>
<td>8</td>
<td></td>
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<tr>
<td>12. Single purpose playground equipment (e.g. slide, simple climber)</td>
<td>8</td>
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<tr>
<td>13. Multi-component playground equipment (e.g. adventure playground or structure with slides, climbing areas, rungs)</td>
<td>8</td>
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<tr>
<td>14. Fields (e.g. soccer, baseball, football)</td>
<td>8</td>
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<tr>
<td>15. Athletics track (grass or hard-surface)</td>
<td>8</td>
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<tr>
<td>16. Courts (e.g., basketball including half court, multicourt area)</td>
<td>8</td>
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<td>17. Benches or other seating</td>
<td>8</td>
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<tr>
<td>18. Working drinking fountains</td>
<td>8</td>
<td></td>
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<tr>
<td>19. Cycle parking (count number of bikes that could park)</td>
<td>8</td>
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<tr>
<td>20. Wildlife/bio-diversity-promoting gardens (low maintenance — eg. pollinator gardens, no-mow areas)</td>
<td>8</td>
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<tr>
<td>21. Theme gardens (higher maintenance, e.g. vegetables, indigenous healing, alphabet)</td>
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<td></td>
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<td>22. Naturalized play spaces (areas with boulders, logs, forest)</td>
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<tr>
<td>23. An enclosed outdoor classroom area</td>
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<td></td>
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<tr>
<td>24. Other:</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Other:</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Other:</td>
<td>8</td>
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</tbody>
</table>
27. Is dog mess visible in the areas where children play?  
   □ Yes □ No

28. Are the school grounds on a split site? (i.e., a road crosses the schoolyard)  
   □ Yes □ No

29. Are the school grounds predominantly flat?  
   □ Yes □ No

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**Aesthetics**

Please indicate whether the following are present:

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>30. Decorative planted beds containing flowers/shrubs/small trees</td>
<td></td>
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<tr>
<td>31. Areas shaded by trees</td>
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<tr>
<td>32. Ambient noise (e.g. traffic, trains, industry)</td>
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<tr>
<td>33. Litter</td>
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<tr>
<td>34. Murals/outdoor art</td>
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</tbody>
</table>

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**Usage**

Are the school grounds generally suitable for:

<table>
<thead>
<tr>
<th></th>
<th>Very</th>
<th>Somewhat</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>35. Sports (organized or not)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>36. Informal games (kickball, frisbee, etc)</td>
<td></td>
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<tr>
<td>37. General play</td>
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</tr>
</tbody>
</table>

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**Overall**

To what extent do you agree or disagree with the following statements?

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>38. The grounds are shielded from the surrounding area by hedges/trees/fences.</td>
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<tr>
<td>39. The grounds are generally well maintained.</td>
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<tr>
<td>40. The grounds are generally free of vandalism.</td>
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</tbody>
</table>
41. Estimate the total percentage cover of different surfaces where children could play.
   a) Paving, tarmac or asphalt _______%
   b) Grass _______%
   c) Bark/rubber/other safety surface _______%
   d) Other: _______%

   TOTAL _______%

42. Is the area around the school predominantly ....? (tick one)
   ❑ Residential
   ❑ Open fields/parks/greenspace
   ❑ Business/retail
   ❑ A mixture of the above

The SPEEDY School Ground Assessment Tool was developed and tested by Natalia R. Jones, Andy Jones, Esther M. F. van Sluijs, Jenna Panter, Flo Harrison, and Simon J. Griffin. Information about the tool is available at “School environments and physical activity: The development and testing of an audit tool”, (2010) Health & Place Sep; 16 (5): 776-83. We thank them for generously sharing it with us and helping us adapt it.

The next part of the survey asks about how schoolyards are used at your school, and funding.

Use Of The Schoolyard

How many students attend your school?

How many minutes of outdoor recess/lunch time does your school provide per day?

Are there organized outdoor games and activities during recess or lunch at your school? ❑ Yes ❑ No

Are there balls and physical education equipment available during recess? ❑ Yes ❑ No

Is there an outdoor ‘loose parts’ kit (might include blocks, burlap, tires, tree-cookies, pinecones, sticks) available to students during recess? ❑ Yes ❑ No
How often are students at your school outside for learning activities during class time?

- Seldom (less than once per month)
- Regularly (2-4 times a month)
- Frequently (more than once a week)

Is your schoolyard shared with other organizations (childcare programs, municipal recreation departments, through private-public partnerships, community garden groups):

- Yes
- No

If yes, please describe: ______________________________________________________________

Is your schoolyard unlocked and open to the public outside of school hours?

- Yes
- No

Improvements

In the last three years, which of the following improvements occurred in your schoolyard? (Select all that apply)

- Created a project to enhance biodiversity (e.g., pollinator garden, no mow zone...)
- Created a learning garden (e.g., vegetables, alphabet, indigenous healing...)
- Adding logs and/or boulders
- New play structure
- Renewal of fields/turf
- Improvements to physical accessibility of play areas
- Kindergarten yard
- Other __________________________________________________________
- No improvements

Budget

In THIS YEAR’s school budget, how much is allocated for:

a) Schoolyard maintenance?

b) Schoolyard capital improvements?

Is regular landscaping maintenance paid for out of board or school budgets?

- School
- Board

Has the school board funded schoolyard improvement work (beyond maintenance) at your school in the LAST THREE YEARS?

- Yes
- No
Fundraising

LAST YEAR, how much did your school fundraise, IN TOTAL?

External Sources

In the LAST THREE YEARS, has your school...

...had a fundraising drive within the school community focused on schoolyard improvements. ❑ Yes ❑ No
...received grants or project funding from organizations (e.g., Evergreen, TD Friends of the Environment, Jumpstart) to support schoolyard improvements. ❑ Yes ❑ No
...received donations from local businesses to support schoolyard improvements. ❑ Yes ❑ No
...received support from regional or municipal governments for schoolyard improvements (eg tree plantings, fencing, play structures). ❑ Yes ❑ No
...received support from regional or municipal governments to improve walkability (e.g. crosswalks, traffic calming, lights). ❑ Yes ❑ No

In the LAST THREE YEARS, how much would you estimate your school has received from external sources for schoolyard improvements?

YOUR SAY

Are there major challenges or success you have had with your schoolyard that you would like to share?
Contact

How, if at all, do you want us to contact you?

[ ] Please don’t contact me.
[ ] Please send me a copy of the report by email when it is done.
[ ] I consent to the research team contacting me by email if there is a question about my responses.
[ ] I’m interested in doing more to publicly promote this initiative, please contact me by email.

If you have printed out the PDF form of this tool and want to submit by mail, please send the completed form to:

Schoolyards Count!
c/o Dr. Kelly Gallagher-Mackay
Wilfrid Laurier University
73 George Street,
Brantford, Ontario
N3T 2Y3
Comprehensive School Health includes four pillars: Social and Education Act, R.S.O. 1990, as am., s.0.1, “Purpose”. See note 3, p.9.


23 For a collection of such tools, plus the supporting research, see https://activelivingresearch.org/toolsandresources/toolsandmeasures.


Schoolyards Count!

The online tool, instruction manual and an instructional video are online and ready for you to use. To get started in your school, please go to: www.ophea.net/schoolyardscount