

# Nature of Place Symposium Phipps Conservatory and Botanical Garden

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# Healthy Kids, Healthy Planet *Supporting health and the environment through nature in schools*

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## Background

This project examines a simple intervention- time in nature- as a means of supporting children's health and environmental stewardship. Extensive evidence indicates spending time in nature is good for kids' mental and physical health<sup>1</sup>, social and emotional development<sup>2</sup>, academic success<sup>3</sup>, and the development of long-term pro-environmental attitudes and behaviors<sup>4</sup>. However, children today spend less time in nature than previous generations<sup>5</sup>, leading to a generation that does not feel connected to the natural environment. Concurrently, young people show greater rates of stress and anxiety compared to past decades<sup>6</sup>.

**Spending time in nature can help address these problems.**

We are working with elementary schools in one district in the Northeastern United States to examine opportunities for provision of time in nature as a means of increasing access and opportunity for all students regardless of race, ethnicity, or income.

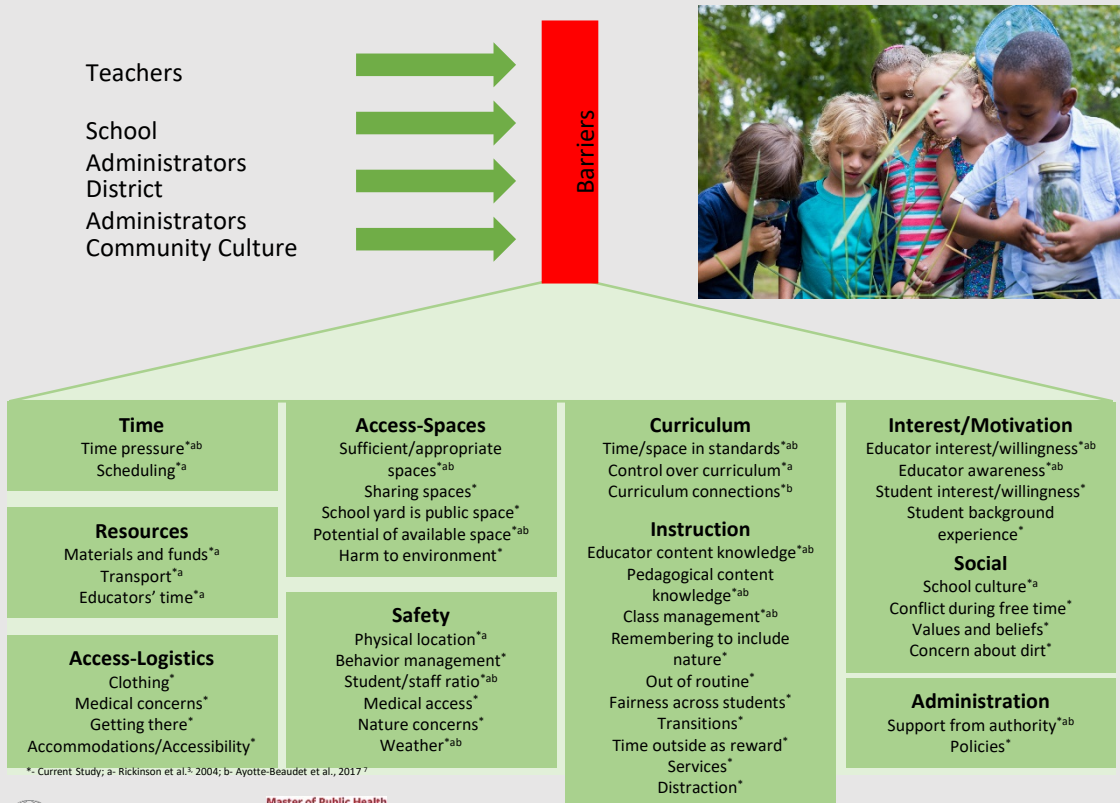
**There is extensive support in this district for students to spend time in nature. Despite this, many classes do not go outside.**

## Goals

- 1) Elucidate the barriers that limit time outside
- 2) Identify strategies to increase time outside.

## Methods

Interviews and focus groups were conducted with 4 district administrators, 3 school administrators, 1 school nurse, 24 teaching staff in one district. Thematic analysis was used to identify barriers and strategies.



\*- Current Study; a- Rickinson et al.<sup>3</sup> 2004; b- Ayotte-Beaudet et al., 2017<sup>7</sup>

## Findings

- Administrators saw possibilities, but teachers experienced multiple barriers.
- The set and relative importance of the barriers are different in different classes, and on different days.
- Barriers exist at different levels- individual (teacher or student), classroom, school, district, state/national.
- Strategies to address barriers can, or must, be enacted by stakeholders at different levels.
- Teachers are often expected to enact strategies, but may not be able to do so without support or permission from others.
- Various strategies may increase time in nature in different classes or on different days. Flexible solutions are needed for multiple contexts.

| Strategies to increase time outside                               | Teacher | School | District | State |
|-------------------------------------------------------------------|---------|--------|----------|-------|
| <b>Curriculum</b>                                                 |         |        |          |       |
| Teach outdoor topics outdoors                                     |         | *      |          |       |
| Use existing nature-related curricula                             |         | *      |          |       |
| Teach other topics outdoors (reading, writing, math)              |         | *      |          |       |
| Include nature or outdoors in PBL/Case study units                |         | *      |          |       |
| Social/emotional learning curriculum outdoors                     |         | *      |          |       |
| "Specials" outdoors (PE, art, music)                              |         | *      |          |       |
| Explicitly include nature in standards                            |         |        |          |       |
| <b>Instruction</b>                                                |         |        |          |       |
| Class contract about outdoor behavior/work time norms             |         |        |          |       |
| Transit- Walk around instead of through the building              |         | *      |          |       |
| Involve students in planning or data collection                   |         |        |          |       |
| Clump outdoor times together                                      |         |        |          |       |
| Practice transitions                                              |         |        |          |       |
| Set up routines around time in nature                             |         |        |          |       |
| Cross-class collaborations                                        |         |        |          |       |
| Break time outdoors                                               |         | *      |          |       |
| Field trips to nature spaces                                      |         | *      |          |       |
| Add nature to other field trips (picnic lunch, walk there)        |         |        |          |       |
| <b>Spaces</b>                                                     |         |        |          |       |
| Construct outdoor spaces                                          |         | *      | *        |       |
| Pick "special" spaces for class/grade                             |         |        |          |       |
| School gardens                                                    |         | *      |          |       |
| Bring nature indoors                                              |         | *      |          |       |
| <b>Reminders</b>                                                  |         |        |          |       |
| Schedule outdoor time in lesson plans-- daily, weekly, etc        |         | *      |          |       |
| awareness campaigns                                               |         | *      |          |       |
| time outdoors campaigns                                           |         | *      |          |       |
| <b>Administrative, school wide</b>                                |         |        |          |       |
| Whole school events                                               |         | *      | *        |       |
| Build space in the school schedule for nature time for each class |         | *      | *        |       |
| Increase adults available for outdoor time                        |         | *      | *        |       |
| Lunch outdoors                                                    |         | *      | *        |       |
| Reduce required permissions (admin or guardian)                   |         | *      | *        |       |
| Increase entry/exit points                                        |         | *      | *        |       |

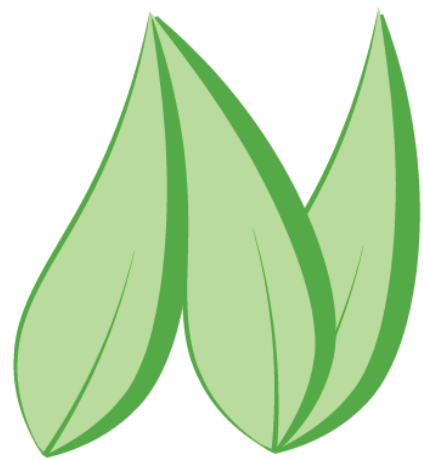
Main implementer

Potential implementer

\* Could veto

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2. Gill, V. (2014). The benefits of children's engagement with nature: A systematic literature review. *Children, Youth and the Environment*, 24(2), 10-34.  
3. Rickinson M., et al. (2004) A review of research on outdoor learning. *Shrewsbury, UK: National Foundation for Educational Research and King's College London.*  
4. Chuan, C. (2005) *Learning in green: Restoring an agent of care for the natural world.* *Journal of Environmental Psychology*, 41(1), 6-13.  
5. Lewis, Richard. (2008) *Lost Child in the Woods*. *Algonquin Books of Chapel Hill.*  
6. Thompson, J. et al. (2015) Youth interest in nature: A cross-national meta-analysis of the NIMH Clinical Psychology Review, 20(2), 145-154.  
7. Ayotte-Beaudet, J. P., Pothier, P., Lapierre, H. G., & Glick, M. (2017). Teaching and Learning Science Outdoors in Schools' Immediate Surroundings at K-12 Levels: A Meta-Synthesis. *Research Journal of Mathematics, Science and Technology Education*, 25, 1345-1365.





mature<sub>Rx</sub>  
@Cornell

Cornell Health

SHANTON CENTER  
FOR HEALTH  
INITIATIVES

Bring your strength  
and spirit and heart  
along to develop a  
strong community  
where we have  
to be here  
to the future  
Cornell

Shant Center for  
Health Initiatives

- ☐ CAPS Group   ☐ Let's Meditate   ☐ CAPS Workshop  
☐ No further action planned at this time   ☐ Encouraged PRN scheduling   ☐ Sched  
☐ Hospital Evaluation

Referral to Cornell Health Provider/resource

< Enter text here >

- ☐ Behavioral Health Consultant  
☐ Cornell Healthy Eating Program (CHEP)  
☒ Nature Rx discussed and recommended

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- ☐ Primary Care Provider  
☐ Psychiatry  
☐ Student Disabilities  
☐ Victim Advocate

- ☐ Referral to community provider

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## Nearby Nature



Beebe Lake



Newman, Slim Jim Woods



Cascadilla Gorge



Morgan-Smith Trail, Park Park



Palmer Woods



Fall Creek Gorge



Mundy Wildflower Garden



Liberty Hyde Bailey Conservatory



Tiger Glen Garden



F. R. Newman Arboretum



Cornell Botanic Gardens



Willard Straight Rock Garden



The Deans Garden/Centennial









