

A LITERATURE REVIEW AND KEY INFORMANT INTERVIEW FINDINGS FROM AN OUTDOOR-BASED SCHOOL AGE CHILD CARE PILOT IN VANCOUVER



Exploring the YMCA's Licensed Outdoor Based School Pilot Program
(The Kerrisdale/Malkin Park Outdoor Adventures)

Final Report: June 2022

Prepared by:
Joanne Schroeder
Director, External Partnerships
Human Early Learning Partnership, UBC



Process Evaluation Funded by 
& Administered by  | WCCRC

Table of Contents

<i>Project Background.....</i>	<i>3</i>
<i>Literature Review</i>	<i>3</i>
Methodology.....	3
Search Results	4
Parental Perceptions	5
Space Design	5
Licensing Standards.....	6
Indigenous Perspectives	6
<i>Key Informant Interviews.....</i>	<i>7</i>
Methodology and Participants	7
Emerging Themes.....	8
<i>Summary and Recommendations.....</i>	<i>10</i>
<i>Appendix 1 (Full Literature Review).....</i>	<i>12</i>

1. Project Background

In 2018, facing growing demands for quality school age child care spaces and limited room availability within public schools, the City of Vancouver collaborated with Vancouver School Board, VCH Licensing and the YMCA of Greater Vancouver to explore innovative solutions.

This work resulted in the launch of an Outdoor-Based School Age Pilot Project, a first-of-its-kind initiative in Vancouver aimed at expanding licensed child care options while providing school age children with the well-documented benefits of outdoor based learning.

This specific report is one component of a broader review of the startup and delivery of the Outdoor Based Licensed School Age Program pilot – YMCA’s Kerrisdale/Malkin Park Outdoor Adventures. The review’s Project Team Members were Sandra Menzer, Rika Lange, Human Early Learning Partnership UBC and Dr. Mariana Brussoni.

This report provides a comprehensive literature review along with the findings from key informant interviews. The purpose is to:

- a) review accreditation and quality measures established by existing outdoor based programs for school age children.*
- b) gather material related to curriculum and safety, and risk mitigation strategies.*
- c) identify promising practices that could be applied to this project and other future outdoor based programs.*

This report will be an appendix to the Resource Kit in Part 5 of the Project

2. Literature Review – The review was completed by Michele Wiens, Senior Manager, Knowledge Management, Human Early Learning Partnership, UBC

a) Methodology – The review focused on literature that considered the following questions:

- What promising practices, quality markers are notable for outdoor based after school programs?
- What examples of program curricula are there in Canadian and International contexts?
- What outdoor schools have been shown to be beneficial for students?
- What evaluation / impact work has been done for outdoor schools? in what areas?

Search Objective

To conduct a literature search for articles related to the questions noted above. For this scoping review, searches aimed to capture scientific and grey literature relevant to this topic. Bibliographies of retrieved articles were scanned to further identify more extensive and detailed information for focus areas. Related articles and suggested articles appearing within the search engine were also considered for inclusion. This process aided in refining search terminology and finding additional and specific articles of interest.

Articles with publishing dates between the years 2011-2021 were of primary interest, but articles were not excluded by date if their material was relevant to the current context. Grey literature, or material produced by non-academic organizations, was included for context and reporting on initiatives, primarily. The search was restricted to English language articles and was completed in December 2021.

Search Parameters

Date: The past ten years (2011-2021) with an emphasis on most current literature

Language: English language focus

Geography: British Columbia and Canada (including Indigenous communities; urban/rural) (although other regions, particularly the UK and Australia, were included for international context)

URLs and PDFs: URLs were included within the citations. PDFs may be retrieved if requested

b) Search Results (see Appendix 1 for full literature listing)

Findings were grouped into the following focus areas:

- Indigenous, culturally responsive curriculum/perspectives
- Curriculum Case Studies:
 - Canadian
 - International
- Licensing Standards
 - Canadian
 - International
- Evaluation
 - Eco Knowledge
 - At risk, disadvantaged communities
 - Disabilities
 - General
 - Physical/Motor Skills
 - Psychological, Socioemotional, Cognitive
 - Risk Taking
- Perceptions
 - Parents
 - Students
 - Educators
- School Design
- School Quality
- Play- General

Overall results were dominated by literature speaking to early childhood learning and care, and outdoor education. There is a paucity of literature that speaks directly to outdoor based school aged care and even more so in relation to care that is based specifically at local schools.

Based on a discussion with the project steering committee, we are highlighting key findings in four specific focus areas:

- **Parental Perceptions**

Studies included highlighted the critical role that parental expectations play in determining their perceptions about a particular program. Hunter et al (2020) found that typically there is a tension between parents and educators in respect to the purpose of outdoor experiences as part of a care curriculum. In this study, parents reported a belief that “just being outside to play” was not a valuable use of children’s time. Alternatively, educators typically held a pedagogy that promoted free, unstructured, child-led play as equally, or more so, beneficial to children’s development. Similarly, Curtis et al (2012) found that parents differentiated play from physical activity, seeing physical activity as structured with stated goals for development, while play was unstructured with no clearly identified intention. Clear use of language and identification of hoped for outcomes from outdoor experiences would contribute to a resolution of this tension.

Several studies spoke to the cultural differences that contribute to parental perceptions. Prince et al (2013) studied parental perceptions across cultures finding that relationship to the environment, perceptions and tolerance of risk, and value placed on physical development all differed across cultures. This will be considered further in the section on Indigenous Perspectives.

- **Space Design**

While much is known about the influence of the design components of the outdoor space, the importance of the role and responsibilities of the adult educator has been found to have more of an influence than any aspect of facility design (Mansfield et al, 2020). This reminds us of the importance of outdoor based competencies for educators assigned to these programs.

Khan et al (2020) found that a substantial influence on the efficacy of design is the participation of both children and educators in building that design. Particularly, allowing children to have a voice in the creation of the outdoor space elements facilitates their ongoing engagement with, and care of, the space.

The creation of multiple zones of activity has been found to allow for alignment with the diverse, and changing, needs and interests of children and educators. (Amnipoor 2022). In particular, providing spaces for both collective play and quiet individual activity. A predominance of natural versus built components creates more flexibility in the environment and fosters children’s connection to, and stewardship of, nature. When asked children tend to prefer natural elements. Children do also, however, identify the value of climbing structures and open green space to accommodate games and sports (Jansson et al 2020).

Finally the role of gardens is spoken of often in the literature (Bekar et al, 2018; Bohnert et al, 2021). Multiple benefits of school yard gardens include: opportunities for science teachings; fostering connection to living plants; and providing food for the program, especially for children who may experience food insecurity.

- **Licensing Standards**

“When policy that could potentially advocate for play and development of children is replaced by technical safety standards, the needs of children are lost” (Herrington et al, 2007).

A review of licensing standards across Canada reveals that indeed, overall, these standards focus on the technical elements of outdoor play space (size, location) and risk reduction in the out of doors. Typically, the standards apply to built play structures and not natural environments.

Licensing regulations do provide requirements for time spent outside in each licensed centre, but address only minimally the character and quality of that outside time. Studies point to significant inconsistency in the activities that children engage in during these outdoor sessions. While additional research points to the importance of educator training as the most critical component in maximizing the value of outdoor play, there is no requirements in Canada for educators to have this additional training as part of licensing. Existing outdoor based programs operate without licensing at this time. This approach eliminates oversight of the programs and creates an inequity of access as they are only affordable for parents who can afford to pay the full fee.

There are examples of programs within Canada which have developed innovative approaches to fostering outdoor based programming. For example, a unique partnership between Child and Nature Alliance of Canada (CNAC) and Andrew Fleck Children’s Services (AFCS) in Ottawa, Ontario has allowed for children in a licensed centre to experience a Forest Schools (totally outdoor) curriculum two days a week. A Memorandum of Understanding between the partners outlines that children will have supervised nature-based “field trips” on those two days. (Niblett et al 2020).

While “forest schools” exist around the world with guidelines developed and monitored by government, the only jurisdiction within North America reviewed for this paper that licenses these programs is Washington State (Washington State Dept of Children, Youth and Families, 2019). Following a pilot limited to outdoor preschool programs, the state is now moving to licensing full day early childhood and school age outdoor based programs.

- **Indigenous/Culturally Responsive Curriculum/Perspectives**

“People need Land, and Land needs people, we’re made of the same stuff. Learning on the Land should be mandatory. Giving children the chance to form a spiritual relationship with Land will serve them as a foundation for the rest of their lives. It will sustain them and it will sustain Mother Earth” STEVEN NITAH, ŁUTSELK’E

Full consideration of Indigenous Perspectives on outdoor based education is beyond the scope of this paper and outside the experience of this non-Indigenous writer. I would like to acknowledge that all care and learning programs in Canada take place on the

traditional, unsundered, territories of Indigenous peoples. As such, we must be guided by local Indigenous communities in the development and delivery of those programs. Traditionally, the environment and Indigenous systems of living are inextricably linked. (Dragon Smith, 2020). Through generations of colonization, Western educational methodologies have dominated and served to systematically disrupt the essential role of land based learning for Indigenous children. While the current movement towards outdoor based programming in Canada represents a “new” way for mainstream Western culture, it is for Indigenous cultures a reclamation of traditional methods to support children’s learning and development.

For Indigenous children historically, watching, learning and imitating played a large role in their development. Rather than learning through talking, they learned through imitating actions they observed from parents and elders. As such, a key component of current day land-based programs is continuous involvement of families and local elders who actively engage in the teaching of children. (MacEachren, 2018)

Additionally, interaction with flora and fauna had a purpose. Items were made to support the well-being of the community (a canoe, cooking utensils, etc) and plants were accessed primarily for food or for medicine. Indigenous land-based programs today continue those traditions, taking from the earth only what is needed - what has a purpose for the individual or community.

Colonization has created layers of structures and processes that have distanced Indigenous communities from their traditional ways of teaching their children.

Indigenous led land based programs represent a step towards reclaiming those traditions.

3. Key Informant Interviews

- **Methodology and Participants**

Key Informant Interviews were conducted by Joanne Schroeder and Rika Lange. They took place either by Zoom or by telephone. Recordings and live transcripts of the sessions were made for analysis. Interview questions can be found in Appendix II.

Interview participants were:

- Sophia Baker French, Director, Access and Quality, MECC
- Sue Bedford, Director, Community Care Facility Licensing and Assisted Living Registry, Ministry of Health
- Dawn Williams, Manager, Community Care Licensing and Assisted Living Registry, Ministry of Health
- Dr. Mariana Brussoni, Director, Human Learning Partnership
- Kate Dawson, Coordinator, Terra Nova Nature School
- Debbie Groff, Area Administrator, Outdoor Based Licensing, Washington State
- Leslie Senft, Early Years Manager, Fraser Region Aboriginal Friendship Centre

- Aleksandra Stevanovic, Executive Director, Child Care Policy, MECC
- Tyler Summers, Member at Large, School Age Child Care Association of BC
- **Emerging Themes.** The following themes emerged consistently across the interviews.
 - i. **Facilitators to the Development of Outdoor Based Programs:**
 Informants often mentioned the changing perceptions of outdoor play and its accompanying risk as a factor in promoting new programs. There has been a growing recognition of the benefits, educationally and developmentally, of outdoor play for children and concurrently a growing understanding that managing some risk promotes children's physical and emotional development. Ongoing research proving benefits and collective advocacy were both mentioned as ways to amplify this trend.
 The Covid pandemic was mentioned by all informants as a more recent factor facilitating the development of outdoor programs. The virus forced many programs to move outside and with that, discover that all aspects of programming could be adapted to an outdoor setting. One informant reported that a decision has been made by their program to remain outside even as the threat of the pandemic subsides.
 New investment in child care in British Columbia will increase access to spaces overall. While licensing restrictions still limit the availability of fully outdoor programs, a new policy to prioritize the delivery of school age programs on school grounds could serve as a foundation for establishing additional outdoor programs in future.
 While licensing regulations prohibit the licensing of any program which is not attached to an indoor space, there is still considerable latitude within the existing regulations to develop and offer outdoor based activities.
 - ii. **Barriers to Development of Outdoor Based Programs:** Overall, informants mentioned more barriers than facilitators to the development of new programs.
 Lack of licensing regulation to allow fully outdoor based programs was most often mentioned as the primary barrier. No type of child care program can be licensed without connection to an indoor space in BC. Regulations in respect to outdoor programming are limited to technical safety standards for space and equipment, and to the amount of time that children are required to spend outside each day. There is nothing in the regulations that guides the quality and character of outdoor time. As noted, Washington State has developed legislation to allow for the licensing of fully outdoor programs as well as hybrid (indoor/outdoor) centres. They have created tools to address some of

the bigger roadblocks (e.g. benefit/risk assessment, liability insurance compliance) that could be adapted for use within BC. Within the Washington state model, operators, rather than spaces, are licensed.

Informants with experience in providing school based programming also highlighted the barriers presented by the lack of coordination across the child care and education sectors. Often providers are caught in the middle between contradictory policy and regulation. Of particular note is the challenge of the landlord/tenant relationship existing in many school districts. This relationship can create a partnership that focuses more on finances than on quality care of children.

While informants did recognize that attitudes and perceptions on outdoor play are changing, several also mentioned that underlying beliefs and values, or what one informant called “old school mindsets” still create barriers for new development. Fear of the risk presented in outdoor based programs is still prevalent, in spite of studies that consistently show injury incidence is very low in these settings. The belief, reportedly often held by parents, that “learning” only takes place inside with a pencil in hand also limits participation in outdoor based programs. A need to educate families on the benefits of outdoor learning was often noted.

Finally, a lack of trained educators across the child care system is a significant barrier for the creation of new programs.

- iii. **Educator Preparation:** Educator preparation, or the lack of it, was a consistent theme across the interviews. As noted above, there is an overall shortage of trained educators so recruiting educators in and of itself is a significant barrier.

There is minimal content in educator training about outdoor pedagogy so many educators enter the field unprepared to use outdoor time to maximize learning and development. One informant mentioned that just “being outside” is the norm in many programs and there is little attention to the quality and intention of that time.

Notably it was mentioned by a couple of informants that often the most effective outdoor educators come to the role not with education training, but rather with a background in earth sciences and/or a simple passion for being in the out of doors.

- iv. **Equity of Access:** A result of the current lack of licensing and policy support for outdoor programs is a fundamental inequity in the accessibility of these programs. Without licensing, families cannot receive subsidy for these programs and therefore, they are limited to those families who can afford to pay the full fee and purchase the needed clothing and equipment. Relatedly,

it is beyond the reach of many programs to access the funding they need to provide appropriate clothing and equipment to their staff.

Children with extra support needs are also often excluded from outdoor based programs as there is no capacity to safely meet their needs in an outdoor setting. One informant referred to these young people as the “children who don’t fit”.

- v. **Pedagogical Frameworks:** Several informants referenced BC’s Early Learning Framework as providing guidance and language to promote the expansion of outdoor based learning. While the framework includes provisions for children up to age 8, it is reportedly less well known and used within the school age population than with preschool aged children. There was consultation with First Nations, Metis and Inuit partners in the creation of the Early Learning Framework and there is considerable content that reflects traditional teachings in children’s learning and development within this document. Additionally, informants drew on the distinct First Nations, Inuit and Metis Early Learning and Care Frameworks developed in partnership between Indigenous communities and the federal government.

4. Summary and Recommendations

Findings in this report confirm that there is significant value to children’s development to be realized through outdoor based programs. Additionally, there is considerable interest in building more programs within BC. It is recognized, however, that there are currently substantial barriers to this expansion. The following recommendations are presented through a lens of firstly, what is possible in our current context and then, what might be future objectives.

Immediate recommendations:

- Continue the advocacy and education efforts that are underway in the province. These initiatives are focused both on advocating within government for policy changes and on educating parents, educators and policy makers about the benefit of outdoor based programming.
- Specifically work with service providers to ensure that they are familiar with existing regulations and understand the latitude and range for providing outdoor programming within current rules.
- Pilot in Vancouver a partnership initiative bringing together the VSB, City of Vancouver, VCH licensing, and service providers to build a coordinated implementation plan for future programs

Future Recommendations:

- As licensing regulations were significantly found to be the most common barrier, the realization of a proliferation of programs requires changes in licensing. It is recommended that the Washington State model of licensing operators, rather than spaces be explored.
- Review of educator training. Work with ECEBC, SACCA, the Province of BC and the college system to conduct a full review of ECE training towards enhancing curriculum content for outdoor programming.
- Building on provisions in the existing Early Learning Framework develop a fulsome outdoor based pedagogical framework including mechanisms to increase inclusion.
- Consult with Indigenous service providers, potentially in partnership with BCACCS to explore the role of land based learning within a broader pedagogical framework.

APPENDIX I
LITERATURE SEARCH
Prepared by Michele Wiens
Senior Manager, Knowledge Management

SECTION 1 BACKGROUND

I	<u>Search Context</u>	page 2
II	<u>Specific Question</u>	page 2
III	<u>Search Objective</u>	page 2
IV	<u>Search Parameters</u>	page 2
V	<u>Search Summary</u>	page 3

SECTION 2 SEARCH RESULTS – AFTERSCHOOL OUTDOOR PROGRAM

I	<u>Indigenous, culturally responsive curriculum/perspectives</u>	page 4
II	<u>Curriculum, case studies – Canadian</u>	page 4
III	<u>Curriculum, case studies – International</u>	page 8
IV	<u>Licensing, standards – Canadian</u>	page 15
V	<u>Licensing, standards – International examples</u>	page 16
VI	<u>Evaluation - Academic, Eco Knowledge</u>	page 17
VII	<u>Evaluation – At-risk, disadvantaged, low income communities</u>	page 19
VIII	<u>Evaluation – Disabilities, Behaviour</u>	page 20
IX	<u>Evaluation – Disabilities, Eyesight</u>	page 21
X	<u>Evaluation – General</u>	page 22
XI	<u>Evaluation - Physical, Motor Skills</u>	page 23
XII	<u>Evaluation - Psychological, Socioemotional, Cognitive</u>	page 27
XIII	<u>Evaluation – Risk-taking</u>	page 30
XIV	<u>Perception - Parents</u>	page 30
XV	<u>Perception - Students</u>	page 31
XVI	<u>Perception – Teachers, Practitioners</u>	page 32
XVII	<u>School design</u>	page 36
XVIII	<u>School quality</u>	page 37
XIX	<u>Play - general</u>	page 37

SECTION 1 BACKGROUND

I Search Context

The overarching purpose of the project is to evaluate the process of developing and running one after school centre in Vancouver as an outdoor based program. Sandra Menzer, the lead contractor, will be developing a resource kit based on the findings, with the intent that this will be shared with other centres.

HELP's contribution has two parts – some key informant interviews with stakeholders exploring what has worked and why. And secondly, a lit review with more of a national and international focus about promising practices, quality markers, curriculum of outdoor based after school programs.

II Specific Question(s)

What promising practices, quality markers are notable for outdoor based after school programs?

What examples of program curricula are there in Canadian and International contexts?

What outdoor schools have been shown to be beneficial for students? What evaluation / impact work has been done for outdoor schools? in what areas?

III Search Objective

To conduct a literature search for articles related to search context items noted. For this scoping review, searches will aim to capture scientific and grey literature relevant to this topic. Bibliographies of retrieved articles will be scanned to further identify more extensive and detailed information for focus areas. Related articles and suggested articles appearing within the search engine will also be considered for inclusion. This process will aid in refining search terminology and finding additional and specific articles of interest.

Articles with publishing dates between the years 2011-2021 will be of primary interest, but articles will not be excluded by date if their material is relevant to contemporary context or the date of publication will not adversely impact the quality of evidence. Grey literature will be included for context and reporting on initiatives, primarily. The search will be restricted to English language articles and will be completed in December 2021.

Articles will be identified through EBSCOhost (to access MEDLINE, CINAHL Complete, APA PsycINFO, ERIC, Humanities & Social Science, and Academic Search Premier), SAGE journals, IngentaConnect (to access books and journals from a range of different publishers), Google Scholar and Google (to access books, book chapters, older articles, and articles from journals not indexed through major database platforms), Indigenous journals ([UBC Library](#)), and government websites. Keywords and search statements are appended.

IV Search Parameters

- **Date:** The past ten years (2011-2021) with an emphasis on most current literature
- **Language:** English language focus
- **Geography:** British Columbia and Canada (including Indigenous communities; urban/rural) (although other regions, particularly the UK and Australia, will be included for international context)

- **URLs and PDFs:** URLs will be included within the citations. PDFs may be retrieved if requested
- **Output:** The citation listing will be prepared using Endnote software. Literature search results will be stored in this Endnote Library: Child Dev 20211201 (available upon request)

V Search Summary

The search strategy aims to capture relevant, published literature and further the state of knowledge of outdoor-school afterschool programs. Of particular interest is to assess the evidence with respect to the benefit or value of outdoor schools, and what the evidence suggests with respect to best practices and curriculum.

SECTION 2 SEARCH RESULTS – AFTERSCHOOL OUTDOOR PROGRAM

I **Indigenous, culturally responsive curriculum/perspectives**

1. Anderson D, Comay J, Chiarotto L. **Natural Curiosity Guide, 2nd ed. The Importance of Indigenous Perspectives in Children's Environmental Inquiry**. Toronto, ON: University of Toronto OISE - Institute of Child Studies. Available from: <https://www.naturalcuriosity.ca/englishbook>.
2. Daoust M. **Another Brick in the Wall: A Narrative Inquiry Alongside Out-of-Doors Nipugtugewei Kindergarten Teachers**. Montreal, QC: McGill University 2020. Available from: <https://escholarship.mcgill.ca/concern/theses/v979v720p>.
3. Dragon Smith C. **Creating ethical spaces: Opportunities to connect with the land for life and learning in the NWT**. Gordon Foundation, Jane Glassco Northern Fellowship; 2020. Available from: <https://gordonfoundation.ca/resource/chloe-dragon-smith-policy-paper/>.
4. Kaluraq K. **Nunami ilinniarniq: Inuit community control of education through land-based education**. Gordon Foundation, Jane Glassco Northern Fellowship; 2020 Apr 8. Available from: <https://gordonfoundation.ca/resource/kaviq-kaluraq-policy-paper/>.
5. Kreutz A, Loebach J, Kidd AN. Indigenous architecture of early learning centres: International comparative case studies from Australia, Canada and Aotearoa New Zealand. *The Handbook of Contemporary Indigenous Architecture*: Springer; 2018. p. 895-925. Available from: https://link.springer.com/chapter/10.1007/978-981-10-6904-8_33.
6. MacEachren Z. **First Nation pedagogical emphasis on imitation and making the stuff of life: Canadian lessons for indigenizing Forest Schools**. *Journal of Outdoor and Environmental Education*. 2018;21(1):89-102. Available from: <https://link.springer.com/article/10.1007/s42322-017-0003-4>.
7. McKay M. **Infusing Indigenous Perspectives in Outdoor Education and Inquiry while Developing Early Literacy Skills**. *Seeing Self in Story: Holding Space for Identity and Perspectives*. 2020:10. Available from: <https://www.educationthatinspires.ca/2020/01/28/meaningful-acts-of-reconciliation-infusing-indigenous-perspectives-in-outdoor-education-and-inquiry/>.
8. Pacini-Ketchabaw V, Taylor A, Blaise M, de Finney S. **Learning How to Inherit in Colonized and Ecologically Challenged Life Worlds in Early Childhood Education**. *Canadian Children*. 2015;40(2). Available from: <https://ir.lib.uwo.ca/edupub/21/>.
9. Streelasky J. Elementary Students' Perceptions of Their School Learning Experiences: Children's Connections with Nature and Indigenous Ways of Knowing. *Child Youth Environ*. 2017;27(1):47-66. Available from: <https://doi.org/10.7721/chilyoutenvi.27.1.0047>.
10. Waite S, Pleasants K. **Cultural perspectives on experiential learning in outdoor spaces**. *Journal of Adventure Education and Outdoor Learning*. 2012;12(3):161-5. Available from: <https://doi.org/10.1080/14729679.2012.699797>.

II **Curriculum, case studies – Canadian**

Journal Articles, Book Sections

1. Banack H. **A Place-Binding Knot Map. Phronêsis as Outdoor Learning**. *Außerschulische Lernorte, Erlebnispädagogik und philosophische Bildung*: Springer; 2021. p. 115-45. Available from: https://link.springer.com/chapter/10.1007/978-3-476-05770-9_6.
2. Banack H, Berger I. **The emergence of early childhood education outdoor programs in British Columbia: A meandering story**. *Children's Geographies*. 2020;18(1):58-68. Available from: <https://doi.org/10.1080/14733285.2019.1590527>.

3. Baron J. **10 Strategies for Strengthening Outdoor Learning at Your School: An Iterative Sequence for Multiple Age Groups**. Connections (07010400). 2021;39(2):24-9. Available from: <https://greenteacher.com/ten-strategies-for-strengthening-outdoor-learning-at-your-school/>.
4. Blanchet-Cohen N, Elliot E. **Young children and educators engagement and learning outdoors: A basis for rights-based programming**. Early education & development. 2011;22(5):757-77. Available from: <https://doi.org/10.1080/10409289.2011.596460>.
5. Blenkinsop S. **In search of the eco-teacher: Public school edition**. Canadian Journal of Environmental Education (CJEE). 2014;19:145-59. Available from: <https://cjee.lakeheadu.ca/article/view/1305>.
6. Boileau EY, Dabaja ZF. **Forest School practice in Canada: a survey study**. Journal of Outdoor and Environmental Education. 2020;23(3):225-40. Available from: <https://link.springer.com/article/10.1007/s42322-020-00057-4>.
7. Bunce L, McGee N, Phillips-MacNeil C. **Ontario EcoSchools: A Framework for Environmental Learning and Action in K-12 Schools**. In: Gough A, Lee JC, Tsang EPK, editors. Green Schools Globally International Explorations in Outdoor and Environmental Education. Cham: Springer; 2020. Available from: https://doi.org/10.1007/978-3-030-46820-0_7.
8. Carty E, Harper N, Magnuson D. **Outdoor adventure and Child and Youth Care Practice: intersections and opportunities**. Child and Youth Care across Sectors, Volume 1: Canadian Perspectives. 2019;1:80. Available from: https://www.researchgate.net/publication/332705980_Outdoor_adventure_and_child_and_youth_care_practice_Intersections_and_opportunities.
9. Coe HA. Embracing risk in the Canadian woodlands: Four children's risky play and risk-taking experiences in a Canadian Forest Kindergarten. J Early Childhood Res. 2017;15(4):374-88. Available from: <https://doi.org/10.1177%2F1476718X15614042>.
10. Elliot E. **Envisioning a nature kindergarten**. Green Teacher. 2014;103:38-42. Available from: <https://greenteacher.com/webinars/past-webinars/nature-pre-schools/envisioning-a-nature-kindergarten/>.
11. Elliot E, Krusekopf F. **Thinking Outside the Four Walls of the Classroom: A Canadian Nature Kindergarten**. International Journal of Early Childhood. 2017;49(3):375-89. Available from: <https://doi.org/10.1007/s13158-017-0203-7>.
12. Elliot E, Krusekopf F. **Growing a nature kindergarten that can flourish**. Australian Journal of Environmental Education. 2018;34(2):115-26. Available from: <https://www.cambridge.org/core/journals/australian-journal-of-environmental-education/article/abs/growing-a-nature-kindergarten-that-can-flourish/5F4DFA2CE18849F27C46BA410FD1F85E>.
13. Elliot E, Ten Eycke K, Chan S, Müller U. **Taking kindergartners outdoors: Documenting their explorations and assessing the impact on their ecological awareness**. Children Youth and Environments. 2014;24(2):102-22. Available from: <https://www.jstor.org/stable/10.7721/chilyoutenvi.24.2.0102>.
14. Foran A, Young D, Kraglund-Gauthier WL, Hubley D, Doyle B, Doucette J, et al. **The 7 Rights: an active reflection tool to develop risk awareness for outdoor first aid education**. Available from: <https://oaks.kent.edu/ijfae/vol2/iss1/7-rights-active-reflection-tool-develop-risk-awareness-outdoor-first-aid-education>.
15. Gray T. **A 30-year retrospective study of the impact of outdoor education upon adolescent participants: Salient lessons from the field**. Pathways: The Ontario Journal of Outdoor Education. 2017:4-15. Available from: <https://researchdirect.westernsydney.edu.au/islandora/object/uws%3A42363>.

16. Harwood D, Collier DR. **The matter of the stick: Storying/(re) storying children's literacies in the forest.** *Journal of Early Childhood Literacy*. 2017;17(3):336-52. Available from: <https://journals.sagepub.com/doi/10.1177/1468798417712340>.
17. Hoyland T, Elliot E, Lockerbie L, VanStone E. **Nature kindergarten in Sooke: A unique collaboration.** *Canadian Children*. 2014;39(2):39-44. Available from: <https://journals.uvic.ca/index.php/jcs/article/view/15224>.
18. Katzko A. **A K–6 Nature-Based Learning Program: Ryan Lemphers and Graham Campbell.** *Connections* (07010400). 2021;39(2):56-60. Available from: [https://go.boarddocs.com/can/fsd38/Board.nsf/files/BXLN975ECB41/\\$file/NBL%20Implementation%20Plan.pdf](https://go.boarddocs.com/can/fsd38/Board.nsf/files/BXLN975ECB41/$file/NBL%20Implementation%20Plan.pdf).
19. Lloyd A, Truong S, Gray T. **Place-based outdoor learning: More than a drag and drop approach.** *Journal of Outdoor and Environmental Education*. 2018;21(1):45-60. Available from: <https://link.springer.com/article/10.1007/s42322-017-0002-5>.
20. Oberle E, Zeni M, Munday F, Brussoni M. **Support factors and barriers for outdoor learning in elementary schools: A systemic perspective.** *American Journal of Health Education*. 2021;52(5):251-65. Available from: <https://www.outdoorcouncil.ca/resources/Documents/Resources/Support%20Factors%20and%20Barriers%20for%20Outdoor%20Learning%20in%20Elementary%20Schools%20A%20Systemic%20Perspective.pdf>.
21. Omidvar N, Wright T, Beazley K, Seguin D. Examining Children's Indoor and Outdoor Nature Exposures and Nature-related Pedagogic Approaches of Teachers at Two Reggio-Emilia Preschools in Halifax, Canada. *Journal of Education for Sustainable Development*. 2019;13(2):215-41. Available from: <https://doi.org/10.1177%2F0973408219872066>.
22. Purc-Stephenson R, Rawleigh M, Kemp H, Asfeldt M. **We are wilderness explorers: A review of outdoor education in Canada.** *Journal of experiential education*. 2019;42(4):364-81. Available from: <https://journals.sagepub.com/doi/abs/10.1177/1053825919865574?journalCode=jeea>.
23. Stevens Z, Grimwood BSR, Babcock S, Meissner CR. **Shifting Culture Towards Endorsement and Advocacy of Outdoor Play and Learning: A Collaborative Case Study with KidActive.** *Canadian Journal of Environmental Education*. 2020;23(2). Available from: <https://cjee.lakeheadu.ca/article/view/1622>.
24. Streelasky J. **A forest-based environment as a site of literacy and meaning making for kindergarten children.** *Literacy*. 2019;53(2):95-101. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1111/lit.12155>.
25. Tink LN, Kingsley BC, Spencer-Cavaliere N, Halpenny E, Rintoul MA, Pratley A. 'Pushing the outdoor play agenda': exploring how practitioners conceptualise and operationalise nature play in a Canadian context. *Qualitative Research in Sport, Exercise and Health*. 2020;12(3):303-18. Available from: <https://doi.org/10.1080/2159676X.2018.1457071>.
26. Waite S. **Children Learning Outside the Classroom. From Birth to Eleven.** London, UK: Sage Publications; 2017 Feb. Available from: <https://uk.sagepub.com/en-gb/eur/children-learning-outside-the-classroom/book244871>.
27. Zimanyi L, Rossovskaya O. **Who is John the Snail and When Can We Meet Him?: Parent Perspectives on Children's Engagement in a Forest Nature Program.** Available from: <https://www.outdoorplaycanada.ca/2020/07/16/who-is-john-the-snail-and-when-can-we-meet-him-parent-perspectives-on-childrens-engagement-in-a-forest-nature-program/>.

Reports, Blogs, Websites

1. Alberta Teachers' Association. **This guide includes resources about Forest School and outdoor educational activities for students.** Edmonton, AB: Government of Alberta. Available from: <https://teachers-ab.libguides.com/c.php?g=712400&p=5078151>.
2. Back to Nature Network. **Stepping into Nature: Teacher Stories Volume 1.** Ontario: Resources for Thinking, supported by the Ontario Trillium Foundation through a collaborative partnership between Royal Botanical Gardens, Parks and Recreation Ontario and Ontario Nature; 2013. Available from: <https://www.back2nature.ca/stepping-into-nature/>.
3. Child Nature. **Forest and Nature School Practitioners Course.** Child and Nature Alliance of Canada. Available from: <https://childnature.ca/forest-school-canada/>.
4. Foster A, Linney G. **Reconnecting Children Through Outdoor Education.** Council of Outdoor Educators of Ontario; 2007. Available from: <https://eric.ed.gov/?id=ED517798>.
5. Langer S. Whether it's an outdoor learning center or using the school building as a teaching tool, educators are embracing sustainable design in their curriculum. Stantec; 2019. Available from: <https://www.stantec.com/en/ideas/from-the-design-quarterly-teaching-nature-via-outdoor-spaces-and-sustainable-design>.
6. Ontario Ministry of Education. **Ready, Set, Green! Tips, Techniques and Resources from Ontario Educators.** Toronto, ON: Government of Ontario. Available from: https://www.abca.ca/downloads/GC_readySetGreen.pdf.
7. Ontario Ministry of Education. **The Ontario Curriculum Grades 1-8 and The Kindergarten Program. Environmental Education Scope and Sequence of Expectations.** Toronto, ON: Government of Ontario; 2017. Available from: http://www.edu.gov.on.ca/eng/curriculum/elementary/environmental_ed_kto8_eng.pdf.
8. Outdoor Playbook. **Curriculum connections.** Outdoor Playbook. Available from: <http://outdoorplaybook.ca/learn/education-research/curriculum-connections/>.
9. Parks Canada. **Connecting Canadians with Nature.** Parks Canada; 2020. Available from: https://parks-parcs.ca/wp-content/uploads/2020/09/ConnectingCanadians-English_web.pdf.
10. Resources 4 Thinking. **Step Outside – Your Guide to Nature's Event.** Resources for Thinking. Available from: <http://resources4rethinking.ca/en/step-outside/>.
11. Simon Fraser University. **Imaginative Ecological Education - Teacher Resources.** Burnaby, BC: SFU. Available from: <http://ierg.ca/IEE/>.
12. Toyota Ever Green Learning Grounds. **Classroom Management: Outdoor Teaching Strategies** Available from: http://en.beststart.org/sites/en.beststart.org/files/u4/B2_Classroom_Management.pdf.
13. Merritt P. **Taking Learning Outdoors: Connecting Students and the Curriculum with Nature.** Victoria, BC: University of Victoria; 2015. Available from: https://dspace.library.uvic.ca/bitstream/handle/1828/6029/Merritt_Pamela_MEd_2015pdf.pdf;sequence=1.
14. Perez C. **Forest schools in Canada: An exploration of teacher perspectives in Ontario.** Toronto: University of Toronto, Ontario Institute for Studies in Education; 2016. Available from: https://tspace.library.utoronto.ca/bitstream/1807/72268/1/Perez_Cara_L_201606_MT_MTRP.pdf.
15. Child and Nature Alliance. **The "Hidden Curriculum" of Forest School.** Child and Nature Alliance; 2017 [updated May]; Available from: <https://childnature.ca/the-hidden-curriculum-of-forest-school/>.
16. Columbia Basin Environmental Education Network, Whittick D, King M. **BC Curriculum.** Invermere, BC: Columbia Basin Environmental Education Network; Available from: <https://cbeen.ca/curriculum/>.
17. Dash BC. **Outdoor Classroom Resources.** Dash BC; Available from: <https://dashbc.ca/resources/outdoor-classroom/>.

18. David Suzuki Foundation. **Connecting With Nature: an educational guide for grades four to six.** David Suzuki Foundation; Available from: <https://davidsuzuki.org/take-action/act-locally/connecting-youth-with-nature/>.
19. Evergreen. **Evergreen, Guides for Education, Community, and Family.** Evergreen; Available from: <http://www.evergreen.ca/en/resources/>.
20. North Vancouver School District. **Outdoor learning.** North Vancouver, BC: NVSD; Available from: <http://nvstd44curriculumhub.ca/outdoor-school-curriculum-and-instruction-planning/>.
21. Zeni M. **10 Tips For Teaching Outside The Classroom.** Available from: <https://meganzeni.com/teaching-outside-the-classroom/>.

III Curriculum, case studies – International

Journal Articles, Book Sections

1. Absher JD, Fege AS, Jacobson L. **Institutional Influences on the Provision of After-School Nature Programs.** Child Youth Environ. 2015;25(1):57-79. Available from: <https://doi.org/10.7721/chilyoutenvi.25.1.0057>.
2. Arvola M, Fuchs IE, Nyman I, Szczepanski A. **Mobile Augmented Reality and Outdoor Education.** Built Environ. 2021;47(2):223-42. Available from: <https://doi.org/10.2148/benv.47.2.223>.
3. Ashmann S. Developing a Nature-Based Four-Year-Old Kindergarten Program: Oak Learning Center at Bay Beach Wildlife Sanctuary in Green Bay, WI (USA). International Journal of Early Childhood Environmental Education. 2018;6(1):35-43. Available from: <https://naaee.org/eepr/research/library/developing-nature-based-four-year-old>.
4. Barfod K, Ejbye-Ernst N, Mygind L, Bentsen P. **Increased provision of udeskole in Danish schools: An updated national population survey.** Urban Forestry & Urban Greening. 2016;20:277-81. Available from: <https://www.sciencedirect.com/science/article/pii/S1618866716302126>.
5. Barfod KS, Daugbjerg P. **Potentials in Udeskole: Inquiry-Based Teaching Outside the Classroom.** Frontiers in Education. 2018;3(34). Available from: <https://www.frontiersin.org/article/10.3389/feduc.2018.00034>.
6. Bentsen P, Schipperijn J, Jensen FS. **Green Space as Classroom: Outdoor School Teachers' Use, Preferences and Ecostrategies.** Landscape Research. 2013;38(5):561-75. Available from: <https://doi.org/10.1080/01426397.2012.690860>.
7. Borg F. **A case study of a Green Flag-certified preschool in Sweden.** Hungarian Educational Research Journal. 2019;9(4):607-27. Available from: <https://doi.org/10.1556/063.9.2019.4.52>.
8. Chawla L. **Nature and Young Children: Encouraging Creative Play and Learning in Natural Environments, 2nd edition.** Child Youth Environ. 2013;23(2):224-. Available from: <https://www.routledge.com/Nature-and-Young-Children-Encouraging-Creative-Play-and-Learning-in-Natural/Wilson/p/book/9781138553347>.
9. Chowdhury MAT. **Nature of Environmental Education in Bangladesh: A School Level Assessment with Reference to the National Curriculum.** International Electronic Journal of Environmental Education. 2014;4(1):53-60. Available from: <https://files.eric.ed.gov/fulltext/EJ1060541.pdf>.
10. Christiansen A, Hannan S, Anderson K, Coxon L, Fargher D. **Place-based nature kindergarten in Victoria, Australia: No tools, no toys, no art supplies.** Journal of Outdoor and Environmental Education. 2018;21(1):61-75. Available from: <https://naaee.org/eepr/research/library/place-based-nature-kindergarten-victoria?page=12>.

11. Christie B, Beames S, Higgins P. **Context, culture and critical thinking: Scottish secondary school teachers' and pupils' experiences of outdoor learning.** Br Educ Res J. 2016;42(3):417-37. Available from: <https://bera-journals.onlinelibrary.wiley.com/doi/abs/10.1002/berj.3213>.
12. Christie B, Higgins P. Residential outdoor learning experiences and Scotland's school curriculum: an empirical and philosophical consideration of progress, connection and relevance. Scottish Educational Review. 2012;44(2):45-59. Available from: <https://www.research.ed.ac.uk/en/publications/residential-outdoor-learning-experiences-and-scotlands-school-cur>.
13. Cincera J, Johnson B, Kroufek R. **Outdoor environmental education programme leaders' theories of experiential learning.** Cambridge Journal of Education. 2020;50(6):729-45. Available from: <https://doi.org/10.1080/0305764X.2020.1770693>.
14. Clark L, Körner D. **Transformative learning in nature: An educational pilot programme at Hazel Hill Wood.** Journal of Holistic Healthcare. 2017;14(1):25-9. Available from: <https://bhma.org/wp-content/uploads/2017/07/14.1.6-Transformative-Learning-in-Nature.pdf>.
15. Coates JK, Pimlott-Wilson H. **Learning while playing: Children's Forest School experiences in the UK.** Br Educ Res J. 2019;45(1):21-40. Available from: <https://bera-journals.onlinelibrary.wiley.com/doi/abs/10.1002/berj.3491>.
16. Constable K. **The outdoor classroom in practice, ages 3-7: A month-by-month guide to forest school provision:** Routledge; 2018. Available from: <https://www.routledge.com/The-Outdoor-Classroom-in-Practice-Ages-3-7-A-Month-By-Month-Guide-to/Constable/p/book/9781138310100>.
17. Coppola R, Schembri R, Manzo G, SgrÒ F. **Possible use of technological tools in outdoor movement education.** Journal of Physical Education & Sport. 2021;21:702-8. Available from: <https://www.proquest.com/openview/a5ffd86c6f6cd61a5fd4854a6cc13f66/1?pq-origsite=gscholar&cbl=1006394>.
18. Cornish C, Driver F, Nesbitt M, Willison J. **Revitalizing the School Museum: Using Nature-Based Objects for Cross-Curricular Learning.** Journal of Museum Education. 2021;46(3):334-47. Available from: <https://eric.ed.gov/?id=EJ1225659>.
19. Cree J, Robb M. **The Essential Guide to Forest School and Nature Pedagogy.** New York: Routledge; 2021. Available from: https://www.routledge.com/The-Essential-Guide-to-Forest-School-and-Nature-Pedagogy/Cree-Robb/p/book/9780367425616?qclid=Cj0KCQiAwgCOBhCdARIsAEPyW9k2FU8-zISWA02iujdGGYWF9lkoInkVF6TYEOLW2BdUjCjHiSoUFXlaAgpvEALw_wcB.
20. Cumming F, Nash M. **An Australian perspective of a forest school: shaping a sense of place to support learning.** Journal of Adventure Education & Outdoor Learning. 2015;15(4):296-309. Available from: <https://doi.org/10.1080/14729679.2015.1010071>.
21. Dabaja ZF. **The Forest School impact on children: reviewing two decades of research.** Education 3-13. 2021:1-14. Available from: <https://doi.org/10.1080/03004279.2021.1889013>.
22. Dabaja ZF. **Reviewing two decades of research on the Forest School impact on children: The sequel.** Education 3-13. 2021:1-14. Available from: <https://doi.org/10.1080/03004279.2021.1905019>.
23. Davis JN, Pérez A, Asigbee FM, Landry MJ, Vandyousefi S, Ghaddar R, et al. School-based gardening, cooking and nutrition intervention increased vegetable intake but did not reduce BMI: Texas sprouts - a cluster randomized controlled trial. Int J Behav Nutr Phys Act. 2021;18(1):18. Available from: <https://doi.org/10.1186/s12966-021-01087-x>.
24. de Lázaro y Torres ML, de Miguel González R, Sánchez IB. **Outdoor Learning and Geography on the Cloud: A Challenge for the European "School on the Cloud" Network.** International Journal of Technologies in Learning. 2016;23(3):1-13. Available from:

- https://www.researchgate.net/publication/311267259_Outdoor_learning_and_geography_on_the_cloud_A_challenge_for_the_European_school_on_the_cloud_network.
25. Fägerstam E, Blom J. **Learning biology and mathematics outdoors: Effects and attitudes in a Swedish high school context**. Journal of Adventure Education and Outdoor Learning. 2013;13(1):56-75. Available from: <https://doi.org/10.1080/14729679.2011.647432>.
 26. Glaab S, Heyne T. **Focus Wildlife Park: Outdoor Learning at Workstations for Primary School Children**. Applied Environmental Education and Communication. 2020;19(2):141-54. Available from: <https://doi.org/10.1080/1533015X.2018.1554461>.
 27. Gray T, Birrell C. **'Touched by the Earth': a place-based outdoor learning programme incorporating the Arts**. Journal of Adventure Education & Outdoor Learning. 2015;15(4):330-49. Available from: <https://doi.org/10.1080/14729679.2015.1035293>.
 28. Halimah L, Abdillah F. Developing Sundanese Local Culture Literacy in Elementary School: Cross-Curricular Learning Together with Indoor and Outdoor Environment Integration. Interchange (0826-4805). 2021;52(3):319-36. Available from: <https://link.springer.com/article/10.1007/s10780-021-09438-0>.
 29. Harianto E, Nursalam LO, Ikhsan FA, Zakaria, Damhuri, Sejati AE. The compatibility of outdoor study application of environmental subject using psychological theories of intelligence and meaningful learning in senior high school. Geosfera Indonesia. 2019;4(2):201-16. Available from: <http://dx.doi.org/10.19184/geosi.v4i2.9903>.
 30. Harris F. **Outdoor learning spaces: The case of forest school**. Area. 2018;50(2):222-31. Available from: <https://rqs-ibg.onlinelibrary.wiley.com/doi/pdf/10.1111/area.12360>.
 31. Hickman J, Atkins C. **Outdoor and adventurous activities: At key stage 2**. Physical Education Matters. 2016. Available from: <https://www.lotc.org.uk/wp-content/uploads/2012/04/CAAPS-AfPE-article.pdf>.
 32. Hickman J, Hathaway F. **To be or not to be? Outdoor and adventurous activities embedded in the primary school physical education curriculum**. Physical Education Matters. 2018;13(3):22-4. Available from: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=sph&AN=133152187&site=ehost-live&scope=site&custid=s5672194>.
 33. Hill V. Learning in nature: Leadership opportunities in an Education Outside the Classroom programme in a New Zealand early childhood centre. Journal of Educational Leadership, Policy & Practice. 2018;33(1):32-45. Available from: https://www.exeley.com/journal_of_educational_leadership_policy_and_pract/doi/10.21307/jelpp-2018-004.
 34. Hradsky J. Implementing Outdoor Education Curriculum: The Benefits Of, Barriers To, And Materials Required For Successful Outdoor Education [thesis]: Hamline University; 2021. Available from: https://digitalcommons.hamline.edu/hse_cp/627/.
 35. Jose S, Patrick PG, Moseley C. **Experiential learning theory: the importance of outdoor classrooms in environmental education**. International Journal of Science Education, Part B. 2017;7(3):269-84. Available from: <https://doi.org/10.1080/21548455.2016.1272144>.
 36. Jung YJ, Zimmerman HT, Land SM. **Emerging and developing situational interest during children's tablet-mediated biology learning activities at a nature center**. Science Education. 2019;103(4):900-22. Available from: <https://psycnet.apa.org/doi/10.1002/sce.21514>.
 37. Kerr K. Teacher development through coteaching outdoor science and environmental education across the elementary-middle school transition. The Journal of Environmental Education. 2020;51(1):29-43. Available from: <https://doi.org/10.1080/00958964.2019.1604482>.

38. Khudoiberganovna NR. **Methodology for teaching outdoor games in preschool institutions.** Academic Research in Educational Sciences. 2020(4). Available from: http://ares.uz/storage/app/media/2020yil/Vol_1_No_4/932-941_abstract.pdf.
39. King J, Hardwell A, Brymer E, Bedford A. Reconsidering McKenzie's Six Adventure Education Programming Elements Using an Ecological Dynamics Lens and Its Implications for Health and Wellbeing. *Sports (Basel)*. 2020;8(2). Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32054044>.
40. Kleespies MW, Gübert J, Popp A, Hartmann N, Dietz C, Spengler T, et al. Connecting High School Students With Nature - How Different Guided Tours in the Zoo Influence the Success of Extracurricular Educational Programs. *Front Psychol*. 2020;11:1804. Available from: <https://doi.org/10.3389/fpsyg.2020.01804>.
41. Knight S. **Forest School as a way of learning in the outdoors in the UK.** *International Journal for Cross-Disciplinary Subjects in Education*. 2011;1(1):590-5. Available from: <https://www.forestschoolassociation.org/wp-content/uploads/2013/04/Forest-School-as-a-Way-of-Learning-in-the-Outdoors-in-the-UK.pdf>.
42. Kos M, Jerman J. **Provisions for outdoor play and learning in Slovene preschools.** *Journal of Adventure Education and Outdoor Learning*. 2013;13(3):189-205. Available from: <https://doi.org/10.1080/14729679.2013.769888>.
43. Kruger CJ, Scogin SC, Jekkals RE. **The STREAM Program: Project-Based Learning in an Outdoor Context.** *Kappa Delta Pi Record*. 2019;55(2):85-8. Available from: <https://doi.org/10.1080/00228958.2019.1580987>.
44. Löfström E, Klöckner CA, Nesvold IH. Nature in Your Face - Disruptive Climate Change Communication and Eco-Visualization as Part of a Garden-Based Learning Approach Involving Primary School Children and Teachers in Co-creating the Future. *Front Psychol*. 2020;11:568068. Available from: <https://doi.org/10.3389/fpsyg.2020.568068>.
45. Mackinder M. **Footprints in the woods: 'tracking' a nursery child through a Forest School session.** *Education 3-13*. 2017;45(2):176-90. Available from: <https://doi.org/10.1080/03004279.2015.1069368>.
46. MacQuarrie S. **Everyday teaching and outdoor learning: developing an integrated approach to support school-based provision.** *Education 3-13*. 2018;46(3):345-61. Available from: <https://doi.org/10.1080/03004279.2016.1263968>.
47. Marchant E, Todd C, Cooksey R, Dredge S, Jones H, Reynolds D, et al. **Curriculum-based outdoor learning for children aged 9-11: A qualitative analysis of pupils' and teachers' views.** *PLoS One*. 2019;14(5):e0212242. Available from: <https://doi.org/10.1371/journal.pone.0212242>.
48. Martin A, Franc D, Zounková D. **Outdoor and experiential learning: An holistic and creative approach to programme design:** Routledge; 2017. Available from: <https://www.routledge.com/Outdoor-and-Experiential-Learning-An-Holistic-and-Creative-Approach-to/Martin-Franc/p/book/9781138248625>.
49. Masters J, Grogan L. **A comparative analysis of nature kindergarten programmes in Australia and New Zealand.** *International Journal of Early Years Education*. 2018;26(3):233-48. Available from: <https://doi.org/10.1080/09669760.2018.1459507>.
50. Mulholland M, O'Toole C. **When it matters most: a trauma-informed, outdoor learning programme to support children's wellbeing during COVID-19 and beyond.** *Irish Educational Studies*. 2021;40(2):329-40. Available from: <https://doi.org/10.1080/03323315.2021.1915843>.
51. Murphy MC. **Exploring the "construction" strand in the Irish primary school visual arts curriculum through the Forest School approach.** *Journal of Adventure Education and Outdoor Learning*. 2018;18(3):257-74. Available from: <https://doi.org/10.1080/14729679.2018.1443481>.

52. Nah K-O, Waller T. **Outdoor play in preschools in England and South Korea: Learning from polyvocal methods.** *Early Child Dev Care.* 2015;185(11-12):2010-25. Available from: <https://doi.org/10.1080/03004430.2015.1028397>.
53. Nielsen G, Mygind E, Bolling M, Otte CR, Schneller MB, Schipperijn J, et al. A quasi-experimental cross-disciplinary evaluation of the impacts of education outside the classroom on pupils' physical activity, well-being and learning: the TEACHOUT study protocol. *BMC Public Health.* 2016;16(1):1117. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/27776502>.
54. Olsen H, Thompson D, Hudson S. **Outdoor Learning Supervision Is More Than Watching Children Play.** *Dimensions of Early Childhood.* 2014;42(1):32-9. Available from: <https://eric.ed.gov/?id=EJ945687>.
55. Ord J, Leather M. **The Substance Beneath the Labels of Experiential Learning: The Importance of John Dewey for Outdoor Educators.** *Journal of Outdoor and Environmental Education.* 2011;15(2):13-23. Available from: <https://doi.org/10.1007/BF03400924>.
56. Paulsen CA, Andrews JR. **Using Screen Time to Promote Green Time: Outdoor STEM Education in OST Settings.** *Afterschool Matters.* 2019(30):24-32. Available from: <https://eric.ed.gov/?id=EJ1236075>.
57. Peng A, Sollervall H. **Primary School Students' Spatial Orientation Strategies in an Outdoor Learning Activity Supported by Mobile Technologies.** *International Journal of Education in Mathematics, Science and Technology.* 2014;2(4):246-56. Available from: <https://www.semanticscholar.org/paper/Primary-School-Students'-Spatial-Orientation-in-an-Peng-Sollervall/61bab9f1b551209ba8fb0783b1eea6b4e7a3fdc0>.
58. Pimlott-Wilson H, Coates J. Rethinking learning? Challenging and accommodating neoliberal educational agenda in the integration of Forest School into mainstream educational settings. *Geographical Journal.* 2019;185(3):268-78. Available from: <https://doi.org/10.1111/geoj.12302>.
59. Richmond D, Sibthorp J, Gookin J, Annarella S, Ferri S. **Complementing classroom learning through outdoor adventure education: out-of-school-time experiences that make a difference.** *Journal of Adventure Education & Outdoor Learning.* 2018;18(1):36-52. Available from: <https://doi.org/10.1080/14729679.2017.1324313>.
60. Russell W, Fitzpatrick J, Handscomb B. **'Adventure Playgrounds', 'Nature' and 'Learning': Disrupting Lofty Notions.** *Built Environ.* 2021;47(2):206-22. Available from: <https://doi.org/10.2148/benv.47.2.206>.
61. Rymanowicz K, Hetherington C, Larm B. **Planting the Seeds for Nature-Based Learning: Impacts of a Farm- and Nature-Based Early Childhood Education Program.** *International Journal of Early Childhood Environmental Education.* 2020;8(1):44-63. Available from: <https://eric.ed.gov/?id=EJ1280494>.
62. Scrutton R. **Investigating the Process of Learning for School Pupils on Residential Outdoor Education Courses.** *Journal of Outdoor and Environmental Education.* 2020;23(1):39-56. Available from: <https://link.springer.com/article/10.1007/s42322-019-00044-4>.
63. Seaman J, Rheingold A, Rea T, Waite S. Issue 17: Are educational reform policies that stress standards and accountability compatible with pedagogical aims and practices in outdoor education? No. *Taken Over? Schooling and Outdoor Education. Controversial Issues in Adventure Programming* Champaign, IL: Human Kinetics. 2012:265-71. Available from: <http://dx.doi.org/10.5040/9781492595359.ch-017>.
64. Silverman J, Corneau N. **From Nature Deficit to Outdoor Exploration: Curriculum for Sustainability in Vermont's Public Schools.** *Journal of Adventure Education and Outdoor Learning.* 2017;17(3):258-73. Available from: <https://doi.org/10.1080/14729679.2016.1269235>.

65. Sobel D. **Learning to walk between the raindrops: the value of nature preschools and forest kindergartens.** Children Youth and Environments. 2014;24(2):228-38. Available from: <https://www.jstor.org/stable/10.7721/chilyoutenvi.24.2.0228>.
66. Speelman EA, Wagstaff M. **Adventure Leadership and Experiential Education.** New Dir Stud Leadersh. 2015;2015(147):89-98. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/26895017>.
67. Sukamti EU, Putra AP, Devi AC. **Innovation of Project Base Learning (PjBL) on Outdoor Study for PGSD's Student Activity on Education Diffusion.** Int J Innov Creat Chang. 2019;5(5):546-61. Available from: https://www.ijicc.net/images/vol5iss5/Part_2/55216_Sukamti_2020_E_R.pdf.
68. Suryani A, Soedarso S, Saifulloh M, Muhibbin Z, Wahyuddin W, Hanoraga T, et al. **Education for Environmental Sustainability: A Green School Development.** IPTEK Journal of Proceedings Series. 2019(6):65-72. Available from: <http://dx.doi.org/10.12962/j23546026.y2019i6.6347>.
69. Svobodová H, Durna R, Mísařová D, Hofmann E. **A proposal of a concept of outdoor education for primary and lower secondary schools – the case of the Czech Republic.** Journal of Adventure Education and Outdoor Learning. 2021;21(4):336-56. Available from: <https://doi.org/10.1080/14729679.2020.1830138>.
70. Taylor HB. **From Fear to Freedom: Risk and Learning in a Forest School.** YC: Young Children. 2019;74(2):60-7. Available from: <https://www.naeyc.org/resources/pubs/yc/may2019/forest-school>.
71. Thomas GJ. **Effective teaching and learning strategies in outdoor education: Findings from two residential programmes based in Australia.** Journal of Adventure Education and Outdoor Learning. 2019;19(3):242-55. Available from: <https://doi.org/10.1080/14729679.2018.1519450>.
72. Torkar G, Rejc Aa. **Children's Play and Physical Activity in Traditional and Forest (Natural) Playgrounds.** International Journal of Educational Methodology. 2017;3(1):25-30. Available from: <https://www.ijem.com/childrens-play-and-physical-activity-in-traditional-and-forest-natural-playgrounds>.
73. Wahyuni S, Indrawati I, Sudarti S, Suana W. **Developing science process skills and problem solving abilities based on outdoor learning in junior high school.** Jurnal Pendidikan IPA Indonesia. 2017;6(1). Available from: <https://journal.unnes.ac.id/nju/index.php/jpii/article/view/6849>.
74. Waite S, Passy R, Gilchrist M. **Getting it off PAT: Researching the use of urban nature in schools.** Urban nature: Inclusive learning through youth work and school work. 2014:35-49. Available from: https://scholar.google.co.uk/citations?view_op=view_citation&hl=en&user=Xii16IAAAAAAJ&alert_preview_to_p_rm=2&citation_for_view=Xii16IAAAAAAJ:qjMakFHDy7sC.
75. Wang X, Lam CB. **An exploratory case study of an American-style, play-based curriculum in China.** Journal of Research in Childhood Education. 2017;31(1):28-39. Available from: <https://doi.org/10.1080/02568543.2016.1243175>.
76. Ward K. **Singing in the forest: Outdoor education as early childhood curriculum.** The Palgrave international handbook of women and outdoor learning: Springer; 2018. p. 607-21. Available from: https://link.springer.com/chapter/10.1007%2F978-3-319-53550-0_41.
77. Williams-Sieghfredsen J. **Understanding the Danish Forest School approach: Early years education in practice:** Routledge; 2017. Available from: <https://www.routledge.com/Understanding-the-Danish-Forest-School-Approach-Early-Years-Education-in/Williams-Sieghfredsen/p/book/9781138688094>.
78. Winje Ø, Løndal K. 'Wow! is that a birch leaf? In the picture it looked totally different': a pragmatist perspective on deep learning in Norwegian 'uteskole'. Education 3-13. 2021:1-14. Available from: <https://doi.org/10.1080/03004279.2021.1955946>.

79. Wistoft K. **The desire to learn as a kind of love: gardening, cooking, and passion in outdoor education.** Journal of Adventure Education and Outdoor Learning. 2013;13(2):125-41. Available from: <https://doi.org/10.1080/14729679.2012.738011>.
80. Yokuş G. Integrating outdoor school learning into formal curriculum: Designing outdoor learning experiences and developing outdoor learning framework for pre-service teachers. International Journal of Education Technology and Scientific Researches. 2020;5:1330-88. Available from: http://ijetsar.com/Makaleler/142241601_4.%201330-1388%20g%c3%bcrol%20yoku%c5%9f.pdf.

Reports, Blogs, Websites

1. Boston Schoolyard Initiative. **Outdoor Classroom Users Guide** Boston, MA: Boston Schoolyard Initiative. Available from: <http://www.schoolyards.org/pdf/OutdoorClassroomUsersGuide.pdf>.
2. Child by Nature. **Top free nature-based learning curriculums for schools and homeschools.** Available from: <https://www.childhoodbynature.com/top-free-nature-based-learning-curriculums-for-schools-and-homeschools/>.
3. Children's Forest Central Oregon. **Curriculum and Resources.** Children's Forest Central Oregon. Available from: <https://childrensforestco.org/curriculum-and-resources/>.
4. Ecology Project International. **11 Ways to Incorporate Outdoor Education in your Curriculum.** Ecology Project International. Available from: <https://www.ecologyproject.org/post/11-ways-to-incorporate-outdoor-education-in-your-curriculum>.
5. Elpel TJ. **K - 12 Outdoor Skills Online Curriculum Guide For Schools, Scouts, Nature Centers, and Families.** HOPS Press, LLC Available from: http://www.hopspress.com/Books/Curriculum_Guide/Outdoor_Skills.html.
6. Hirschmann K. **Forest club: a year of activities, crafts and exploring nature.** Lake Forest, CA: Words and Pictures; 2019. Available from: https://lernerbooks.com/products/search_results?search%5Bcollection_name_contains%5D=Forest+Club.
7. Natural Start Alliance. **Curriculum/Resource Guides - resources.** Washington, DC: North American Association for Environmental Education. Available from: <https://naturalstart.org/resources/curriculumresource-guides>.
8. Nature Explore. **Nature for Children. Every Day. Resource Guide.** Lincoln, NE: Nature Explore; 2014. Available from: <http://www.natureexplore.org/resourceguide.cfm>.
9. Outdoor Recreation Australia. **Curriculum Guidelines Guidelines for K-12 Outdoor Education curriculum.** Outdoor Recreation Australia. Available from: <https://outdooreducationaustralia.org.au/education/curriculum-guidelines/>.
10. Portland Forest School. **Curriculum.** Portland, OR: Portland Forest School. Available from: <https://portlandforestschool.com/curriculum/>.
11. Project Learning Tree. **Explore your environment k-8 activity guide.** Washington, DC: Sustainable Forest Initiative Inc; 2021. Available from: <https://www.plt.org/curriculum/k-8-activity-guide-explore-your-environment/>.
12. Project Learning Tree. **Greenschools - Curriculum overview.** Washington, DC: Sustainable Forest Initiative Inc; 2021; Available from: <https://www.plt.org/environmental-education-curriculum/>.
13. Project Wild. **Growing Up WILD Guide.** Association of Fish and Wildlife Society. Available from: <http://www.projectwild.org/growingupwild.htm>.
14. Shackell A, Butler N, Doyle P, Ball D. **Design for Play: A guide to creating successful play spaces.** Play England; 2017. Available from: <http://www.playscotland.org/wp-content/uploads/Design-for-Play-a-guide-to-creating-successful-place-spaces.pdf>.

15. Sobel D. **Nature Preschools and Forest Kindergartens: The Handbook for Outdoor Learning.** Redleaf Press; 2015. Available from: <https://www.redleafpress.org/Nature-Preschools-and-Forest-Kindergartens-The-Handbook-for-Outdoor-Learning-P1340.aspx>.
16. University of Wisconsin. **Outdoor Education – Research Summary.** UWSC. Available from: <https://www.uwsp.edu/cnr-ap/leaf/school-grounds/documents/outdoor%20education%20research%20for%20school%20Grounds.pdf>.
17. Vegsund B. **Ideas and Inspiration for School-Based Physical Activity from Norway.** Lunenburg, NS: Municipality of the District of Lunenburg Nova Scotia; 2018 May. Available from: <http://southshoreconnect.ca/wp-content/uploads/2018/05/Education-on-the-Move.pdf>.
18. Wilderness Connect for Practitioners. **Education.** Wilderness Connect for Practitioners. Available from: <https://wilderness.net/practitioners/education/default.php>.
19. Worroll J, Houghton P. **A year of forest school: outdoor play and skill-building fun for every season.** London, UK: Watkins; 2018. Available from: <https://www.acornnaturalists.com/year-of-forest-school-a-outdoor-play-and-skill-building-fun-for-every-season.html>.

IV Licensing, standards – Canadian

1. Alberta Health Services. **Health and Safety Guidelines for Child Care Facilities.** Edmonton, AB: Government of Alberta; 2017 Apr. Available from: <https://www.albertahealthservices.ca/assets/wf/eph/wf-eh-health-safety-guidlines-child-care-facilities.pdf>.
2. Association of Early Child Care Educators of Alberta. **Outdoor Play in Child Care Settings: Recommendations for Child Care Licensing in Alberta.** Edmonton, AB: AECEA. Available from: <https://aecea.ca/outdoor-play-child-care-settings-recommendations-child-care-licensing-alberta>.
3. Fraser Health. **Outdoor Play Areas (Away). Gaining Approval to Use a Play Area Away From the Facility.** Surrey, BC: Fraser Health. Available from: <https://www.fraserhealth.ca/-/media/Project/FraserHealth/FraserHealth/Health-Topics/Child-care/Child-Care-Licensing-Resources/Outdoor-Play-Areas-Away.pdf?rev=b02ad1de3d264ef085d50a21efb086ea>.
4. Government of British Columbia. **Director of Licensing Standard of Practice - Safe Play Space.** Victoria, BC: Government of British Columbia; 2007 Dec. Available from: https://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/child-day-care/safe_play_space.pdf.
5. Government of British Columbia. **Director of Licensing Standard of Practice - Active Play.** Victoria, BC: Government of British Columbia; 2016 Jul. Available from: https://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/child-day-care/active_play_june_2016.pdf.
6. Government of New Brunswick. **Operator Manual. Full-time and Part-time Early Learning and Childcare Centres.** Fredericton, NB: Government of New Brunswick; 2018 Jun. Available from: <https://www2.gnb.ca/content/dam/gnb/Departments/ed/pdf/ELCC/OperatorManualFullTimePartTimeEarlyLearningChildcareCentres.pdf>.
7. Herrington S, Nicholls J. **Outdoor play spaces in Canada: The safety dance of standards as policy.** Critical Social Policy. 2007;27(1):128-38. Available from: <https://doi.org/10.1177%2F0261018307072210>.
8. Hinkley T, Carson V, Hesketh KD. Physical environments, policies and practices for physical activity and screen-based sedentary behaviour among preschoolers within child care centres in Melbourne, Australia and Kingston, Canada. Child Care Health Dev. 2015;41(1):132-8. Available from: <https://doi.org/10.1111/cch.1215>.

9. Loebach J, Sanches M, Jaffe J, Elton-Marshall T. **Paving the Way for Outdoor Play: Examining Socio-Environmental Barriers to Community-Based Outdoor Play.** *Int J Environ Res Public Health*. 2021;18(7):3617. Available from: <https://www.mdpi.com/1660-4601/18/7/3617>.
10. Niblett B, Hiscott K, Power M, McFarlane H. Partnering for Outdoor Play: A Case Study of Forest and Nature School Programming in the Context of Licensed Child Care in Ottawa, Ontario. *Canadian Journal of Environmental Education*. 2020;23(2). Available from: <https://cjee.lakeheadu.ca/article/view/1651>.
11. Perlman M, Howe N, Bergeron C. **How and Why Did Outdoor Play Become a Central Focus of Scottish Early Learning and Care Policy.** *Canadian Journal of Environmental Education*. 2020;23(2):46-66. Available from: <https://cjee.lakeheadu.ca/article/view/1618>.
12. Predy M. **A comprehensive examination of outdoor play in licensed childcare centres in Alberta, Canada.** 2019. Available from: <https://era.library.ualberta.ca/items/aa98e3b9-8e3a-47c7-b8b5-cc835d8cff51>.
13. Sampasa-Kanyinga H, Colman I, Hamilton HA, Chaput J-P. Outdoor physical activity, compliance with the physical activity, screen time, and sleep duration recommendations, and excess weight among adolescents. *Obesity science & practice*. 2019;6(2):196-206. Available from: <https://doi.org/10.1002/osp4.389>.
14. Szpunar M, Johnson AM, Driediger M, Burke SM, Irwin JD, Shelley J, et al. **Implementation Adherence and Perspectives of the Childcare Physical Activity (PLAY) Policy: A Process Evaluation.** *Health Educ Behav*. 2021;1090198121996285. Available from: <https://journals.sagepub.com/doi/abs/10.1177/1090198121996285>.
15. Vancouver Coastal Health. **Child care licensing.** Vancouver, BC: Vancouver Coastal Health. Available from: <http://www.vch.ca/public-health/licensing/child-care>.
16. Vancouver Coastal Health. **Design Resource for Child Care Facilities.** Vancouver, BC: Vancouver Coastal Health, Community Care Facilities Licensing. Available from: <http://www.vch.ca/Documents/Design-resource-for-Child-care-facilities.pdf>.
17. Vercammen KA, Frelie JM, Poole MK, Kenney EL. **Obesity prevention in early care and education: a comparison of licensing regulations across Canadian provinces and territories.** *Journal of Public Health*. 2020;42(2):362-73. Available from: <https://doi.org/10.1093/pubmed/fdaa019>.
18. Yukon Government. **Get a licence for your family day home.** Whitehorse, YK: Government of Yukon. Available from: <https://yukon.ca/en/doing-business/licensing/get-licence-your-family-day-home>.

V Licensing, standards – International examples

1. Beets MW, Glenn Weaver R, Brazendale K, Turner-McGrievy G, Saunders RP, Moore JB, et al. **Statewide dissemination and implementation of physical activity standards in afterschool programs: two-year results.** *BMC Public Health*. 2018;18(1):819. Available from: <https://bmcpublihealth.biomedcentral.com/articles/10.1186/s12889-018-5737-6>.
2. Beets MW, Weaver RG, Turner-McGrievy G, Moore JB, Webster C, Brazendale K, et al. **Are We There Yet? Compliance with Physical Activity Standards in YMCA Afterschool Programs.** *Child Obes*. 2016;12(4):237-46. Available from: <https://doi.org/10.1089/chi.2015.0223>.
3. Burriss K, Burriss L. **Outdoor Play and Learning: Policy and Practice.** *International Journal of Education Policy & Leadership*. 2011;6(8):1-12. Available from: <http://dx.doi.org/10.22230/ijepl.2011v6n8a306>.
4. Byrd-Williams CE, Dooley EE, Thi CA, Browning C, Hoelscher DM. Physical activity, screen time, and outdoor learning environment practices and policy implementation: a cross sectional study of

- Texas child care centers. BMC Public Health. 2019;19(1):274. Available from: <https://bmcpublihealth.biomedcentral.com/articles/10.1186/s12889-019-6588-5>.
5. Christian H, Lester L, Trost SG, Trapp G, Schipperijn J, Boruff B, et al. **Shade coverage, ultraviolet radiation and children's physical activity in early childhood education and care.** Int J Public Health. 2019;64(9):1325-33. Available from: <https://doi.org/10.1007/s00038-019-01289-y>.
 6. Jarrett OS. **The Sage Handbook of Outdoor Play and Learning.** Am J Play. 2018;10(3):359-62. Available from: <https://uk.sagepub.com/en-gb/eur/the-sage-handbook-of-outdoor-play-and-learning/book245741>.
 7. McGall SE, McGuigan MR, Nottle C. **Contribution of free play towards physical activity guidelines for New Zealand primary school children aged 7-9 years.** Br J Sports Med. 2011;45(2):120-4. Available from: <https://doi.org/10.1136/bjsm.2009.065318>.
 8. Sobel D. **Outdoor School for All: Reconnecting Children to Nature.** In: EarthEd. State of the World. Washington, DC: Island Press; 2017. Available from: https://doi.org/10.5822/978-1-61091-843-5_2.
 9. Stermann JJ, Naughton GA, Bundy AC, Froude E, Villeneuve MA. **Planning for outdoor play: Government and family decision-making.** Scand J Occup Ther. 2019;26(7):484-95. Available from: <https://doi.org/10.1080/11038128.2018.1447010>.
 10. Turner L, Calvert HG, Chaloupka FJ. **Barriers to Shared Use of Indoor and Outdoor Facilities at US Elementary Schools.** J Sch Health. 2018;88(5):379-87. Available from: <https://doi.org/10.1111/josh.12621>.
 11. Washington State Department of Children Youth and Families. **Outdoor, nature-based early learning and child care pilot project. Substitute senate bill 5357, chapter 162, laws of 2017.** 2019 May. Available from: <https://files.eric.ed.gov/fulltext/ED601955.pdf>.

VI Evaluation - Academic, Eco Knowledge

1. Ardoin NM, Bowers AW. **Early childhood environmental education: A systematic review of the research literature.** Educational Research Review. 2020;31:100353. Available from: <https://www.sciencedirect.com/science/article/pii/S1747938X19305561>.
2. Avci G, GÜMÜŞ N. **The Effect of Outdoor Education on the Achievement and Recall Levels of Primary School Students in Social Studies Course.** Review of International Geographical Education Online. 2020;10(1):171-206. Available from: <https://files.eric.ed.gov/fulltext/EJ1251503.pdf>.
3. Ayotte-Beaudet J-P, Chastenay P, Beaudry M-C, L'Heureux K, Giamellaro M, Smith J, et al. **Exploring the impacts of contextualised outdoor science education on learning: the case of primary school students learning about ecosystem relationships.** J Biol Educ. 2021:1-18. Available from: <https://doi.org/10.1080/00219266.2021.1909634>.
4. Beyer KMM, Heller EF, Bizub JM, Kistner AJ, Szabo A, Shawgo EE, et al. **More than a pretty place: assessing the impact of environmental education on children's knowledge and attitudes about outdoor play in nature.** Int J Environ Res Public Health. 2015;12(2):2054-70. Available from: <https://dx.doi.org/10.3390%2Fijerph120202054>.
5. Boeve-de Pauw J, Van Petegem P. **Eco-school evaluation beyond labels: The impact of environmental policy, didactics and nature at school on student outcomes.** Environmental Education Research. 2018;24(9):1250-67. Available from: <https://doi.org/10.1080/13504622.2017.1307327>.
6. Browning M, Rigolon A. **School Green Space and Its Impact on Academic Performance: A Systematic Literature Review.** Int J Environ Res Public Health. 2019;16(3). Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30717301>.

7. Browning MHEM, Rigolon A. **School Green Space and Its Impact on Academic Performance: A Systematic Literature Review**. Int J Environ Res Public Health. 2019;16(3). Available from: <https://doi.org/10.3390/ijerph16030429>.
8. Buldur S, Bursal M, Yalcin Erik N, Yucel E. **The impact of an outdoor education project on middle school students' perceptions and awareness of the renewable energy**. Renewable & Sustainable Energy Reviews. 2020;134. Available from: <https://doi.org/10.1016/j.rser.2020.110364>.
9. Burgess E, Ernst J. **Beyond Traditional School Readiness: How Nature Preschools Help Prepare Children for Academic Success**. International Journal of Early Childhood Environmental Education. 2020;7(2):17-33. Available from: https://naturalstart.org/sites/default/files/journal/6._final_burgess_ernst.pdf.
10. Burke A, Moore S, Molyneux L, Lawlor A, Kottwitz T, Yurich G, et al. **Children's wellness: outdoor learning during Covid-19 in Canada**. Education in the North. 2021;28(2):24-45. Available from: https://aura.abdn.ac.uk/bitstream/handle/2164/16601/Burke_et al_EITN_chidren_wellness_outdoor_VOR.pdf?sequence=1.
11. Chawla L. **Benefits of Nature Contact for Children**. Journal of Planning Literature. 2015;30(4):433-52. Available from: <https://journals.sagepub.com/doi/abs/10.1177/0885412215595441>.
12. Cole LB, Hamilton EM. **Can a Green School Building Teach? A Pre- and Post-Occupancy Evaluation of a Teaching Green School Building**. Environ Behav. 2020;52(10):1047-78. Available from: <https://doi.org/10.1177%2F0013916518825283>.
13. Fägerstam E, Samuelsson J. **Learning arithmetic outdoors in junior high school – influence on performance and self-regulating skills**. Education 3-13. 2014;42(4):419-31. Available from: <https://doi.org/10.1080/03004279.2012.713374>.
14. Ghent C, Trauth-Nare A, Dell K, Haines S. **The Influence of a Statewide Green School Initiative on Student Achievement in K-12 Classrooms**. Applied Environmental Education and Communication. 2014;13(4):250-60. Available from: <https://doi.org/10.1080/1533015X.2014.983658>.
15. Gleason T. **A Critical Ethnography of an Outdoor School: Reimagining the Relationship Between Science Education and Climate Change Politics**. New York: Routledge; 2021. Available from: <https://doi.org/10.4324/9780429331626>.
16. Görkem A, Gümüş N. **The effect of outdoor education on the achievement and recall levels of primary school students in social studies course**. Review of International Geographical Education Online. 2020;10(1 (Special Issue)):171-206. Available from: <https://files.eric.ed.gov/fulltext/EJ1251503.pdf>.
17. Green CS. **Children's environmental identity development**. New York, NY: Peter Lang Publishing; 2018. Available from: <https://www.peterlang.com/document/1057238>.
18. Green M, Rayner M. **School ground pedagogies for enriching children's outdoor learning**. Education 3-13. 2020;1-14. Available from: <https://doi.org/10.1080/03004279.2020.1846578>.
19. Kuo M, Barnes M, Jordan C. **Do experiences with nature promote learning? Converging evidence of a cause-and-effect relationship**. Front Psychol. 2019;10:305. Available from: <https://doi.org/10.3389/fpsyg.2019.00305>.
20. Lloyd A, Gray T. **Place-based outdoor learning and environmental sustainability within Australian Primary School**. Journal of Sustainability Education. 2014;1-. Available from: http://www.susted.com/wordpress/content/place-based-outdoor-learning-and-environmental-sustainability-within-australian-primary-school_2014_10/.

21. Mannion G, Mattu L, Wilson M. **Teaching, learning, and play in the outdoors: a survey of school and pre-school provision in Scotland**: Scottish Natural Heritage; 2015. Available from: https://www.researchgate.net/publication/278689445_Teaching_Learning_and_Play_in_the_Outdoors_a_survey_of_school_and_pre-school_provision_in_Scotland.
22. Marchant E, Todd C, Brophy S. **Outdoor learning has huge benefits for children and teachers — so why isn't it used in more schools?** The Conversation. 2019. Available from: <https://theconversation.com/outdoor-learning-has-huge-benefits-for-children-and-teachers-so-why-isnt-it-used-in-more-schools-118067>.
23. Mazyck M, Andreu M, Annie Hermansen-Báez L, Miller MD. **The impact of outdoor science instruction on middle school students' understanding of the science process**. Florida Scientist. 2020;83(2):55-63. Available from: <https://www.fs.usda.gov/treesearch/pubs/62708>.
24. Meilinda H, Prayitno BA, Karyanto P. **Student's Environmental Literacy Profile of Adiwiyata Green School in Surakarta, Indonesia**. Journal of Education and Learning. 2017;11(3):299-306. Available from: <https://media.neliti.com/media/publications/178429-EN-students-environmental-literacy-profile.pdf>.
25. Neville IA, Petrass LA, Ben F. **The impact of an outdoor learning experience on the development of English creative writing skills: an action research case study of year 7 and 8 secondary school students in Australia**. Journal of Adventure Education & Outdoor Learning. 2021:1-14. Available from: <https://doi.org/10.1080/14729679.2021.1983445>.
26. Ozturk Y, Ozer Z. **Outdoor play activities and outdoor environment of early childhood education in turkey: A qualitative meta-synthesis**. Early Child Dev Care. 2021. Available from: <https://doi.org/10.1080/03004430.2021.1932865>.
27. Phillips R, III, Latosi-Sawin E. **An Exploratory Study of Student Development in an Outdoor Higher Education Program**. Journal of Applied Learning in Higher Education. 2013;5:29-48. Available from: <https://files.eric.ed.gov/fulltext/EJ1188683.pdf>.
28. Quibell T, Charlton J, Law J. **Wilderness Schooling: A controlled trial of the impact of an outdoor education programme on attainment outcomes in primary school pupils**. Br Educ Res J. 2017;43(3):572-87. Available from: <https://doi.org/10.1002/berj.3273>.
29. Sjamsir H, Yuliani. **Nature-based Learning Analysis in the Nature School of Early Childhood Education-Barokallah Samarinda**. International Journal of Early Childhood Special Education. 2021;13(2):49-52. Available from: <https://www.int-jecse.net/abstract.php?id=250>.
30. Song J, Lee H. **The Effects of School Forest Activities Program on Science Process Skill and the Attitude toward Science of Elementary Student**. Journal of the Korean Society of Earth Science Education. 2018. Available from: <https://doi.org/10.15523/JKSESE.2018.11.3.182>.
31. Sontay G, Karamustafaoglu O. **The Effect of Out-of-School Science Learning Environment on the Understanding the Nature of Science of the 7th Grade Students in Secondary School**. Malaysian Online Journal of Educational Sciences. 2018;6(4):23-31. Available from: <https://eric.ed.gov/?id=EJ1192969>.
32. van den Bogerd N, Coosje Dijkstra S, Koole SL, Seidell JC, de Vries R, Maas J. **Nature in the indoor and outdoor study environment and secondary and tertiary education students' well-being, academic outcomes, and possible mediating pathways: A systematic review with recommendations for science and practice**. Health Place. 2020;66:102403. Available from: <https://doi.org/10.1016/j.healthplace.2020.102403>.
33. Yilmaz NY, Tas AM. **The Effect of Nature Education Program on the Level of Environmental Awareness of the Elementary School Students from Different Socioeconomic Status**. Universal

Journal of Educational Research. 2018;6(9):1928-37. Available from: <https://eric.ed.gov/?id=EJ1189928>.

34. Yılmaz S, Çığ O, Yılmaz-Bolat E. **The impact of a short-term nature-based education program on young children's biophilic tendencies.** İlkogretim Online. 2020;19(3):1729-39. Available from: <http://dx.doi.org/10.17051/ilkonline.2020.734968>.

VII Evaluation – At-risk, disadvantaged, low income communities

1. Bang K-S, Kim S, Song MK, Kang KI, Jeong Y. The Effects of a Health Promotion Program Using Urban Forests and Nursing Student Mentors on the Perceived and Psychological Health of Elementary School Children in Vulnerable Populations. Int J Environ Res Public Health. 2018;15(9). Available from: <https://dx.doi.org/10.3390%2Fijerph15091977>.
2. Caldas SV, Broadbudd ET, Winch PJ. Measuring conflict management, emotional self-efficacy, and problem solving confidence in an evaluation of outdoor programs for inner-city youth in Baltimore, Maryland. Eval Program Plann. 2016;57:64-71. Available from: <https://doi.org/10.1016/j.evalprogplan.2016.04.003>.
3. Camasso MJ, Jagannathan R. **Improving Academic Outcomes in Poor Urban Schools through Nature-Based Learning.** Cambridge Journal of Education. 2018;48(2):263-77. Available from: <https://doi.org/10.1080/0305764X.2017.1324020>.
4. Camasso MJ, Jagannathan R. Nurture thru Nature: Creating natural science identities in populations of disadvantaged children through community education partnership. The Journal of Environmental Education. 2018;49(1):30-42. Available from: <https://doi.org/10.1080/00958964.2017.1357524>.
5. Fisher-Maltese C, Fisher DR, Ray R. **Can learning in informal settings mitigate disadvantage and promote urban sustainability? School gardens in Washington, DC.** International Review of Education. 2018;64(3):295-312. Available from: <https://eric.ed.gov/?id=EJ1182428>.
6. Frazier SL, Dinizulu SM, Rusch D, Boustani MM, Mehta TG, Reitz K. **Building resilience after school for early adolescents in urban poverty: Open trial of Leaders @ Play.** Administration and Policy in Mental Health and Mental Health Services Research. 2015;42(6):723-36. Available from: <https://doi.org/10.1007/s10488-014-0608-7>.
7. Goldstein M, Famularo L. **Leveraging the Outdoors as an Informal Learning Environment to Bridge Gaps in Formal Science Instruction.** Paper presented at the Annual Meeting of the American Educational Research Association; New York, Apr 13-17: AERA Online Paper Repository; 2018. Available from: <https://eric.ed.gov/?id=ED593071>.
8. Goldstein M, Famularo L, Kynn J, Pierson E. **Researching a New Pathway for Promoting Children's Active Outdoor Science Exploration in Urban Settings.** Journal of Outdoor Recreation, Education & Leadership. 2019;11(2):101-19. Available from: <https://eric.ed.gov/?id=EJ1215190>.
9. Murdock M-L. **Outdoor education as a protective school-based intervention for "at-risk" youth: A case study examining** 2007. Available from: <https://scholar.uwindsor.ca/cgi/viewcontent.cgi?referer=&httpsredir=1&article=7993&context=etd>.
10. Pérez-Del-Pulgar C, Anguelovski I, Cole HVS, de Bont J, Connolly J, Baró F, et al. The relationship between residential proximity to outdoor play spaces and children's mental and behavioral health: The importance of neighborhood socio-economic characteristics. Environ Res. 2021;200:111326. Available from: <https://doi.org/10.1016/j.envres.2021.111326>.

11. Tesler R, Endevelt R, Plaut P. Urban Forest Health Intervention Program to promote physical activity, healthy eating, self-efficacy and life satisfaction: impact on Israeli at-risk youth. *Health Prom Int*. 2021. Available from: <https://doi.org/10.1093/heapro/daab145>.
12. Veen EJ, Pijpker R, Hassink J. Understanding educational care farms as outdoor learning interventions for children who have dropped out of school in the Netherlands. *Journal of Adventure Education & Outdoor Learning*. 2021:1-17. Available from: <https://doi.org/10.1080/14729679.2021.2011340>.

VIII Evaluation – Disabilities, Behaviour

1. Dillenschneider C. **Integrating Persons With Impairments and Disabilities Into Standard Outdoor Adventure Education Programs**. *Journal of Experiential Education*. 2007;30(1):70-83. Available from: <https://doi.org/10.1177%2F105382590703000106>.
2. Floresca JA. **How Nature Walk Program Affects the Behavior of Children with Learning Disabilities**. *Education Quarterly Reviews*. 2020;3(4):500-9. Available from: <http://dx.doi.org/10.31014/aior.1993.03.04.157>.
3. Lange A-M. 45.2 the effectiveness of parent training as a treatment for preschool attention-deficit/hyperactivity disorder: A multi-center randomized controlled trial of the new forest parenting program in everyday clinical practice. *J Am Acad Child Adolesc Psychiatry*. 2016;55:S330-S. Available from: <https://doi.org/10.2196/resprot.5319>.
4. Liao J, Yang S, Xia W, Peng A, Zhao J, Li Y, et al. **Associations of exposure to green space with problem behaviours in preschool-aged children**. *Int J Epidemiol*. 2020;49(3):944-53. Available from: <https://doi.org/10.1093/ije/dyz243>.
5. Lundy A, Trawick-Smith J. **Effects of active outdoor play on preschool children's on-task classroom behavior**. *Early Childhood Educ J*. 2021;49(3):463-71. Available from: <https://link.springer.com/article/10.1007/s10643-020-01086-w>.
6. Meade WW, O'Brien J. **To Play or Not to Play: Equitable Access to Afterschool Programs for Students With Disabilities**. *Journal of Cases in Educational Leadership*. 2018;21(1):43-52. Available from: <https://doi.org/10.1177%2F1555458917722184>.
7. Morrier MJ, Ziegler SMT. I wanna play too: Factors related to changes in social behavior for children with and without autism spectrum disorder after implementation of a structured outdoor play curriculum. *J Autism Dev Disord*. 2018;48(7):2530-41. Available from: <https://link.springer.com/article/10.1007%2Fs10803-018-3523-z>.
8. Price A. Improving school attendance: can participation in outdoor learning influence attendance for young people with social, emotional and behavioural difficulties? *Journal of Adventure Education & Outdoor Learning*. 2015;15(2):110-22. Available from: <https://doi.org/10.1080/14729679.2013.850732>.
9. Roe J, Aspinall P. **The restorative outcomes of forest school and conventional school in young people with good and poor behaviour**. *Urban Forestry & Urban Greening*. 2011;10(3):205-12. Available from: <https://www.sciencedirect.com/science/article/pii/S1618866711000318>.
10. Sonuga-Barke EJS, Barton J, Daley D, Hutchings J, Maishman T, Raftery J, et al. A comparison of the clinical effectiveness and cost of specialised individually delivered parent training for preschool attention-deficit/hyperactivity disorder and a generic, group-based programme: A multi-centre, randomised controlled trial of the New Forest Parenting Programme versus Incredible Years. *Eur Child Adolesc Psychiatry*. 2018;27(6):797-809. Available from: <https://doi.org/10.1007/s00787-017-1054-3>.

11. Ulset V, Vitaro F, Brendgen M, Bekkhus M, Borge AIH. **Time spent outdoors during preschool: Links with children's cognitive and behavioral development.** J Environ Psychol. 2017;52:69-80. Available from: <https://www.sciencedirect.com/science/article/pii/S0272494417300737>.
12. von Benzon N. Unruly children in unbounded spaces: School-based nature experiences for urban learning disabled young people in Greater Manchester, UK. Journal of Rural Studies. 2017;51:240-50. Available from: <https://doi.org/10.1016/j.jrurstud.2016.07.018>.
13. Zachor DA, Vardi S, Baron-Eitan S, Brodai-Meir I, Ginossar N, Ben-Itzhak E. **The effectiveness of an outdoor adventure programme for young children with autism spectrum disorder: A controlled study.** Dev Med Child Neurol. 2017;59(5):550-6. Available from: <https://doi.org/10.1111/dmcn.13337>.

IX Evaluation – Disabilities, eyesight

1. Guo Y, Liu LJ, Tang P, Lv YY, Feng Y, Xu L, et al. **Outdoor activity and myopia progression in 4-year follow-up of Chinese primary school children: The Beijing Children Eye Study.** PLoS One. 2017;12(4):e0175921. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/28448513>.
2. Harrington SC, O'Dwyer V. **Ocular biometry, refraction and time spent outdoors during daylight in Irish schoolchildren.** Clin Exp Optom. 2020;103(2):167-76. Available from: <https://doi.org/10.1111/cxo.12929>.
3. Jin JX, Hua WJ, Jiang X, Wu XY, Yang JW, Gao GP, et al. Effect of outdoor activity on myopia onset and progression in school-aged children in northeast China: the Sujiatun Eye Care Study. BMC Ophthalmol. 2015;15:73. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/26152123>.
4. Liu J, Li B, Chen Q, Dang J. Student Health Implications of School Closures during the COVID-19 Pandemic: New Evidence on the Association of e-Learning, Outdoor Exercise, and Myopia. Healthcare (Basel, Switzerland). 2021;9(5). Available from: <https://doi.org/10.3390/healthcare9050500>.
5. Mingguang H, Fan X, Yangfa Z, Jincheng M, Qianyun C, Jian Z, et al. **Effect of Time Spent Outdoors at School on the Development of Myopia Among Children in China: A Randomized Clinical Trial.** JAMA: Journal of the American Medical Association. 2015;314(11):1142-8. Available from: <https://jamanetwork.com/journals/jama/fullarticle/2441261>.
6. Morgan I, Rose K. **Epidemiology and the protective effects of time outdoors.** Acta Ophthalmologica (1755375X). 2015;93:n/a-n/a. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1755-3768.2015.0142>.
7. Tsai DC, Fang SY, Huang N, Hsu CC, Chen SY, Chiu AW, et al. **Myopia Development Among Young Schoolchildren: The Myopia Investigation Study in Taipei.** Invest Ophthalmol Vis Sci. 2016;57(15):6852-60. Available from: <https://pubmed.ncbi.nlm.nih.gov/28002845/>.
8. Tsinajinie G, Kirboyun S, Hong S. An Outdoor Project-Based Learning Program: Strategic Support and the Roles of Students with Visual Impairments Interested in STEM. Journal of Science Education and Technology. 2021;30(1):74-86. Available from: <https://link.springer.com/article/10.1007/s10956-020-09874-0>.
9. Wu PC, Chen CT, Chang LC, Niu YZ, Chen ML, Liao LL, et al. Increased Time Outdoors Is Followed by Reversal of the Long-Term Trend to Reduced Visual Acuity in Taiwan Primary School Students. Ophthalmology. 2020;127(11):1462-9. Available from: <https://doi.org/10.1016/j.ophtha.2020.01.054>.
10. Yang M, Luensmann D, Fonn D, Woods J, Jones D, Gordon K, et al. **Myopia prevalence in Canadian school children: a pilot study.** Eye (Lond). 2018;32(6):1042-7. Available from: <https://doi.org/10.1038/s41433-018-0015-5>.

11. Zhai LL, Wu XY, Xu SJ, Wan YH, Zhang SC, Xu L, et al. **[Study on relationship between outdoor activities and self-reported myopia among middle school students]**. Zhonghua yu fang yi xue za zhi [Chinese journal of preventive medicine]. 2017;51(9):801-6. Available from: <https://doi.org/10.3760/cma.j.issn.0253-9624.2017.09.006>.

X Evaluation – General

1. Altin C, Kvist Lindholm S, Wejdmark M, Lättman-Masch R, Boldemann C. **Upgrading Preschool Environment in a Swedish Municipality: Evaluation of an Implementation Process**. Health Promot Pract. 2015;16(4):583-91. Available from: <https://doi.org/10.1177%2F1524839914566273>.
2. Cincera J, Kovacikova S, Maskova V, Medal R, Medalova K. **The Green School: an Impact of Evaluation on Decision-Making about a Program**. New Educational Review. 2012;30(4):17-29. Available from: https://www.researchgate.net/publication/288669516_The_Green_School_an_Impact_of_Evaluation_on_Decision-Making_about_a_Program.
3. Garip G, Richardson M, Tinkler A, Glover S, Rees A. **Development and implementation of evaluation resources for a green outdoor educational program**. J Environ Educ. 2021;52(1):25-39. Available from: <https://doi.org/10.1080/00958964.2020.1845588>.
4. Gill T. **The benefits of children’s engagement with nature: A systematic literature review**. Children Youth and Environments. 2014;24(2):10-34. Available from: <https://www.jstor.org/stable/10.7721/chilyoutenvi.24.2.0010>.
5. Harris MA. **Growing among Trees: a 12-month process evaluation of school based outdoor learning interventions**. Journal of Adventure Education and Outdoor Learning. 2021:1-12. Available from: <https://doi.org/10.1080/14729679.2021.2001758>.
6. Leather M. **A critique of “Forest School” or something lost in translation**. Journal of Outdoor and Environmental Education. 2018;21(1):5-18. Available from: <https://link.springer.com/article/10.1007/s42322-017-0006-1>.
7. Mathias S, Daigle P, Dancause KN, Gadais T. **Forest bathing: a narrative review of the effects on health for outdoor and environmental education use in Canada**. Journal of Outdoor and Environmental Education. 2020;23(3):309-21. Available from: <https://doi.org/10.1007/s42322-020-00058-3>.
8. Miller NC, Kumar S, Pearce KL, Baldock KL. **The outcomes of nature-based learning for primary school aged children: a systematic review of quantitative research**. Environmental Education Research. 2021;27(8):1115-40. Available from: <https://doi.org/10.1080/13504622.2021.1921117>.
9. O’Brien L, Murray R. **Forest School and its impacts on young children: Case studies in Britain**. Urban Forestry & Urban Greening. 2007;6(4):249-65. Available from: <https://www.sciencedirect.com/science/article/pii/S1618866707000301>.
10. Parker R, Al-Maiyah S. **Developing an integrated approach to the evaluation of outdoor play settings: rethinking the position of play value**. Children’s Geographies. 2021:1-23. Available from: <https://doi.org/10.1080/14733285.2021.1912294>.
11. Pearson M, Hunt H, Garside R, Moxham T, Peters J, Anderson R. **Preventing unintentional injuries to children under 15 years in the outdoors: a systematic review of the effectiveness of educational programs**. Inj Prev. 2012;18(2):113-23. Available from: <https://dx.doi.org/10.1136%2Finjuryprev-2011-040043>.
12. Selway CA, Mills JG, Weinstein P, Skelly C, Yadav S, Lowe A, et al. **Transfer of environmental microbes to the skin and respiratory tract of humans after urban green space exposure**. Environ Int. 2020;145:106084. Available from: <https://doi.org/10.1016/j.envint.2020.106084>.

13. Slade M, Lowery C, Bland K. **Evaluating the impact of Forest Schools: A collaboration between a university and a primary school.** Support for Learning. 2013;28(2):66-72. Available from: <http://dx.doi.org/10.1111/1467-9604.12020>.
14. Smith EF, Gidlow B, Steel G. Engaging adolescent participants in academic research: The use of photo-elicitation interviews to evaluate school-based outdoor education programmes. Qualitative Research. 2012;12(4):367-87. Available from: <https://doi.org/10.1177%2F1468794112443473>.
15. Tiplady LS, Menter H. **Forest School for wellbeing: an environment in which young people can 'take what they need'.** Journal of Adventure Education and Outdoor Learning. 2021;21(2):99-114. Available from: <https://doi.org/10.1080/14729679.2020.1730206>.
16. Yıldırım G, Akamca GÖ. **The effect of outdoor learning activities on the development of preschool children.** South African journal of education. 2017;37(2). Available from: <http://dx.doi.org/10.15700/saje.v37n2a1378>.

XI Evaluation - Physical, Motor Skills

1. Barber SE, Jackson C, Akhtar S, Bingham DD, Ainsworth H, Hewitt C, et al. "Pre-schoolers in the playground" an outdoor physical activity intervention for children aged 18 months to 4 years old: study protocol for a pilot cluster randomised controlled trial. Trials. 2013;14:326. Available from: <https://doi.org/10.1186/1745-6215-14-326>.
2. Barfield PA, Ridder K, Hughes J, Rice-McNeil K. **Get Outside! Promoting Adolescent Health through Outdoor After-School Activity.** Int J Environ Res Public Health. 2021;18(14). Available from: <https://dx.doi.org/10.3390%2Fijerph18147223>.
3. Becker C, Lauterbach G, Spengler S, Dettweiler U, Mess F. Effects of Regular Classes in Outdoor Education Settings: A Systematic Review on Students' Learning, Social and Health Dimensions. Int J Environ Res Public Health. 2017;14(5). Available from: <https://doi.org/10.3390/ijerph14050485>.
4. Bento G, Dias G. **The importance of outdoor play for young children's healthy development.** Porto biomedical journal. 2017;2(5):157-60. Available from: <https://doi.org/10.1016/j.pbj.2017.03.003>.
5. Bolling M, Mygind E, Mygind L, Bentsen P, Elsborg P. **The Association between Education Outside the Classroom and Physical Activity: Differences Attributable to the Type of Space?** Children (Basel). 2021;8(6). Available from: <https://www.ncbi.nlm.nih.gov/pubmed/34200485>.
6. Bundy A, Engelen L, Wyver S, Tranter P, Ragen J, Bauman A, et al. **Sydney Playground Project: A Cluster-Randomized Trial to Increase Physical Activity, Play, and Social Skills.** J Sch Health. 2017;87(10):751-9. Available from: <https://ro.uow.edu.au/cgi/viewcontent.cgi?article=5048&context=sspapers>.
7. Bundy AC, Naughton G, Tranter P, Wyver S, Baur L, Schiller W, et al. The Sydney playground project: popping the bubblewrap—unleashing the power of play: a cluster randomized controlled trial of a primary school playground-based intervention aiming to increase children's physical activity and social skills. BMC Public Health. 2011;11:680. Available from: <https://bmcpublihealth.biomedcentral.com/articles/10.1186/1471-2458-11-680>.
8. Driediger M, Truelove S, Johnson AM, Vanderloo LM, Timmons BW, Burke SM, et al. The Impact of Shorter, More Frequent Outdoor Play Periods on Preschoolers' Physical Activity during Childcare: A Cluster Randomized Controlled Trial. Int J Environ Res Public Health. 2019;16(21). Available from: <https://doi.org/10.3390/ijerph16214126>.
9. Driediger M, Vanderloo LM, Burke SM, Irwin JD, Gaston A, Timmons BW, et al. The Implementation and Feasibility of the Supporting Physical Activity in the Childcare Environment (SPACE)

- Intervention: A Process Evaluation. *Health Educ Behav*. 2018;45(6):935-44. Available from: <https://doi.org/10.1177%2F1090198118775489>.
10. Duncan MJ, Clarke ND, Birch SL, Tallis J, Hankey J, Bryant E, et al. **The effect of green exercise on blood pressure, heart rate and mood state in primary school children.** *Int J Environ Res Public Health*. 2014;11(4):3678-88. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/24699030>.
 11. Finn KE, Yan Z, McInnis KJ. **Promoting Physical Activity and Science Learning in an Outdoor Education Program.** *JOPERD: The Journal of Physical Education, Recreation & Dance*. 2018;89(1):35-9. Available from: <http://dx.doi.org/10.1080/07303084.2017.1390506>.
 12. Hassler D, Kimmig P. **[Greetings from the forest kindergarten—the harvest mite dermatitis].** *Dtsch Med Wochenschr*. 2002;127(36):1801. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/12362894>.
 13. James AK, Hess P, Perkins ME, Taveras EM, Scirica CS. **Prescribing Outdoor Play: Outdoors Rx.** *Clin Pediatr (Phila)*. 2017;56(6):519-24. Available from: <https://doi.org/10.1177/0009922816677805>.
 14. Johnson U, Ivarsson A, Parker J, Andersen MB, Svetoft I. **Connection in the Fresh Air: A Study on the Benefits of Participation in an Electronic Tracking Outdoor Gym Exercise Programme.** *Montenegrin Journal of Sports Science & Medicine*. 2019;8(1):61-7. Available from: <https://www.mjssm.me/?sekcija=article&artid=174>.
 15. Johnstone A, Hughes AR, Martin A, Reilly JJ. Utilising active play interventions to promote physical activity and improve fundamental movement skills in children: a systematic review and meta-analysis. *BMC Public Health*. 2018;18(1):789. Available from: <https://bmcpublihealth.biomedcentral.com/articles/10.1186/s12889-018-5687-z>.
 16. Lim C, Donovan AM, Harper NJ, Naylor P-J. **Nature Elements and Fundamental Motor Skill Development Opportunities at Five Elementary School Districts in British Columbia.** *Int J Environ Res Public Health*. 2017;14(10). Available from: <https://doi.org/10.3390/ijerph14101279>.
 17. Lundvall S, Maivorsdotter N. **Environing as Embodied Experience-A Study of Outdoor Education as Part of Physical Education.** *Front Sports Act Living*. 2021;3:768295. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/34870196>.
 18. Mall C, Au Jv, Dettweiler U. Students' Appropriation of Space in Education Outside the Classroom. Some Aspects on Physical Activity and Health from a Pilot Study with 5th-Graders in Germany. *Nature and Health: Taylor and Francis*; 2021. Available from: <https://www.taylorfrancis.com/chapters/edit/10.4324/9781003154419-19/students-appropriation-space-education-outside-classroom-aspects-physical-activity-health-pilot-study-5th-graders-germany-christoph-mall-jakob-von-au-ulrich-dettweiler>.
 19. Manandhar S, Suksaroj TT, Rattanapan C. **The Association between Green Space and the Prevalence of Overweight/Obesity among Primary School Children.** *Int J Occup Environ Med*. 2019;10(1):1-10. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30685772>.
 20. Nielsen G, Mygind E, Bolling M, Otte CR, Schneller MB, Schipperijn J, et al. A quasi-experimental cross-disciplinary evaluation of the impacts of education outside the classroom on pupils' physical activity, well-being and learning: the TEACHOUT study protocol. *BMC Public Health*. 2016;16(1):1117. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/27776502>.
 21. Pagels P, Raustorp A, De Leon AP, Mårtensson F, Kylin M, Boldemann C. A repeated measurement study investigating the impact of school outdoor environment upon physical activity across ages and seasons in Swedish second, fifth and eighth graders. *BMC Public Health*. 2014;14:803. Available from: <https://doi.org/10.1186/1471-2458-14-803>.

22. Pagels P, Raustorp A, Guban P, Fröberg A, Boldemann C. **Compulsory School In- and Outdoors- Implications for School Children's Physical Activity and Health during One Academic Year.** Int J Environ Res Public Health. 2016;13(7). Available from: <https://doi.org/10.3390/ijerph13070699>.
23. Pagels P, Wester U, Mårtensson F, Guban P, Raustorp A, Fröberg A, et al. **Pupils' use of school outdoor play settings across seasons and its relation to sun exposure and physical activity.** Photodermatol Photoimmunol Photomed. 2020;36(5):365-72. Available from: <https://doi.org/10.1111/phpp.12558>.
24. Palmer KK, Miller AL, Meehan SK, Robinson LE. **The Motor skills At Playtime intervention improves children's locomotor skills: A feasibility study.** Child Care Health Dev. 2020;46(5):599-606. Available from: <https://doi.org/10.1111/cch.12793>.
25. Pasek M, Szark-Eckardt M, Wilk B, Zuzda J, Żukowska H, Opanowska M, et al. Physical Fitness as Part of the Health and Well-Being of Students Participating in Physical Education Lessons Indoors and Outdoors. Int J Environ Res Public Health. 2020;17(1). Available from: <https://dx.doi.org/10.3390%2Fijerph17010309>.
26. Razak LA, Yoong SL, Wiggers J, Morgan PJ, Jones J, Finch M, et al. Impact of scheduling multiple outdoor free-play periods in childcare on child moderate-to-vigorous physical activity: A cluster randomised trial. The International Journal of Behavioral Nutrition and Physical Activity. 2018;15. Available from: <https://ijbnpa.biomedcentral.com/articles/10.1186/s12966-018-0665-5>.
27. Riiser K, Helseth S, Ellingsen H, Fallang B, Løndal K. Active Play in After-school Programmes: development of an intervention and description of a matched-pair cluster-randomised trial assessing physical activity play in after-school programmes. BMJ open. 2017;7(8):e016585. Available from: <https://bmjopen.bmj.com/content/7/8/e016585>.
28. Riiser K, Richardsen KR, Haugen ALH, Lund S, Løndal K. Active play in ASP -a matched-pair cluster-randomized trial investigating the effectiveness of an intervention in after-school programs for supporting children's physical activity. BMC Public Health. 2020;20(1):500. Available from: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-08645-1>.
29. Romar J-E, Enqvist I, Kulmala J, Kallio J, Tammelin T. Physical activity and sedentary behaviour during outdoor learning and traditional indoor school days among Finnish primary school students. Journal of Adventure Education and Outdoor Learning. 2019;19(1):28-42. Available from: <https://doi.org/10.1080/14729679.2018.1488594>.
30. Schaefer L, Plotnikoff RC, Majumdar SR, Mollard R, Woo M, Sadman R, et al. **Outdoor time is associated with physical activity, sedentary time, and cardiorespiratory fitness in youth.** The Journal of pediatrics. 2014;165(3):516-21. Available from: <https://doi.org/10.1016/j.jpeds.2014.05.029>.
31. Schneller MB, Duncan S, Schipperijn J, Nielsen G, Mygind E, Bentsen P. **Are children participating in a quasi-experimental education outside the classroom intervention more physically active?** BMC Public Health. 2017;17(1):523. Available from: <https://doi.org/10.1186/s12966-017-0534-7>.
32. Schneller MB, Schipperijn J, Nielsen G, Bentsen P. Children's physical activity during a segmented school week: results from a quasi-experimental education outside the classroom intervention. Int J Behav Nutr Phys Act. 2017;14(1):80. Available from: <https://pubmed.ncbi.nlm.nih.gov/28549469/>.
33. Shanahan DF, Franco L, Lin BB, Gaston KJ, Fuller RA. **The Benefits of Natural Environments for Physical Activity.** Sports Med. 2016;46(7):989-95. Available from: <https://doi.org/10.1007/s40279-016-0502-4>.

34. Sharma-Brymer V, Bland D. **Bringing Nature to Schools to Promote Children's Physical Activity.** Sports Med. 2016;46(7):955-62. Available from: <https://link.springer.com/article/10.1007/s40279-016-0487-z>.
35. Sobko T, Brown GT, Cheng WHG. Does connectedness to nature improve the eating behaviours of pre-schoolers? Emerging evidence from the Play&Grow randomised controlled trial in Hong Kong. Appetite. 2020;154:104781. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32615145>.
36. Sobko T, Jia Z, Kaplan M, Lee A, Tseng C-H. Promoting healthy eating and active playtime by connecting to nature families with preschool children: evaluation of pilot study "Play&Grow". Pediatr Res. 2017;81(4):572-81. Available from: <https://www.nature.com/articles/pr2016251>.
37. Tarun S, Arora M, Rawal T, Benjamin Neelon SE. **An evaluation of outdoor school environments to promote physical activity in Delhi, India.** BMC Public Health. 2017;17(1):11. Available from: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-016-3987-8#:~:text=In%20this%20study%20evaluating%20outdoor,crossings%2C%20and%20traffic%20calming%20measures>.
38. Tokarek NR, Chi CC, Swartz AM. Sex Differences In Physical Activity And Sedentary Behaviors Between Traditional And Nature-based Pre-kindergarten Program Settings. Med Sci Sports Exerc. 2021;53:486-. Available from: <https://sites.uwm.edu/healthresearchsymposium/2021/04/20/sex-differences-in-physical-activity-and-sedentary-behaviors-between-traditional-and-nature-based-pre-kindergarten-program-settings/>.
39. Weisshaar E, Schaefer A, Scheidt RR, Bruckner T, Apfelbacher CJ, Diepgen TL. Epidemiology of tick bites and borreliosis in children attending kindergarten or so-called "forest kindergarten" in southwest Germany. J Invest Dermatol. 2006;126(3):584-90. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/16410779>.
40. Wray A, Martin G, Ostermeier E, Medeiros A, Little M, Reilly K, et al. **Physical activity and social connectedness interventions in outdoor spaces among children and youth: a rapid review.** Health promotion and chronic disease prevention in Canada : research, policy and practice. 2020;40(4):104-15. Available from: <https://pubmed.ncbi.nlm.nih.gov/32270668>.

XII Evaluation - Psychological, Socioemotional, Cognitive

1. Amicone G, Petrucci I, De Dominicis S, Gherardini A, Costantino V, Perucchini P, et al. **Green Breaks: The Restorative Effect of the School Environment's Green Areas on Children's Cognitive Performance.** Front Psychol. 2018;9:1579. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30333765>.
2. Anabitarte A, Garcia-Baquero G, Andiarrena A, Lertxundi N, Urbieto N, Babarro I, et al. **Is Brief Exposure to Green Space in School the Best Option to Improve Attention in Children?** Int J Environ Res Public Health. 2021;18(14). Available from: <https://www.ncbi.nlm.nih.gov/pubmed/34299932>.
3. Armour K, Sandford R. **Positive youth development through an outdoor physical activity programme: Evidence from a four-year evaluation.** Educational Review. 2013;65(1):85-108. Available from: <http://dx.doi.org/10.1080/00131911.2011.648169>.
4. Beyer KM, Heller EF, Bizub JM, Kistner AJ, Szabo A, Shawgo EE, et al. More than a pretty place: assessing the impact of environmental education on children's knowledge and attitudes about outdoor play in nature. Int J Environ Res Public Health. 2015;12(2):2054-70. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/25685953>.

5. Blackham L, Cocks A, Bunce LT. **'Our Forest School isn't just the trees.'** **Forest Schools: micro-communities for social and emotional development.** Journal of Adventure Education & Outdoor Learning. 2021;1-12. Available from: <https://doi.org/10.1080/14729679.2021.1984964>.
6. Bolling M, Niclasen J, Bentsen P, Nielsen G. **Association of Education Outside the Classroom and Pupils' Psychosocial Well-Being: Results From a School Year Implementation.** J Sch Health. 2019;89(3):210-8. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30637746>.
7. Cataldi S, Bonavolontà V, Fischetti F. **Starting a sport as outdoor education in infancy: orienteering, visual spatial memory for empowering school learning.** Journal of Physical Education & Sport. 2021;21:696-701. Available from: <https://efsupit.ro/images/stories/februarie2021/Art%2085.pdf>.
8. Chiumento A, Mukherjee I, Chandna J, Dutton C, Rahman A, Bristow K. A haven of green space: learning from a pilot pre-post evaluation of a school-based social and therapeutic horticulture intervention with children. BMC Public Health. 2018;18(1):836. Available from: <https://bmcpublihealth.biomedcentral.com/articles/10.1186/s12889-018-5661-9>.
9. Collado S, Staats H, Corraliza JA. **Experiencing nature in children's summer camps: Affective, cognitive and behavioural consequences.** J Environ Psychol. 2013;33:37-44. Available from: <https://www.sciencedirect.com/science/article/pii/S0272494412000497>.
10. Cordiano TS, Lee A, Wilt J, Elszasz A, Damour LK, Russ SW. Nature-Based Education and Kindergarten Readiness: Nature-Based and Traditional Preschoolers Are Equally Prepared for Kindergarten. International Journal of early childhood environmental education. 2019;6(3):18-36. Available from: <https://eric.ed.gov/?id=EJ1225659>.
11. Fang BB, Lu FJH, Gill DL, Liu SH, Chyi T, Chen B. **A Systematic Review and Meta-Analysis of the Effects of Outdoor Education Programs on Adolescents' Self-Efficacy.** Percept Mot Skills. 2021;128(5):1932-58. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/34107802>.
12. Hanscom AJ. **Balanced and barefoot: How unrestricted outdoor play makes for strong, confident, and capable children:** New Harbinger Publications; 2016. Available from: <https://outdoorschoolshop.com/balanced-and-barefoot-how-unrestricted-outdoor-play-makes-for-strong-confident-and-capable-children/>.
13. Hartmeyer R, Mygind E. **A retrospective study of social relations in a Danish primary school class taught in 'udeskole'.** Journal of Adventure Education and Outdoor Learning. 2016;16(1):78-89. Available from: <https://doi.org/10.1080/14729679.2015.1086659>.
14. Harvey DJ, Montgomery LN, Harvey H, Hall F, Gange AC, Watling D. **Psychological benefits of a biodiversity-focussed outdoor learning program for primary school children.** J Environ Psychol. 2020;67. Available from: <https://doi.org/10.1016/j.jenvp.2019.101381>.
15. Koszalka-Silska A, Korcz A, Wiza A. The Impact of Physical Education Based on the Adventure Education Programme on Self-Esteem and Social Competences of Adolescent Boys. Int J Environ Res Public Health. 2021;18(6). Available from: <https://www.ncbi.nlm.nih.gov/pubmed/33804140>.
16. Kwok SWH, Wu CST, Tong HT, Ho CN, Leung KL, Leung YCP, et al. Effects of the School-Based Integrated Health Promotion Program With Hydroponic Planting on Green Space Use and Satisfaction, Dietary Habits, and Mental Health in Early Adolescent Students: A Feasibility Quasi-Experiment. Frontiers in public health. 2021;9:740102. Available from: <https://doi.org/10.3389/fpubh.2021.740102>.
17. Laaksoharju T, Rappe E. **Trees as affordances for connectedness to place—a framework to facilitate children's relationship with nature.** Urban Forestry & Urban Greening. 2017;28:150-

9. Available from: <https://research.childrenandnature.org/research/tree-play-can-deepen-connection-to-nature-and-afford-opportunity-for-risky-play/>.
18. Laaksoharju T, Rappe E, Kaivola T. **Garden affordances for social learning, play, and for building nature-child relationship.** Urban Forestry & Urban Greening. 2012;11(2):195-203. Available from: <https://doi.org/10.1016/j.ufug.2012.01.003>.
19. Largo-Wight E, Guardino C, Wludyka PS, Hall KW, Wight JT, Merten JW. **Nature contact at school: The impact of an outdoor classroom on children's well-being.** Int J Environ Health Res. 2018;28(6):653-66. Available from: <http://dx.doi.org/10.1080/09603123.2018.1502415>.
20. Latino F, De Candia M, Morano M, Carvutto R. **The impact of an extracurricular outdoor physical activity program on long-term memory in adolescent during COVID-19 pandemic.** Journal of Human Sport & Exercise. 2021;16:S1114-S25. Available from: <https://doi.org/10.14198/jhse.2021.16.Proc3.28>.
21. Mainella FP, Agate JR, Clark BS. **Outdoor-based play and reconnection to nature: a neglected pathway to positive youth development.** New directions for youth development. 2011;2011(130):89-104. Available from: <https://doi.org/10.1002/yn.399>.
22. Mason L, Ronconi A, Scrimin S, Pazzaglia F. **Short-term exposure to nature and benefits for students' cognitive performance: A review.** Educ Psychol Rev. 2021. Available from: <https://link.springer.com/article/10.1007/s10648-021-09631-8>.
23. McKenzie J. **The Impact of Outdoor Education on Executive Function in Adolescents** [M.Ed. thesis]. Ann Arbor: University of Lethbridge (Canada); 2021. Available from: <https://hdl.handle.net/10133/5817>.
24. Orson CN, McGovern G, Larson RW. **How challenges and peers contribute to social-emotional learning in outdoor adventure education programs.** J Adolesc. 2020;81:7-18. Available from: <https://doi.org/10.1016/j.adolescence.2020.02.014>.
25. Piccininni C, Michaelson V, Janssen I, Pickett W. **Outdoor play and nature connectedness as potential correlates of internalized mental health symptoms among Canadian adolescents.** Prev Med. 2018;112:168-75. Available from: <https://doi.org/10.1016/j.ypmed.2018.04.020>.
26. Pirchio S, Passiatore Y, Panno A, Cipparone M, Carrus G. **The Effects of Contact With Nature During Outdoor Environmental Education on Students' Wellbeing, Connectedness to Nature and Pro-sociality.** Front Psychol. 2021;12:648458. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/34017288>.
27. Prince HE. **The lasting impacts of outdoor adventure residential experiences on young people.** Journal of Adventure Education & Outdoor Learning. 2021;21(3):261-76. Available from: <http://dx.doi.org/10.1080/14729679.2020.1784764>.
28. Reed K, Wood C, Barton J, Pretty JN, Cohen D, Sandercock GR. **A repeated measures experiment of green exercise to improve self-esteem in UK school children.** PLoS One. 2013;8(7):e69176. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/23894426>.
29. Scarf D, Hayhurst JG, Riordan BC, Boyes M, Ruffman T, Hunter JA. **Increasing resilience in adolescents: the importance of social connectedness in adventure education programmes.** Australas Psychiatry. 2017;25(2):154-6. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/27679628>.
30. Slee V, Allan JF. **Purposeful Outdoor Learning Empowers Children to Deal with School Transitions.** Sports (Basel, Switzerland). 2019;7(6). Available from: <https://dx.doi.org/10.3390%2Fsports7060134>.
31. Sobko T, Jia Z, Brown G. **Measuring connectedness to nature in preschool children in an urban setting and its relation to psychological functioning.** PLoS One. 2018;13(11):e0207057. Available from: <https://doi.org/10.1371/journal.pone.0207057>.

32. Sobko T, Liang S, Cheng WH, Tun HM. Impact of outdoor nature-related activities on gut microbiota, fecal serotonin, and perceived stress in preschool children: the Play&Grow randomized controlled trial. *Sci Rep.* 2020;10(1):1-12. Available from: <https://www.nature.com/articles/s41598-020-78642-2>.
33. Stevenson MP, Dewhurst R, Schilhab T, Bentsen P. Cognitive Restoration in Children Following Exposure to Nature: Evidence From the Attention Network Task and Mobile Eye Tracking. *Front Psychol.* 2019;10:42. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30804825>.
34. Szczytko R, Carrier SJ, Stevenson KT. Impacts of Outdoor Environmental Education on Teacher Reports of Attention, Behavior, and Learning Outcomes for Students With Emotional, Cognitive, and Behavioral Disabilities. *Frontiers in Education.* 2018;3(46). Available from: <https://www.frontiersin.org/article/10.3389/feduc.2018.00046>.
35. Volpe M, Derr V, Kim S. **“And it made me feel good inside”: Initial Evidence and Future Methods for Evaluating Nature School Effectiveness.** *Child Youth Environ.* 2019;29(2):5-27. Available from: <https://www.jstor.org/stable/10.7721/chilyoutenvi.29.2.0005>.
36. Walker KLA. **Outdoor child-centered play therapy with attention and social-emotional competencies in children:** ProQuest Information & Learning; 2022. Available from: <https://digital.library.unt.edu/ark:/67531/metadc1808455/>.
37. Williams IR, Rose LM, Raniti MB, Waloszek J, Dudgeon P, Olsson CA, et al. **The impact of an outdoor adventure program on positive adolescent development: a controlled crossover trial.** *Journal of Outdoor & Environmental Education.* 2018;21(2):207-36. Available from: <https://link.springer.com/article/10.1007/s42322-018-0015-8>.
38. Zamzow J, Ernst J. **Supporting School Readiness Naturally: Exploring Executive Function Growth in Nature Preschools.** *International Journal of Early Childhood Environmental Education.* 2020;7(2):6-16. Available from: <https://naaee.org/eeepro/research/library/supporting-school-readiness-naturally>.

XIII Evaluation – Risk-taking

1. Back to Nature Network. **A guide to teaching in nearby nature.** Ontario: Resources for Thinking, supported by the Ontario Trillium Foundation through a collaborative partnership between Royal Botanical Gardens, Parks and Recreation Ontario and Ontario Nature; 2012. Available from: https://resources4rethinking.ca/media/B2N_Into-Nature_English.pdf.
2. British Columbia Ministry of Education. **The environmental learning & experience curriculum maps. Environment & sustainability across BC’s k-12 curricula.** Victoria, BC: BC Ministry of Education; 2008-9. Available from: https://www2.gov.bc.ca/assets/gov/education/kinderergarten-to-grade-12/teach/teaching-tools/environmental-learning/ele_maps.pdf.
3. Cardona J. **Discover The Fun Of Backyard Geology.** Porch; 2021 May. Available from: <https://porch.com/advice/discover-the-fun-of-backyard-geology>.
4. Forest School Canada. **Forest and nature school in Canada: A head, heart, hands approach to outdoor learning.** Forest School Canada; 2017. Available from: <https://childnature.ca/wp-content/uploads/2017/10/FSC-Guide-1.pdf>.
5. Huggins V. **Risk and adventure in early years outdoor play: learning from forest schools, and Forest schools for all.** *Early Years: Journal of International Research & Development.* 2012;32(1):99-100. Available from: <https://uk.sagepub.com/en-gb/eur/risk-adventure-in-early-years-outdoor-play/book234719>.

6. ImaginED. **Walking curriculum**. ImaginED,. Available from: <https://www.educationthatinspires.ca/walking-curriculum-imaginative-ecological-learning-activities/>.
7. Learning through landscapes. **A year of outdoor homework**. Available from: <https://www.ftl.org.uk/resources/outdoor-homework/>.
8. Resources for Fresh Air School. Calgary, AB: Outdoor Council of Canada; 2021; Available from: <https://www.outdoorcouncil.ca/Resources-for-Fresh-Air-School>.
9. Tsikalas K, Martin KL. **Girls' Challenge Seeking: How Outdoor Exposure Can Support Girls in Taking Positive Risks**. Afterschool Matters. 2015(21):1-10. Available from: <https://www.informalscience.org/girls%E2%80%99challenge-seeking-how-outdoor-exposure-can-support-girls-taking-positive-risks>.
10. University of Calgary. **List of Resources for Online Experiential Learning**. Calgary, AB: University of Calgary, Taylor Institute. Available from: <https://taylorinstitute.ucalgary.ca/resources/list-of-resources-for-online-experiential-learning>.
11. WildBC. Get Outdoors: An Educators Guide to Outdoor Classrooms WildBC, BC Parks, Parks Canada, Metro Vancouver, and the Ministry of Education. Victoria, BC: WildBC. Available from: <http://www.metrovancouver.org/events/school-programs/K12publications/GetOutdoors.pdf>.
12. Wildsight. **Classroom with outdoors**. Kimberley, BC: Wildsight; Available from: <https://wildsight.ca/programs/classroom-outdoors/>.
13. Zeni M. **Playful Learning Outdoors In May During Covid-19**. Available from: <https://meganzeni.com/playful-learning-outdoors-in-may-during-covid-19/>.

XIV Perception - Parents

1. Curtis AD, Hinckson EA, Water TCA. **Physical activity is not play: perceptions of children and parents from deprived areas**. The New Zealand medical journal. 2012;125(1365):38-47. Available from: <https://pubmed.ncbi.nlm.nih.gov/23254499/>.
2. Hunter J, Syversen KB, Graves C, Bodensteiner A. **Balancing Outdoor Learning and Play: Adult Perspectives of Teacher Roles and Practice in an Outdoor Classroom**. International Journal of Early Childhood Environmental Education. 2020;7(2):34-50. Available from: <https://files.eric.ed.gov/fulltext/EJ1254849.pdf>.
3. Mazyck M, Andreu M, Hermansen-BÁez LA, Miller MD. **Parent Perceptions of Outdoor Learning in the Kids in the Woods Program**. Journal of Extension. 2021;59(4):1-4. Available from: <https://tigerprints.clemson.edu/joe/vol59/iss4/1/>.
4. Nguyễn THN. **Parental involvement in outdoor learning: crossing curriculum priorities**. Curriculum Perspectives. 2019;39(1):103-7. Available from: <https://link.springer.com/article/10.1007/s41297-019-00064-6>.
5. Prince H, Allin L, Sandseter EBH, Ärlemalm-Hagsér E. **Outdoor play and learning in early childhood from different cultural perspectives**. Journal of Adventure Education and Outdoor Learning. 2013;13(3):183-8. Available from: <https://doi.org/10.1080/14729679.2013.813745>.
6. Waite S, Pleasants K. **Cultural perspectives on experiential learning in outdoor spaces**. Journal of Adventure Education and Outdoor Learning. 2012;12(3):161-5. Available from: <https://doi.org/10.1080/14729679.2012.699797>.

XV Perception – Students

1. Asmara CH, Anwar K, Muhammad RN. **EFL Learners' Perception toward an Outdoor Learning Program**. International Journal of Education and Literacy Studies. 2016;4(2):74-81. Available from: <https://www.journals.aiac.org.au/index.php/IJELS/article/view/2430>.

2. Ayotte-Beaudet J, Potvin P. **Factors Related to Students' Perception of Learning During Outdoor Science Lessons in Schools' Immediate Surroundings.** Interdiscip J Env Sci Ed. 2020;16(2):e2212. Available from: <https://doi.org/10.29333/ijese/7815>.
3. BonavolontÀ V, Cataldi S, Fischetti F. **Changes in body image perception after an outdoor physical education program.** Journal of Physical Education & Sport. 2021;21:632-7. Available from: <https://efsupit.ro/images/stories/februarie2021/Art%2074.pdf>.
4. Curtis AD, Hinckson EA, Water TCA. **Physical activity is not play: perceptions of children and parents from deprived areas.** The New Zealand medical journal. 2012;125(1365):38-47. Available from: <https://pubmed.ncbi.nlm.nih.gov/23254499/>.
5. FÄGerstam E, GrothÉRus A. **Secondary school students' experience of outdoor learning: A Swedish case study.** Education. 2018;138(4):378-92. Available from: <https://go.gale.com/ps/i.do?id=GALE%7CA543610941&sid=googleScholar&v=2.1&it=r&linkaccess=abs&isn=00131172&p=AONE&sw=w&userGroupName=anon%7E3b075fe2>.
6. Ferreira JG. **Student Perceptions of a Place-Based Outdoor Environmental Education Initiative: A Case Study of the "Kids in Parks" Program.** Applied Environmental Education and Communication. 2020;19(1):19-28. Available from: <https://doi.org/10.1080/1533015X.2018.1489317>.
7. Fruin H. **Muddy Play: Reflections on Young Children's Outdoor Learning in an Urban Setting.** Voices of Practitioners: Teacher Research in Early Childhood Education. 2020;15:68-75. Available from: <https://www.naeyc.org/resources/pubs/yc/mar2020/outdoor-learning-urban-setting>.
8. Hammarsten M. **What are Schoolchildren doing Out There? Children's Perspectives on Affordances in Unedited Places.** Built Environ. 2021;47(2):186-205. Available from: <https://doi.org/10.2148/benv.47.2.186>.
9. Heras R, Medir RM, Salazar O. **Children's perceptions on the benefits of school nature field trips.** Education 3-13. 2020;48(4):379-91. Available from: <https://doi.org/10.1080/03004279.2019.1610024>.
10. Marley J, Nobe MC, Clevenger CM, Banning JH. **Participatory Post-Occupancy Evaluation (PPOE): A Method to Include Students in Evaluating Health-Promoting Attributes of a Green School.** Child Youth Environ. 2015;25(1):4-28. Available from: <http://dx.doi.org/10.7721/chilyoutenvi.25.1.0004>.
11. Pamuk DK, Berat A. **A phenomenological study on the school concept of the children attending the forest school.** Eğitimde Nitel Araştırmalar Dergisi. 2019;7(4):1386-407. Available from: <http://enadonline.com/en/archives/volume-7-issue-4/a-phenomenological-study-on-the-school-concept-of-the-children-attending-the-forest-school-2999/>.
12. Razak NHBA, Iksan ZH, Zakaria SZS. **Students' reflection on green school.** Journal of Techno Social. 2017;9(1). Available from: <https://www.semanticscholar.org/paper/STUDENTS%E2%80%99-REFLECTION-ON-GREEN-SCHOOL-Razak-Iksan/93be058cb8bdbc2c0f7acd9323eea7054d69b5db>.
13. Rios C, Menezes I. **'I saw a magical garden with flowers that people could not damage!': Children's visions of nature and of learning about nature in and out of school.** Environmental Education Research. 2017;23(10):1402-13. Available from: <https://doi.org/10.1080/13504622.2017.1325450>.
14. Sahrakhiz S, Harring M, Witte MD. **Learning opportunities in the outdoor school—empirical findings on outdoor school in Germany from the children's perspective.** Journal of Adventure Education and Outdoor Learning. 2018;18(3):214-26. Available from: <https://doi.org/10.1080/14729679.2017.1413404>.
15. Skalstad I, Munkebye E. **Young children's questions about science topics when situated in a natural outdoor environment: a qualitative study from kindergarten and primary school.** International Journal of Science Education. 2021;43(7):1017-35. Available from: <https://doi.org/10.1080/09500693.2021.1895451>.

16. Streelasky J. Elementary Students' Perceptions of Their School Learning Experiences: Children's Connections with Nature and Indigenous Ways of Knowing. *Child Youth Environ.* 2017;27(1):47-66. Available from: <https://doi.org/10.7721/chilyoutenvi.27.1.0047>.

XVI Perception – Teachers, Practitioners

1. Agostini F, Minelli M, Mandolesi R. **Outdoor Education in Italian Kindergartens: How Teachers Perceive Child Developmental Trajectories.** *Front Psychol.* 2018;9:1911. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30369896>.
2. Beyer K, Bizub J, Szabo A, Heller B, Kistner A, Shawgo E, et al. **Development and validation of the attitudes toward outdoor play scales for children.** *Soc Sci Med.* 2015;133:253-60. Available from: <https://doi.org/10.1016/j.socscimed.2014.10.033>.
3. Brussoni M, Han CS, Jacob J, Munday F, Zeni M, Walters M, et al. A Web-Based Risk-Reframing Intervention to Influence Early Childhood Educators' Attitudes and Supportive Behaviors Toward Outdoor Play: Protocol for the OutsidePlay Study Randomized Controlled Trial. *JMIR research protocols.* 2021;10(11):e31041. Available from: <https://doi.org/10.2196/31041>.
4. Button J, Wilde A. **Exploring practitioners' perceptions of risk when delivering Forest School for 3- to 5-year-old children.** *International Journal of Play.* 2019;8(1):25-38. Available from: <https://doi.org/10.1080/21594937.2019.1580334>.
5. Chen C, Ahlqvist VH, Henriksson P, Magnusson C, Berglind D. Preschool environment and preschool teacher's physical activity and their association with children's activity levels at preschool. *PLoS One.* 2020;15(10):e0239838. Available from: <https://doi.org/10.1371/journal.pone.0239838>.
6. Dabaja ZF. An Explorative Case Study of the Perceptions and Attitudes of Lebanese School Educators toward the Integration of Outdoor Education in the Teaching of School Curricula: University of Windsor; 2020. Available from: <https://scholar.uwindsor.ca/etd/8442/>.
7. Dietze B, Kashin D. **Perceptions That Early Learning Teachers Have about Outdoor Play and Nature.** *LEARNing Landscapes.* 2019;12(1):91-105. Available from: <https://www.learninglandscapes.ca/index.php/learnland/article/view/981>.
8. Dring CC, Lee SY, Rideout CA. **Public school teachers' perceptions of what promotes or hinders their use of outdoor learning spaces.** *Learning Environments Research.* 2020;23(3):369-78. Available from: <https://eric.ed.gov/?id=EJ1267312>.
9. Dring CC, Lee SYH, Rideout CA. **Public school teachers' perceptions of what promotes or hinders their use of outdoor learning spaces.** *Learning Environments Research.* 2020;23(3):369-78. Available from: <https://link.springer.com/article/10.1007/s10984-020-09310-5>.
10. Ernst J. Early childhood educators' use of natural outdoor settings as learning environments: an exploratory study of beliefs, practices, and barriers. *Environmental Education Research.* 2014;20(6):735-52. Available from: <https://doi.org/10.1080/13504622.2013.833596>.
11. Fägerstam E. **High school teachers' experience of the educational potential of outdoor teaching and learning.** *Journal of Adventure Education and Outdoor Learning.* 2014;14(1):56-81. Available from: <https://doi.org/10.1080/14729679.2013.769887>.
12. Feille KK. Teaching in the Field: What Teacher Professional Life Histories Tell About How They Learn to Teach in the Outdoor Learning Environment. *Research in Science Education.* 2017;47(3):603-20. Available from: <https://doi.org/10.1007/s11165-016-9519-9>.
13. Gill A, Grace R, Waniganayake M, Hadley F. Practitioner and foster carer perceptions of the support needs of young parents in and exiting out-of-home care: A systematic review. *Child Youth Serv Rev.* 2020;108:104512. Available from: <https://www.sciencedirect.com/science/article/pii/S0190740919305924>.

14. Glackin M. 'Risky fun' or 'authentic science'? How teachers' beliefs influence their practice during a professional development programme on outdoor learning. *International Journal of Science Education*. 2016;38(3):409-33. Available from: <https://doi.org/10.1080/09500693.2016.1145368>.
15. Goff LS. **Public Elementary School Teachers' Experiences With Implementing Outdoor Classrooms**: Walden University; 2018. Available from: <https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=6903&context=dissertations>.
16. Guardino C, Hall KW, Largo-Wight E, Hubbuch C. **Teacher and student perceptions of an outdoor classroom**. *Journal of Outdoor and Environmental Education*. 2019;22(2):113-26. Available from: <https://link.springer.com/article/10.1007/s42322-019-00033-7>.
17. Harper NJ, Obee P. **Articulating outdoor risky play in early childhood education: voices of forest and nature school practitioners**. *Journal of Adventure Education and Outdoor Learning*. 2021;21(2):184-94. Available from: <https://doi.org/10.1080/14729679.2020.1784766>.
18. Harris F. **The nature of learning at forest school: practitioners' perspectives**. *Education 3-13*. 2017;45(2):272-91. Available from: <https://doi.org/10.1080/03004279.2015.1078833>.
19. Hovey K, Niland D, Foley JT. The impact of participation in an outdoor education program on physical education teacher education student self-efficacy to teach outdoor education. *Journal of Teaching in Physical Education*. 2020;39(1):18-27. Available from: <https://doi.org/10.1123/jtpe.2018-0288>.
20. Howe N, Perlman M, Bergeron C, Burns S. **Scotland Embarks on a National Outdoor Play Initiative: Educator Perspectives**. *Early Education & Development*. 2021;32(7):1067-81. Available from: <https://doi.org/10.1080/10409289.2020.1822079>.
21. Jones B. **Barriers and Supports for Outdoor Adventure Education in Rural British Columbia**. Vancouver, BC: University of British Columbia; 2021. Available from: <https://open.library.ubc.ca/soa/cIRcle/collections/graduateresearch/42591/items/1.0402141>.
22. Kemp N. **Views from the staffroom: forest school in English primary schools**. *Journal of Adventure Education and Outdoor Learning*. 2020;20(4):369-80. Available from: <https://doi.org/10.1080/14729679.2019.1697712>.
23. Kerlin S, Santos R, Bennett W. **Green Schools as Learning Laboratories? Teachers' Perceptions of Their First Year in a New Green Middle School**. *Journal of Sustainability Education*. 2015:1-. Available from: http://www.susted.com/wordpress/content/green-schools-as-learning-laboratories-teachers-perceptions-of-their-first-year-in-a-new-green-middle-school-2_2015_01/.
24. Lee S. **Early Childhood Teachers' Perspectives of Outdoor and Nature Play in Seoul, South Korea and Montreal, Canada**: Concordia University; 2019. Available from: <https://spectrum.library.concordia.ca/id/eprint/985593/>.
25. Lee SY. A comparative study of health perceptions, passion for the teaching profession, teacher efficacy, and happiness of forest kindergarten teachers across types of forest kindergartens. *Information (Japan)*. 2017;20:6819-26. Available from: <https://www.proquest.com/openview/780278479a325ca5c8e6f11af8e9772c/1?pq-origsite=gscholar&cbl=936334>.
26. LeMasters AC, Vandermaas-Peeler M. Exploring outdoor play: a mixed-methods study of the quality of preschool play environments and teacher perceptions of risky play. *Journal of Adventure Education & Outdoor Learning*. 2021:1-13. Available from: <https://doi.org/10.1080/14729679.2021.1925564>.
27. MacQuarrie S, Nugent C, Warden C. **Learning with nature and learning from others: nature as setting and resource for early childhood education**. *Journal of Adventure Education and Outdoor Learning*. 2015;15(1):1-23. Available from: <https://doi.org/10.1080/14729679.2013.841095>.

28. Malden S, Doi L. The Daily Mile: teachers' perspectives of the barriers and facilitators to the delivery of a school-based physical activity intervention. *BMJ Open*. 2019;9(3):e027169. Available from: <https://bmjopen.bmj.com/content/9/3/e027169>.
29. Marques R, Xavier CR. **The Challenges and Difficulties of Teachers in the Insertion and Practice of Environmental Education in the School Curriculum**. *International Journal on Social and Education Sciences*. 2020;2(1):49-56. Available from: <https://www.ijonses.net/index.php/ijonses/article/view/30>.
30. Murphy C, Smith G, Varley J, Razi Ö, Boylan M. Changing practice: An evaluation of the impact of a nature of science inquiry-based professional development programme on primary teachers. *Cogent Education*. 2015;2(1):1-N.PAG. Available from: <https://doi.org/10.1080/2331186X.2015.1077692>.
31. Nel A, Joubert I, Hartell C. **Teachers' perceptions on the design and use of an outdoor learning environment for sensory and motor stimulation**. *South African Journal of Childhood Education*. 2017;7(1):1-11. Available from: <https://eric.ed.gov/?id=EJ1186961>.
32. Neves T, Pereira MJ, Nata G. Head teachers' perceptions of secondary school rankings: Their nature, media coverage and impact on schools and the educational arena. *Education as Change*. 2014;18(2):211-25. Available from: <https://doi.org/10.1080/16823206.2014.926829>.
33. Nugent C, MacQuarrie S, Beames S. **'Mud in my ears and jam in my beard': Challenging gendered ways of being in nature kindergarten practitioners**. *International Journal of Early Years Education*. 2019;27(2):143-52. Available from: <https://doi.org/10.1080/09669760.2018.1562884>.
34. Océane L, Mathis P. **The Udeskole model, an alternative school for ESDD**. *LPCOM* 2019; 2019. Available from: <https://wikis.cdrflorac.fr/wikis/LPCOM2019/?Groupeceeddr2>.
35. Ray HA, Jakubec SL. **Nature's Classroom: A Review of Motivators and Deterrents for Teacher Engagement in Outdoor Education Field Experiences**. *Journal of Outdoor Recreation, Education and Leadership*. 2018;10:323+. Available from: <https://doi.org/10.18666/JOREL-2018-V10-I4-8770>.
36. Sahrakhiz S. **The 'outdoor school' as a school improvement process: Empirical results from the perspective of teachers in Germany**. *Education 3-13*. 2018;46(7):825-37. Available from: <https://doi.org/10.1080/03004279.2017.1371202>.
37. Sahrakhiz S, Harring M, Witte MD. **School Teaching in Germany Between Tradition and Innovation: The Concept of the Outdoor School**. *Decision Making in Social Sciences: Between Traditions and Innovations* 2020. p. 91-8. Available from: https://link.springer.com/chapter/10.1007/978-3-030-30659-5_5.
38. Sakellariou M, Banou M. Play within outdoor preschool learning environments of Greece: A comparative study on current and prospective kindergarten educators. *Early Child Dev Care*. 2020. Available from: <http://dx.doi.org/10.1080/03004430.2020.1813123>.
39. Savery A, Cain T, Garner J, Jones T, Kynaston E, Mould K, et al. **Does engagement in Forest School influence perceptions of risk, held by children, their parents, and their school staff?** *Education 3-13*. 2017;45(5):519-31. Available from: <https://doi.org/10.1080/03004279.2016.1140799>.
40. Spencer RA, Joshi N, Branje K, McIsaac J-LD, Cawley J, Rehman L, et al. **Educator perceptions on the benefits and challenges of loose parts play in the outdoor environments of childcare centres**. *AIMS public health*. 2019;6(4):461-76. Available from: <https://doi.org/10.3934/publichealth.2019.4.461>.
41. Spencer RA, Joshi N, Branje K, Murray N, Kirk SF, Stone MR. **Early childhood educator perceptions of risky play in an outdoor loose parts intervention**. *AIMS public health*. 2021;8(2):213-28. Available from: <https://pubmed.ncbi.nlm.nih.gov/34017887>.

42. van Dijk-Wesselius JE, van den Berg AE, Maas J, Hovinga D. **Green schoolyards as outdoor learning environments: Barriers and solutions as experienced by primary school teachers.** Front Psychol. 2020;10:2919. Available from: <https://www.frontiersin.org/articles/10.3389/fpsyg.2019.02919/full>.
43. Waite S. **Where Are We Going? International Views on Purposes, Practices and Barriers in School-Based Outdoor Learning.** Education Sciences. 2020;10(11):311. Available from: <https://doi.org/10.3390/educsci10110311>.
44. Waite S, Goodenough A. **What is different about Forest School? Creating a space for an alternative pedagogy in England.** Journal of Outdoor and Environmental Education. 2018;21(1):25-44. Available from: <https://link.springer.com/article/10.1007/s42322-017-0005-2>.
45. Webber C, Hardwell A. 'Perhaps a Bit Different to What We Did Twenty Years Ago': Senior Teachers' Perceptions of Outdoor Adventure within Primary Education in England. Sports (Basel). 2019;7(4). Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31010210>.

XVII School design

1. Aminpour F. From the child's perspective: How the layout of outdoor school environments shapes conflict between children's self-directed play. J Environ Psychol. 2022;79:101727. Available from: <https://www.sciencedirect.com/science/article/pii/S0272494421001808>.
2. Aminpour F, Bishop K, Corkery L. **The hidden value of in-between spaces for children's self-directed play within outdoor school environments.** Landscape and Urban Planning. 2020;194:103683. Available from: <https://www.sciencedirect.com/science/article/pii/S016920461930297X>.
3. Armstrong GP, Maitland C, Lester L, Trost SG, Trapp G, Boruff B, et al. **Associations between the home yard and preschoolers' outdoor play and physical activity.** Public Health Res Pract. 2019;29(1). Available from: <https://doi.org/10.17061/phrp2911907>.
4. Bekar M, Guneroglu N. **Designing nature friendly school gardens: Implementing visions of students.** Fresenius Environmental Bulletin. 2018;27(12B):9473-80. Available from: <https://www.cabdirect.org/cabdirect/abstract/20193243071>.
5. Bohnert AM, Nicholson LM, Mertz L, Bates CR, Gerstein DE. **Green schoolyard renovations in low-income urban neighborhoods: Benefits to students, schools, and the surrounding community.** Am J Community Psychol. 2021. Available from: <https://doi.org/10.1002/ajcp.12559>.
6. Browning MHEM, Marion JL, Gregoire TG. **Sustainably connecting children with nature – An exploratory study of nature play area visitor impacts and their management.** Landscape and Urban Planning. 2013;119:104-12. Available from: <https://www.sciencedirect.com/science/article/pii/S0169204613001321>.
7. Burt KG, Koch P, Contento I. Development of the GREEN (Garden Resources, Education, and Environment Nexus) Tool: An Evidence-Based Model for School Garden Integration. Journal of the Academy of Nutrition and Dietetics. 2017;117(10):1517. Available from: <https://doi.org/10.1016/j.jand.2017.02.008>.
8. Dinkel D, Dev D, Guo Y, Sedani A, Hulse E, Rida Z, et al. **Comparison of Urban and Rural Physical Activity and Outdoor Play Environments of Childcare Centers and Family Childcare Homes.** Fam Community Health. 2020;43(4). Available from: <https://doi.org/10.1097/fch.0000000000000267>.
9. Elliott H. **Forest School in an inner city? Making the impossible possible.** Education 3-13. 2015;43(6):722-30. Available from: <https://doi.org/10.1080/03004279.2013.872159>.

10. Harmon L. **Nature Play & Learning Places: Creating and Managing Places where Children Engage with Nature.** Child Youth Environ. 2017;27(2):125-8. Available from: http://outdoorplaybook.ca/wp-content/uploads/2015/09/Nature-Play-Learning-Places_v1.5_Jan16.pdf.
11. Harper NJ. **Outdoor risky play and healthy child development in the shadow of the 'risk society': A forest and nature school perspective.** Child & Youth Services. 2017;38(4):318-34. Available from: <https://doi.org/10.1080/0145935X.2017.1412825>.
12. Harper NJ, Lim C, Alqallaf H, Naylor PJ. **A case study exploring the 'real world' process of 'naturalizing' school playgrounds.** Int J Environ Health Res. 2021;31(3):298-314. Available from: <https://doi.org/10.1080/09603123.2019.1656174>.
13. Herrington S, Brunelle S, Brussoni M. **Outdoor play spaces in Canada: As if children mattered.** In: Waller T, Årlemalm-Hagsér E, Sandseter EBH, Lee-Hammond L, Lekies K, Wyver S, editors. The Sage handbook of outdoor play and learning 2017. p. 143-65. Available from: https://www.researchgate.net/publication/336552283_Outdoor_Play_Spaces_in_Canada_As_if_Children_Mattered.
14. Hyndman B, Mahony L. **Developing creativity through outdoor physical activities: a qualitative exploration of contrasting school equipment provisions.** Journal of Adventure Education and Outdoor Learning. 2018;18(3):242-56. Available from: <https://doi.org/10.1080/14729679.2018.1436078>.
15. Jansson M, Mårtensson F. **Green School Grounds: A Collaborative Development and Research Project in Malmö, Sweden.** Child Youth Environ. 2012;22(1):260-9. Available from: <https://www.jstor.org/stable/10.7721/chilyoutenvi.22.1.0260#:~:text=In%202010%2C%20the%20municipality%20of,for%20example%2C%20woodland%20and%20hilly>.
16. Kennedy E, Olsen H, Vanos J, Vecellio DJ, Desat M, Richters K, et al. **Reimagining spaces where children play: developing guidance for thermally comfortable playgrounds in Canada.** Can J Public Health. 2021;112(4):706-13. Available from: <https://link.springer.com/article/10.17269/s41997-021-00522-7>.
17. Khan M, Bell S, McGeown S, Silveirinha de Oliveira E. **Designing an outdoor learning environment for and with a primary school community: a case study in Bangladesh.** Landscape Research. 2020;45(1):95-110. Available from: <https://doi.org/10.1080/01426397.2019.1569217>.
18. Mansfield A, Cotton WG, Ginns P. **Design Principles of Youth Development Programs in Outdoor Environments: A Scoping Review.** Journal of Outdoor and Environmental Education. 2020;23(3):241-60. Available from: <http://dx.doi.org/10.1007/s42322-020-00063-6>.
19. Moore SA, Apicella M, Marston SA, Thompson M. **Designing Nature for Learning: School Gardens for Youth and Child Education.** Child Youth Environ. 2012;22(1):250-9. Available from: <https://www.jstor.org/stable/10.7721/chilyoutenvi.22.1.0250>.

XVIII School quality

1. Collins R, Sibthorp J, Gookin J, Schumann S. The role and importance of program quality in outdoor adventure programs for youth: Examining program quality indicators as predictors of outcome achievement among NOLS participants. Research in Outdoor Education. 2012;11:28-46. Available from: <https://muse.jhu.edu/article/669533>.
2. Hu BY, Li K, De Marco A, Chen Y. **Examining the quality of outdoor play in Chinese kindergartens.** International Journal of Early Childhood. 2015;47(1):53-77. Available from: <http://dx.doi.org/10.1007/s13158-014-0114-9>.

3. Li X, Huang Y, Ma X. Evaluation of the accessible urban public green space at the community-scale with the consideration of temporal accessibility and quality. *Ecol Indic.* 2021;131:N.PAG-N.PAG. Available from: <https://doi.org/10.1016/j.ecolind.2021.108231>.
4. Spencer KH, Wright PM. **Quality Outdoor Play Spaces for Young Children.** *YC: Young Children.* 2014;69(5):28-34. Available from: https://issuu.com/naeyc/docs/yc1114_quality_outdoor_play_spaces.
5. Weyland B. **Movement and outdoor spaces as quality indicators in the design of school buildings.** *Journal of Physical Education & Sport.* 2021;21:624-31. Available from: <https://www.proquest.com/openview/0d9a93c9a923a25e8c51858d4f4a89a1/1?pq-origsite=gscholar&cbl=1006394>.

XIX Play - general

1. Borghese MM, Janssen I. Development of a measurement approach to assess time children participate in organized sport, active travel, outdoor active play, and curriculum-based physical activity. *BMC Public Health.* 2018;18(1):396. Available from: <https://dx.doi.org/10.1186%2Fs12889-018-5268-1>.
2. Brussoni M, Ishikawa T, Brunelle S, Herrington S. **Landscapes for play: Effects of an intervention to promote nature-based risky play in early childhood centres.** *J Environ Psychol.* 2017;54:139-50. Available from: <https://doi.org/10.1016/j.jenvp.2017.11.001>.
3. Brussoni M, Lin Y, Han C, Janssen I, Schuurman N, Boyes R, et al. A qualitative investigation of unsupervised outdoor activities for 10- to 13-year-old children: "I like adventuring but I don't like adventuring without being careful". *J Environ Psychol.* 2020;70:101460. Available from: <https://www.sciencedirect.com/science/article/pii/S0272494420300633>.
4. Clark E, Dumas A. **Children's active outdoor play: 'good' mothering and the organisation of children's free time.** *Sociol Health Illn.* 2020;42(6):1229-42. Available from: <https://doi.org/10.1111/1467-9566.13107>.
5. Cox A, Loebach J, Little S. **Understanding the Nature Play Milieu: Using Behavior Mapping to Investigate Children's Activities in Outdoor Play Spaces.** *Child Youth Environ.* 2018;28(2):232-61. Available from: <https://www.jstor.org/stable/10.7721/chilyoutenvi.28.2.0232>.
6. Dankiw KA, Tsiros MD, Baldock KL, Kumar S. **The impacts of unstructured nature play on health in early childhood development: A systematic review.** *PLoS One.* 2020;15(2). Available from: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0229006>.
7. de Lannoy L, Rhodes RE, Moore SA, Faulkner G, Tremblay MS. **Regional differences in access to the outdoors and outdoor play of Canadian children and youth during the COVID-19 outbreak.** *Can J Public Health.* 2020;111(6):988-94. Available from: <https://doi.org/10.17269/s41997-020-00412-4>.
8. Earth Day. **Outdoor Play and Learning (OPAL): Coming to a School Near You.** *Physical & Health Education Journal.* 2017;83(4):3-. Available from: <https://journal.phcanada.ca/issues/226/volume-83-issue-4/outdoor-play-and-learning-opal-coming-school-near-you>.
9. Ergler CR, Kearns RA, Witten K. **Seasonal and locational variations in children's play: Implications for wellbeing.** *Soc Sci Med.* 2013;91:178-85. Available from: <https://doi.org/10.1016/j.socscimed.2012.11.034>.
10. Fang W-T, Ng E, Chang M-C. **Physical Outdoor Activity versus Indoor Activity: Their Influence on Environmental Behaviors.** *Int J Environ Res Public Health.* 2017;14(7). Available from: <https://dx.doi.org/10.3390%2Fijerph14070797>.
11. Flannigan C, Dietze B. **Children, Outdoor Play, and Loose Parts.** *J Childhood Stud.* 2018;42:53-60. Available from: <https://journals.uvic.ca/index.php/jcs/article/view/18103>.

12. Frost JL, Sutterby JA. **Outdoor Play Is Essential to Whole Child Development.** YC: Young Children. 2017;72(3):82-5. Available from: <https://openlab.bmcc.cuny.edu/ece-110-lecture/wp-content/uploads/sites/98/2019/11/Frost-Supperby-2017.pdf>.
13. Herrington S, Brussoni M. **Beyond Physical Activity: The Importance of Play and Nature-Based Play Spaces for Children's Health and Development.** Current obesity reports. 2015;4(4):477-83. Available from: <https://doi.org/10.1007/s13679-015-0179-2>.
14. Holloway SL, Pimlott-Wilson H. **Reconceptualising play: Balancing childcare, extra-curricular activities and free play in contemporary childhoods.** Transactions of the Institute of British Geographers. 2018;43(3):420-34. Available from: <http://dx.doi.org/10.1111/tran.12230>.
15. Houser NE, Cawley J, Kolen AM, Rainham D, Rehman L, Turner J, et al. A loose parts randomized controlled trial to promote active outdoor play in preschool-aged children: Physical Literacy in the Early Years (PLEY) project. Methods and protocols. 2019;2(2):27. Available from: <https://doi.org/10.3390/mps2020027>.
16. Hsu CC, Huang N, Lin PY, Tsai DC, Tsai CY, Woung LC, et al. **Prevalence and risk factors for myopia in second-grade primary school children in Taipei: A population-based study.** J Chin Med Assoc. 2016;79(11):625-32. Available from: <https://doi.org/10.1016/j.jcma.2016.02.011>.
17. Kinsner K. **Fresh Air, Fun, and Exploration: Why Outdoor Play Is Essential for Healthy Development.** YC: Young Children. 2019;74(2):90-2. Available from: <https://www.naeyc.org/resources/pubs/yc/may2019/outdoor-play-is-essential#:~:text=It%20gives%20children%20a%20chance%20to%20take%20appropriate%20risks&text=Playing%20outside%20provides%20opportunities%20to,eye%20of%20a%20caring%20adult>.
18. Lawson Foundation. **Advancing Outdoor Play and Early Childhood Education: A Discussion Paper.** Toronto, ON: Lawson Foundation; 2019 May. Available from: <https://lawson.ca/advancing-op-ece.pdf>.
19. Lee RLT, Lane SJ, Tang ACY, Leung C, Louie LHT, Browne G, et al. **Effects of an Unstructured Free Play and Mindfulness Intervention on Wellbeing in Kindergarten Students.** Int J Environ Res Public Health. 2020;17(15). Available from: <https://www.mdpi.com/1660-4601/17/15/5382>.
20. Lehrer JS, Petrakos HH, Venkatesh V. **Grade 1 students' out-of-school play and its relationship to school-based academic, behavior, and creativity outcomes.** Early Education and Development. 2014;25(3):295-317. Available from: <https://doi.org/10.1080/10409289.2013.817231>.
21. Løndal K. **Bodily Play in the After-School Program: Fulfillment of Intentionality in Interaction between Body and Place.** Am J Play. 2011;3(3):385-407. Available from: <https://www.journalofplay.org/sites/www.journalofplay.org/files/pdf-articles/3-3-article-londal-bodily-play-after-school-program.pdf>.
22. Løndal K. **Places for Child-Managed Bodily Play at an After-School Program.** Child Youth Environ. 2013;23(2):103-26. Available from: <http://dx.doi.org/10.7721/chilyoutenvi.23.2.0103>.
23. Løndal K, Greve A. Didactic approaches to child-managed play: Analyses of teacher's interaction styles in kindergartens and after-school programmes in Norway. International Journal of Early Childhood. 2015;47(3):461-79. Available from: <https://link.springer.com/article/10.1007/s13158-015-0142-0>.
24. Løndal K, Haugen ALH, Lund S, Riiser K. Physical activity of first graders in Norwegian after-school programs: A relevant contribution to the development of motor competencies and learning of movements? Investigated utilizing a mixed methods approach. PLoS One. 2020;15(4):e0232486. Available from: <https://doi.org/10.1371/journal.pone.0232486>.

25. Løndal K, Lund S, Haugen ALH, Riiser K. **First Graders' Stationary Behavior in Norwegian After-School Programs: A Mixed Methods Investigation.** Int J Environ Res Public Health. 2021;18(4). Available from: <https://doi.org/10.3390/ijerph18041938>.
26. McNamara L, Colley P, Franklin N. **School recess, social connectedness and health: a Canadian perspective.** Health Promot Int. 2017;32(2):392-402. Available from: <https://doi.org/10.1093/heapro/dav102>.
27. Nah K-O, Lee S-M. **Actualizing children's participation in the development of outdoor play areas at an early childhood institution.** Action Research. 2016;14(3):335-51. Available from: <http://dx.doi.org/10.1177/1476750315621610>.
28. Niblett B, Maher P, Lowan-Trudeau G. **Outdoor Play and Early Learning.** Canadian Journal of Environmental Education. 2020;23(2):5-9. Available from: <https://cjee.lakeheadu.ca/article/view/1745>.
29. Parrott HM, Cohen LE. **Advocating for play: The benefits of unstructured play in public schools.** The School Community Journal. 2020;30(2):229-54. Available from: <https://files.eric.ed.gov/fulltext/EJ1276879.pdf>.
30. Pearce M, Page AS, Griffin TP, Cooper AR. **Who children spend time with after school: associations with objectively recorded indoor and outdoor physical activity.** Int J Behav Nutr Phys Act. 2014;11(1):45. Available from: <https://doi.org/10.1186/1479-5868-11-45>.
31. Reche C, Viana M, Rivas I, Bouso L, Álvarez-Pedrerol M, Alastuey A, et al. **Outdoor and indoor UFP in primary schools across Barcelona.** The Science of the total environment. 2014;493:943-53. Available from: <https://doi.org/10.1016/j.scitotenv.2014.06.072>.
32. Shiakou M. **Changes in after school time use in Cyprus: Play and education.** International Journal of Play. 2018;7(2):188-98. Available from: <https://doi.org/10.1080/21594937.2018.1495999>.
33. Singer E. **Play and playfulness in early childhood education and care.** Psychology in Russia State of the Art. 2015;8(2):27-35. Available from: <http://psychologyinrussia.com/volumes/index.php?article=3688>.
34. Stone MR, Faulkner GEJ. **Outdoor play in children: Associations with objectively-measured physical activity, sedentary behavior and weight status.** Preventive Medicine: An International Journal Devoted to Practice and Theory. 2014;65:122-7. Available from: <https://doi.org/10.1016/j.ypmed.2014.05.008>.
35. Tremblay MS, Gray C, Babcock S, Barnes J, Bradstreet CC, Carr D, et al. **Position Statement on Active Outdoor Play.** Int J Environ Res Public Health. 2015;12(6):6475-505. Available from: <https://doi.org/10.3390/ijerph120606475>.
36. Webber C. **Outdoor Adventure within Primary Education.** 2019. Available from: https://www.researchgate.net/publication/334262976_Outdoor_Adventure_within_Primary_Education.
37. Wilkie HJ, Standage M, Gillison FB, Cumming SP, Katzmarzyk PT. **The home electronic media environment and parental safety concerns: relationships with outdoor time after school and over the weekend among 9-11 year old children.** BMC Public Health. 2018;18(1):456. Available from: <https://doi.org/10.1186/s12889-018-5382-0>.
38. Wolfenden L, Jones J, Parmenter B, Razak LA, Wiggers J, Morgan PJ, et al. **Efficacy of a free-play intervention to increase physical activity during childcare: a randomized controlled trial.** Health Educ Res. 2019;34(1):84-97. Available from: <https://doi.org/10.1093/her/cyy041>.
39. Wood C, Gladwell V, Barton J. **A repeated measures experiment of school playing environment to increase physical activity and enhance self-esteem in UK school children.** PLoS One. 2014;9(9):e108701. Available from: <https://doi.org/10.1371/journal.pone.0108701>