

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)

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Table of Contents

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

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	Search Context	page 2
II	Specific Question	page 2
III	Search Objective	page 2
IV	Search Parameters	page 2
V	Search Summary	page 3

SECTION 2 SEARCH RESULTS – AFTERSCHOOL OUTDOOR PROGRAM

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