

# **Reimagining Learning Outdoors: How Active Outdoor Play-Based Learning (AOPL) Supports Student Growth and Academic Success**

*A White Paper for School Leaders and Classroom Teachers*

## **Executive Summary**

Active Outdoor Play-Based Learning (AOPL) is an evidence-based approach that integrates active play, outdoor environments, and academic goals. It supports not only curricular learning but also students' physical, emotional, social, and cognitive development. This white paper shares practical insights from a systematic review of 21 empirical studies (2008-2024) on AOPL implementation in formal school settings.

AOPL is a pedagogical strategy that uses play and the outdoors as meaningful contexts for learning. Teachers who implement AOPL build connections between curriculum and students' natural curiosity while leveraging the benefits of being outside<sup>1</sup>.

This paper highlights practical strategies and compelling outcomes to guide implementation.

## **Why AOPL Matters in Schools**

### *Academic Growth*

- Supports literacy, math, science, and reasoning<sup>2,3</sup>
- Fosters the development of 21-century skills (critical thinking, problem solving, etc.)<sup>4,5</sup>
- Aligns with and enhances curriculum goals<sup>6,7</sup>

### *Social-Emotional Growth*

- Builds confidence, resilience, and self-regulation<sup>8,9</sup>
- Strengthens cooperation and communication<sup>10,11</sup>

### *Physical Well-Being*

- Promotes motor development, coordination, and movement skills<sup>7,12</sup>
- Encourages safe risk-taking and physical confidence<sup>13,14</sup>

### *Environmental Awareness*

- Builds connection to nature and place<sup>15,16</sup>
- Encourages environmental responsibility and stewardship<sup>17,18</sup>

## **The Educator's Role**

AOPL blends curricular learning with playful exploration in outdoor spaces. Teachers are not passive observers; instead, they:

- Facilitate both guided and free play with academic purpose<sup>7,19</sup>
- Connect outdoor experiences to classroom learning<sup>5,20</sup>
- Use observation and student interests to scaffold learning<sup>3,4</sup>

## Suggestions for Implementation

- Start small—use a corner of the schoolyard or sidewalk near the building.
- Reflect with students on what they learned, felt, and observed.
- Partner with another teacher or grade level.
- Use materials you already have: clipboards, chalk, magnifying glasses.
- Communicate goals clearly to families and administrators.
- Provide professional development on planning and managing AOPL.

## Practical Recommendations for Principals

To implement AOPL effectively, schools should support teachers in weaving it into core subjects, such as science and literacy<sup>3,20</sup>. Investing in biodiverse school grounds like gardens or tree-lined areas can enhance engagement and deepen environmental learning<sup>2,15</sup>. To signal its academic value, school leaders should encourage a dedicated time for outdoor curriculum beyond recess. Teachers benefit from professional development focused on outdoor classroom management and play-based strategies<sup>21</sup>.

## Final Thoughts

As schools face growing pressure to meet academic benchmarks while also nurturing student well-being, AOPL provides a way to do both. Students thrive when learning feels meaningful, playful, and connected to the world around them.

You don't need to be an outdoor expert to begin. You simply need a willingness to step outside, observe closely, and plan with purpose.

### *Want to Learn More?*

The full research synthesis was conducted by the following authors: Steph N. Dean, Peter Bakalár, David W. Chorney, Peter Kačúr, Summer Landreth, Dani M. Larson, & Megan Zeni. The synthesis included 21 empirical studies and outlines detailed outcomes and implementation strategies. If you'd like to view the full manuscript to explore how AOPL might look in your school or classroom, reach out to Steph Dean at [sndean@clemson.edu](mailto:sndean@clemson.edu).

## References

1. Beames, S., Higgins, P., Nicol, R., & Smith, H. (2024). *Outdoor learning across the curriculum: Theory and guidelines for practice*. Routledge.
2. Christian, B. J., Cameron, K. A., & Pearce, R. (2022). Growing capable kids: Exploring the nexus between the Australian curriculum's general capabilities, global competencies, and one school garden program. *Journal of Outdoor and Environmental Education*, 26(1), 127–146. <https://doi.org/10.1007/s42322-022-00117-x>
3. Sliogeris, M., & Almeida, S. C. (2017). Young children's development of scientific knowledge through the combination of teacher-guided play and child-guided play. *Research in Science Education*, 49(6), 1569–1593. <https://doi.org/10.1007/s11165-017-9667-6>
4. Campbell, C., & Speldewinde, C. (2022). Early childhood STEM education for sustainable development. *Sustainability*, 14(6), 3524. <https://doi.org/10.3390/su14063524>
5. MacDonald, K., & Breunig, M. (2018). Back to the Garten: Ontario kindergarteners learn and grow through schoolyard pedagogy. *Journal of Outdoor and Environmental Education*, 21(2), 133–151. <https://doi.org/10.1007/s42322-018-0011-z>
6. Pyle, A., DeLuca, C., & Danniels, E. (2017). A scoping review of research on play-based pedagogies in kindergarten education. *Review of Education*, 5, 311–351. <https://doi.org/10.1002/rev3.3097>
7. Hyvönen, P. T. (2011). Play in the school context? The perspectives of Finnish teachers. *Australian Journal of Teacher Education*, 36(8). <https://doi.org/10.14221/ajte.2011v36n8.5>
8. McCree, M., Cutting, R., & Sherwin, D. (2018). The hare and the tortoise go to Forest School: Taking the scenic route to academic attainment via emotional well-being outdoors. *Early Child Development and Care*, 188(7), 980–996. <https://doi.org/10.1080/03004430.2018.1446430>
9. Donison, L., & Halsall, T. (2023). 'I'd rather learn outside because nature can teach you so many more things than being inside': Outdoor learning experiences of young children and educators. *Journal of Childhood, Education & Society*, 4(3), 373–390. <https://doi.org/10.37291/2717638x.202343281>
10. Coates, J. K., & Pimlott-Wilson, H. (2018). Learning while playing: Children's Forest School experiences in the UK. *British Educational Research Journal*, 45(1), 21–40. <https://doi.org/10.1002/berj.3491>
11. Speldewinde, C., Kilderry, A., & Campbell, C. (2020). Beyond the preschool gate: Teacher pedagogy in the Australian 'bush kinder.' *International Journal of Early Years Education*, 31(1), 236–250. <https://doi.org/10.1080/09669760.2020.1850432>
12. Kangas, M. (2010). Creative and playful learning: Learning through game co-creation and games in a playful learning environment. *Thinking Skills and Creativity*, 5(1), 1–15. <https://doi.org/10.1016/j.tsc.2009.11.001>
13. Armbrüster, C., Gräfe, R., Harring, M., Sahrakhiz, S., Schenk, D., & Witte, M. D. (2016). Inside we learn, outside we explore the world – children's perception of a weekly outdoor day in German Primary Schools. *Journal of Education and Human Development*, 5(2). <https://doi.org/10.15640/jehd.v5n2a12>
14. Zeni, M., Schnellert, L., & Brussoni, M. (2023). "We do it anyway": Professional identities of teachers who enact risky play as a framework for education outdoors. *Journal of Outdoor and Environmental Education*, 26(3), 341–358. <https://doi.org/10.1007/s42322-023-00140-6>
15. Samborski, S. (2010). Biodiverse or barren school grounds: Their effects on children. *Children, Youth and Environments*, 20(2), 67–115. <https://doi.org/10.1353/cye.2010.0004>
16. Speldewinde, Chris, & Campbell, C. (2023). Bush Kinders: Building young children's relationships with the environment. *Australian Journal of Environmental Education*, 40(1), 7–21. <https://doi.org/10.1017/ae.2023.36>
17. Fisher-Maltese, C., Fisher, D. R., & Ray, R. (2017). Can learning in informal settings mitigate disadvantage and promote urban sustainability? School Gardens in Washington, DC. *International Review of Education*, 64(3), 295–312. <https://doi.org/10.1007/s11159-017-9663-0>
18. Borsos, E. (2018). The gamification of elementary school biology: A case study on increasing understanding of plants. *Journal of Biological Education*, 53(5), 492–505. <https://doi.org/10.1080/00219266.2018.1501407>
19. Zeni, M., Schnellert, L., & Brussoni, M. (2025). Pathways for outdoor play and learning: pedagogical decisions and curricular intent in elementary school outdoor classrooms. *Journal of Adventure Education and Outdoor Learning*, 1–21. <https://doi.org/10.1080/14729679.2025.2517042>
20. Speldewinde, C. (2024). 'Don't pick, don't lick': Connecting young children's risky play in nature to science education in Australian Bush Kinders. *Early Childhood Education Journal*. <https://doi.org/10.1007/s10643-024-01661-5>
21. Miller, N., Kumar, S., Pearce, K. L., & Baldock, K. L. (2022). The perceived benefits of and barriers to nature-based play and learning in South Australian public primary schools: A cross-sectional study. *Journal of Adventure Education and Outdoor Learning*, 22(4), 342–354. <https://doi.org/10.1080/14729679.2022.2100431>