

Making the Case:

Benefits of Outdoor Experiential Education in the Schoolyard

Outdoor experiential education can be the answer that public schools have been searching for to breathe new life into K-12 education as we know it. Schoolyard learning is a key part of achieving impactful and holistic outdoor education. In the most recent years, schools, teachers, and students are pressured to achieve proficient scores in reading and math standardized tests, leaving little room for hands-on learner focused opportunities (James 2016). Research suggests that blending outdoor experiential learning with K-12 curriculum results in increased comprehension of classroom topics, increased motivation to learn, reduced classroom management problems, and facilitates lifelong learning in students (Breuning et al, 2008; as cited in James, 2016; Ernst, 2004; Kossack, 2012).

Combining indoor and outdoor learning into the public school day promotes comprehension by increasing critical thinking skills. In Ernst and Monroe's study of 12 Florida high schools' 9th and 12th grade students, those enrolled in an environment-based school program produced higher critical thinking skills than those students who were enrolled in the traditional environmental science class (2004). Both students and teachers agreed that the environmental-based classroom was a major cause of this change. One teacher explains:

We integrate five disciplines using the environment, and the benefit is that kids start to think about the connections. I can't recall hearing from my kids, 'Why are we learning this?' They are learning it because they see how it is applied to what's going on in the next class. They have to think about how it's related to what they've learned in the past and in what they're learning in their other classes. (2004)

When given the opportunity to participate in relevant, hands-on work, these students were able to use and sharpen their investigative skills, while identifying cross-curricular themes as they interacted with one another in nature.

Incorporating outdoor learning with time spent in the classroom results in students having more motivation to learn during the school day. Students connect to academic concepts better when they get to learn in a classroom that is not surrounded by four walls. Experiential education is valuable for all students, but for students who tend to struggle in traditional academic setting, this type of learning environment promotes autonomy and success. Research has shown that students are more motivated during outdoor education because they experience higher emotional engagement than they typically experience in the classroom. Experiential education often leads students to become emotionally involved with their own curiosity, resulting in a deeper connection to a topic (James, 2016).

When students find meaning and deeper connections in their education, they are more likely to continue on a path of lifelong learning. Students are not only learning what they need to pass their classes; they are collecting, creating, and synthesising actual data, making class time more meaningful (James 2016). When children do not spend time outdoors, they become fearful of it and are exponentially less likely to pursue careers in outdoor, STEM-related fields. If given the opportunity to see nature as something that is raw and beautiful, students can be challenged to not simply fear the unknown, but, instead, embrace and become open to exploring it (James, 2016).

References

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- James, J. K & Williams, T. (2016). School-Based Experiential Outdoor Education: A Neglected Necessity. *Journal of Experiential Education*, 40(1), 58-71.
- Kossack, A & Bogner, F. X. (2012). How does a one-day environmental education programme support individual connectedness with nature? *Journal of Biological Education*, 46(3), 180-7.

Making the Case:

Great Smoky Mountains Institute at Tremont's Work with Schoolyard-Based Outdoor Experiential Education

In 2016, Great Smoky Mountain Institute at Tremont (Tremont Institute) began a 3-year AmeriCorps VISTA project, the Smokies to Schoolyards Connection, that is designed to promote hands-on, experiential education in urban, underserved schools and communities in East Tennessee, and that focuses on providing teachers with the skills and resources needed to take their students out into the learning laboratories that exist in their schoolyards. Tremont Institute's mission for this program is to expand curriculum design and improve teachers' potential through residential teacher development workshops, in-service professional development in the schools, and curricular resource support.

Innovative, residential professional development programs are offered throughout the year to educators from all over the country. These programs provide teachers with time and space to relax and recharge, embrace their curiosity, practice experiential education skills and practices, develop real-world, student-led investigations, and receive mentorship from skilled professionals on staff and from partnering organizations, such as Cornell University and the National Parks Service. It is not enough to participate in a residential program and let the experiential learning end when you and your students return to your school. Tremont Institute encourages teachers to use the knowledge learned and momentum gained during their residential program in their own schoolyard. By engaging in hands-on learning in the schoolyard, teachers can continue inspiring their students to understand and appreciate nature.

Tremont Institute also produces bi-weekly Teacher E-Newsletters that serve as touchpoints between and interested teachers, and include experiential lesson plans and other helpful resources that are designed to help teachers make learning more local, personal, and relevant for their students. Every lesson plan gives a detailed account of an activity that educators can use to facilitate hands-on learning in their schoolyard. Additionally, the lesson plans are correlated to Tennessee Academic Standards, highlight the appropriate Science and Engineering Practices, Crosscutting Concepts, and Disciplinary Core Ideas for the given content from the new Tennessee Academic Standards for Science, and include cross-curricular activities. An archive of every lesson from this series of curriculum is available to teachers via a Google Drive Folder that can be accessed and shared by all teachers who have the link.

In 2016, Tremont Institute was awarded a \$100,000 grant from the National Park Foundation and was selected as one of three sites, nationwide, to develop a training and support program for teachers to use Citizen Science in their schoolyards. The program is built on co-design principles, whereby participants collaboratively work to create lesson plans and research projects that meet their students' specific needs. The 15 educators working through this grant are increasing their schools' capacity to utilize their schoolyards for hands-on learning by designing and facilitating citizen science projects with their students. After she implemented into her classroom what she learned at Tremont, one teacher involved in the program said:

First, I just want to say the culture of my classroom has totally changed. By coming to Tremont and learning how to start open ended questions, and learning myself, that it is okay for students to have the wrong answer and work through that productive struggle, I have had a breakthrough in my career. For example, if my students give me the wrong answer, I still write it on the board, and I accept all thoughts, strategies on the problem. Then, I have noticed my higher level kids want to try to come up with a different strategy to solve the problem. I cannot explain how proud I am of my kids.

When given the knowledge and skills to utilize their classroom, teachers like this one are able to not only create change, but also to see change within themselves, through their teaching techniques and practices, and within their students' conceptions of learning.