PLACE-BASED EDUCATION IN ELEMENTARY SCIENCE

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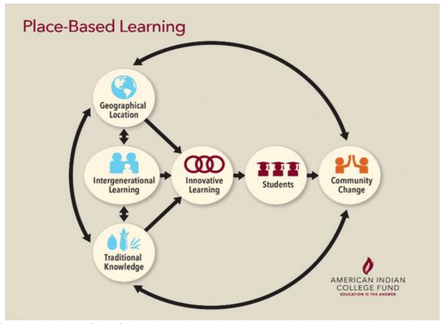
WHAT IS PLACE-BASED EDUCATION?

Place-based education is a broad concept that focuses on teaching practices emphasizing experiential, community-driven, and context-specific learning. It aims to foster a deeper connection to local contexts, cultures, and environments (Yemini et al., 2025). Placed-based education provides an alternative to traditional school methods by providing a way to contextualize learning and nurture a relationship with nature (Ayotte-Beaudet et al., 2025).

TPEP CONNECTION

Place-based education connects to TPEP Criterion 7 which is focused on communicating and collaborating with families and the school community. Place-based education is described also described as the "process of using the local community and environment as a context to teach concepts in subjects across the curriculum..." (Sobel, 2004 as cited in Adams et al., 2014). A place-based curriculum relies on more collaboration between teachers, classrooms, and local opportunities, business, and resources (Sobel, 2004 as cited in Nadelson & Seifert, 2013).



https://collegefund.org/blog/place-based-learning-framework-building-native-student-success/

RATIONALE

Prior to undergoing this program in elementary education, I earned both a B.S. and an M.A. in environmental science and environmental education. During my Master's program at the University of Idaho's McCall Outdoor Science School (MOSS), I spent a year teaching students from across Idaho about the local ecology, hydrology, and geologic history of McCall, Idaho during their one-week stays. However, these students didn't learn through traditional methods of reading or discussions – they learned through hiking, canoeing, asking questions, and exploring the natural world around them. At that time, I was already teaching using place-based education methods. Now, I want to deepen my understanding of the scientific research behind place-based education and explore how I can include it in elementary school science curricula. I believe doing so will strengthen my abilities as an educator by combining my passions of environmental science and teaching early elementary aged students.

INQUIRY QUESTIONS

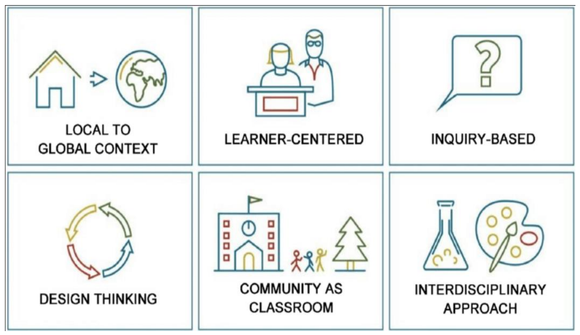
- WHY DOES PLACE-BASED EDUCATION MATTER?
- HOW CAN IT BE IMPLEMENTED IN AN ELEMENTARY CLASSROOM?
- WHAT ARE THE ADVANTAGES AND DISADVANTAGES OF IMPLEMENTING PLACE-BASED EDUCATION?

WHY DOES IT MATTER?

With the rise of technology over the last few decades, children have been spending more and more time on screens (Oswald et al., 2020). This high amount of time on screens also correlates to less time outside for school aged children (Oswald et al., 2020). At the same time mental health related issues such as depression and anxiety have been increasing in children (Oswald et al., 2020). In a systematic review of research Bowler et al. found that spending time in nature had positive changes in energy levels, anxiety, anger, fatigue, and sadness (2010).

> "Students always need a reason, and the local context provides so many" (Demarest, 2017, p. 49).

PRINCIPLES OF PLACE-BASED EDUCATION



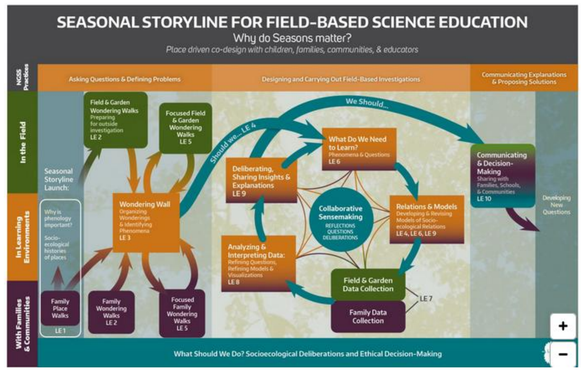
https://www.researchgate.net/figure/Six-place-based-education-principles-as-shared-by-TSS_fig1_355631097

BENEFITS OF PLACE-BASED EDUCATION

- Increase students' scores on both the Washington Assessment of Student Learning (WASL) and the Iowa Assessments (ITBS) (Bartosh, 2004).
- Lead to further development of critical thinking skills (Ernst & Monroe, 2006 as cited in Engles et al., 2019).
- Studies have shown that outdoor education, which can be applied to place-based education, can have a positive effect on students' attitudes, motivations, and enjoyment towards learning (Ayotte-Beaudet et al., 2017).
- Students who have participated in place-based education programs had an increase in their abilities to understand, synthesis, and connect complex ideas, as well as increased confidence (Sobel, 2014).
- Local investigations give students an opportunity to get a broader understanding of real-world exposer to subjects and can lead to developing a deeper global understanding between humans and the natural world (Demarest, 2017).

PLACE-BASED EDUCATION IN THE SCIENCE CLASSROOM

Place-based education is consistent with Next Generation Science Standard (NGSS) (Archive, Inc., 2013, as cited in Adams et al., 2024). Place-based education is based on inquiry and allows students to engage and investigate in problems or real-word situations that students could encounter in their lives. While field trips to museums and local places can provide a rich environment for meaning making, it can be time consuming and difficult to manage and finance transportation (Ayotte-Beaudet et al., 2017). However, an alternative might be closer than you think: "Due to the close proximity and ease of access, one could argue that school grounds have great, yet underutilized, potential to help science teachers to achieve meaningful contextualization of learning" (Ayotte-Beaudet et al., 2017, p. 5344).



https://learninginplaces.org/seasonal-storyline/classroom-storyline/

> Place "is not simply a location that we can identify by listening to a particular voice. It is a location unfolding in time where people inhabit, visit, rebuild, make, enjoy, sorrow, describe, and recount, hence live it – it is articulated by a multitude of voices" (Van Eijck, 2010, p. 189).

WHOSE PLACE IS IT ANYWAY?

When teaching place-based education strategies, it is important to also teach about the perspectives and names given throughout human's history with the place.

https://www.wallowanezperce.org/seasons-and-cycles

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> The way that children are able to form their sense of place is through, "a more immediate, tactile way, through direct interaction and in direct relation to what they can and cannot do in that environment" (Derr, 2002, as cited in Sedawi et al., 2021 p. S488).

ACTION

- Strengthen connections with the classroom and the broader community.
- Actively invite and create opportunities for family members to volunteer to share their unique expertise and experiences.
- Establish collaborative relationships with local organizations (e.g., WSU museums, Palouse Conservation District) to enrich content and provide real-world learning opportunities.

TOOLS

- Washington Office of Superintendent of Public Instruction (OSPI) for grants
- Learning in Places (PB lesson plans and unit plans)
- The Pacific Education Institute (PB lessons connected to math and ELA)
- Project Learning Tree (PB/ nature-based lessons and guidebooks)

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REFERENCES