

EDUCATION FOUNDED IN PLACE

A Guidebook for Implementation

Developed by Sally Triant for Grow Wise Learning, LLC





Grow Wise Learning
It begins with a sense of wonder.

Grow Wise Learning, LLC.
Sally Triant ~ Founder
growwiselearning@gmail.com
616-540-7236

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Sally Triant, Grow Wise Learning, LLC.

*“If a child is to keep alive his inborn sense of wonder,
he needs the companionship of at least one adult who
can share it, rediscovering with him the joy,
excitement, and mystery of the world we live in.”*
~ Rachel Carson

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PLACE-BASED EDUCATION

The goal of this guidebook is to aid in the implementation of place-based education in an elementary school setting. When a curriculum is devoid of place, we are not grounding our students in their local environment and community before educating them on topics addressing challenges that often have a global scale. This leaves students without a clear context with which to relate to their own place in the world as they try to grasp their potential as participants and contributing citizens in society (Sobel, 2013). Place-based education recognizes that as educators we are growing students who are learning to steward the places where they live and learn. An education founded in place begins with an introduction to local learning in elementary school and offers the ideal threshold to welcome the environment and the community into the curriculum.

Place-based education has evolved as a means to extend this concept of local learning by inviting the natural environment surrounding the classroom and the human-made aspects of the community into the classroom. This perspective allows students to participate fully in their world, not simply in a constructed model designed as a training ground for learning content, instead through hands-on real-world connections. Anderson explains that, “when we give our children the opportunity to know their environments through exploration, investigation, play, work, service, and restoration, we allow them to fully experience life firsthand, and in the process learn more than they ever could in a classroom” (2017, p.xv). When they come to know their environment, students will begin to ask questions based on their observations and their inquiry can become the core of the curriculum centered in place.

“One of the main goals of place-based education is to help raise citizens who understand how everything in a community is interconnected. Place-based education extends learning into both nature and human-made aspects of a community. Learning revolves around environment, culture, economics, and governance. (Anderson, 2017, p.1)



Definition of Terms

There are several key terms that should be considered in the implementation of education founded in place. A fluency in the concepts surrounding learning with inquiry led, hands-on experiences derived in the natural world with an inclination to stewardship and civic engagement being the goal is helpful.

Place-Based Education – Place-based education is the process of using the local community and environment as a starting point to teach concepts in language arts, mathematics, social studies, science, and other subjects across the curriculum while emphasizing hands-on, real-world learning experiences, this approach to education increases academic achievement, helps students develop stronger ties to their community, enhances student’ appreciation for the natural world, and creates heightened commitment to serving as active, contributing citizens. (Sobel, 2013)

Place-Based Learning – Children learn best when participating in authentic, hands-on learning experiences that are closely tied to the community. Our place-based approach improves student achievement, helps students develop a closer connection within the community in which they live, creates an appreciation for the natural world, and cultivates a desire to serve as active and committed citizens. (Anderson, 2017)

Environmental Literacy - Environmentally literate citizens are knowledgeable of Michigan’s natural resources, the principles and systems that govern the natural world, and how human actions affect that natural world. They are able to use their knowledge to identify and address environmental issues. They are actively working, both individually and collectively, toward environmental stewardship and healthy lifestyles. (MI Environmental Literacy Plan, 2014)

Environmental Stewardship - Environmental Stewardship is voluntary commitment, behavior, and action that results in environmental protection or improvement. Stewardship refers to an acceptance of personal responsibility for actions to improve environmental quality and to achieve sustainable outcomes. Stewardship involves lifestyles and business practices, initiatives, and actions that enhance the state of the environment. Some examples are: living or conducting business in such a way as to minimize or eliminate pollution at its source; using energy and natural resources efficiently; decreasing the use of hazardous chemicals; recycling wastes effectively; and conserving or restoring forests, prairies, wetlands, rivers, and urban parks. Stewardship can be practiced by individuals, groups, schools, organizations, companies, communities, and state and local governments. (Environmental Protection Agency, 2013 as cited in the MI Environmental Literacy Plan, 2014)

Patterns of Engagement

It is through curriculum founded in place that educators can begin to reclaim their role in forming deep, real connections with their students and the places where their learning occurs. In his exploration of education traditions that deepened with place David Gruenewald named, natural history, cultural journalism, and action research (2003). Similarly, Gregory Smith in his research almost simultaneously identified five thematic patterns that can be adapted to specific learning in place-based education; they are cultural studies, nature studies, real-world problem solving, internships & entrepreneurial opportunities, and the induction into community processes (Smith, 2002b). Their categories pair brilliantly and offer insight for educators looking to define patterns where they can invite place-based education into required curriculum.

Gruenewald	Smith
Natural History	Nature Study
Cultural Journalism	Cultural Studies
Action Research	Real World Problem Solving Internships & Entrepreneurial Opportunities Introduction to Community Processes

When pedagogy can enable educators to use place as the subject of learning, the potential to impact students far beyond the measure of standardized tests is the goal. The benchmarks certainly include the attainment of required concepts, but the true benefit is the additional depth of knowledge acquired through hands on experience and the affirmation of belonging to not only a classroom, but also to an entire community.

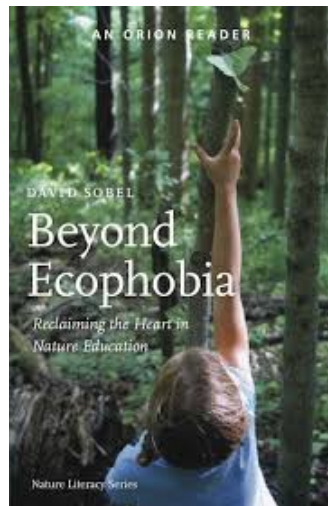
“Teaching means extending the classroom beyond the four walls of the classroom and the two covers of books. It means immersing students in direct experiences with people and places in order to learn in the context of realistic community situations” (Knapp, C.E., 2008, p.9).



Teach Local Over Global

The topic of the environment, and the education surrounding this theme, has evolved to conjure first the concepts of global crisis in the current generation of students (Sobel, 1996). Climate change, plastic pollution of the oceans, and the deforestation of the Amazon are among the large-scale tragedies of which they are innately aware. These crises are both far away from home and so large in their extent that they seem insurmountable in terms of problems that can be solved or even relatable. It has been expressed that this weight of the Earth's problems laid on children at such an early age may actually turn them away from the outdoors all together (Sobel, 1996). In his book *Ecophobia: Reclaiming the Heart in Nature Education*, David Sobel coined the term *ecophobia* to describe this fear of ecological problems and as a result, the natural world.

“If we prematurely ask children to deal with problems beyond their understanding and control, prematurely recruit them to solve the mammoth problems of an adult world, then I think we cut them off from the possible sources of their strength. I propose that there are healthy ways to foster environmentally aware, empowered students. We can cure the malaise of ecophobia with ecophilia – supporting children’s biological tendency to bond with the natural world” (Sobel, 1996, p.8).



In contrast, learning about the local environment with curriculum founded in lessons devoted to the ecosystems right outside the classroom offers the opportunity to engage on a scale that is accessible, tangible, and has the potential to be managed in a meaningful way (Kemp, 2006; Mitchell & Mueller, 2011; Sobel, 1996; Silverman & Conreau, 2017). This ability to connect to the places where we live and learn on such a significant level is something that is unique to humans. In fact, E. O. Wilson describes this “innate tendency to focus on life and life-like processes” as *biophilia* (Wilson, 1984, p.1). He explains that not only is it in our human nature, but it is ingrained as part of our ethic to care for our home. Just as a bird does not foul its own nest, we must learn to care for what is local – our schoolyards, neighborhoods, and communities first, so we can therefore look to the larger goal of tending to this Earth that we all share as a universal home.

Core Concepts in Place-Based Education

Empowering students to develop meaningful connections to place first through intentional and purposeful interactions in the familiar places of their schoolyards, neighborhoods, and communities, is at the very center of an education founded in place. This guide aims to suggest that a path of learning that is rooted in place can embolden students to become active contributing members of society. Young citizens grow awareness through asking questions and designing solutions to problems they identify in their surroundings. This is how students will impact their local community, and then their larger environment, and in turn the world – though hands-on real-world problem solving.



*“If we want our children to flourish, to become truly empowered, then let us allow them to love the Earth before we ask them to save it”
(Sobel, 1996, p.47).*

This guide identifies seven core concepts that can assist in incorporating place-based education into the classroom, schools, and communities that you serve. They are: encouraging a sense of place, reviving nature study and phenology, mapmaking, water fluency, using learning that occurs across curriculum with content standards as the guide, allowing for an emphasis on inquiry led investigations, and acknowledging that teachers are the “key” to success in place-based learning!

Sense of Place

This concept of place is innate in all animals. Consider that the places they know best are the ones they call home. Whether solitary or communal they all have one: bees have hives, foxes have dens, turtles have shells, birds weave nests unique to their species. What makes this unique for humans is that the places where we live and learn, play and grow, become a central dimension to our human experience (Gruenewald, 2003). Place plays a key



role in our development. The places where we live become part of who we are, and we develop a deep bond with them. This bond has even been called our sixth sense, our “sense of place.” The author Rebecca Solnit (1994) poignantly describes this saying, “sense of place is the sixth sense, an internal compass and map made by memory and spatial perception together” (Solnit, p.203). The development of this sense of place is part of our formative growth in early childhood, and if acknowledged in education it can maintain a presence throughout the span of a lifetime.

Modern educators now have the opportunity to promote the importance of place and put it back into the classroom. It is through curriculum founded in place that educators can begin to reclaim their role in forming deep, real connections with their students and the places where their learning occurs. Using the local community and the environment as the platform for cross-curricular studies, place-based-education aims to help students develop sincere ties to their community, enhance their appreciation for the natural world, and develop into thoughtful, active, committed, and contributing citizens (Sobel, 2013).



*“There is nothing more
concrete – more real –
than the piece of earth
and the communities
where we live.
Place both grounds us
and connects us”
(Anderson, 2017, p.xv).*

Nature Study and Phenology

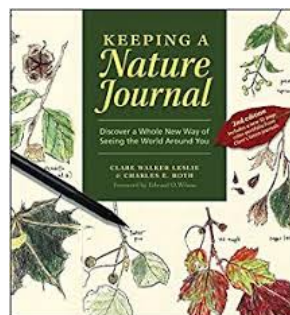
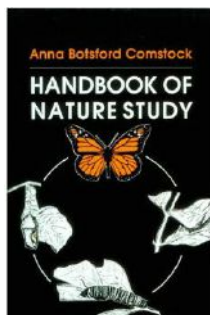
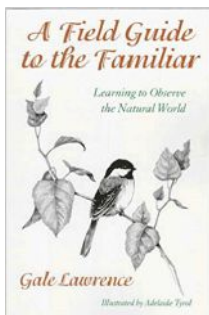
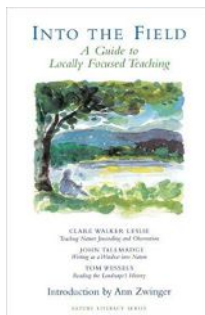
Compelling explorations of place take the form of reviving natural history through the careful observations of the living environments surrounding our schools. By learning to observe the natural world through the practice of keeping a regular nature journal we can encourage students of all ages to develop relationships with place in every season (Comstock, 1931; Lawrence, 1998; Leslie, Tallmadge & Wessels, 1999). This can also take the form of a scientific tool, collecting data in the form of phenology, connecting students through meaningful observations of seasonality and the timing of biological events (Schwartz, 2013).



“If teachers can provide students with meaningful and personal experiences outdoors, they can shape a generation that both loves the environment and has the confidence and know-how to save it” (Silverman & Corneae, 2017).

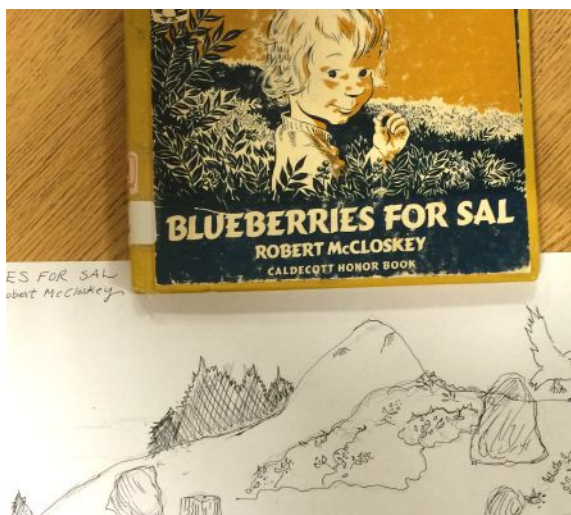
Resources for Nature Study and Phenology in the Classroom

- *Into the Field: A Guide to Locally Focused Teaching* by Claire Walker Leslie, John Tallmadge, and Tom Wessels. Great Barrington, MA: The Orion Society, 1996.
- *A Field Guide to the Familiar: Learning to Observe the Natural World* by Gale Lawrence. Hanover, NH: University Press of New England, 1998.
- *Handbook of Nature Study for Teachers and Parents* by Anna Botsford Comstock. Ithaca, NY: Cornell University Press, 1931.
- *Keeping a Nature Journal* by Claire Walker Leslie and Charles E. Roth. North Adams, MA: Storey Publishing, 2000.
- *Phenology: An Integrative Environmental Science* by Mark Schwartz. New York, NY: Springer, 2013.



Mapmaking

This tool enables students to discover their sense of place, while allowing them to orient themselves in the places where they live and learn in ways that are developmentally appropriate. Mapmaking can be used throughout elementary school to link cross curricular studies. When students' progress through making maps of their classrooms, schoolyard, neighborhoods, watersheds, and larger communities they are learning from the inside out. This is contrary to the current model from the outside in where students learn about the solar system before learning to map their own room. When learning about local places through their explorations of the components that make a good map, students develop a literacy of the place they call home. Sobel says, "we must never lose sight of the goal of using maps as clothespins – a tool for hitching children's lives to their place" (Sobel, 1998, p.9).

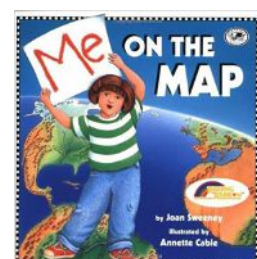
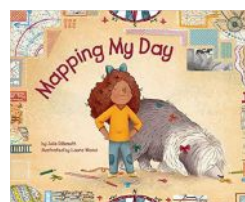
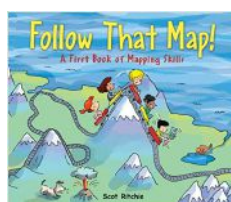
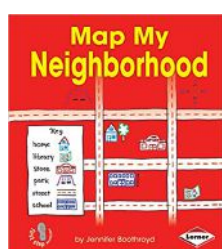
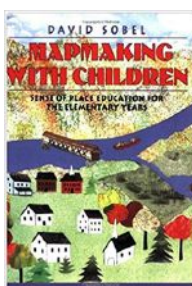


Mapmaking can also be used as a tool to practice mapping skills and connect students to the stories they read. Shown here is a map made to depict the story of the children's book *Blueberries for Sal* by Robert McCloskey.

“Just as mapmaking helps us know and love our neighborhoods and local watersheds, making maps of stories helps us to live inside of the story space in a deeper and more meaningful fashion”
(Sobel, 1998, p.124)

Resources for Mapmaking

- *Mapmaking with Children: Sense of Place Education for the Elementary Years* by David Sobel. Portsmouth, NH: Hienemann, 1998.
- *Map My Neighborhood* by Jennifer Boothroyd. Minneapolis, MN: Lerner, 2014.
- *Follow That Map: A First Book of Mapping Skills* by Scot Richie. Tonawanda, NY: Kids Can Press, 2009.
- *Mapping My Day* by Julie Dillenmuth. Washington, DC: Magination Press, 2017.
- *Me on the Map* by Joan Sweeney. New York: NY: Dragonfly Books, 1998.



Water Fluency

Water is everywhere, all around us in every form, in every season. Studying water is one way to share with students the important resources required for growth and life. The most tangible representation of a boundary containing this resource is the watershed; the physical features of the land around us that shape the pathways and define where our water flows. The borders of our watersheds become the boundaries of our homes. Our lakes and streams, rivers and springs are literally the liquid waterways that weave us together.

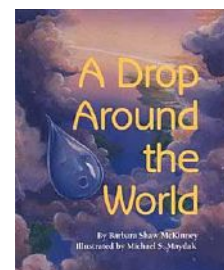
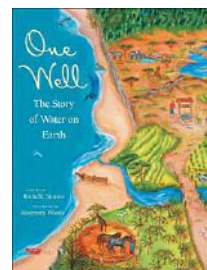
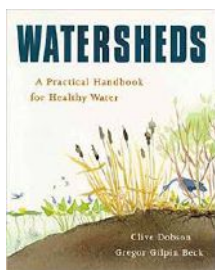
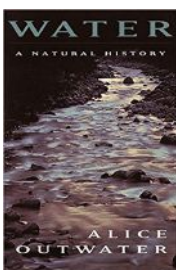
By learning about place through the context of water students learn the importance of becoming stewards of this resource; because no matter where we live, we will always find ourselves upstream of someone, and downstream of someone else. This is why the topic of access to clean water is optimal one to connect students to their community and introduce civic engagement. Water fluency refers to the study, across curriculum in every grade level through hands-on learning, designed to provide authentic understanding of the relevance of water in our lives and our world.



*“Water is everywhere, and everywhere it is local.”
(Haas, 2006, p.109)*

Resources for Water Fluency

- *Water: A Natural History* by Alice Outwater. New York, NY: Basic Books, 1998.
- *Watersheds: A Practical Handbook for Healthy Water* by Clive Dobson & Gregor Gilpin Beck. Buffalo, NY: Firefly Books, 1999.
- *Pitter and Patter* by Martha Sullivan. Nevada City, CA: Dawn Publications, 2015.
- *One Well: The Story of Water on Earth* by Rochelle Strauss. Tonawanda, NY: Kids Can Press, 2007.
- *A Drop Around the World* by Barbara Shaw McKinney. Nevada City, CA: Dawn Publications, 1998.



Learning Across Curriculum with Standards as the Guide

Place-based education is not solely for the subject of science. In *Learning Through Real World Problem Solving: The Power of Integrative Teaching* Nancy Nagel explains that, learning is most effective when students identify a problem they would like to address, and teachers work to incorporate as many traditional subjects as possible into the created unit of study. In this manner, the required standards have the potential to drive best practices when teachers have the artistic license to weave them together using their interpretation of authentic experiences derived in place, then assess learning with multiple strategies (Demarest, 2015).



Inquiry Led Investigations

Place-based education encourages creative thinking at the forefront. E.O. Wilson explains that, “the ideal scientist thinks like a poet and only later works like a bookkeeper” (2013, p.74). In a classroom built on inquiry we can encourage students to become comfortable with the process not just the product of the investigation (Demarest, 2015). This offers the opportunity for teachers to model learning through inquiry led investigations, mirroring the process alongside students as they learn – not in solely in front of them leading as in a traditional setting. This is one of the key components of learning through inquiry.

“By using my knowledge compass, I can help students navigate over much of the terrain outlined in the syllabus. I never will have complete and accurate maps nor will I know all of the course territory. Sometimes my students show me new places that do not appear on the course map. When this happens, we explore together. With each trek into the subject matter, I feel more confident on the journey. At the same time, I realize that knowledge is always growing and changing, and I can never rest on the past for very long. When my students gain enough knowledge and confidence to lead, I step aside and become a learner with them” (Knapp, C.E., 2008, p.9).

Teachers are the “Key”

The teacher is the primary conduit for the incorporation of place into the classroom and the experience of the student. Teachers who are drawn to see place-based education succeed often do so because of a deep personal motivation that resonates from their own childhood. Therefore, finding the “key” teachers is the first step towards an education founded in place. **The surveys on the next three pages are designed to help identify methods being used to promote place-based education and to discover the “keystone” teachers in your school.**

Pre-Guidebook Survey for Administration

You are being asked to complete this survey in support of the place-based education effort to connect our students in meaningful ways to their community and the local environment.

The results of this survey will be used to identify the work already being done to promote place-based education and outdoor learning experiences and identify the areas that require support. We are looking to identify “keystone” teachers that have an interest or expertise in this field and/or buildings where learning outdoors is accessible and supported in the district.

The survey should take less than ten minutes to complete. There are no right or wrong answers and your honest feedback is greatly appreciated.

Please provide your name and the building you supervise:

1. While in school do your students have access to:

	Yes	No
An outdoor space that can serve as a classroom in your schoolyard?	<input type="checkbox"/>	<input type="checkbox"/>
A park or greenspace within walking distance from your school?	<input type="checkbox"/>	<input type="checkbox"/>
Do you support teachers using the outdoors for lessons?	<input type="checkbox"/>	<input type="checkbox"/>
If No, please describe the barriers that prevent you from supporting them.		

2. Are there currently examples of educators in your school using the schoolyard or field trips as a way to promote learning while working to connect students to community partners?

Project / Field Trips	Teacher (s)	Grade(s) Served

	strongly agree	agree	disagree	strongly disagree
3. I support my teachers working with local partners to encourage students to become contributing members of their community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I would like to participate in professional development designed to promote place-based education in my school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I am interested in learning more about place-based education and how I can support it as an administrator.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Teaching students about environmental education and their role as stewards is important.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. What teacher(s) would you recommend from your building to share their vision for place-based education. Please supply name and grade level:

Pre-Guidebook Survey for Teachers

You are being asked to complete this survey in support of the district wide efforts to promote the place-based education effort to connect our students in meaningful ways to their community and the local environment.

The results of this survey will be used to identify the work already being done to promote place-based education and outdoor learning experiences and identify the areas that require support. We are looking to identify “keystone” teachers that have an interest or expertise in this field and/or buildings where learning outdoors is accessible and supported.

The survey should only take about ten minutes to complete. There are no right or wrong answers and your honest feedback is greatly appreciated.

Please provide your name, the school where you teach, and grade level:

If you choose to remain anonymous you may, but if you provide your contact information, we will be able to reach out to you to support the work you are doing.

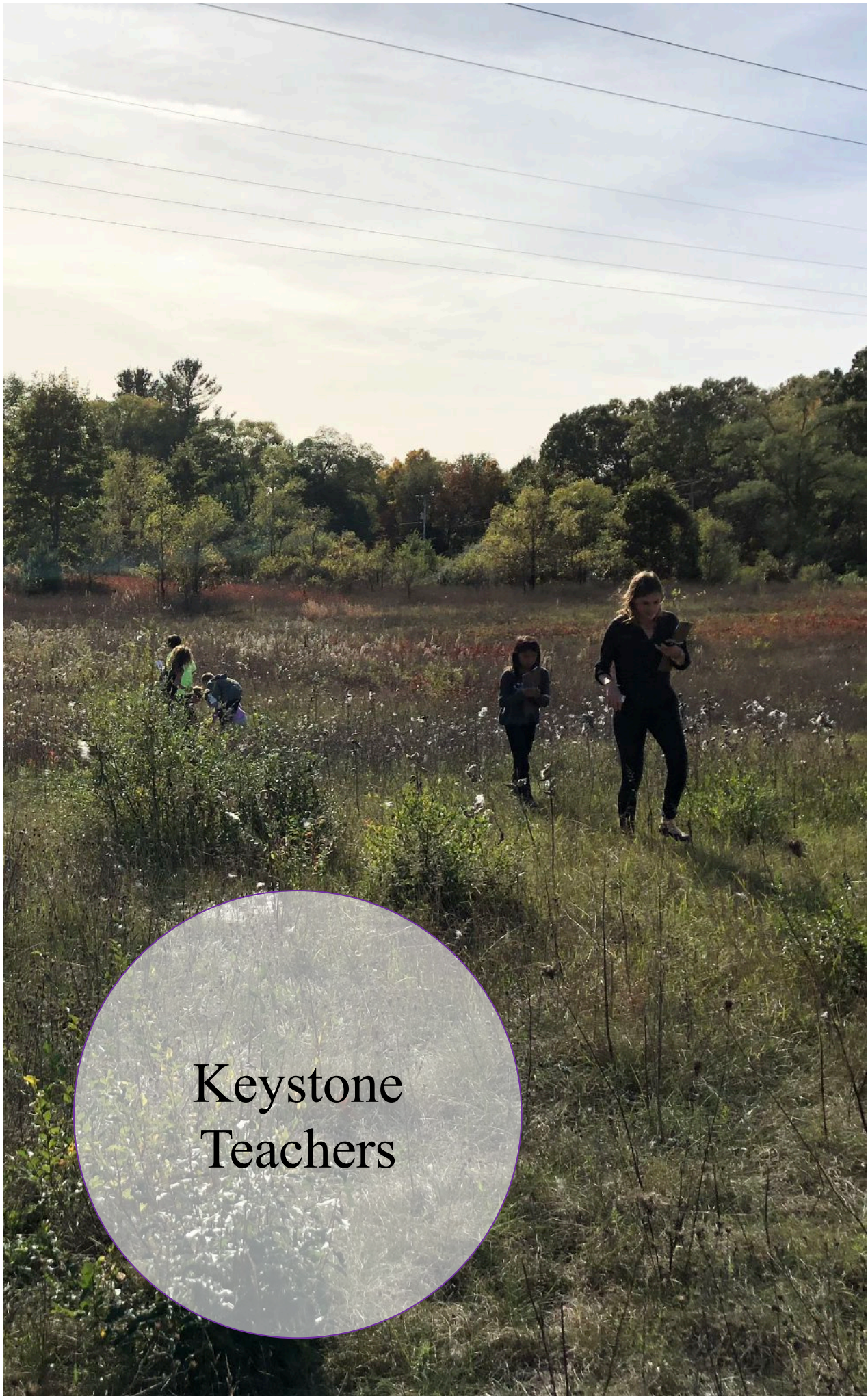
	strongly agree	agree	disagree	strongly disagree
1. It is important to teach lessons outdoors.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I am comfortable teaching in an outdoor setting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I am interested in learning about incorporating place-based education into my classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Teaching students about the environment and their role as stewards is important.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I currently work with community partners to extend classroom learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Yes	No
6. Do you currently teach a lesson or unit that incorporates your schoolyard, neighborhood, or community as the subject?	<input type="radio"/>	<input type="radio"/>
If yes, please describe it:		
7. Do you currently take a field trip that incorporates environmental education or place-based learning?	<input type="radio"/>	<input type="radio"/>
If yes, please describe it:		
8. Do you use curriculum in your classroom to extend the learning before and after the field trip?	<input type="radio"/>	<input type="radio"/>

	strongly agree	agree	disagree	strongly disagree
9. I am interested in taking my students outdoors for more learning experiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Please describe any barriers that currently prevent you from taking your students outside.				
Please describe what administration or community partners can do to support your efforts to promote place-based education and outdoor learning.				
Please describe any tools or materials you currently need to better support place-based education and outdoor learning for your students.				

	strongly agree	agree	disagree	strongly disagree
10. I am interested in using my schoolyard as the subject of nature study experiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I am interested in working with local partners to encourage students to become contributing members of their community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I would like to participate in professional development designed to promote methods for outdoor teaching and place-based education.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I would like to participate in the development of curriculum to support place-based education and promote outdoor learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Environmental education is a core value in my teaching.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Please explain your answer,				

Thank you so much for your participation. Please leave any additional comments, questions, or concern you would like for us to consider here.



Keystone
Teachers

KEYSTONE TEACHERS

Although the word keystone has multiple definitions the crux of their meaning carries a similar significance. In architecture the keystone refers to the wedge-shaped stone at the apex of an arch. In construction it is the final piece added to the arch, yet it is this last element that actually ensures the strength of the entire structure. The relevance of this stone is precisely why in the 1960's ecologist Robert Paine, coined the term "keystone species" to refer to the single most significant species within their communities. A keystone species is one on which the livelihood of all others around it depends.

In the successful implementation of place-based education it is the teachers who believe wholeheartedly in the pursuit of encouraging their students to come to know the places where they live that play the most vital role. For this reason, the teachers are considered the "keystone" component, the most vital element required for students to achieve significant measures of learning founded in place. The first step in implementing place-based education in the classroom is finding the "keystone" teachers who will be able to make it happen.



Grand Rapids Arch by Andy Goldsworthy

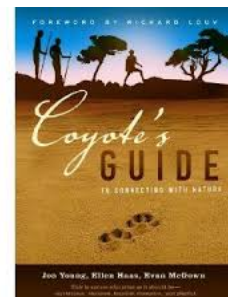
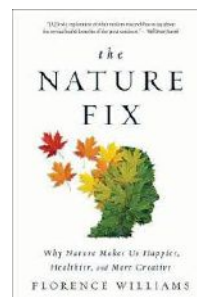
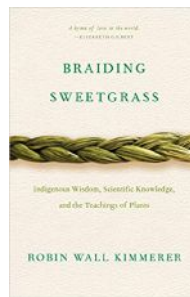
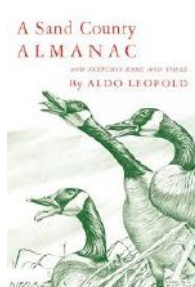
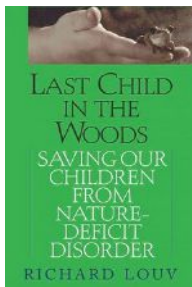
Personal Narrative

Notably, one topic that seems to connect educators that promote place-based education throughout the world is their personal story. Research shows that they feel drawn to see this type of teaching succeed because of a deep personal motivation. The shared conclusion is that educators using the outdoors to develop lessons founded in place were compelled to do so because of their own experiences in nature growing up. They described their childhood and the memories they created through spending time in nature as a key element that has shaped their life experience and subsequently informed their present method of pedagogy (Borsos, Patocskai & Boric, 2018; Carrier, Tugurian & Thomson, 2013; Chawla, 2007; Eick, 2012; Ernst, 2007; Louv, 2005; Pyle, 2008).

Teacher as Role Model

In the place-based education model educators serve as primary guides in public school education that will teach our children about the “ecological foundations of the resources they will inherit” (Mitchell & Mueller, 2011, p.215). This link between a teacher’s childhood connection to nature, and the interactions they design for their students, is a true and tangible extension of their own personal narrative. Leading environmentalists exclaim that their concern for the environment as an adult was encouraged as the product of repeated childhood experiences in nature, often in the presence of a role model (Chawla, 2007; Sobel, 2008). To develop environmental stewards requires more than solely the time spent in nature, it is the presence of a mentor adult that guides them to intrinsically value the environment. In school, our teachers clearly serve as those guides and work to foster their experiences with inquiry through direct connection to place. Teachers must stoke the embers of wonder in a child and work to keep them alive throughout their education.

*“If each child is to keep alive his inborn sense of wonder he need the companionship of at least one adult who can share it, rediscovering with him the joy, excitement, and mystery of the world we live in”
(Carson, 1956, p.55).*



Resources for Inspiring and Encouraging Keystone Teachers

- *Last Child in the Woods: Saving Our Children from Nature Deficit Disorder* by Richard Louv. Chapel Hill, NC: Algonquin Press, 2005.
- *A Sand County Almanac and Sketches Here and There* by Aldo Leopold. Toronto, OH: Oxford University Press, 1949.
- *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teaching of Plants* by Robin Wall Kimmerer. Minneapolis, MN: Milkweed Editions, 2013.
- *The Nature Fix: Why Nature Makes Us Happier, Healthier, and More Creative* by Florence Williams. New York, NY: W.W. Norton & Co., 2017.
- *Coyote's Guide to Connecting with Nature* by Jon Young, Ellen Haas, Evan McGown. Santa Cruz, CA: OwlLink Media Corporation, 2016.

Learning locally begins with familiarizing yourself with your “wild” neighbors. Explore a variety of field guides & naturalist themed books until you find what works best for you. Look to your library to find options for resources regarding species found regionally.

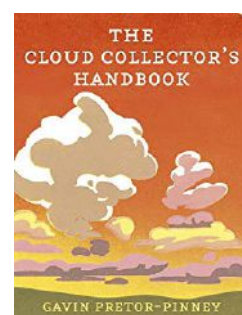
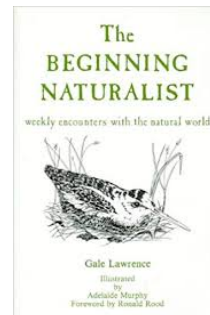
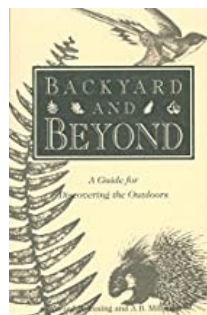
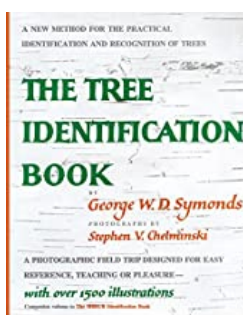
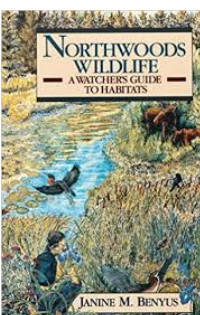
Perhaps this is not a subject that interests you personally. Know that this is alright, just remain open to identifying and calling on local experts that can speak to your students about the subject of nature study and phenology. Remember their connection to nature begins with yours; their connections to place starts where you are.



“These educators can be found in rural and urban settings, in small schools and large, and in classrooms that focus on any and all curricular domains. They are inventing a wide range of experiences that allow students to connect what they are learning to their own lives, communities, and regions” (Smith, 2002b, p.587).

Resources for Local Learning (some suggestions may require finding regional equivalents)

- *Northwoods Wildlife: A Watcher’s Guide to Habitat* by Janine M. Benyus. Minocqua, WI: North Woods Press, 1989.
- *The Tree Identification Book* by George W.D. Symonds. New York, NY: Harper Collins Publishing, Inc., 1958.
- *Backyard and Beyond: A Guide for Discovering the Outdoors* by Edward Duensing and A.B. Millmoss. Golden, CO: Fulcrum Publishing, 1992.
- *The Beginning Naturalist: Weekly Encounters with the Natural World* by Gale Lawrence. Shelburne, VT: The New England Press, 1979.
- *The Cloud Collectors Handbook* by Gavin Pretor-Pinney. San Francisco, CA: Chronicle Books, 2011.



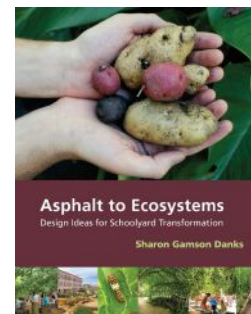
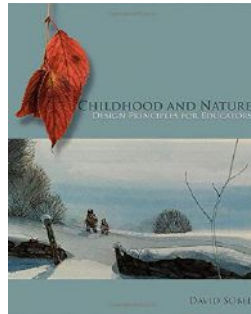
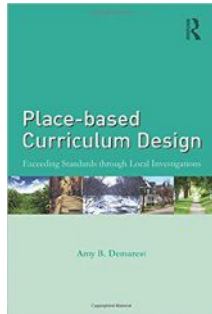
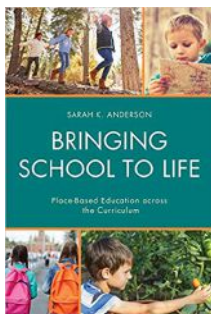


Teachers that are successful in the methods of place-based instruction have developed a confidence in creating curriculum led by student inquiry and rooted in required content. While this fluid and constantly changing context may seem intimidating at first, the long-term rewards of deep learning founded in place keeps teachers working to achieve this outcome over and over again. While the natural communities may vary the potential for education that begins with place remains a solid foundation to grow the citizens and stewards of our local communities.

“Curriculum can lead to sophisticated academic achievement if it grows out of children’s fascinations, aims towards substantive content, and aspires to develop ethics of stewardship and community engagement” (Sobel, 2008, p.7).

Resources for Developing Place-based Curriculum

- *Bringing School to Life: Place-based Education Across Curriculum* by Sarah K. Anderson. Lanham, MD: Rowman & Littlefield, 2017.
- *Place-based Curriculum Design: Exceeding Standards through Local Investigations* by Amy B. Demarest. New York, NY: Routledge, 2015.
- *Childhood and Nature: Design Principles for Educators* by David Sobel. Portland, ME: Stenhouse Publishers, 2008.
- *Schoolyard-Enhanced Learning: Using the Outdoors as an Instructional Tool, K-8* by Herbert W. Broda, Portland, ME: Stenhouse Publishers, 2007.
- *Asphalt to Ecosystems: Designing Ideas for Schoolyard Transformation* by Sharon Gamson Danks. Oakland, CA: New Village Press, 2010.





Touchstone
Experiences

TOUCHSTONE EXPERIENCES

One of the earliest methods used to assess precious metals was with a touchstone. The metal in question was rubbed on a black slate touchstone and its mark was gauged for purity. As a metaphor the term touchstone is used as a measure to ascertain the potency of an object and to serve as a standard of comparison.

Teachers fluent in place-based education strive to offer their students true experiences that become the foundation of their learning journey. “Touchstone experiences” are curated to expose students to a subject through inquiry-led investigations, while offering the opportunity to build their skills and understanding of a subject with hands-on involvement. Another component that is crucial to the touchstone experience is the opportunity for reflection. Allowing space in the schedule and the curriculum to self-assess and review the process is an important part of the product, and a true measure of an authentic experience.



Schoolyards as the Source of Touchstone Experiences

Environmental education does not require extensive field trips or even visits to nature centers. This misconception perpetuates because most teachers are not considering the schoolyard directly outside their classroom as an environment ripe with opportunity for education and community connection (Demarest, 2015). In contrast, place-based educators view the physical locations of the schools as the primary resource for the development of an entirely locally focused curriculum that has the potential to connect the community directly to the classroom (Kemp, 2006; Sobel, 2013). Schoolyard habitats are the ideal place for educators to create touchstone experience while encouraging students to develop a sense of place and an introduction to stewardship in the elementary school setting.

The Outdoor Classroom

Managing an effective outdoor experience begins long before you set foot out the door. To make sure you are using your time and efforts efficiently consider these topics.

Before you go outside – Make sure that you have a clear protocol with your administration to cover details such as required field trip forms, having the necessary chaperones, and safety procedures in place for any instances of accident or emergency. Make sure students are able to identify common hazards such as poison ivy or know the signs of a storm approaching.

Classroom Management – Before your go out cover the prerequisite knowledge of the subject that will be required for a successful experience. Give clear directions and review the expectations of the outdoor learning experience. Once outside have a format that consists of group work or independent work that periodically gathers together in a circle to report out, to cover questions that may arise, or share knowledge that has been discovered. Have a clear call or whistle to signal to students when the lesson is over, and it is time to head inside.

Required Materials – Each teacher may have their own preferences for what is required for a successful outdoor classroom. Try different things and decide what works best for you.

Your Teaching Backpack	Each Student Will Need
<ul style="list-style-type: none">• Class List and Lesson Plans• Cell phone & emergency numbers• First Aid & Tick Removal Kit• Portable Microphone (if desired)• Camera for documentation• Binoculars & Loop• Rubber gloves & trash bags• Hand Sanitizer• Pencil, Sharpener, and Sharpie• Ziploc bags of various sizes• Small towel or bandana• Field guides that may be applicable	<ul style="list-style-type: none">• Pencil & Sharpener (or access to one)• Clip Board• Sit Pads• Journal or notebook• To use the restroom before the lesson• Appropriate shoes & clothing• To know their goal and their group• Prior knowledge of how to identify poison ivy and a plan for an emergency situation• To feel safe and supported as they experience new things

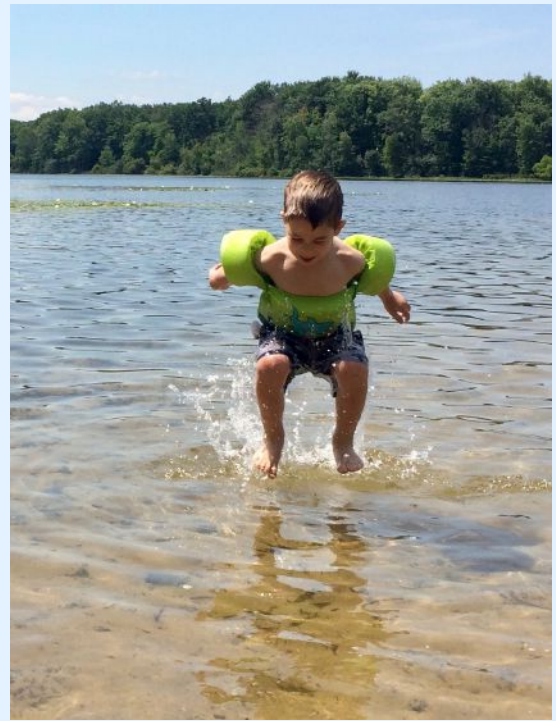
Make it routine – Every time you lead a class outdoors you help students come to know it as a place for learning and not solely for recess. Making it a habit makes it easier every time!

Lead by example – Your actions and the way you interact with nature will dictate what your students do. Pick up litter, treat living things with respect, and take time to express curiosity and witness with wonder those moments when nature awes or inspires you.

“Although going outside provides an obvious change of pace, it can also affect the pace of instruction. The richness of the outdoor environment naturally causes us to slow down a bit and react to our surroundings. It is certainly true that teaching a concept outdoors may take longer than “covering” the same content indoors, but much of that extra time comes from the closer inspection and reflection that is promoted by outdoor experiences.” (Broda, 2007, p.17).

The Ripple Effect

When a rock is thrown into the water it makes a splash. The energy of that action moves through the water and the ripples that emanate from the center spread out in concentric rings. Similarly, when a child first begins school and “jumps into learning” their kindergarten explorations become the very core of their education. From this inauguration founded in place a life of learning begins. When the schoolyard is the focus of discovery, learning begins locally, and layers of understanding grow from the center that is rooted in a strong sense of place.



“A curriculum that starts with place and expands to the world would enable students to understand each better. Place-based education gives relevance to the school experience. There is a reason for everything that we learn. By taking this curricular philosophy and extending it from the place, to the region, to the country we would give students the opportunity to understand how people relate to each other and to the various places in which others live” (Kemp, 2006, p.140).

•	KINDERGARTEN
⊙	FIRST GRADE
⊘	SECOND GRADE
⊚	THIRD GRADE
⊛	FOURTH GRADE
⊜	FIFTH GRADE



KINDERGARTEN

Sense of Place

Kindergarten is the beginning of their journey in elementary school, but it is not the beginning of their learning. Every day since their first breath each child has been exploring and experiencing the world with their own curiosity as their guide. Our role in kindergarten place-based education is to keep that wonder alive. Allowing time for sensory led investigations outdoors, in all seasons and types of weather conditions, is encouraged along with plenty of unstructured exploratory play in nature. This is where students begin to ask questions from their observations that can lead into instruction using the required curriculum as a scaffold. Just as important is building in time for reflection allowing young students to understand the role of introspection to balance time engaged with peers.

Sense of Place	Explorations in place begin in the schoolyard noticing nature.
Phenology	Takes the form of seasonal nature tables and beginning journals.
Mapmaking	Start using the classroom and schoolyard to model principles.
Water Fluency	Notice water in all forms. Observe where it is seen & how it is used.
Cross-curricular	Student interest and inquiry drives the focus of curriculum.
Inquiry-led	Make space in the day to allow opportunities to experience wonder.
Teacher Role	Creating a safe environment for exploration and reflection.

“I sincerely believe that for the child, and for the parents seeking to guide him, it is not half so important to know as to feel. If facts are the seeds that later produce knowledge and wisdom, then the emotions and the impressions of the senses are the fertile soil in which the seeds must grow. The years of early childhood are the time to prepare the soil. Once the emotions have been aroused – a sense of the beautiful, the excitement of the new and the unknown, a feeling of sympathy, pity, admiration or love – then we wish for knowledge about the object of our emotional response. Once found, it has lasting meaning. It is more important to pave the way for the child to want to know than to put him on a diet of facts he is not ready to assimilate” (Carson, 1956, p.56).



FIRST GRADE

Mapmaking to Discover Place



The first-grade classroom begins to explore place by discovering the school as the larger community after the classroom. As their world expands these students begin to learn to explore a world that interacts with moving parts. Paying attention to place begins with becoming familiar with the variables. Curriculum that lends itself to documenting the changes they are observing will help ground them in place. The first structured forays into mapmaking will root this exploration into their minds and hearts as they grow in place and begin to connect with a world outside of themselves.

Sense of Place	Invite the adoption of a “sit spot” to routinely survey a location.
Phenology	Begin to identify unique features in an inventory of the schoolyard.
Mapmaking	Label the pathways of birds, pollinators, water, and people on maps.
Water Fluency	Discover where water is present in our lives and in our schools.
Cross-curricular	Use maps to document literature and connect to stories in this way.
Inquiry-led	Wonder and uncover questions to explore through mapping.
Teacher Role	Encourage group & individual projects using maps to interpret place.

“When students are asked to make maps of the world as they know it, they are being asked to share a uniquely personal perspective. Honoring their experiences lets kids know they are important, and so are the places that they care about” (Anderson, 2017, p.15).



SECOND GRADE

Exploring with Phenology & Citizen Science



Paying attention to place begins with noticing trends through seasonal observations and the collection of data to monitor details like high and low temperatures, precipitation, length of day, and moon phases. This foundation in the methods of phenology help students develop a keen eye while noticing nature through the routines and changes they observe.

With Citizen Science projects ranging from Backyard Bird Counts, Bud Burst, the Urban Forestry Tree Inventory, and through activities like raising butterflies, or working to reduce pet waste in watersheds, by eliminating plastic bags from local grocers, and locating food deserts in communities, all while working together with local experts, students will see real-world applications to emphasize their efforts in affecting change (Anderson, 2017). Teaching students the basic skills of collecting data and reporting out prepares them for their continued roles as valuable contributing members of community throughout their education.

Sense of Place	Notice the species & seasonal changes that make your place unique.
Phenology	Begin a phenology journal (or wheel) to record the collected data.
Mapmaking	Focus on the schoolyard and work to develop spatial relations skills.
Water Fluency	Interpret the flow of water in & around school and interpret findings.
Cross-curricular	Report findings across subjects to build speaking & writing skills.
Inquiry-led	Let the data collection lead to observations, questions & predictions.
Teacher Role	Coordinate materials and scaffold the subjects uncovered by inquiry.

“Rethinking where we learn is one of the most fundamental changes in thinking that teachers experience when engaging in the local. As students search for answers to their questions in new and different places, teachers learn new ways to teach. These new sources of information are no longer always text-based but rather three dimensional, breathing people, places, and local happenings” (Demarest, 2015, p.103).



THIRD GRADE

Learning our Neighborhood



Now that the foundation of local learning has been laid with the school and the schoolyard as the subject of inquiry and curriculum, the borders of the places where we learn expand to include the neighborhood. This is where the potential to introduce community partners for neighborhood learning can be maximized. Local learning includes everything and everyone; the school is just one component of the larger community. Allow for the possibility to ground the required curriculum in local issues that are relevant to the surrounding community. Rooting lessons in place can occur across curriculum through topics with relevance to the human experience: culture, the natural environment, making a living, and the processes of government (Smith & Sobel, 2010).

Sense of Place	Expanding the borders of place allows students to “fledge the nest.”
Phenology	Identify green spaces and parks in the surrounding community.
Mapmaking	Generate maps with the school & landmarks of the surrounding area.
Water Fluency	Learn about water utilities & where water flows in the neighborhood.
Cross-curricular	Opportunities for deep connections to cultural & historical content.
Inquiry-led	ID of local problems offers the opportunity for civic engagement.
Teacher Role	Serves as the bridge between students and community partners.

*“By working to make a difference in the places where they live, students develop civic knowledge, skills, and values while gaining even more motivation to make a difference”
(Anderson, 2017, p.1)*



FOURTH GRADE

Our Home is Our Watershed



When lessons begin in local community across curriculum, students learn to ask inquiry-based questions and delve into their own research to find answers. One subject that has been seen to continually unify classrooms and communities is our human connection to water. By learning about place through the perspective of water, one of our most valuable natural resources, we connect students to the living legacy of the land they share with everyone and everything around them. The opportunities for cross-curricular engagement are exponential when considering historical and environmental implications of studies on the subject of water. When possible, let students confident now in their observation skills, direct the path of learning allowing inquiry to be their guide.

Sense of Place	Water as related to the human experience & local connections.
Phenology	Begin to link cyclical occurrences to larger studies of seasonality.
Mapmaking	Illustrate the borders of the watershed & explore relevance to place.
Water Fluency	Learn local waterways culminating with hands-on explorations.
Cross-curricular	Allow the storyline of learning to include water as the connection.
Inquiry-led	Inquiry leads to opportunities to take action in a local setting.
Teacher Role	Let students take the lead and facilitate with parallel modeling.

“Experience is the impetus for all education. The phenomenon of learning is an active process and involves a change in thinking in the mind of the learner. To learn, students need a personal incentive to connect their existing ideas and perceptions to new information. While this is fundamental in all teaching it is a distinct way teachers use local investigations.” (Demarest, 2015, p.46).



FIFTH GRADE

We Are Stewards of This Place

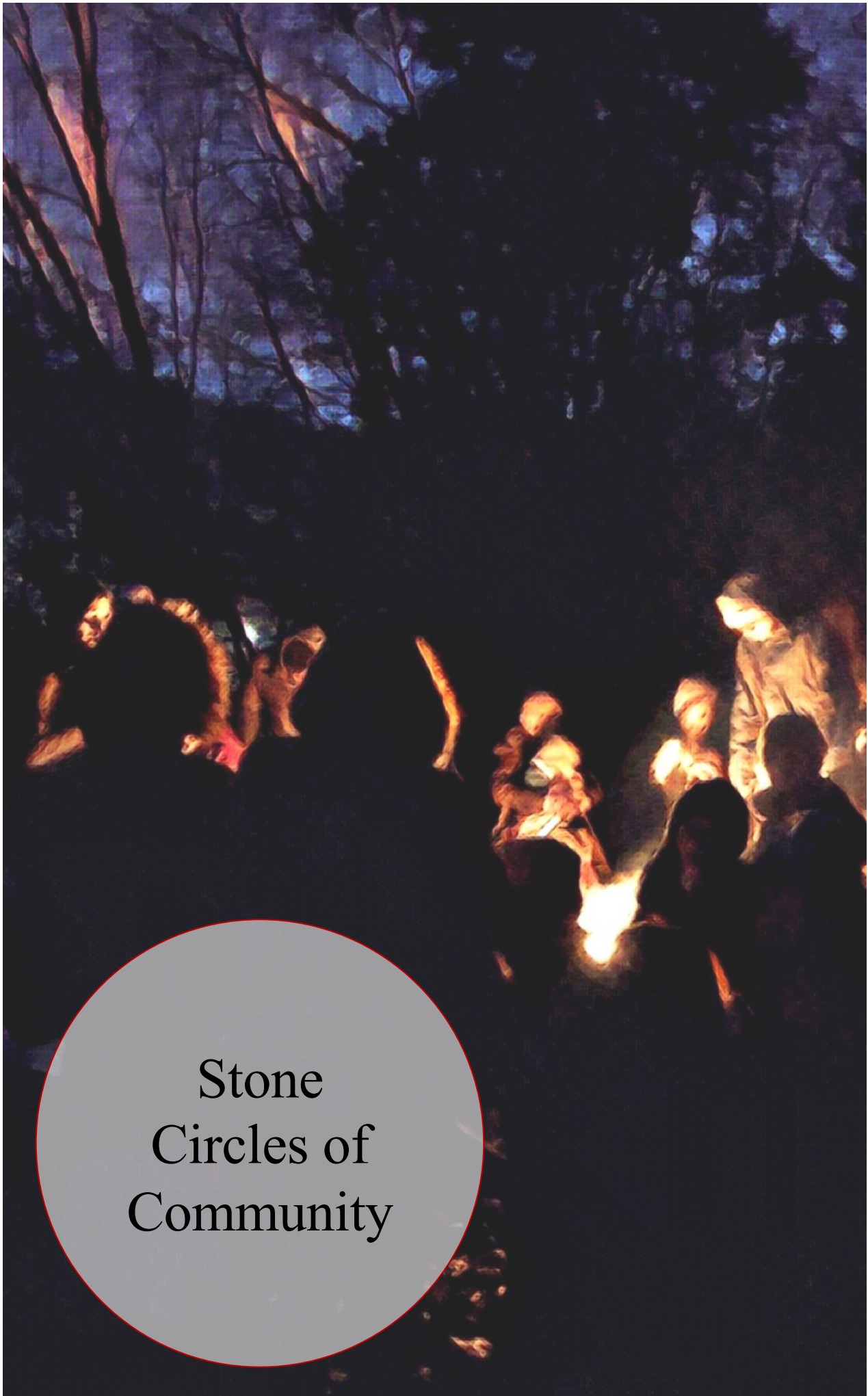


This is the last concentric ring of their education in elementary and represents the culmination of years of learning through inquiry and discovering place. Here is where students should be encouraged to identify where they would like their civic action to have a direct meaningful impact within their community. Together with community partners students can make a difference globally by working locally. There is no prescribed method for this to direct teachers because the path of each project is unique. There are however plenty of examples of brave teachers allowing inquiry to guide their classroom that can be used to map the way (Anderson, 2017; Demarest, 2015; Smith & Sobel, 2010).

Sense of Place	Local civic action develops a personal narrative & lifelong memories.
Phenology	Continued journaling promotes the value of observing place.
Mapmaking	View land through the lens of stewardship and civic engagement.
Water Fluency	Water rights & clean water as core concepts of eco-awareness.
Cross-curricular	Partnering with community members promotes social skills & abilities.
Inquiry-led	Allow experiences to explore & facilitate the process of democracy.
Teacher Role	Seemingly behind the scenes anticipating & troubleshooting next steps.

By learning to affect positive change directly in their own communities through environmentally focused civic engagement, we are teaching students to see “themselves as part of an interdependent web of life” and enabling them to develop “the ethics and the ability to care for that life within the midst of the significant and interconnected social and environmental challenges we face at this moment in history” (Lowenstein, Grewel, Erkaeva, Nielsen & Voelker , 2018, p.37).





Stone
Circles of
Community

STONE CIRCLES OF COMMUNITY

Archeologists have noticed that throughout history humans gathered together in community have erected monuments that stand as a circle of stones. This has been observed across many cultures and spanning vast geographic ranges. A stone circle is an intentional alignment of megalith stones, and while historians have presented many theories for their creation and yet there is no consensus for their intended purpose. Their formation, however, must have entailed the efforts of an entire community, from the quarrying of the stone to the painstaking construction. Dating back to the Bronze Age some of these circles like Stonehenge still stand as a monument to the efforts that can be achieved when an entire community is involved. The preserved remnants stand as stoic reminders of the human tendency to gather in circles and the legacy of what can be created through working together.

In much more modern history, the landscape architect Jens Jensen inserted a concept of a stone ring into his parks designs. He very much wanted to promote a space for community to gather in an outdoor setting. Drawing on what he expressed as an inspiration from the Native American culture he created a feature for his parks that became known as the council ring. In a council ring everyone sits in the circle as an equal promoting a space for sharing.

These two examples of stone circles are very relevant when it comes to creating a place for place in public schools. The incredible feats that can be accomplished when connecting classrooms with community partners can serve as local real-time living legacies of teamwork. The power of community and the connection to place will resonate when the students belong their community circle and can participate in democracy as active contributing citizens.



We can use place to connect the classroom to the community and unite schools to their neighborhoods and watersheds. This is because each school exists in a unique microcosm that is created in part by the multiple dynamic components of the community that it serves. Nurturing purposeful connections to place can happen anywhere, regardless of if the school is in an urban, suburban, or rural setting. By considering the four categories of place and the child, place and the teacher, place and the school, and place and the community each school can find a way to link lessons to their own environs. Educators and administrators can use these categories to outline the path for creating a system designed to empower student to engage wholeheartedly in their education and in turn develop lasting connections to place.

“Place- and community-based education often engages students in projects that require them to apply their knowledge, skills, and energy to community issues or problems. In doing so it demonstrates to young people the value of their own efforts and helps cultivate a taste for civic participation” (Smith & Sobel, 2010, p.25).



Place and The Child

Smith suggests that most valuable knowledge for children is derived from experiences “that allow them to engage in activities that are of service to and valued by those they love



and respect” (Smith, 2002b, p.586). Each school, no matter where it is located has the potential to nurture their developing students by engaging them in their surroundings through their own inquiry, turning their innate connection to place into lessons that can be linked to learning across curriculum, while at the same time guiding children to become agents of social change within their own communities and for the benefit of their communities. (Ernst, 2007; Kudryavtsev, Krasny & Stedman, 2012; Silverman & Corneau, 2017; Smith & Sobel, 2010).



Place and The Teacher

Along with a personal narrative and desire to promote this style of pedagogy, it has been observed that teachers can truly excel when the parents, fellow teachers, community partners, and administrators work alongside them with the goal of facilitating place-based learning.

The backing of administration was especially relevant as it makes it possible to acquire the additional resources needed to create schoolyard classrooms, conduct classes in a non-traditional setting, and lead deeper lessons that link inquiry and exploration to the required curriculum across subjects, while enhancing student awareness and understanding of the natural world (Silverman & Corneau, 2017).

The “keystone” teachers are often creating new “trails” and making connections that link their classrooms to community partners based on inquiry led investigations. For this reason professional development opportunities were shown to serve as an integral tool to provide strategies for teachers to implement impactful lessons. This proved important because teachers who do not have a background in the sciences, confidence teaching through methods of inquiry, or comfort in managing classrooms in outdoor settings have expressed that they are not likely to attempt place-based lessons in their current role (Carrier et al., 2013; Ernst, 2007, Mitchell & Mueller, 2011). Therefore, connecting with successful “keystone” teachers that can serve to train teachers in methods required for the successful implementation of place-based education and effective pairing with community partners is vital for the sustainability of this format in any school. The comradery of this collective learning creates a teacher community.



Place and The School

The interwoven components of an elementary school functions as a small society. This is the first place that children will step out on their own away from home, and work to develop their roles and understand the world around them. The school grounds themselves become the first living laboratory that children know (Smith, 2002b). Lessons provide students the opportunities to work together as a team allowing them to hone the “prosocial skills of cooperating and sharing” (Kenney, Militana & Donohue, 2003, p.22). As their work and awareness of their surroundings builds, students gain a desire take ownership and care for the places where they learn and grow each day, because they have a vested interest in them.

The school building and grounds are also where students will develop their initial care and concern for their environment. We have seen that when students learn outdoors, especially through a science curriculum, students begin to foster a care for the environment (Mitchell & Mueller, 2011). A further benefit of this is the findings show that when the environment is used as an integrative context, student achievement and in school behavior improve (Lieberman & Hoody, 1998). Learning to pay attention to place in every season, while working alongside their teachers and peers to serve and care for their immediate environment, is the first step in growing stewards of the places where we live and learn.



Education in the true sense, of course, is an enablement to serve -- both the living community in its natural household or neighborhood and the precious cultural possessions that the living community inherits or should inherit. To educate is, literally, to "bring up," to bring young people to a responsible maturity, to help them to be good caretakers of what they have been given, to help them be charitable toward fellow creatures... And if this education is to be used well, it is obvious that it must be used somewhere, it must be used where one lives, where one intends to continue to live; it must be brought home. (Berry, 1987, p.52)

Place and The Community

Having found their place first in the school community, students are next ready to set their sights on the community at large as a forum for learning. It is in their shared concern for the spaces where they learn that students become engaged with community partners and begin to try on service learning and exploration of their own civic action.

Place-based education allows students to become active, valuable members of society at an early age offering them the opportunity to have a role in their immediate neighborhood while in turn expanding their connection to place. It has been seen that students develop a deeper understanding of the complex interrelationships of individuals, communities, and societies when their learning takes place in a context that includes them as contributing members of their community through curriculum (Lieberman & Hoody, 1998). This type of learning linked with community calls them to consider themselves at an early age, active contributing members of their greater democratic society. Learning alongside the elders of their communities' students are exposed to their wisdom and collective experience, learning firsthand what pride in place looks like (Bishop, 2004).

If we want to empower our students through their education, to encourage them to develop their own voice and learn to use it, we must teach them to find it first. We must bring education home, allowing them to view their place first as part of their local community, and offering them the opportunity to serve alongside community partners as part of the lesson. The larger consideration is that learning takes on true meaning when it is first rooted in place.

“ If students are allowed to learn how to care about a place and to care for it, they are more likely to consider living there and helping to solve its problems. A pride of place will also give them the necessary skills to live well in any community. Place-based learning, wherever that place is, teaches a sense of community and gives students a model for living well anywhere” (Bishop, 2004, p.69).



Patterns to engage community

Teachers need to look no further than the pairings of the key traditions and themes identified by Smith & Gruenewald to find areas where the classroom can engage with community (Gruenewald, 2003; Smith, 2002b).

The first union surrounding the subject of the environment are the topics of natural history and nature studies. Lessons connecting to citizen science projects, where students collect and report data, are a great example of learning locally while linking to the larger scientific community. This can take the form of working with local community to protect and preserve a wild space or to create a garden to provide food for neighbors or pollinators (Anderson, 2017; Smith & Sobel, 2010). This type of learning has also proven to be beneficial across the curriculum, not solely in science (Lieberman & Hoody, 1998).

Next, learning through cultural journalism and cultural studies offers the opportunities to honor the lives of those that have inhabited the places before us. Perhaps this takes the form of curriculum designed to focus on indigenous knowledge or environmental justice for underrepresented members of a community (Gruenewald & Smith, 2008).

Finally, schooling comes to life through the connection to action research and the categories of real-world problem solving, internship & entrepreneurial opportunities, and the introduction to community processes. Students can problem solve in real time and truly observe the connections of their school to their neighborhoods and begin to shape change through civic engagement and service learning. Their observations of their surroundings can first identify a problem that needs a solution. Examples are discovering too much pet waste in a local park, or plastic being littered on the roadways. Perhaps it is a creek bed that needs to be cleaned, invasive plants need to be removed from a local waterway, work to be done to improve a neglected greenspace, or help with analyzing water quality, or education for the protection of wetlands (Anderson, 2017; Lowenstein & Smith, 2017; Smith, 2002a; Sobel, 2013). Students report finding this type of hands-on real-world learning to be “more engaging and meaningful, especially when they see their efforts lead to socially or environmentally beneficial results” (Lowenstein & Smith, 2017, p.55).



Civic Engagement

When children become active participants in their surrounding community, they begin to ask questions and identify challenges. It is this very connection to the child's innate sense of wonder in the parameters of the natural world, or in recognizing the needs of the surrounding community, that the most benefit can be gained in a place-based curriculum in a public-school setting. This learning serves to unite the classroom with the community by developing methods to meaningfully engage in local civic action. It helps us reconceptualize environmental education because it looks at how the landscape, community infrastructure, watersheds, and cultural traditions interact and shape each other simultaneously (Sobel, 2013). Effective relationships succeed because they weave together school and community and draw out the best in everyone involved (Smith & Sobel, 2010). Through place-based learning educators have the ability to bolster their potential to raise strong, contributing citizens that can also serve as environmental stewards of our world.

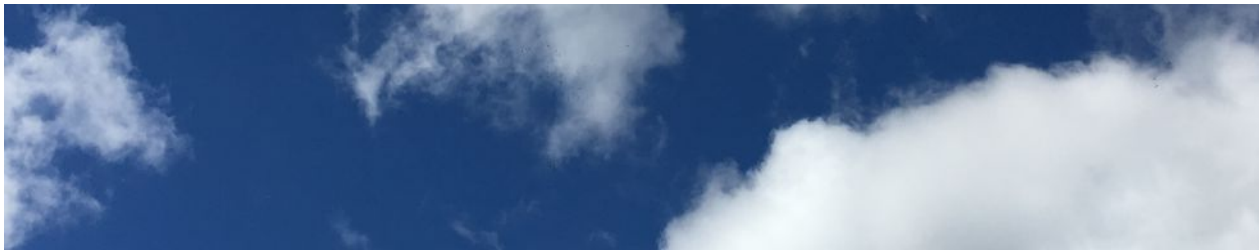
“The new idea here is that we’re not preparing students for tomorrow, we’re preparing them to solve the problems of today. You don’t learn about ecology so you can help protect nature in the future. You learn so you can make a difference here and now” (Sobel, 2013, p.18).



Community Partnerships

Learning founded in place not only teaches us how-to live in community, but also how to give to community. "We often forget that the most powerful lever for youth and teachers to become their best selves is public affirmation and a powerful sense of belonging to community" (Lowenstein & Smith, 2017, p.56). School and community leaders must work together to develop a common vision big enough to inspire all partners, grounded in a sense of what is possible, with a purpose of growing a healthy collaboration through open communication (Smith & Sobel, 2010). Lowenstein & Smith (2017, p.53) give these tips on forming community partnerships:

- Identify relevant coalitions and networks connected to your area of study.
- Let students do the talking – have them write letters, make phone calls, and send e-mails.
- Strive for transformational partnerships with shared long-term goals built on bonds of trust and driven by a shared ethical and civic vision.
- Make partners aware of your teaching goals & be prepared to modify them along the way.
- Anchor your inquiry in student civic engagement.
- Start somewhere – Make mistakes, forgive yourself quickly, and learn along the way.

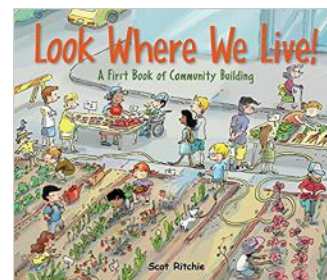
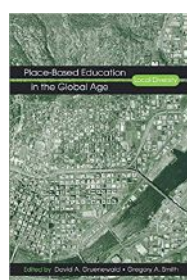
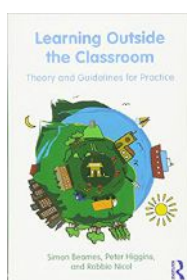
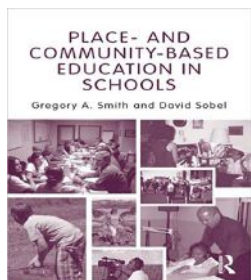
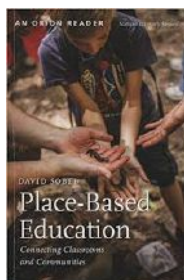


Through the four categories of place and the child, place and the teacher, place and the school, and place and the community, educators and administrators can outline the path for creating such a system designed to empower student to participate wholeheartedly in their community as part of their education.

The outdoors directly outside the classroom can become the fodder for meaningful investigations that allow students to engage with their environment through the process of asking questions about the world they observe every day (Gruenewald & Smith, 2008; Nagel, 1996). Acknowledging that the presence of experiential, inquiry-based opportunities for the developing students reaps benefits far beyond test scores, offers teachers and administrators the occasion to see their role as that of growing stewards as well as scholars. This is amplified when students take pride and ownership in their achievements through learning that engages the whole child and leads to community involvement through civic action and environmental stewardship enriched in place (Smith & Sobel, 2010).

Resources for Connecting Classrooms to Communities

- *Place-based Education: Connecting Classrooms and Communities* by David Sobel. Great Barrington, MA: The Orion Society, 2013.
- *Place- and Community-Based Education in Schools* by Gregory A. Smith and David Sobel. New York, NY: Routledge, 2010.
- *Learning Outside the Classroom: Theory and Guidelines for Practice* by Simon Beames, Peter Higgins, and Robbie Nicol. New York, NY: Routledge, 2012.
- *Place-Based Education in the Global Age* by David A. Gruenewald and Gregory A. Smith. New York: NY: Lawrence Erlbaum Associates, 2008.
- *Look Where We Live: A First Book of Community Building* by Scot Ritchie. Tonawanda, NY: Kids Can Press, 2015.



The stone circles of community are not found solely in the archeological past of mankind. In fact, they exist today through the living examples of community members working together to mold and shape their communities through their schools, their neighborhoods, and their watersheds. Through place-based learning schools can connect with communities and contribute to projects that work to provide all creatures with clean water, allow for equitable access to natural experiences for every child, create opportunities for relationships that span generations allowing the youth to learn from their elders, and provide and care for green spaces in communities. Indeed, it is in the union of the school with the local community as supporters, partners, and the subject of local curriculum that educators can lead their students into practical experiences in the real world. By teaching students to recognize their community and its members as part of the place that forms their life experience, as well as part of their education, we are affirming their roles as active members of their society, while modeling potential career opportunities. We are teaching them that no matter how young, their efforts are part of a greater community. We are teaching our children, the next generation of stewards, that together with community they can grow wise learning from this incredible Earth that we share.



“There are many ways to know, love, and care for our world, from incorporating diverse perspectives to honoring the rural or urban nature of our environment to teaching our kids to treat each other and the places they live with kindness and compassion. PBE provides a way for us to bring our children more fully into the world while preparing them to be strong and capable stewards of their own future” (Anderson, 2017, p.9).

Congratulations on taking the time to learn more about what exploring place through your curriculum, schoolyards, classrooms, and communities can look like. The hope is that your connection to place continues to grow as you let local learning guide your teaching.

The surveys on the next three pages are designed to help identify areas where the Guidebook has been helpful in your successful implementation of place-based education and help uncover areas where there is still room for growth.

Post-Guidebook Survey for Administrators

You are being asked to complete this survey because you have used the *Education Founded in Place a Guidebook for Implementation* developed by Sally Triant for Grow Wise Learning, LLC (referred to in this survey as the Guidebook) to support place-based education efforts to connect your students in meaningful ways to their community and the local environment.

The results of this survey will be used to identify the ongoing work that being done to promote place-based education and outdoor learning experiences and identify the areas that continue to require support. Please make sure to add details of work begun since using the Guidebook.

The survey should take less than ten minutes to complete. There are no right or wrong answers and your honest feedback is greatly appreciated.

Please provide your name and the building you supervise:

1. While in school do your students have access to:

	Yes	No
An outdoor space being used as a classroom in your schoolyard?		
Excursions to a park or greenspace that is within walking distance?		
Do you support teachers using the outdoors for lessons?		
If No, please describe the barriers that prevent you from supporting them.		

2. Since using the Guidebook are there new examples of educators in your school using the schoolyard or field trips as a way to promote learning while working to connect students to community partners?

Project / Field Trips	Teacher (s)	Grade(s) Served

	strongly agree	agree	disagree	strongly disagree
3. I support my teachers working with local partners to encourage students to become contributing members of their community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I would like to participate in ongoing professional development designed to promote place-based education in my school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I am interested in learning more about place-based education and how I can continue to support it as an administrator.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I feel teaching students about environmental education and their role as stewards is even more important since using the Guidebook.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. Please add any additional comments to express how the Guidebook helped shaped your current place-based curriculum and any areas where you still require assistance.

Post-Guidebook Survey for Teachers

You are being asked to complete this survey because you have used the *Education Founded in Place a Guidebook for Implementation* developed by Sally Triant for Grow Wise Learning, LLC (referred to in this survey as the Guidebook) to support place-based education efforts to connect your students in meaningful ways to their community and the local environment.

The results of this survey will be used to identify the ongoing work that being done to promote place-based education and outdoor learning experiences and identify the areas that continue to require support. Please make sure to add details of work begun since using the Guidebook.

The survey should only take about ten minutes to complete. There are no right or wrong answers and your honest feedback is greatly appreciated.

Please provide your name, the school where you teach, and grade level:

If you choose to remain anonymous you may, but if you provide your contact information, we will be able to reach out to you to support the work you are doing.

	strongly agree	agree	disagree	strongly disagree
1. It is important to teach lessons outdoors.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I am more comfortable teaching in an outdoor setting since using the Guidebook.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I am confident incorporating place-based education into my classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Teaching students about the environment and their role as stewards is important.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Since using the Guidebook, I am looking for more ways to work with community partners to extend classroom learning .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Yes	No
6. Have you added a lesson or unit that incorporates your schoolyard, neighborhood, or community as the subject since using the Guidebook?	<input type="radio"/>	<input type="radio"/>
If yes, please describe it:		
7. Have you added a field trip or schoolyard lesson that incorporates environmental education or place-based learning since using the Guidebook?	<input type="radio"/>	<input type="radio"/>
If yes, please describe it:		
8. Do you use curriculum in your classroom to extend the learning before and after the field trip or schoolyard lesson?	<input type="radio"/>	<input type="radio"/>

	strongly agree	agree	disagree	strongly disagree
9. Since using the Guidebook, I have taken my students outdoors for more learning experiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Please describe any barriers that continue to prevent you from taking your students outside.				
Please describe what administration or community partners can continue to do to support your efforts to promote place-based education and outdoor learning.				
Please describe any tools or materials you still need to better support place-based education and outdoor learning for your students.				

	strongly agree	agree	disagree	strongly disagree
10. I am confident using my schoolyard as the subject of nature study experiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I am confident working with local partners to encourage students to become contributing members of their community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I would like to participate in professional development designed to promote ongoing methods for outdoor teaching and place-based education.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I would like to participate in the development of curriculum to support place-based education and promote outdoor learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. My perspective has shifted on the importance of environmental education as a core value in my teaching since using the Guidebook.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Please explain your answer,				

Thank you so much for your participation. Please leave any additional comments, questions, or concern you would like for us to consider here.

References

- Anderson, S. K. (2017). *Bringing school to life: Place-based education across the curriculum*. Lanham, MD: Rowman & Littlefield.
- Berry, W. (1987). Higher education and home defense. In, *Home Economics: Fourteen Essays by Wendell Berry*. (pp.49 – 53). San Francisco, CA: North Point Press.
- Bishop, S. (2004). The power of place. *The English Journal*, 93(6), 65-69.
- Borsos, E., Patocskai, M., & Boric, E. (2018). Teaching in nature? Naturally! *Journal of Biological Education (Routledge)*, 52(4), 429–439.
- Broda, H. W. (2007). *Schoolyard-enhanced learning: Using the outdoors as an instructional tool, K-8*. Portland, Me: Stenhouse Publishers.
- Carrier, S. J., Tugurian, L. P., & Thomson, M. M. (2013). Elementary science indoors and out: Teachers, time, and testing. *Research in Science Education*, 43(5), 2059-2083.
- Carson, R. (1956) *The sense of wonder*. New York, NY: Harper & Row Publishers.
- Chawla, L. (2007). Childhood experiences associated with care for the natural world: A theoretical framework for empirical results. *Children Youth and Environments*, 17(4), 144-170.
- Comstock, A. B., 1854-1930. (1931). *Handbook of nature-study for teachers and parents*. Ithaca, NY: Comstock and Cornell University Press.
- Demarest, A.B. (2015). *Place-based curriculum design: Exceeding standards through local investigations*. New York, NY: Taylor & Francis.
- Eick, C.J. (2012). Use of the outdoor classroom and nature-study to support science and literacy learning: A narrative case of a third-grade classroom. *Journal of Science Teacher Education*, 23(7), 789 – 803.
- Ernst, J. (2007). Factors associated with K-12 teachers' use of environment-based education. *The Journal of Environmental Education*, 38(3), 15-32.
- Gruenewald, D. A. (2003). Foundations of place: A multidisciplinary framework for place-conscious education. *American Educational Research Journal*, 40(3), 619-654.
- Gruenewald, D. A., & Smith, G. A. (2008). *Place-based education in the global age: Local diversity*. New York: Lawrence Erlbaum Associates.

- Hass, R. (2006). On Watershed Education. In M.K. Stone & Z. Barlow (Eds.), *Ecological literacy: Educating our children for a sustainable world*. (pp. 107 - 110). San Francisco, CA: Sierra Book Clubs.
- Kemp, A. T. (2006). Engaging the Environment: A case for a place-based curriculum. *Curriculum and Teaching Dialogue*, 8(1/2), 125-142.
- Kenney, J. L., Militana, H. P., & Donohue, M. H. (2003). Helping teachers to use their school's backyard as an outdoor classroom: A report on the watershed learning center program. *The Journal of Environmental Education*, 35(1), 18-26.
- Knapp, C. E. (2008). Place-based curricular and pedagogical models: My adventures in teaching through community contexts. In D.A. Gruenewald & G.A. Smith, *Place-based education in the global age: Local diversity*. (pp. 5 – 27). New York: Lawrence Erlbaum Associates.
- Kudryavtsev, A., Krasny, M.E. & Stedman, R.C. (2012). The impact of environmental education on sense of place in urban youth. *Ecosphere*, 3(4), 1-15.
- Lawrence, G. (1998). *A field guide to the familiar: Learning to observe the natural world*. Hanover, NH: University Press of New England.
- Lieberman, G. A., Hoody, L. L., & State Education and Environment Roundtable (Calif.). (1998). *Closing the achievement gap: Using the environment as an integrating context for learning*. San Diego, Calif: State Education and Environment Roundtable.
- Leslie, C.W., Tallmadge, J., Wessels, T. (1996) *Into the field: A guide to locally focused teaching*. Great Barrington, MA: The Orion Society.
- Louv, R. (2005) *Last child in the woods: Saving our children from nature-deficit disorder*. Chapel Hill, NC: Algonquin Books.
- Lowenstein, E., Grewal, I. K., Erkaeva, N., Nielsen, R., & Voelker, L. (2018). Place-based teacher education: A model whose time has come. *Issues in Teacher Education*, 27(2), 36-52.
- Lowenstein, E., & Smith, G. (2017). Making a world of difference by looking locally. *Alexandria: Association for Supervision and Curriculum Development. Educational Leadership*, (75)2, 50-56.
- Michigan Environmental Task Force. (2014). *The Michigan environmental literacy plan* (1st ed.). Retrieved from https://www.gleft.org/documents/603-mi_elp-pdf

- Mitchell, D. B., & Mueller, M. P. (2011). A philosophical analysis of David Orr's theory of ecological literacy: Biophilia, ecojustice and moral education in school learning communities. *Cultural Studies of Science Education*, 6(1), 193 – 220.
- Nagel, N.G. (1996). *Learning through real world problem solving: The power of integrative teaching*. Thousand Oaks, CA: Corwin Press, Inc.
- Pyle, R. M. (2008). No child left inside: Nature study as a radical act. In D.A. Gruenewald & G.A. Smith *Place-based education in the global age: Local diversity*. (pp. 155 – 172). New York: Lawrence Erlbaum Associates.
- Schwartz, M. D., (2013). *Phenology: An integrative environmental science* (2nd 2013. ed.). New York, NY: Springer.
- Silverman, J., & Corneau, N. (2017) From nature deficit to outdoor exploration: Curriculum for sustainability in Vermont's public schools. *Journal of Adventure Education and Outdoor Learning*, 17(3), 258-273.
- Smith, G. A. (2002a). Going Local. *Educational Leadership*, 60(1), 30–33.
- Smith, G. A. (2002b). Place-based education: Learning to be where we are. *The Phi Delta Kappan*, 83(8), 584-594.
- Smith, G. A., & Sobel, D. (2010). *Place- and Community-Based Education in Schools*. New York, NY: Routledge.
- Sobel, D. (1996). *Beyond ecophobia: Reclaiming the heart of nature in education*. Great Barrington, MA: Orion.
- Sobel, D. (1998) *Mapmaking with children: Sense of place education for the elementary years*. Portsmouth, NH: Heinemann.
- Sobel, D. (2008). *Childhood and nature: Design principles for educators*. Portland, ME: Stenhouse.
- Sobel, D. (2013). *Place-based education: Connecting classrooms and communities* (2nd ed.). Great Barrington, MA: Orion.
- Solnit, R. (2014). *Savage dreams: A journey into the hidden wars of the American west*. San Francisco, CA: Sierra Club Books.
- Wilson, E. O. (1984). *Biophilia*. Cambridge, MA: Harvard University Press.
- Wilson, E. O. (2013). *Letters to a young scientist (First ed.)*. New York: Liveright Publishing Corporation, a Division of W.W. Norton & Company.