

**GUIDING PRINCIPLES
FOR EXEMPLARY
PLACE-BASED
STEWARDSHIP
EDUCATION:

USER GUIDE AND GLOSSARY**



This “User Guide and Glossary” is a companion document to “Guiding Principles for Exemplary Place-based Stewardship Education.” Both documents were produced by the Great Lakes Stewardship Initiative (GLSI) (www.glstewardship.org), a ten-year effort across several Michigan K–12 schools and communities to develop environmental stewards of the Great Lakes.

Based on their accumulated experience, and with support from the U.S. Environmental Protection Agency (U.S. EPA), the initiative’s central and hub staff developed two documents—a set of ten guiding principles and an associated rubric. Together, these two documents describe and explain the GLSI’s vision of exemplary place-based stewardship education in a K–12 context, and provide a progression of practice for each of the principles (from baseline/beginning to exemplary).

The GLSI’s primary goal in developing the principles and rubric was to guide the work of the GLSI’s own participants—its regional hubs, and its participating schools, teachers, and community partners. However, staff soon realized that these documents had application well beyond the GLSI. We hope that all readers—within and outside of the GLSI—will find the guiding principles and the rubric to be a useful compass for their work. In particular, we hope that readers will thoughtfully consider how these principles could be adapted to their own environmental, community, organizational, and programmatic contexts. The successful implementation of the GLSI across urban, suburban, and rural contexts, and across the K–12 spectrum, indicates that place-based stewardship education is a powerful and engaging approach to teaching and learning that can be readily adapted and used in a variety of grade levels and communities.

This document has two parts:

- **Part 1:** The User Guide provides the reader with ideas for using the guiding principles and the rubric to steer and enhance their work, and answers questions we anticipate from readers.
- **Part 2:** The Glossary of Terms defines or elaborates on certain words or phrases in the guiding principles and rubric, with a goal of helping the reader more fully understand and interpret both documents.

PART 1: USER GUIDE

The guiding principles and associated rubric have many potential uses.

- **Assessing your own PBSE practice:** Use the guiding principles to examine your own practice. Consider the principles as a whole. How does your practice measure up across the broad landscape of work represented by all ten principles? Does the quality or quantity of your practice reflect a special interest in one or more principles? Are there principles that you deem important but have yet to operationalize in your practice? What would teaching and learning look like—how would it be different—if you built your practice around these principles?

You might also consider specific principles that are especially timely or closely connected to your curriculum or area of expertise. Use the principle's narrative and the associated section of the rubric to figure out what exemplary practice for that principle might look like. Once you have that vision of "success," think about how you could develop, strengthen, or share your practices associated with this principle. What areas need to be bolstered? What effective strategies or resources do you use that might be of interest to others?

You can use the rubric as an annual self-assessment tool. You can track your own results (and share them with others, if you wish) and chart the growth of your knowledge and practice of PBSE.

- **Examining your team's or school's PBSE work:** In some school buildings or districts, PBSE efforts are fielded by teams of teachers, who coordinate their instruction and support each other along the way. In such places, the principles and rubric can help these colleagues examine and strengthen their collective practice, and share effective strategies and resources with colleagues. For many GLSI hubs, learning communities or study groups of teachers are an important part of the hub's sustained professional development program for teachers. Beyond the GLSI, many schools have structures to support collegiality among teachers. The principles and rubric can provide a focus and substance for discussions and planning among teachers.
- **Introducing PBSE to others:** Use the guiding principles and rubric to introduce PBSE to a colleague as part of a broader invitation to join an ongoing PBSE effort or practice in your school or district. The guiding principles can also help you share PBSE with an administrator, curriculum specialist, or school board. Whether the concern or focus in your school or community is on student engagement, academic achievement, school-community partnerships, teacher retention and morale, a specific environmental issue or topic, or something else, the guiding principles and rubric can help you demonstrate how PBSE connects with your building and district priorities.

The following are some important considerations and frequently asked questions about place-based stewardship education as defined in the principles.

Who can do all of this? As you consider the guiding principles and rubric, please keep in mind that fully executed, exemplary PBSE—as described in the principles and elucidated in the “Exemplary” column of the rubric—is an advanced teaching practice. Masters of this practice have spent years developing their understanding, skill sets, and strategies for implementing PBSE with real kids in real communities, and even then do not maximize every principle for every effort. You should not feel diminished if your PBSE effort embodies few of the principles today. This is a journey. Whether you’re taking that first step or making your way along the path, we applaud you!

Why is the school described as if it is different from, or not part of, the community? The principles and rubric may occasionally refer to the “school” in a way that distinguishes it from the “community.” Some have questioned this distinction, given that schools are part of the community. When such distinction is made in these documents, it is meant as a reminder that the focus of GLSI PBSE is on the shared spaces and environmental well-being of the community, and not on places (such as school grounds, or senior centers, or private-sector businesses) that are, or are perceived to be, for use by only certain people within the community. The school-community distinction is also used in describing school-community partnerships, in which case we draw attention to alliances between the school and its staff and other community organizations and their staffs.

Why do you sometimes distinguish the environment from the community? Isn’t the environment part of the community? The principles and rubric may occasionally refer to the “environment” in a way that distinguishes it from the “community.” Some have questioned this distinction, given that natural features (“the environment”) are part of the community. When such distinction is made in these documents, it is meant as a reminder that the focus of GLSI PBSE is on the natural environment, and not on other worthy elements of community life, e.g., the local economy or community development.

Why is PBSE conducted on school grounds treated as less worthy, or less well developed, than PBSE conducted off school grounds? Although robust PBSE experiences on the school grounds are better than no or limited experiences elsewhere, the intent of PBSE is to get students involved in their communities in ways that immerse them in the local environment, help them understand how they affect and are affected by it, and provide experiences that affirm their capacity to help improve their “place” through individual or collective choices and actions.

We acknowledge the real pressures that drive teachers to confine PBSE to the school grounds, whether because of concerns about students’ safety, the time and money costs of transportation, lack of adequate chaperones, interference with students’

other classes, and more. We also acknowledge that a PBSE effort can be fully executed on the school site while also drawing upon community partners and being effectively connected to the community's stewardship needs—yet we find such efforts to be rare exceptions. The GLSI's goal, and that of most facilitators of PBSE, is to find means to move beyond the school grounds and into the community where the work becomes public, ties into the goals and priorities of community partners, and can produce visible and enduring benefits for the local community and the environment. In turn, those community and environmental benefits can generate significant, broad support for PBSE, and the recognition helps make the experience meaningful for students.

Are all of these principles appropriate for elementary students (or high school students)? The guiding principles and rubric can be applied across the K–12 spectrum, from kindergarten through high school and even beyond. Teachers should interpret the principles in a manner that allows for developmentally appropriate teaching and learning practices and content.

Isn't place-based stewardship education really the same as service learning (project-based learning, problem-based learning, environmental education, etc.)? How can I distinguish between all of these pedagogies? Place-based stewardship education shares some characteristics with other experiential instructional approaches. For example, PBSE is a targeted form of place-based education—one that focuses not only on acquiring a deep knowledge of place but also on active stewardship of its environment. Many PBSE efforts involve elements of service learning, but not all place-based education is service learning, nor is all service learning place-based. In project- or problem-based learning, students actively explore real-world issues and challenges in order to acquire deep knowledge. Not all project-based learning is place-based, but many PBSE efforts feature exactly this type of deep learning by students. Finally, environmental education is often delivered in a place-based manner, but not all environmental education emphasizes local environmental resources and needs.

Most of the time, all of these approaches to learning stem from an experiential approach to teaching and learning, so there are important parallels, and common, underlying beliefs and theory that inform these pedagogies. Because these practices are not owned by anyone and are open to reinterpretation and modification, the effort to carefully delineate where service-learning ends and place-based education starts (for example) can be difficult. We recommend that, to the degree possible, you focus on the nature of the work rather than the terms used to describe it, and we also offer the guiding principles and related rubric as concrete guidance on PBSE.

PART 2: GLOSSARY OF TERMS

This glossary defines terms in relation to the GLSI's PBSE guiding principles and rubric. Others may interpret these terms differently, but the entries below describe our meaning in using these terms.

GENERAL TERMS

Community: For purposes of this document, a “community” is a geographically located entity that demarcates one’s residence, such as a village, town, or city. In large urban cities, a “neighborhood” could be considered a community as well (e.g., Southwest Detroit, the downtown business district). This concept of community is to be distinguished from professional communities, organizational communities, learning communities, clubs and interest-based communities, and other social connections that are not place-bound, or are building-bound.

Education: The GLSI's Guiding Principles for Exemplary Place-based Stewardship Education document was designed with K–12 education in mind. This is not to diminish the importance of education for youth and adults that occurs outside of this context, but rather to acknowledge that appropriate principles for such education in those settings may differ from those suitable for the K–12 context.

Environment, environmental issues: The environment, or environmental issues and concerns, are defined broadly by the GLSI to include not only natural systems and their care, but also the related human systems and infrastructures for building, transportation, energy production and use, agriculture and food distribution, and other topics that speak to the sustainability and impacts of human choices and behaviors.

Issues, assets, themes, or opportunities of focus: Place-based stewardship learning education can focus on an environmental issue (e.g., Should our town limit use of phosphate-based fertilizer?), an environmental asset (e.g., the local river or vernal pool), an environmental theme (e.g., the sources and impacts of microplastics in the Great Lakes), or an environmental opportunity (e.g., an invitation to create a Monarch butterfly waystation).

Local, localness: The term “local” has different meanings in different contexts and ultimately cannot be defined in any fixed way for this document. For second graders, the local environment is quite likely smaller than the local environment known by high school seniors. Local places are accessible to students and belong to the students, in the sense of one’s own town, watershed,

or school. Users of this guide must use their own judgment in defining their local contexts, and we do not distinguish in the principles between the concepts of “place” and “local” or “localness.”

Place (also local, localness): The term “place” can apply to scales as small as a child’s fort and as large as a bioregion, such as the Great Lakes region. For the practice of PBSE, a place is accessible to students and belongs to the students—in the sense of one’s own special place, one’s own school, or one’s own community. In practice, then, for purposes of delimiting “place,” this includes those areas known or knowable to most learners that are also reasonably accessible to teachers and learners for ongoing fieldwork. For second graders, the scope of accessible place is likely more constrained than the scope of accessible place for graduating seniors. We do not distinguish in this guide between the concepts of “place” and “local” or “localness.” Users of the principles and rubric must use their own judgment in defining their local contexts.

Place-based, place-based education, pedagogy of place: Place-based education is education that uses place as a foundation for teaching and learning. Sobel (2005) defines pedagogy of place as “a theoretical framework that emphasizes the necessary interpenetration of school, community, and environment, whether it’s urban, suburban, or rural.” Perrone et al. (1999) characterized place-based education as follows:

“Another way to think about this focus on place is to understand that a “grounded” or “rooted” learner stands within the world, acting on its many elements, rather than standing outside looking in, acting in large measure as an observer, which is the typical stance expected of students in schools. What is notable from our close observations of student work that has an embedded quality—meaning that the student is in the community, researching aspects of its history, learning about local lore, researching and reconstructing aspects of a local watershed, conducting community health surveys, developing exhibits for the local museum—is that the quality of the work deepens greatly, is more carefully attended to, assumes genuine meaning. Students easily distinguish this rooted work from typical work in which they stand outside. A grounded, rooted learner understands that his/her actions matter, that they affect the community beyond the school. It is out of this particular formulation that the “student as a resource to the community” takes shape—that understanding that students need to be thought of as productive assets to the health of a community. A pedagogy of place, then, recontextualizes education locally. It makes education a preparation for citizenship, both locally and in wider contexts, while also providing the basis for continuing scholarship.”

Place-based stewardship education (PBSE) effort: A PBSE “effort” is a collection of classroom and field-based activities, in which students take part, involving learning, taking action, communicating with others, and demonstrating learning and community impacts around one or more locally significant environmental issues, assets, themes, or opportunities. The PBSE effort may take

the form of a single project, but or may also be a constellation of mini-projects or activities pursued over the course of the year on one or more selected environmental issues, themes, assets, or opportunities of focus.

Stewardship: Stewardship is a set of attitudes, behaviors, and knowledge with regard to natural resources and conservation of said resources for future generations of people and other living things. Stewardship includes the care and management of natural systems, as well as attitudes in support of the environment, sense of comfort in nature, participation in public decision making regarding the environment, and discussion and deliberation around policies affecting the distribution and use of natural resources. It also includes a commitment to maintain pro-environmental attitudes and behaviors and related civic participation into the future. Thus, stewardship can have public and private dimensions as well as knowledge, behavioral, and value dimensions, and can manifest in both private and public life. See Hungerford and Volk (1990), Hollweg et al. (2011), and Simmons (1996, 2004) for further background on environmental stewardship and its components.

ADDITIONAL TERMS

Assessments for learning: This term is used to describe assessments that are designed to foster and result in learning (as opposed to merely demonstrating learning), such as a research project or a creative project. Other terms that sometimes convey this meaning include *authentic assessments* and *performance assessments*.

Assessments of learning: These are assessments that result in a measure of how much a student has learned relative to expectations, in which the assessment itself is not a learning opportunity, e.g., a multiple-choice test.

Baseline/Beginning, Developing, Advancing, Exemplary: These terms are used to describe the four stages in the rubric. A baseline/beginning practice generally provides little or no evidence that a principle is in use. A developing practice generally shows inconsistent, or limited, implementation. An advancing practice is generally deliberate, planned, and easily observed in the PBSE effort. An exemplary practice generally demonstrates full execution of a principle, with a level of excellence that suggests it as a model for others to study.

Built environment: The built environment is land that has been amended by humans for living, working, transportation, farming, and other human uses, as is found anywhere there is housing, industry, agriculture, or roads.

Content standards, content and process standards: Content and process standards outline or articulate what students should know and be able to do at various grade levels. Examples include such documents as the Common Core standards, the Next

Generation Science Standards, the C3 Framework, the Michigan Department of Education Standards and Benchmarks, and the Michigan Technology Education Standards.

Credible evidence (of learning), quality evidence (of learning): Credible evidence of learning and quality evidence of learning refer to the norms and conventions among users of evidence regarding the strength of that evidence. What is compelling or credible in one context may be less so in another. Users of the guiding principles should become acquainted with the views on credible evidence of learning that most influence decision makers in their school building and district.

Deliberate process: A deliberate process is one that has been designed in advance, with an intended goal or end state for students in mind, and has been tested and refined to provide a reliable means of moving students to that goal or end state.

Democratic practices: Democratic practices include defining issues or problems, considering alternatives, weighing the alternatives through a deliberate process, and coming to decisions through preidentified processes such as voting, engaging in collection action, and engaging in public discourse, among other practices. See the Kettering Foundation (2015) for one concept of democratic practices.

Developmentally appropriate: “Developmentally appropriate practice” is a frequently used term in early childhood education, and there are numerous written strategies, principles, and considerations for this available for early childhood educators. In the GLSI context, which serves K–12 populations, there are fewer concrete guides to achieving developmentally appropriate practices. By this term, we mean that teachers should in all cases adapt materials, lessons, and topics to ensure they are appropriate to their students’ cognitive, emotional, social, and cultural readiness. Writing about developmentally appropriate methods for *evaluating* place-based education in young children, Doberneck (2010) referred to Kellert (1995), Sobel (1996), and Simmons (1996, rev. 2004), each of which articulated a developmental sequence associated with children’s learning in and about the environment. Although the stages are defined differently, these authors point out developmental changes in children’s frames of reference, sense of identity, capacity for abstract thought and social thinking, and readiness to contemplate “adult-sized” problems and challenges associated with the environment.

Discipline(s): This refers to fields of study such as the sciences, social studies, language arts, mathematics, foreign languages, technology, and the arts and humanities, as well as their subfields.

Ecojustice: Ecojustice is a philosophy in which nonhuman life is accorded equal status with human life, in terms of its intrinsic value and associated fundamental rights of humane treatment and freedom. Those adopting an ecojustice perspective examine,

and try to influence, human practices that presume a freedom to use natural resources for exclusively human purposes and to the detriment of other life on Earth, as well as practices that privilege some humans above others. Martusewicz, Edmundson, and Lupinacci (2011) define ecojustice as “the understanding that local and global ecosystems are essential to all life; challenging the deep cultural assumptions underlying modern thinking that undermine those systems; and the recognition of the need to restore the cultural and environmental commons.”

Ecosystem: An ecosystem is a biological community of interacting organisms and their physical environment (Oxford, n.d.).

Environmental justice: Environmental justice is an inquiry and philosophy concerned with the fair distribution of environmental benefits and burdens. Environmental justice is concerned, for instance, with disproportionate placement of toxic-waste storage facilities in low-income communities, heightened asthma rates among low-income persons due to poor air quality, and other inequitable outcomes in which low-income or disenfranchised populations suffer disproportionately from environmental burdens. The U.S. EPA (n.d.) defines environmental justice as follows: “Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.”

Equity, equity perspective: Equity is a fair or just outcome in which all people affected share proportionately in benefits and/or harms. An equity perspective on environmental issues considers whether, in any given situation, environmental benefits and harms are distributed proportionately across people.

Experiential learning: Wurdinger and Carlson (2010) define experiential learning as follows: “Broadly, experiential learning is any learning that supports students in applying their knowledge and conceptual understanding to real-world problems or situations where the instructor directs and facilitates learning. The classroom, laboratory, or studio can serve as a setting for experiential learning through embedded activities such as case and problem-based studies, guided inquiry, simulations, experiments, or art projects.”

Hands-on learning: In hands-on learning, students learn by doing. Typically, students have firsthand experiences with objects, materials, phenomena, and ideas, and then draw meaning and build understanding from those experiences. Hands-on learning involves students in manipulating some object or system, or engaging in some action to lead to a consequence. It includes inquiry-based learning, but some hands-on learning may not be inquiry-based. “Hands-on learning” is also known as materials-centered learning or minds-on learning.

Inquiry, inquiry cycle, inquiry process: The term “inquiry” implies an investigative learning process. There are many definitions as practiced in education. According to the National Research Council (2000):

“Inquiry is a multifaceted activity that involves making observations; posing questions; examining books and other sources of information to see what is already known; planning investigations; reviewing what is already known in light of experimental evidence; using tools to gather, analyze, and interpret data; proposing answers, explanations, and predictions; and communicating the results. Inquiry requires identification of assumptions, use of critical and logical thinking, and consideration of alternative explanations.”

There are also many graphic representations of the inquiry process/inquiry cycle. One of the most popular graphics was developed by Kath Murdoch; access it at <https://s-media-cache-ak0.pinimg.com/736x/d4/6a/95/d46a952898d8cbd5a13a257a7d1b8254.jpg>. Learn more about inquiry and access useful resources on the Edutopia website at <http://www.edutopia.org/article/inquiry-based-learning-resources-downloads>; on the Edudemic website at <http://www.edudemic.com/inquiry-in-the-classroom>, or, for interesting examples of inquiry-based instruction at different grade levels, see the National Research Council (2000) online at <http://www.nap.edu/read/9596/chapter/4#39>.

Integrate, curriculum integration: Integrating across disciplines is a means of combining certain knowledge and skills imparted by distinct disciplines (e.g., science, language arts, fine arts, and social studies) to respond to a challenge or need in the real world. Scholars distinguish between multidisciplinary, interdisciplinary, and transdisciplinary approaches to curriculum integration, and these different labels correspond to the degree to which the standards and practices of the disciplines have been meshed together. See Drake and Burns (2004) online at <http://www.ascd.org/publications/books/103011/chapters/What-Is-Integrated-Curriculum%C2%A2.aspx> for further details.

Learning goals: The explicit, written expectations a teacher establishes for the learning and skill development students will achieve through a PBSE effort. These goals may or may not be articulated to students.

Management plan: In the PBSE context, a management plan refers to a written work plan with timetable that a) considers the potential for disruption or delay (e.g., weather-related delays, supply-related delays) and b) anticipates and prepares for these contingencies. There is no standard format of such a plan, but it should be explicit.

Natural environment: The natural environment refers to sites or natural systems that are relatively undisturbed by current human activity, without significant amendment by humans for living, working, transportation, farming, or other human uses.

Natural resources: Natural resources include water, fertile soils, clean air, minerals, forests, and other naturally occurring systems or substances that support life. Some definitions of natural resources include wildlife as a natural resource, while others do not.

Neighborhood: Neighborhood means a generally walkable area proximate to one's home. Some but not all neighborhoods may have a formal or informal name.

Professional competencies: Included in professional competencies are concepts such as communication skills (speaking, listening, writing, nonverbal), organizational skills, time management, responsibility, accountability for results, leadership, teamwork, interpersonal skills, self-control, and other skills related to success in public and private work. The professional competencies are not mutually exclusive from the social-emotional competencies as defined in this document.

Public discourse, meaningful public discourse: Public discourse is an open discussion among members of a community regarding shared or common-good resources—including environmental, economic, infrastructure, and cultural and social resources, and existing or proposed actions affecting such resources. Public discourse seeks to arrive at an acceptable decision or resolution of an issue or query after varied views have been aired.

Robust partnerships: Robust partnerships are long-term, mutually beneficial relationships between a community-based organization and a teacher team or school in which each party is deeply involved in the design, development, and implementation of PBSE efforts, and accountable for outcomes. Every PBSE effort will ideally have one or more robust partnerships between the school and community organizations, and will also have other partnerships that are more targeted in their goals and purposes. Partnerships for PBSE come in all shapes and sizes and all are valuable; not every partnership need be of this robust nature.

School and district priorities, school building priorities: Some schools have specific curricula, reform efforts, schoolwide programs, themes for the year, and/or other ways in which their programming is distinct from that of another school or district in their region or state. All public schools have school-improvement plans that identify (often granular) school-improvement goals that are a focus for the coming year. School or district priorities can encompass any of these broad or narrow emphases. In some schools or districts, there may not be any specific, distinct priority or emphasis that is connected to curriculum or general teaching and learning experiences.

School grounds: School grounds are the property of the school, including gardens, landscaping, playgrounds, lawns, and other areas maintained by the school. Some schools may include sites that are relatively undisturbed natural environments as well as built features or developed landscapes.

Setting that supports public discourse: A setting that supports public discourse is open to members of the community and provides space and time for meaningful discussion and airing of perspectives and ideas. A one-way presentation without dialogue can be valuable, but is not a setting that supports public discourse.

Social-emotional competencies: These are such competencies as self-awareness or self-consciousness; self-regulation or self-management; social awareness or empathy; social abilities and relationships; and responsible decision-making. See CASEL (2015) at <http://www.casel.org/social-and-emotional-learning/core-competencies> for more information. The social-emotional competencies are not mutually exclusive from the professional competencies as defined in this document.

Student voice: SoundOut, a national nonprofit organization that supports meaningful student involvement, defines student voice (2016) as follows: “Student voice is any expression of any learner anywhere, anytime focused on learning, schools or education. This can include, but isn’t limited to, active or passive participation, knowledge, voting, wisdom, activism, beliefs, service, opinions, leadership, and ideas. Student voice reflects identity, and comes from a person’s experiences, ideals, and knowledge. Student voice is the individual and collective perspective and actions of young people within the context of learning and education.” To *cultivate* student voice, as recommended in the guiding principles, educators must do more than permit it; they must help students to find their perspectives and to express them, individually and collectively, in ways that are socially responsible and effective.

Systems thinking: “Systems thinking” is a challenging term with many definitions. Peter Senge’s (1994) notes: “Systems thinking [is] a way of thinking about, and a language for describing and understanding, the forces and interrelationships that shape the behavior of systems. This discipline helps us to see how to change systems more effectively, and to act more in tune with the natural processes of the natural and economic world.” As defined by the Waters Foundation (n.d.): “Systems thinking utilizes habits, tools and concepts to develop an understanding of the interdependent structures of dynamic systems. When individuals have a better understanding of systems, they are better able to identify the leverage points that lead to desired outcomes.” See <http://watersfoundation.org/> for more information about systems thinking in education.

Ways of knowing: In the International Baccalaureate program, the term “ways of knowing” refers specifically to sense perception, reason, emotion, faith, imagination, intuition, memory, and language as means by which people gain knowledge of the world. GLSI PBSE uses the term more generally to recognize that humans use varied and multiple faculties to consider the world and their place in it.

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