



Workshop Standards and Resources

LBN understands that a teacher's time and resources are often limited and their days are filled with a plethora of demands. A focus on nature and place isn't about adding another commitment to an already overloaded curriculum. In fact, the framework of nature and place advances educational objectives by making all subjects more engaging, relevant, solutions-oriented, and sustainable.

These standards help articulate the fundamentals generally covered in a LBN workshop or training and related discussions. We also take time to identify specific needs of LBN participants, as they know their needs and interest's best. While standards help focus on targeted essential learning's, they do not describe all of what is or could be taught within a LBN workshop OR within an engaging schoolyard landscape. The possibilities are only limited by each participant's imagination!

LBN workshops encourage participants to reflect on the many standards-based lessons and units they already teach and empower educators to apply these, and extensions to these lessons, into a new engaging outdoor learning environment. Our workshops and landscape designs create engaging, safe and standards-based learning opportunities on and around the school grounds while meeting the needs and interests of teachers, administrators, and of course our primary audience- the students!

Research shows that when children learn in an outdoor environment (and also when they have unstructured time to explore), they:

- ✓ are more engaged, exhibit a stronger motivation toward learning, and improve academic performance
- ✓ utilize creativity and problem-solving
- ✓ exhibit reduced attention deficit behaviors
- ✓ exhibit cooperative and collaborative behaviors as well as greater self greater confidence
- ✓ develop a sense of personal ownership, understanding and respect for place- their local environment and community
- ✓ develop their knowledge and skills in ways that add value to their everyday experiences in the classroom.

Benefits of using the outdoors as a classroom for teachers, schools and community include:

- ✓ new curriculum connections
- ✓ increased morale, engagement and enthusiasm for teaching and learning
- ✓ fewer discipline and classroom management problems
- ✓ better attendance
- ✓ increased school pride
- ✓ decrease in bullying and conflict on school grounds
- ✓ active involvement for parents and the greater community

We understand that taking children into the outdoors is not something everyone may be initially comfortable with. Not to worry, each workshop begins with some simple activities and tips for how to set yourself and your class up for a successful, safe outdoor learning experience. We also discuss how to integrate community expertise to help further enrich the students' learning experience.

A chart outlining Montana content standards and benchmarks that can be met when using the outdoors as a unifying theme, is found below.

The following chart is based on correlations to the Montana content standards (http://opi.mt.gov/curriculum)					
Topic and related lessons / activities explored in an outdoor classroom	Grades	2010 Science 4th Grade Benchmarks	2010 Math 4th Grade Benchmarks	2010 Communication Arts 4th Grade Benchmarks	Notes
Shapes, Colors, Patterns	PreK-3	1.4, 1.6, 2.2, 3.1, 3.5	1.1, 1.2, 2.1, 3.1, 3.3, 4.1	1.2, 2.2	Though these standards are outlined per topic, a learning landscape naturally lends itself to teaching across multiple disciplines, within all grade levels and many abilities. Through observation, inquiry, reasoning, fact finding and problem solving, students develop the skills, knowledge and confidence to interpret, explain, propose, predict and communicate their first hand understandings and experiences. An invaluable asset that is not addressed in the content standards when incorporating an outdoor learning environment into the neighborhood schoolyard is the invaluable connections the students, staff and school will make with parents, the community and each other.
Sounds	PreK-3		1.1	1.2, 2.2	
Trees: structure, function, uses	PreK-6	1.6, 2.2, 3.1, 3.2, 5.2, 5.4	1.5, 3.4		
Animals, Insects	PreK-8	3.1, 3.2, 3.5, 6.2			
Diversity	4-6	3.1, 3.3, 6.2	1.2, 2.2		
Habitat	K-5	1.3, 3.4	3.5	4.3	
Renewable / Nonrenewable and Sustainability	4-8	2.1, 3.2, 3.4, 5.2, 5.3, 5.4, 6.2, 6.3	2.1, 3.4	1.4, 4.3	
Nature's recycling	1-6	1.1, 1.2, 1.3, 1.4, 2.3, 3.2, 3.6, 4.1		1.4, 2.5, 2.8, 2.10	
Adaptations: plants and animals	3-8	1.4, 1.6, 2.1, 3.2, 6.2	2.1	1.4, 2.5	
Plants: germination, growth, seeds, parts, functions	k-2, 4-8	1.1, 1.2, 1.3, 1.4, 1.6, 3.1, 3.2, 3.5	1.5, 2.1, 2.2	2.5, 2.10	
Measuring	1-6	1.3, 1.2, 2.2, 2.4, 5.1	1.5, 1.6, 2.1, 2.3, 3.4, 3.5, 4.2	1.8	
Identification	3-8	1.6, 2.2, 3.5		1.2, 2.10	
Soil, rocks	Prek-8	3.4, 4.1, 4.2, 6.2	1.5		
Life cycles	1-3	1.4, 2.2		2.10	
Water cycle	2-5	1.1, 1.3, 1.4, 2.1, 2.4, 4.2, 4.4, 6.2		2.5, 2.10	
Inquiry, Scientific explorations and process	2-8	1.1, 1.2, 1.3, 1.5, 2.2, 2.3, 2.4, 3.4, 5.3, 5.4, 6.2	1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 3.4, 3.5, 4.2	1.2, 1.3, 1.4, 1.8, 2.5, 2.6, 2.8, 2.10, 2.13, 4.6, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.9, 5.10, 5.11	
Cultures, MT history, Place-based learning	k-8	1.6, 5.2, 5.3, 5.5, 6.1	2.3	1.2, 1.3, 1.5, 1.7, 1.8, 2.5, 2.13, 3.5, 4.3, 5.7, 5.8, 5.11, 5.13	
Seasons, Change over time	k-6	1.1, 1.2, 1.3, 1.4, 2.2, 4.5, 6.2	1.5, 2.1, 2.2	1.2, 1.4, 1.7, 2.5, 2.6, 2.10, 2.13, 5.13	



Ecosystems	4-8	3.4, 5.4, 6.2	1.5, 2.1, 2.2	2.5, 2.9, 2.10, 4.3
Weather	2-8	4.5, 5.1, 5.2, 6.2, 6.3	1.5, 2.1, 2.2	1.2, 2.8, 2.10
Mapping	4-8	1.2, 2.5, 5.1, 5.2	1.1, 1.5, 2.1, 3.1, 3.2, 3.4, 3.5, 4.1, 4.2	1.5, 2.11, 5.6

RESOURCES

Below is a sampling of studies and resources that document the benefits to students from learning outdoors on (and near) school grounds that are ecologically diverse and include habitat for wildlife, walking trails, gardens and free-play areas.

Bell, Anne C.; and Janet E. Dymont. "Grounds for Action: Promoting Physical Activity through School Ground Greening in Canada." © 2006 Evergreen. (www.evergreen.ca/en/)

"California Student Assessment Project Phase Two: The Effects of Environment-Based Education on Student Achievement." SEER: Poway, CA, 2005. Available on the Web site of the State Education and Environment Roundtable (SEER) at www.seer.org.

Kellert, Stephen R. "Nature and Childhood Development." In *Building for Life: Designing and Understanding the Human-Nature Connection*. Washington, D.C.: Island Press, 2005.

Louv, Richard. "Last Child in the Woods. Saving Our Children From Nature Deficit Disorder." Chapel Hill, NC: Algonquin Press, 2005.

Taylor, Andrea Faber; and Frances E. Kuo. "Is Contact with Nature Important for Healthy Child Development? State of the Evidence." In Spencer, C. & Blades, M. (Eds.), *Children and Their Environments: Learning, Using and Designing Spaces*. Cambridge, UK: Cambridge University Press, 2006.

www.childrenandnature.org/research/volumes. *The Children and Nature Network research section of their website includes an executive summary of related research reports; full citation; and a PDF if available, or a link to each study in its entirety, or contact information if the study is not available online.*