

Why Teach Outdoors?

There is an enormous body of research that documents the benefits of time spent outdoors. Below are findings from several studies related to a child's development and academic performance, from the Children and Nature Network's "Research and Resources Pages." For more, visit: <http://www.childrenandnature.org/research/Intro/>

Teaching outdoors can...

Combat "Nature deficit disorder" and promote ecological literacy

- "Children's ability to identify common wildlife rose from 32% at age 4 to 53% at age 8 and then fell slightly, whereas children's identification success for Pokémon characters rose from 7% at age 4 to 78% at age 8." (Balmford, Clegg, Coulson, and Taylor, 2002)
- A 2009 study documented 8-18 year olds were spending an average of over 7 hours watching television and movies, playing video games, listening to music, using computers, and reading. (Roberts, Foehr, and Rideout, 2010)

Promote well-rounded early childhood development

- Nature is important to the development of the "whole child," which includes intellectual, social, spiritual, and physical development. (Kellert, 2005)
- Nature provides opportunity for unstructured free play, which teaches young children cooperation, flexibility, and self awareness. (Burdette and Whittaker, 2005)

Strengthen cognitive abilities and capacity to concentrate

- Activity in nature soothes AD/HD symptoms. "The greener a child's everyday environment, the more manageable their attention deficit symptoms will be in general." (Taylor, Kuo, and Sullivan, 2001)
- Nature boosts children's cognitive functioning. Daily exposure to natural settings increases a child's ability to focus. (Wells, 2000)
- Exposure to nature helps to maintain and even restore the capacity to direct one's attention. In other words, time spent in nature can improve anyone's ability to concentrate. (R. Kaplan & S. Kaplan, 1989; S. Kaplan, 1995 S. Kaplan & R. Kaplan, 1983)

Encourage health and wellness

- Students at schools with gardens demonstrated improved school attitude and pride in the garden. Gardening enhanced student bonding, teamwork, and learning opportunities. (Blair, 2009)
- Children who spend more time outside and less time watching television have lower Body Mass indices. (Kimbrow, Brooks-Gunn, and McLanahan, 2011)
- Spending time outdoors helps prevent myopia (nearsightedness) in 12 year-olds. (Rose et al., 2008)
- Many children are vitamin D deficient because of reduced sun exposure. (Huh and Gordon, 2008)

Lesson Planning Resources



The following websites provide activities and lesson plans across multiple disciplines, where instructors can use the school garden as an extension of the classroom.

Edible School Yard

edibleschoolyard.org/resources-tools

On this searchable webpage users can sort hundreds of activities by grade, season, subject area, and program type.

Openlands

openlands.org/building-school-gardens

Since 2013 Openlands has collected plans for activities, lessons, and units that utilize the school garden, particularly for the subjects on writing and science. All plans were collected from Chicago Public School teachers, and are aligned with the Common Core and the Next Generation Science Standards. Contact John Cawood for copies: jcawood@openlands.org

Green Schoolyards America

<http://www.greenschoolyards.org/resources.html>

In 2016, Green Schoolyards America is releasing a school garden activity guide particularly for educators in the Midwest. Currently, a guide for California is available on their webpage. While activities in these guides are not matched with educational standards, they are presented in small digestible bits that allow educators to utilize the schoolyard without a great deal of preparation.

STEM in the Garden

steminthegarden.org/

Created by School Garden Project of Lane County, this site offers unit plans on plant parts, soil, habitats, harvest, and much more. Lessons are aligned with Next Generation Science Standards.

Kitchen Community

<https://thekitchencommunity.org/lesson-plans/>

See this list of lessons that utilize edible gardens to teach classroom lessons.

Poetry in the Garden

By Openlands Staff, adapted from Project Learning Tree Activity #5, Page 31

Summary: Students learn the meaning of “heirloom plants,” hear stories of family heirloom plants, think of an heirloom plant for their family, or just a plant that represents home to them, and tell their story to their classmates.

Objective:

Grades: 3-8

Time needed: 1 class periods; 45-60 minutes

Standards met:

CCSS.ELA-Literacy.CCRA.R.1-2, R.4-5, R.7, W.3-6, W.10, SL.1, SL.5-6

Background

Poetry is a great way for students to express their ideas. Giving students a specific poetic form helps provide a structure for these ideas. Below are examples of poetic structures to use with your students:

Haiku: A Japanese form of poetry with three lines: the first line has five syllables, the second line has seven syllables, and the third line has five again. Third line also has a surprise or tension element.

Cinquain: Consists of five lines, each with a specific purpose and fixed number of syllables. (1) The title in two syllables, (2) description of title in four syllables, (3) a description of action in six syllables, (4) a description of a feeling in eight syllables, and (5) another word for the title in two syllables.

Acrostic: A poem where the first letter in each line, when read vertically, spells out the name of something or conveys a message.

Shape Poetry: Words are written in a way that forms a picture of what is happening in the poem.

Windspark: A poem with five lines in the following pattern: (1) “I dreamed,” (2) “I was...” (something or someone), (3) where, (4) an action, and (5), how.

Example:

I dreamed
I was a tree
On a hillside
Playing in the wind
Joyfully.

Free verse: Follows no set formula or style

Preparation and Materials Needed:

Walk through the garden space to ensure that it is presentable to your students for this lesson. Think about where you will be asking your students to go (i.e. are there particular paths for them to stay on? Are there defined borders?)



Prepare a poetry worksheet with three prompts:

1. Write a poem about something you observe in the garden
2. Write a poem about anything that crosses your mind while in the garden
3. [leave the third prompt blank]

Helpful Background Resource: Project Learning Tree: www.plt.org/prek-8-activity-5--poet-tree

Procedure:

- 8.) **In-class preparation and moving outside (15-20 minutes):** Explain to students that they will be in the school garden for class today. Students should brainstorm rules and/or best behavior for the garden (i.e. listening, following directions, boundaries, meeting place, etc). Explain that they are going outside mainly to write poetry, but they will also play a game to get them familiar with the garden (and to release some of their built up energy from being inside all day). Ask students what kind of poetry they have written before? Consider sharing examples of poems from the Project Learning Tree website. When going outside, the instructor should take enough pencils, worksheets, and clipboards (optional) for the class.
- 9.) **Game (10 minutes):** Gather students in an area of the school yard where there is plenty of space for the class to move around.
- 10.) **Poetry Writing (15 minutes):** Pass out pencils, worksheets, and clipboards to students. If there are no clipboards, they can find hard surfaces to write on instead - benches, sidewalk, even each other's backs! Students have 15 minutes to write their poems. Everyone needs to try at least one! Pick a time and meeting place for everyone to come back together when they are done.
- 11.) **Poetry Slam (15-20 minutes):** Have the students get into groups of 3-4 people to share their poems with each other. They have 7-10 minutes to do this. After the time is up, have everyone come together closely, where they can hear each other. Take 8-10 minutes for students to nominate each other to read their poems aloud, in a Poetry Slam. Perhaps your school garden has a space that could act as a stage for the poem reader to stand on. The class can show their appreciation of poems by snapping their fingers after a poem is read.
- 12.) **Go back in side (5 minutes):** Thank students for their participation, collect worksheets, and provide directions on what to do when they return inside.

Assessment:

- 13.) Collect poems for a participation grade.

Extensions

- 14.) Consider involving students in a younger grade. For example, if you teach 4th grade, connect with a 1st grade class, and go outside together. It's a bit much to play the game with that many children at once, but 1st graders and 4th graders could be paired up to write poems together and share them with everyone.

Poetry in the Garden

Directions: Use this space to create your own poems. Take your time to write your thoughts, and feel free to add a sketch to your poem. Also, make sure your poem has a title.

Poem 1: Write a poem related to something you see in the garden.

Poem 2: Write a poem about anything that crosses your mind while sitting or standing in the garden.

Poem 3:

Building School Gardens



The Lessons We Teach

Complete the table below for 2-3 lessons/units that you currently teach which could be adapted for instruction in your school garden. *Think of lessons that might be very difficult to teach in the garden, and the barriers/adaptations that would make it teachable outdoors.*

Name: _____

Grade level/subject: _____

Description of Classroom Lesson	Objectives/Standards met	Adaptations for garden instruction
1.)		
2.)		

Tips and Tricks for Outdoor Classroom Management

from Boston Public School teachers experienced in using the schoolyard as a resource for teaching

Develop & Practice Outdoor Classroom Routines

Develop Outdoor Classroom rules with your students to post in the classroom. (No running. Quiet voices. Touch gently.)

Establish set procedures for going outdoors

Practice collecting clipboards and other tools, lining up, and walking through the halls so students know what is expected and can get ready quickly and quietly.

Use a different door than students use at recess

Using a different door can reinforce the fact that this is class time and help students remember to exhibit the behavior of scientists, writers, artists or researchers.

Have an outdoor “gathering spot”

Designate a gathering area where students go when they first get outside to await initial instructions, and to which they return for a mid-lesson check-in, or closing discussion.

Consider having a signal for emergency situations

Practice it so students know how to return to the building immediately, if needed.

Review and practice routines periodically.

Invite students to reflect on how the class did after the first few times out. What went well? What needs improvement? Practice routines as needed throughout the year.



Be Prepared

Have a clear objective for going outdoors

Be clear about the purpose of going outdoors for each lesson. Direct students' attention to the specific things you want them to focus on this time out, and help them connect what they see and do outdoors to what they have been learning in the classroom.

Have a backup lesson plan

The first several times out students will be learning *how* to work outdoors and the work they are doing may be secondary. Have an alternative lesson planned in case students haven't yet mastered the outdoor classroom rules and you have to go back in.

Anticipate the weather

Going outdoors is useful in all types of weather though you will likely spend less time outdoors if it is cold or rainy. “Tell students you will be going out the day before and ask them to bring appropriate clothing. As they become used to working outdoors they are increasingly motivated to come prepared.

Have materials on hand

Have clipboards, hand lenses, field guides or other books, extra pencils, ready in a crate or backpack so you can easily take them with you when you go out.

Build Success

Help students get to know their schoolyard

Use the first few times out to help students explore their schoolyard. Walk around the site and *talk* with them about what you find. What questions do they have? What can they, or can't they, name? Use these trips to build a common vocabulary. Map the schoolyard and come up with place names: the "Big Rock"; "the forest". Point out any noxious plants (poison ivy, stinging nettle) that they will need to be able to identify. Let students poke around, freely explore and play with the "outdoor materials" before getting down to work.

Keep it short

Begin with short trips out and increase the time spent outside as students' skills and stamina increase. An outdoor experience may be only ten to twenty minutes. It may be just long enough to make notes or record data in notebooks; later in the year your time outdoors may be longer.

Always give students something to carry

Clipboards (extra pencils!), notebooks, measuring instruments, or other tools help students take their task seriously.

Go out often

The more you go out, the easier it gets. Students' ability to work purposefully outdoors increases as they learn what to expect, experience the comfort of a routine, and develop confidence in their own outdoor observation skills.

Model outdoor skills

Model what you want students to do before setting them loose to work.

Show them how to turn over a stone gently and replace it; how to examine a plant; how to sit quietly and write; how to observe without being heard. They will learn a lot about how to look closely and take notes by watching you do it alongside them.

Remember that learning looks different outdoors

Voices may be louder, and body movements larger outdoors. Excitement is likely to be high, and expressed more physically than in the classroom. Students may move around to share what they found with others. *Encourage* them to talk to each other about what they find.

Believe in your students

All students from the highest achieving to the most challenged can work outdoors. Resist the temptation to use outdoor work as a reward for good behavior. Communicate a belief that working outdoors is simply part of everyday class work. Your students may well surprise you.



Building School Gardens



Enhance Learning

- School achievement is enhanced when curricula are environment based. (SEER, 2000)
- Children spending time in nature over a week scored higher on tests. Children demonstrated increases in cooperation and conflict resolution skills, self-esteem, problem-solving ability, motivation to learn, and appropriate classroom behavior. (American Institutes for Research, 2005)
- Hands-on learning in school gardens increased student enthusiasm and engagement. (Dyment, 2005)

Develop future environmental stewards

- Childhood nature experiences are strong predictors of adult use and attitudes toward environmental spaces. (Thompson, Aspinall, and Montarzino, 2008)

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