

LESSON 6

Curriculum and Outdoor Class Management

As was mentioned in the introduction, one of the keys to creating a school gardening program that can stand the test of time is to make the garden an essential teaching tool for teachers in all subjects, rather than an additional school feature that is used only if teachers feel particularly motivated. Doing this requires that teachers have access to lots of possible activities and lessons in a range of subjects to be conducted in the garden or about the garden. It also requires rules and plans to make garden time easy for teachers to incorporate into their lesson plans. This means careful, consistent scheduling of classes in the garden, and simple rules for children to follow while they're in the garden. In this lesson we'll discuss ways to help create meaningful curriculum in the garden and guidelines for garden use.

Learning Objectives

1. Learn ways to use gardening to teach all subjects.
2. Gardening to address state learning standards.
3. Know ways to facilitate use of the garden through teaching methods, scheduling, and rules.

Using the Garden to Teach All Subjects

School gardens are commonly used to teach science and environmental lessons, from life cycles, to species interactions, to scientific experimentation and human-environment interactions. But the garden can be an outdoor classroom to teach a broad range of subjects. The following are ideas for using some of the stronger existing garden curricula and creating your own activities.

Adapt Existing School Curricula to the Garden

District-adopted curriculum already contains activities that, with a little creativity, can be easily adapted to take place in the garden or use garden elements. Particularly now, when district curriculum leaves little time for additional activities, teachers need easy ways to use the garden within the lessons they'll already be teaching. Teachers can scan the suggested activities in their curriculum, with a creative eye, for minor adjustments to use the garden. For example:

- Life sciences: plant a seed in a raised bed, rather than a cup inside; look for and observe butterflies, other insects, worms, etc. in the garden rather than with a photo; find and observe habitats of garden-dwelling species.
- Language arts: use the garden as the topic for writing assignments such as poetry and stories; have nature or garden-based readings and poetry posted in the garden.
- Social studies: for Native American history, help students choose and grow a plant that was or is significant for a Native American culture; for California history, plant a small plot based on plants commonly grown in a California mission.
- Math: measure and chart plant growth over time; weigh and measure garden yield and calculate what the produce could sell for given sample produce prices; search for examples of shapes and symmetry in plants and animals in the garden.
- Visual and performance arts: use the garden or garden elements as models for painting or drawing; use the garden as a theater performance space.





Use Existing Garden Curricula

There are many wonderful resources that provide numerous garden-based activities to teach all subjects, so there's no need to invent your own, unless you're feeling creative! These resources can make garden use much easier on teachers (as well as after-school staff and other garden users) because they've already been used, tested, and written out to be copied. The following table lists some resources you can check out, with notes in the "Uses" column on particular uses of that resource, so you can skim through and find which one(s) may be most applicable. For reference, "Gr" refers to the grade levels covered, "standards" addresses California state standards, "after-school" addresses before- and after-school activities, "food systems" addresses broader food system ideas, "nutrition" addresses nutrition, food and wellness, "composting" addresses composting and soil formation particularly, "music" has songs and uses of music in the garden, and "environmental" addresses environmental studies issues.

CURRICULUM	SOURCE/ REFERENCE	WEB LINK	USES
A Child's Garden of Standards	California Department of Education	www.cde.ca.gov/ls/nu/he/documents/childsgarden.pdf	Standards
Gardens for Learning: Creating and Sustaining Your School Garden	California School Garden Network	www.csgn.org/page.php?id=36	Standards, all around good reference
Gardens for Learning: Linking State Standards to Your School Garden	California Ag in the Classroom	www.cfaitc.org/gardensforlearning/	Gr K-6, Standards
Closing the Loop: Exploring Integrated Waste Management and Resource Conservation	California Waste Management	www.ciwmb.ca.gov/Schools/Curriculum/CTL/	Gr 1-3, Gr 4-6, Standards, Composting
Worms Eat Our Garbage: How to Set Up and Maintain a Worm Composting System	Appelhof, Mary. Flower Press, 1997.	www.wormwoman.com/acatalog/Wormwoman_catalog_Worms_Eat_My_Garbage_3.html	Gr K-6, Composting, Afterschool
Healthy Foods From Healthy Soils: A Hands-On Resource For Teachers	Patten, Elizabeth and Lyons, Kathy. Tilbury House Publishers, 2003	www.tilburyhouse.com/Children's%20Frames/child_health_fr.html	Gr PreK-6, Afterschool, Nutrition, Composting
Botany on Your Plate	Sarah Pounders	www.gardeningwithkids.org/11-3350.html	Gr 4-6, Standards, Nutrition
The Growing Classroom: Garden-Based Science	Jaffe, Roberta and Appel, Gary. Addison Publishing Company, 1990.	www.lifelab.org/products/activity.html	Gr K-6, Standards, Nutrition, Composting, Environmental, Music
TWIGS (Teams With Intergenerational Support)	ED. Johns, Marilyn J. University of California Cooperative Extension, 1997.	cesanmateo.ucdavis.edu/Custom_Program850/	Gr preK-6, Standards, Nutrition, Afterschool

CURRICULUM	SOURCE/ REFERENCE	WEB LINK	USES
Nutrition to Grow On		www.cde.ca.gov/ls/nu/he/nrttogrow.asp	Gr 4-6, Standards, Nutrition
NOURISH curricula		www.nourishlife.org/teach/curriculum/	Gr 6-8, Standards, Nutrition, Food Systems
Growing Together	Food Project	thefoodproject.org/books-manuals	Gr HS, Afterschool
Food, Land, and People	Project Food, Land, and People, 1998.	www.foodlandpeople.org/	Gr K-HS, Food Systems
French Fries and the Food System	Food Project	thefoodproject.org/books-manuals	Gr HS, Afterschool, Food Systems
Harvest of the Month	Network for a Healthy California	www.harvestofthemonth.com	Nutrition, Standards, Afterschool
Fresh Fruit and Vegetable Photo Cards	California Dept. of Education		Nutrition
Kids Cook Farm Fresh Food: Seasonal Recipes, Activities, and Farm Profiles that Teach Ecological Responsibility	Kraus, Sibella. California Dept. of Ed., CDE Press, 2002.	www.cde.ca.gov/ls/nu/he/documents/kidscookcomplete.pdf	Gr K-6, Nutrition, Standards, Food Systems, Afterschool
Junior Master Gardener, Handbook, Level 1	Texas A&M University, 1999.	www.jmgkids.us/index.k2?did=6019&sectionID=6019	Gr K-6, Afterschool
Junior Master Gardener, Teacher/Leader Guide	Texas A&M University, 1999.		Gr K-6, Afterschool
Garden Mosaics	Cornell University	communitygarden.org/gardenmosaics/index.htm	All ages
Banana Slug String Band: Singing in Our Garden CD	Banana Slug String Band	www.bananaslugstringband.com ; 888-327-5847	Gr K-6, Music
Green songbook	Guitars in the Classroom	www.greensongbook.com/	All ages, Music
No Student Left Indoors	Kirkland, Jane	www.takeawalk.com/no-student/	All ages especially K-6, Environmental



Since some of these resources are not available for free, here are three ideas to get started finding appropriate lessons.

1. Use the California School Garden Network "Curriculum" page (www.csgn.org/page.php?id=22) to see sample lessons for several full curricula and determine which ones you like best and might want to buy.
2. Visit the SD Master Gardeners library at their office (9335 Hazard Way, San Diego, CA 92123) to read some curricula in person, or leave a message for the school garden committee on their hotline (858-694-2860) with a question about the type of curriculum or activity you're looking for.
3. Google for those curricula in the table above that don't show links. Many resources are becoming available for free online all the time, so some may be available now that were not when this manual was published.



ACTIVITY 1

Pick an active, hands-on activity (before class time), and do it with the class. Participants get to be stand-ins for kids, get a feel for how activities might work in the garden, and get to stretch their legs and have some fun.



ACTIVITY 2

Have participants get into groups and look at some of these existing garden curricula and discuss how they might use these curricula, as well as other ideas for activities that they've used.

Gardening to Address State Education Standards

Often teachers feel limited using class time in the garden unless they can argue that they are addressing the state's required educational standards. Therefore, the more that the garden can help teachers teach those standards in an engaging and fun way, the more teachers will want to use the garden as an outdoor classroom. The table shows several resources that are great for incorporating state standards into the garden, but two in particular (at the top of the table) are "A Child's Garden of Standards" and "Gardens for Learning."

Facilitating Use of the Garden

Equally important for helping teachers want to use the garden actively and regularly is making sure it's easy to do so. In this section we'll talk about ideas for teaching methods in the garden, how to schedule use of the garden between classes, and rules for children to follow in the garden to create a positive space for learning.

Teaching Methods

Outdoor classrooms are often new environments for teachers and can provide challenges for class management. It's helpful for teachers if they know some garden-specific teaching methods that will allow them to teach the intended subject matter in the garden. Here are some tips:

- Find ways to use both individual and group work. Use team-building activities and small-group work to help students support each other's learning and work together to accomplish the activity, even if the teacher doesn't have the luxury of a teacher's aide.
- Involve parents and community members (including retired folks) to make outdoor class time one of the highlights of the day for children. If it is possible to have a lower ratio of students to adults, this can help accomplish

activities. Volunteers will have to fulfill the safety requirements of the school (described in detail in Lesson 5). Remember to regularly acknowledge and thank volunteers for their contributions.

- Garden journals and planned backup activities are good for occupying students who complete the garden lesson quickly or those who have trouble focusing on the lesson. Planned backup activities will also keep a student from disrupting a lesson. More on this in the after-school lesson below.
- Be aware of the seasons of the garden to help guide lessons. Knowing the growing time from seed to harvest and animals' life cycles will help you count backwards to time your lessons. Because of weather or pests, lessons may still have to be adjusted. Learn with the garden. For example, if you want to witness a caterpillar making a cocoon in your garden, you may have to adjust your lesson(s) to correspond with the lifecycle of the butterfly you are studying. Vegetables and fruits have their seasons and their growing times, so be sure to think about these things when you're planning lessons. While we live in a temperate climate and can grow food year-round in San Diego, it's still important to recognize the time it takes for a crop to grow and the appropriate time to plant that crop. (Take Gardening 101 for more on planting times or see the Master Gardener Publication specific to the crop you're interested in).
- The Master Gardeners School Program is here to help you get started, locate resources and keep your garden happy and healthy. To use them as advisors to help your activities go smoothly and for troubleshooting. Sign up by calling or emailing the Master Gardener Hotline at 858-694-2860. Some Master Gardeners are retired teachers and have suggestions for many aspects of teaching in the garden.

Garden Use Scheduling

Careful scheduling for use of the garden by classes will make garden use easier for teachers. If each class has a plot or designated area, then teachers can independently decide what times they use their plots, but coordinating with other teachers still helps prevent crowding and facilitate sharing of resources. The number of classes that could be in the garden at once will depend on the size of the garden and layout of the plots. Ideas:

- Teachers could seek to schedule visits so that classes of different grades are in the garden at the same time, allowing for interaction and collaboration between ages that might not normally occur.
- Especially for younger children, schedule one or more regular times each week when a class gets to visit its plot. Regularity of visits eases scheduling, helps students expect and look forward to their garden time, and can aid in activities like observational experiments for older children.
- Designate a portion of each garden visit specifically for maintenance tasks such as weeding, in addition to more designed activities. This way, maintenance happens in small, manageable chunks of time that are less burdensome on teachers and students.

Garden Rules

Having a set of simple, easy-to-follow rules will help children know what's expected of them in the garden and help them see the garden as an outdoor classroom rather than a playground. Students can help develop the rules as well, for more ownership. LifeLab recommends the following rules, but you can always add more that pertain specifically to your garden. Aim for no more than about 6 rules to keep them manageable for young kids, and try to phrase the rules to use positive words ('always', 'please', etc.) rather than negative words ('never', 'don't', etc.). Post the rules in a prominent place, like the toolshed.

1. Always walk when in the garden.
2. Stay on the paths.
3. Always ask before using any tool or harvesting any crop.
4. Respect the plants, the animals, the nonliving things, and each other.

