LSU AgCenter
Research & Extension

4-H

LEARN AND SERVE K-12

School Gardening:
Best Practices

Your School G

Assembling your team: Establishing the right garden team or advisory committee is critical to the success of your school garden. Your team should consist of:

* two youth from each grade
* school administrators
* community partners
* specially trained volunteers
* parent volunteers
* head coordinator
* school custodian

Team will meet to establish purpose, vision, & educational goals.

Potential Purposes:

- learning where food comes from
- promoting beautification
- improving nutritional status
- watershed education
- producing food
- stimulating creativity
- encouraging leadership & service
- attracting wildlife
- changing family home food habits

Vision:

- big or small?
- in-ground, raised, or container?
- organic? fertilizers?
- Are all donations accepted?

Educational Goals:

- teach science, math, English, environmental studies, health, family & consumer science, art, history, etc.
- Teach about nature, how plants grow, the importance of nutrition, etc.

*Once the above are established, your team should market to students, faculty, & the community & conduct monthly meetings to develop plans on the various steps in the service-learning cycle, to give updates on implementation, and to evaluate progress beginning made within the month. *

Contributors:

Dorothy Mullen, Garden Educator and Founder of The Suppers Programs, Princeton, NJ
Carl Motsenbocker, Ph.D., Professor (Horticulture), Louisiana State University, Baton Rouge, LA
Emily Neustrom, SARE Assistant (Horticulture), Louisiana State University, Baton Rouge, LA
Lisa A. Whittlesey, Extension Program Specialist, National Junior Master Gardener Coordinator, Texas AgriLife Extension Service Texas A&M University, College Station, TX
Rusty Collins, Jefferson County Extension Director, Golden, CO
Charles Hebert, County Agent, 4-H Youth Development, Lafayette Parish, Lafayette, LA

Garden Getting started

Engaging students, parents, staff, & the community

Students: It's important to get students involved early to enhance a feeling of ownership. But the majority of people involved in the planning, design and implementation of school gardens are adults: teachers, parents, administrators & community educators with an interest in gardening education.

Engaging children more intentionally in all facets of garden education fosters their deeper commitment and interest. The total amount of time spent on planting activities is actually quite small. It is strongly recommended that adults find ways to more fully engage children in all phases of garden **design, implementation, & maintenance.** To see this effort as a long term process, rather than simply a planting day, is extremely important. In addition, studies show that boys need more prompting in order to become more fully involved.

Parents: Parents are an important addition to a school gardening team and can provide support in **obtaining resources** for the garden, **working** in the garden, and **promoting** the garden. Parents also play an important role in promoting learning. When you recruit parents through school gardens, the increased attention from various adults in the classroom can have a positive impact. Have the children "educate" their parents on what they are doing. They love to share.

To motivate parents and other volunteers to help maintain the gardens on a regular basis, the program can offer veggies from the garden (for a family of four for one week) as a reward. In one instance, parent signups for the summer increased following implementation of this program, presumably due to this motivation.

"Get everyone in the school involved—we began our garden planning with a committee that included the school administration, curriculum staff, teachers, and therapists. Everyone's input is needed to 'make the garden grow'." -Linda McHugh

Curriculum Coordinator., Archbishop Damiano School, Westville Grove, NJ

Contributors:
Marcia Eames-Sheavly, Cornell Garden-Based Learning Program, NYS 4-H Youth Development, Cornell University, Ithaca, NY.
Dr Kristi S. Lekies, Assistant Professor, Human and Community Resource Development, Ohio State University, Columbus, OH
Charles Hebert, County Agent, 4-H Youth Development, Lafayette Parish, Lafayette, LA
Linda Naeve, Extension Program Specialist, Iowa State University, Ames, IA
Carl Motsenbocker, Ph.D., Professor (Horticulture), & Emily Neustrom, SARE Assistant , Louisiana State University, Baton Rouge, LA
Sheryl Casteen, Committee Chair, Planting Seeds of Change, An Edible Educational Endeavor

Staff: To be successful, school gardens need committed people. This commitment has to start with the **administrators**. To convince administration of the importance of school gardens, the school garden coordinator needs to show the academic, behavioral, nutritional, and social benefits of school gardens. Fortunately, there are numerous research reports that show this information. Once the administrators are convinced, they will help with site selection, allowing teachers time for training, and the purchasing of tools, etc...

Teachers must also buy-into the garden. They play a critical role to the involvement of their students within the garden. In securing the teacher's buy in, it's important to identify their reasons for getting involved in the garden and making sure that the garden supports those needs.

Cafeteria staff can be great advocates if food and nutrition education and garden-to-table are priorities. In any case, good relationships should be courted as an investment in the kids' food future even if this is not a current school priority; and nurses, too, have the potential to be great associates of the gardening process. **School nurses and health teachers** will find a lot of go od curriculum connections for health, safety, nutrition, and hygiene in the garden. Princeton has started doing nurse-led field trips to the local whole food store and tying them in with lessons in the herb garden.

Community: Financial assistance and man-power can be provided by partnering with a broad range of groups. **Students from local community colleges** offer knowledge, guidance and physical labor. Grants have made it possible to maintain and provide the supplies necessary for operating the garden. Local businesses can provide support throughout the year.

Before initiating the school garden, make a list of the resources needed to get started. Consider what funds, goods, expertise, and services do not come from within the school community and whether a donation of equipment or services is needed.

So, use community resources, and make sure community groups know they are appreciated. **Master Gardeners, Junior Master Gardeners and 4-H clubs** provide a tremendous resource. They work with the students in the garden, show them how to plant, what to plant, how to work with seedlings in the greenhouse, and can teach them basic gardening in the classroom. Following their training, Master Gardeners have to give back their service time to schools and community gardens so school gardens are an outstanding outlet for this service.

Similarly, **school and community gardeners** in neighboring schools and other towns provide important venues to share resources and enhance quality. Connect to the people who have what you want and find out how they got it. Make a list for your area. You can share

Contributors:
James Nichnadowicz, Rutgers Cooperative Extension of Union County, 4-H Agent, NJ
Dorothy Mullen, Garden Educator and Founder of The Suppers Programs, Princeton, NJ
Sheryl Casteen, Committee Chair, Planting Seeds of Change, An Edible Educational Endeavor
Carol Baney, Master Gardener, Penn State Cooperative Extension of Centre County, State College, PA
Charles B. Cox, Professor/Asst. Director, 4-H Youth Development, Oklahoma State University, Stillwater, OK
Linda McHugh, Curriculum Coordinator, Archbishop Damiano School, Westville Grove, NJ

resources. You can form a cooperative. You can create your own non-profit and act as your own fiscal agents. You can use each other as precedents to show the people in power how the Joneses are doing it next door.

"Partnership with a community or University garden is a big plus for school gardens. The Michigan State University 4-H Children's Garden is a tremendous technical resource for schools and garden programs. With the online Collaborating Classrooms, teachers and students have access to online technical support from horticultural scientists that engage in gardening with kids. They are able to ask technical questions 24/7 and usually get a response to their questions or comments within 24 hours. "

-**Becky Henne,** Associate Program Leader, Michigan State University Extension, MI

University and college service-learning programs can supply lots of labors and resources to support a school garden. Student fall and spring break service projects are important venues to support school gardens. Local university and college students can also serve as mentors for the youth.

State Department of Education in both **Team Nutrition** and the **Child and Adult Care Feeding program** offers a funding stream option for programs that apply for mini-grants through these programs. With this partnership, the school garden programs have worked with the food service programs in order to promote fresh produce being integrated into the food service programs at the schools. The **Farm Service Agency and Rural Development** are sources for potential funding streams for garden programs.

Local green businesses also typically like the public relations value in supporting these projects generously; and if the garden experience is about food, **local restaurants** can be involved with cooking, restaurant tours, tastings, and/or fundraisers.

In Summary: Explore aid in the form of:

—local college students—4-H clubs-(Jr.) Master Gardeners—other school & community gardens—local restaurants, farmers, and green businesses—the State Department's Team Nutrition and Child & Adult Care Feeding Programs—& Farm Service Agency and Rural Development

Contributors:
Dorothy Mullen, Garden Educator and Founder of The Suppers Programs, Princeton, NJ
Judy Weaver, Kids Hope USA Volunteer, University United Methodist Church, University Terrace Elementary Volunteer Garden Team and Louisiana Master Gardener, Baton Rouge, LA

Planning
-location

When starting a garden, a good word of advice is to start small and don't overextend the garden resources. The garden should be built in phases and have an overall vision.

When choosing a garden location, consider:

. **Space:** Space for the garden to grow will need to be evaluated. If the space is very limited, container gardening should be considered as an option.

. **Soil:** Space The soil should be well-drained and loose. It's important to avoid damp spots and steep spots. If drainage is not good, raised beds are a solution. **Soil must be tested for lead if there are pre-1978 buildings close by.**

. **Sunlight:** Eight hours of direct sun for fruiting crops and 6 hours for leaf crops and herbs. A way to determine if a place is sunny enough is to place a sheet of paper in the spot identified and record the sunlight hours through the day.

. **Water Source:** A source for water must be very convenient. Watering takes place ideally very early in the day. Consider mulching to reduce need.

. **Competing Vegetation:** There should be no competition from trees and roots for water, soil, and sun.

. **High Visibility:** It's good when the garden can be viewed and admired by the public. A school courtyard is ideal or a securely fenced area.

. **Convenient Location:** The garden should be easily accessible to students and teachers.

. **Protection:** A garden should be located to be protected from people, pests or any other things. The location of the school garden should be planned for protection from active recreation and vandalism.

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Dorothy Mullen, Garden Educator and Founder of The Suppers Programs, Princeton, NJ
Linda McHugh, Curriculum Coordinator, Archbishop Damiano School, Westville Grove, NJ
James Nichnadowicz, Rutgers Cooperative Extension of Union County, 4-H Agent, NJ
Carl Motsenbocker, Ph.D., Professor (Horticulture), & Emily Neustrom, SARE Assistant , Louisiana State University, Baton Rouge, LA
Lisa A. Whittlesey, Extension Program Specialist, National Junior Master Gardener Coordinator, Texas AgriLife Extension Service Texas A&M University, College Station, TX

-design

The design will be driven by the purposes the garden is to serve, the desires of the team, the available space, and the needs of the plants you select. Most of the early effort should go into care of the soil, and then any design will thrive.

When discussing garden design, consider

. **Affordability:** The garden design should be affordable in comparison to the resources available. Research material costs and specifications with local experts.

. **Soil:** If the soil is poor, seriously consider building raised beds and trucking in soil. A raised bed can be built and filled with soil much quicker than a poor site can be dug up and amended. Raised beds, with quality soil, are so easy to work with. Large shovels, rakes, long-handled hoes, will not be needed.

. **Layout:** A layout of the garden with students' gardening activities is very helpful. The map will have many uses including mapping crop rotation and where the following will be placed:

-garden beds: 3-4' wide, with clear wide pathways for trampling feet
-sitting area, including tables, preferably out of the harsh sun
-compost area
-tool shed or storage area

Optional:

-cold frames or green house
-good signs
-fencing
-rain barrels
-handicap ramp

****If the school garden cannot be maintained in the summer, plant quick maturing crops that will be ready to pick before the students are dismissed. In the north things like radishes, lettuce, and other greens can be planted in early April and harvested in June. Strawberries can be planted in the fall and harvested before school recesses for the summer.****

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Carl Motsenbocker, Ph.D., Professor (Horticulture), Louisiana State University, Baton Rouge, LA
Emily Neustrom, SARE Assistant (Horticulture), Louisiana State University, Baton Rouge, LA
James Nichnadowicz, Rutgers Cooperative Extension of Union County, 4-H Agent, NJ

In- Ground Raised Beds

In-Ground

In ground gardens are initially can be cheaper to install, often times require that the soil is amended, requires a tiller for the initial planting and weeds can be a problem.

Raised Beds

A variety of materials can be used to make the edge of garden bed. The bed size can be built based on need. The beds can be removed easily if needed. The preference is to not add bulk top soil due to weed seeds but bagged soil, organic matter, and mulch are preferred and easier to handle. Weed barrier cloth can also be used if desired, but not necessary. **Also, note that using pressure treated wood is not appropriate for many vegetable gardens because the chemicals can leak into the soil and be very hazardous to the vegetables.**

& Container Gardens

A good recommendation is to allow 1 square foot per gardener. This will allow each child to have an area of the garden that is their very own. Other materials that can be used to build raised beds are straw bales, and cinder blocks. A good formula for making your garden soil using bagged product:

- 1 part bagged compost
- 1 part tagged topsoil mix
- 1 part shredded pine bark

Container Gardens

Container gardeners are easy to make and maintain. They are great for schools with limited space and are portable. Bagged soil mixtures can be used for containers. Cylinder gardens are containers made from 5 gallon containers where the bottom is removed with a saw and the remaining "cylinder" is cut in half. Cylinders can be placed on bare ground, newspaper or sidewalk area and filled with bagged garden soil mixture.

Other ideas:

Plasticulture

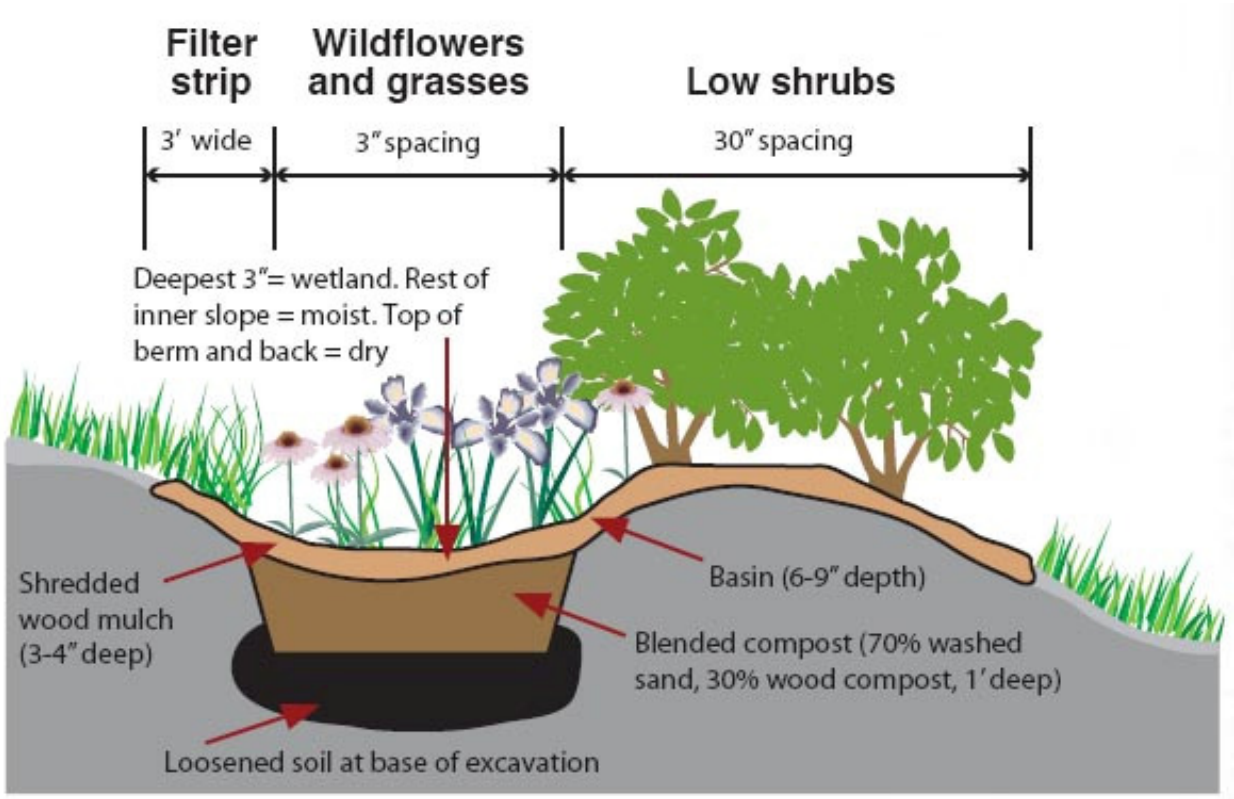
Youth in the Langston Community 4-H S.E.T. Club in collaboration with the Oklahoma Department of Agriculture, Food and Forestry, (ODAFF) prepared a plasticulture garden. Resources and preliminary education about: gardening, particularly plasticulture gardening, from grounds preparation; to laying the drip tubing and plastic; to where to place the holes in the plastic (crop dependent); to planting seedlings and seeds; to harvest, were all provided. Prior to making the garden, a visit to some well established producers in the field was conducted. Although the garden was planted late in the season, the youth were able to reap the benefits all the way around.

Organic Gardening

The School garden can be organic. Using vinegar for herbicides, baking soda for fungus control, biological pheromone traps for reduction of insects as well as oil and insecticidal soaps for insect control are effective ways to make a garden organic. Row cover can be to protect plants from insect devastation. Kitchen veggies, as well as use composted manures can be used to promote plant vigor. Natural mulches such as newspaper and straw are used for garden aisles. Straw/leaves for mulches are used for overwintering plants.

Rain Garden

A rain garden looks like an ornamental perennial garden, but contains a shallow depression that is designed to collect and filter storm water that runs off nearby hard surfaces, such as roofs, driveways or walkways. Rain gardens have a ponding depth of only a few inches, and are expected to hold water for just a day or so. The water leaving the garden may enter a storm drain system, or seep into the ground, where it can help to renew our groundwater. The ornamental plants in the rain garden slow the rate of storm water runoff and help to reduce flooding and erosion. In addition, the vegetation may remove pollutants that could enter our waterways. A properly constructed rain garden will hold and filter approximately 30 percent more rainfall than the same area covered by a lawn.



Virtual Garden

An innovative piece of a school garden can be a virtual garden which is free to anyone and can be accessed at www.kidscom.com. Youth can log on, create an avatar, grow their own garden, learn about gardening, harvest the produce and cook healthy food that will give their avatar more movement options. The creators are seeing that the youth involved are learning more and more each day about gardening. This tool can be used during cold winter months to keep kids engaged in gardening or for kids that do not have a safe outdoor environment available to learn about growing food and nutrition.

Themes:

Kitchen Garden consists of vegetables and herbs used in cooking including squash, tomato, beans, broccoli, cucumber, and parsley.

Pizza Garden is made up of plants used in pizza such as tomatoes, bell pepper, onions, garlic, chives, and oregano.

Herb or Sensory Garden consists of plants such as basil, mint, thyme, oregano, rosemary, and lemon grass.

Butterfly Garden is designed to attract butterflies with plants such as purple coneflower, bee balm, butterfly bush, butterfly weed, and zinnias.

Craft Garden is made up of plants that provide materials for art projects such as gourds, sunflowers, pansies, dry beans, and corn.

Salsa Garden consists of ingredients used in salsa such as Chile pepper, tomato, onion, cilantro, and tomatillo.

Rainbow Garden includes the colors of the rainbow from plants such as zinnias, sunflowers, purple coneflower, marigolds, and pansies.

Literacy Garden relate to plants found in children's literatures including blackberries, lettuce, beans, radish, parsley, cabbages, potatoes, and onions.

Native American can include a Three Sisters garden consisting of corn, beans, and squash.

International Garden focuses on plants native to other countries around the world such as okra, watermelon, collards, pac choi, peppers, and potatoes.

Alphabet Garden creates an ABC garden with plants that represent the alphabet with plants and herbs such as alyssum, basil, corn, dill, eggplant, fennel, and geranium.

Art Garden features garden murals, stepping stones, painted pots and wind chimes as part of their garden.

Victory Garden is designed for young gardeners to learn a history lesson from World War II veterans about how the nation harvested sense of unity through gardening

Kinder Garden is a garden designed and maintained by kindergarteners. In St. Tammany Parish, LA, Lee Road Jr. High School, has a neat garden that is maintained by the Kindergarten classes. As the students learn about letters of the alphabet they will place a large letter in the garden and plant a vegetable or annual that begins with that letter in that spot. They are learning gardening skills along with the alphabet.

Consider making your garden handicap accessible

A Handicap Accessible Garden can have many rewards for all involved in a school garden. It's important to establish a handicap accessible garden that gives equal access to all members of the community garden or school garden. To get started, the bed can be designed with a raised bed concept with a walkway on all four sides of the bed for wheel chair access. In the Carcencro Middle School Garden, the bed was constructed of 2 x 12" lumber in the dominations 4'wide by 16' long. It is 24" tall (two boards stacked on top of one another) and braced with "U" post and 1 1/8 inch wooden screws. The walkway was constructed of landscaping timbers 18" apart to support the ½ treated plywood that is placed on the top to form the decking with a ramp to the walkway.

Contributors:

Lisa A. Whittlesey, Extension Program Specialist, National Junior Master Gardener Coordinator, Texas AgriLife Extension Service Texas A&M University, College Station, TX
Sheila Stevenson, Extension Specialist II, Langston University, Langston, OK
Sheryl Casteen, Committee Chair, Planting Seeds of Change, An Edible Educational Endeavor
Donna Cooke, Community Horticulture Educator, Rockland County Cooperative Extension, Cornell University, Stony Point, NeY
Becky Henne, Associate Program Leader, Michigan State University Extension, East Lansing, MI
Carl Motsenbocker, Ph.D., Professor (Horticulture), Louisiana State University, Baton Rouge, LA
Emily Neustrom, SARE Assistant (Horticulture), Louisiana State University, Baton Rouge, LA
Willa L. Williams, 4-H Youth Development Specialist - STEM and K-12, Colorado State University Extension, Boulder, CO
Tanya A. Walker Giroir, Instructor, Louisiana State 4-H Military Liaison, 4-H Youth Development, LSU AgCenter, Baton Rouge, LA
Bobby King, Louisiana State University Ag Center, 4-H Agent, St. Tammany Parish, Slidell, LA

Identifying your horticulture needs

Planting Zone

Know what grows in your geographic area and when. It's important to determine the last frost date and first frost date when planting a garden so appropriate plant selections can be made.

Orientation

School gardens should face south, with tall plants on the north side and short plants on the south side to maximize sun light hours.

Scheduled Maintenance

The garden coordinator will want to come up with a maintenance schedule for watering, weeding, staking, fertilizing, pruning, bug picking, turning compost, mulching, and cover crop planting in the fall.

Have a regular schedule for maintenance, and clearly post the tasks to be done. Be creative in addressing maintenance needs such as making weeding fun. Keep maintenance at set times so volunteers know when they can assist, and make sure the right tools and resources are available. As part of this maintenance schedule, volunteers should be recruited and scheduled to help support the garden. Post a chart to track the progress of assignments. For Example…….
:

Date assigned: 1/1/11
Action item: tomato plant
Assigned to: John Smith
Due: 1/20/11
Status: Complete

Watering System

For easy garden maintenance, irrigation systems can be set up for automatic watering & mulches can be used to keep the weeds down.

Rain barrels represent an environmentally friendly alternative to typical irrigation systems. They work by collecting rainwater from roofs. One inch of rain falling on a 1000 square foot roof over a 24-hour period produces 600 gallons of rainwater. The average U.S. household uses 146,000 gallons of water per year; up to half of this is used on landscapes in the summer. Harvesting rainwater saves water, energy and money. It also helps to reduce erosion and storm water runoff. This protects water quality and aquatic habitats.

Plant Selection

Plant a variety of things if you're able: vegetables, herbs, and flowers. Students are not interested in just growing all the same kinds of plants. They would rather see one or two of a kind. This way they learn what different plants look like and how they grow.

It's also important to think about harvesting and subsequent planting in the emptied bed as well as crop rotation schedule. In doing so, the schedule orders for continuation of future gardens will be easier.

Children love grape tomatoes. They are the perfect size to eat and sweeter than cherry tomatoes. Sugar snap peas are another favorite as they eat them pod and all and are very sweet. Basil can be made into pesto, or youth can just chew on it. Cucumbers are a little sweet but mild tasting so kids like these a lot. Also, they are harvested over a long period thus providing food for many weeks.

Crops that need a lot of room are pumpkins, watermelons and sweet corn. Pumpkins and watermelons need plenty of space to spread out. Sweet corn is great tasting but needs a lot of room and you'll have to plant at least four rows for pollination.

Soil Prep

Soil is the foundation for the school garden. Decisions will have to be made that will impact the garden for a while after the first planting. A few raised beds can be constructed the first year while starting to start compost and working the soil. A fall crop of green manure, like winter rye, will improve the soil. Attention to the soil is the most important point of starting a garden. It's important to add lots of organic material (compost). A soil test will identify soil deficiencies and toxic materials in the soil as well as guide the decisions about recommended amendments for the garden. Rototilling may be necessary the first year.

To maximize the learning experience, it's important to teach about soil! That's where it all begins! Upon close inspection, children learn there is more to soil that what gets on your clothes or under your nails.

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Dorothy Mullen, Garden Educator and Founder of The Suppers Programs, Princeton, NJ
Carl Motsenbocker, Ph.D., Professor (Horticulture), Louisiana State University, Baton Rouge, LA
Emily Neustrom, SARE Assistant (Horticulture), Louisiana State University, Baton Rouge, LA
Sheryl Casteen, Committee Chair, Planting Seeds of Change, An Edible Educational Endeavor
Donna Cooke, Community Horticulture Educator, Rockland County Cooperative Extension, Cornell University, Stony Point, NY
James Nichnadowicz, Rutgers Cooperative Extension of Union County, 4-H Agent, NJ
Joseph R. Heckman, Extension Specialist - Soil Fertility, Cook Campus, Rutgers University, New Brunswick, NJ
Linda Naeve, Extension Program Specialist, Iowa State University, Ames, IA

Budgeting

When planning a garden, it's important to think about the valuable financial resources to support the garden. A school garden can run between **$300** if you get a lot of the material donated to **$16,000** for a perfect, commercially installed ready-to-plant garden. Usually, the more money that is spent, the less labor is spent collecting money and building the garden. As the financial resources are determined, think about whether or not the students may miss out on certain science or gardening lessons, like growing your own compost. If funds are limited, the majority of the effort should go into the soil preparation.

Consider these basics when making a budget:

* expenses related to locating it (making water reach the garden, clearing land, tilling the first year)
* soil test kit and amendments
* organic material to improve soil, compost
* tools
* means of watering
* materials for raised beds, if using
* seeds, starts, plants
* protections, fencing, row covers
* fertilizers
* pest controls, if using
* instructional materials, field guides, books
* expertise, if the volunteers are beginners
* material for walkways
* cold frames, green house
* mulch
* containers
* labor

Understanding your school's payment system

When trying to pay for items, it's important to understand the payment system of the school or non-profit entity that the school garden team is working with. The system at the school or non-profit may be too slow to deal with the immediacy of garden needs. If approved by the sponsoring entity, consider store credit or an account at the local nursery will help expedite matters. Having an account may result in getting a discount for the school garden and can greatly reduce bookkeeping needs.

Fundraising

Fundraising can be a fun and essential part of ensuring your school garden's sustainability. For example, the Piney Hills Louisiana Master Gardeners (PHLMG) hold an event known as "Buds and Blooms" in order to raise money to sponsor the 4-H Gardening contest for Webster Parish in Minden, LA. The Buds and Blooms is a gardening seminar that features handouts, free seeds and a raffle.

Grants

Grants and partnerships are is the key for getting school gardens going in most schools. It's important to identify the best method for receiving grants within the sponsoring organization. Knowing the 501 (c) 3 status or working with another non-profit will be issues you have to determine prior to applying for grants. It's critical that the procedures and guidelines in each system are understood. To do this, it's helpful to talk to individuals who have been able to work within the system or similar systems to identify preferred methods to expedite payment and processes.

$AVE THE GREEN WHILE GOING GREEN

Contributors:
Dorothy Mullen, Garden Educator and Founder of The Suppers Programs, Princeton, NJ
Calvin Walker, Assistant Extension Agent, (4H/ANR) Webster Parish, Minden, LA
Charles B. Cox, Professor and Assistant Director, 4-H Youth Development, Oklahoma State University, Stillwater, OK

Learning Conne

ADVICE from others:

"The garden is an important recreational and educational tool. Children can look forward to going into the garden to learn about math, science, language arts, and workforce skills. At times, it's nice to sit, observe and enjoy nature. " -Linda McHugh

"The curriculum interests of the participating teachers should be well represented in the garden design." -Dorothy Mullen

"When designing the educational components of a school garden, it's important to make the experiences hands-on. Educators should avoid technical jargon, particularly with elementary school students, related to the gardening project." -Henry Harrison

"The project directors should have a means of collecting, storing and sharing good garden lessons."-Dorothy Mullen

"Always relate what is growing in the garden to what kids already know and like. For example children relate best to growing a pizza instead of saying growing tomatoes."

-James Nichnadowicz

"As you develop curriculum or identify curriculum, it's important that the teachers meet state teaching standards. It is vital that activities related to the garden are meeting objectives, if not teachers no longer have time to just do fun things. The more of this that is done, the easier it is for teachers to participate. With variation by district, their lives are more or less driven by standards in the public schools." -Charles B. Cox & Dorothy Mullen

"You'll want to take into consideration the instructional materials such as lenses, books, field guides, seeds and starting materials, scales, and measuring devices that you'll need. As the garden selection is made, the curriculum identified and garden design drawn up, keep in mind the cost and availability of instructional materials." -Dorothy Mullen

"It's important to note that different stakeholders may have different ideas about how much the garden must be driven by curriculum or education standards and how much it should provide opportunities for spontaneous, seasonal learning, or food. This needs to be discussed."-Dorothy Mullen

"The garden setting should be ideal for learning the subject matter that has to be taught as well as promote spontaneous learning." -Linda Naeve

ections

"Incorporate literature into your garden activities. At the end of the gardening time, it is nice to sit and read a short book related to what the students did in the garden. There is a fabulous selection of children's gardening books on the market."- Linda Naeve

"Taste testing is an important avenue for experiencing the school garden. Make food from the garden! We make fresh garden salsa and even non-tomato eaters love it! Research has shown that children are more likely to eat fresh fruits and vegetable if they have ownership in them and have grown them."- Linda Naeve and Sheryl Casteen

"A 4-H School Garden Train the Trainer Workshop can offer subject matter training and demonstration stations conducted by local nursery and garden supply dealership as well as research based information provided by University staff. Teams made up of teachers, Extension staff. community volunteers and youth are equipped with the information and curriculum they need to be successful." Shaney Hill, and Robin Landry

"Gardens provide a wonderful outlet for exercise. The garden is a great way to incorporate exercise. Through this outdoor experience, youth are doing something active as opposed to doing something passive like reading. The youth like spending time in the fresh air. They get to see nature's miracles and appreciate the diverse educational classroom."

-Sheryl Casteen

"Gardens are a great way to teach nutrition. Vegetables grown in the garden can then be used for nutrition education through cooking activities within the classroom. All the kids come to the garden once a week by class. The produce can often be washed an eaten on the spot! Sometimes garden chores are done and the children are rewarded with a special recipe! A local chef or culinary students can bring their skills to the school garden in order to show the children how to prepare, cook and enjoy their vegetables and herbs."- Carol Baney

"School gardens can be a multi-purpose area used to teach lessons in all subject matter areas as well as helping students learn responsibility, citizenship, caring, and respect. Often times, teaching character development is overlooked as an educational component of school gardens. It provides the perfect setting to learn and practice good character."- Margo Castro and Robin Landry

"The My Garden™ initiative in Michigan is a multi-faceted program that incorporates nutrition education, virtual gardening, K-12 lessons that are written with grade level content expectations in mind, a strong partnership with the MSU 4-H Children's Garden (and the great online resource there called Collaborating Classrooms and the Wonder Wall), a food service guide for schools with gardens and a Youth Farm Stand Guide."- Becky Henne

"Hospitals with nutritionists, food service directors and master gardeners have selected a veggie or fruit to be highlighted for each month. A flyer is put together and then sent home with every student. During that month the hospital and some businesses in town highlight the food. We have parent volunteers in the schools that stand in the cafeteria and offer this food (i.e. blueberries or carrots) to the students as they pass by in the lunch line. The hospital pays for the paper and copies. Another way we are trying to entice people to eat whole foods. This food is ordered by and paid for by the Food Services Director. It does not come from our gardens – YET." -Sheryl Casteen

"Gardens provide an outstanding outdoor learning area. Funded through a grant, an Power Mechanics class built and installed, under an existing oak tree. With the addition of this outdoor learning area came other improvements to the garden that has enhanced its usability which included a solar thermometer, rain gauge, hummingbird and wild bird feeders, bird baths, future fruit producing plants that included a Satsuma tree, a pineapple orange tree, and blueberry and grape vines. This area has become one of pride for the grade students, faculty and staff. The vegetables in the garden provide a mid-morning or mid-afternoon snack while others expressed their pleasure in being able to sit under the shade of the oak tree and experience the beauty and solitude that this project has brought to the grounds of the Belle Rose Primary School." - Margo Castro & Robin Landry

Contributors' Information:

Linda McHugh, Curriculum Coordinator, Archbishop Damiano School, Westville Grove, NJ
Dorothy Mullen, Garden Educator and Founder of The Suppers Programs, Princeton, NJ
Henry Harrison, County Agent, Washington Parish, Franklinton, LA
James Nichnadowicz, Rutgers Cooperative Extension of Union County, 4-H Agent, NJ
Charles B. Cox, Professor/Assistant Director, 4-H Youth Development, Oklahoma State University, Stillwater, OK
Linda Naeve, Extension Program Specialist, Iowa State University, Ames, IA
Sheryl Casteen, Committee Chair, Planting Seeds of Change, An Edible Educational Endeavor
Carol Baney, Master Gardener, Penn State Cooperative Extension of Centre County, State College, PA
Margo Castro, 4-H Agent, and Robin Landry, Extension Agent, Food and Nutrition Program, Louisiana State University, Assumption Parish, Napoleonville, LA
Becky Henne, Associate Program Leader, Michigan State University Extension, East Lansing, MI
Shaney Hill, 4-H Agent , Terrebonne Parish, Houma, and Robin Landry, Extension Agent, Food and Nutrition Program, Louisiana State University, Assumption Parish, Napoleonville, LA

Safety Rules:

Safety is extremely important when it comes to school gardens. You'll want to set up rules that protect people and rules to protect the plants.

Rules that protect people:

1. Use of senses for plant identification.

2. Don't eat anything until you are sure it is food making sure you know which plants have both edible and poisonous parts (leaves of rhubarb and the tomato plants itself).

3. Know which children have allergies to plants, pollen, or stings .

4. Keep a supply of sunscreen (know if anyone is allergic). In high heat, have kids wear hats and shirts with sleeves.

5. If there is an after school club with no nurse is on duty, have all parents signed off with on a health form highlighting allergies, a first aid kit on hand and drinking water should be available.

6. No bare feet or flip flops, proper shoes to protect from cuts and stings.

7. Add only plant materials to compost to keep out vermin.

8.When using tools stay your arm's length plus the tool length away from the next person.

9.Walk while holding tools and/or identify which tools are for adults only .

10. Discuss pest controls and why you use what you use.

Rules that protect the plants

1. Keep feet on pathways.

2. Use two hands to pick plants so you don't uproot them, one is to hold the plant and the other is to nip off.

3. Discuss pest controls, keeping the gate shut.

4. Have three children on the hoses, and rotate positions so one is controlling the water while the other two children are preventing the hose from knocking over the plants.

5. Practice the above like drills.

-Dorothy Mullen, Garden Educator and Founder of The Suppers Programs, Princeton, New Jersey

TIPS for Meaningful Service

-When you plan your garden-related service, don't forget to look at the calendar. March is National Nutrition Month. Make a Difference Day occurs during October along with Learn and Serve Week. April is a big service month that features National Gardening Month, National Volunteer Week, Earth Day and Global Youth Service Day.

-When planning the service related to your garden, it's wise to plan some service that is garden related and other service that is issue related. This way if a hard winter or too much rain delays your garden, it doesn't impede you from serving others.

-It's important not to forget about providing the gardening experience to everyone. Youth can put their building skills to use in making gardens wheelchair accessible. A garden provides youth with limitations great learning and sensory experiences.

-Through your school garden, you can tap into service initiatives such as Plant A Row, a public service program of the Garden Writers Association and the GWA Foundation. Garden writers encourage their readers/listeners to plant an extra row of produce and donate their surplus to local food banks, soup kitchens and service organizations to help feed America's hungry. Another popular project that involves plants is the American Cancer Society daffodil sale that serves as a symbol of hope for people affected by cancer.

-Youth can educate others or serve as mentors for younger student by teaching about gardening and explaining how plants grow in the garden.

-Sharing garden vegetables with the local food bank or homeless shelter teaches the children to be part of a giving community.

-Whatever cause that the students select, while plants are hibernating during the winter, they can research the topic and its causes, interview experts, create posters, flyers or brochures and conduct related service projects.

-Youth can serve their community by telling their community about how it has helped the neighborhood.

-Youth can publish and share recipes created in the garden. Not only does it highlight the crops they grow, it gives them an opportunity to spread nutritional facts.

Contributors:
Janet Fox, Professor and Associate Department Head, 4-H Youth Development, Louisiana State University AgCenter, Baton Rouge, LA
Emelie Swackhamer, Extension Educator, Lehigh County Cooperative Extension, and Northampton County Cooperative Extension, PA
Carol Baney, Master Gardener, Penn State Cooperative Extension of Centre County, State College, PA
Calvin Walker, Assistant Extension Agent, (4-H?ANR), Webster Parish, Minden, LA

PR & Celebration TIPS

Public Relations

When promoting the school garden, there are a number of things that should be considered when telling your story. Consider who will take photographs and write press releases or letters to the editor. It's important to know and follow school policy about parental permission to use images. Youth will want to identify ways to inform parents and the school community about garden activity. When promoting good will for the garden, it's critical to have an approved system for requesting and thanking donors.

To highlight your school garden, plan seasonal events, scripted tours for the public, tomato tastings, pesto day, colonial day fair, tea harvest and drying, harvest dinner, poetry readings, garden cycle tours and fund raisers like plant sales.

Celebration!

There are a number of ways to get the children excited about their garden:

Hold a **garden contest** so youth take school gardening home. Make the contest very simple with only a few rules to follow. First the garden can only be 100 square feet, which does not mean it has to be square just as long as the plants are within that area. The students must grow any variety of corn, tomatoes, bell pepper, and green beans. They must have at least three of each vegetable. The gardens have around 75 days of growing season before judging begins. The gardens are judged on correct size, minimum number of plants, appearance, and creativity. The students are judged on knowledge of the project, journals, weed control, and overall how the garden turned out. The Piney Hills Louisiana Master Gardener Program sponsor an awards program where the students are asked to attend a small cookie and juice social where they are awarded prize money for 1st, 2nd, 3rd, and most creative gardens. The key to having a successful contest is students that want to succeed and volunteers that are willing to help the success of these students.

Make the garden a fun place. Put in decorations, signs, play music, and "dip your strawberries in chocolate."

Plan a **garden party.** Youth can lead tours, present demonstrations and serve refreshments. To support the gardening project, youth can sell pots they paint and the plants they grew.

Contributors:
James Nichanadowicz, 4-H Agent, Rutgers Cooperative Extension of Union County, NY
Calvin walker, Assistant Exetnsion Agent, (4-H?ANR), Webster Parish, Minden, LA
Judy Weaver, Kids Hope USA Volunteer, University United Methodist Church, University Elementary Volunteer Garden Team and Louisiana Master Gardener, Baton Rouge, LA

Sustainability TIPS

-If the garden is big enough, the produce harvested can be sold in a farmers market. A school garden in North Carolina raise chickens in the garden and sell eggs to the local community. This gives the children the opportunity to get their first taste of being entrepreneurial ~ learning about recordkeeping, profits vs. costs, advertising and how money can be earned and saved. Fiscal responsibility can be introduced in a non-threatening, fun way. By doing so, youth will not only learn entrepreneurship skills but also make money to support future gardening efforts.

-One of the best ways to recreate a culture of people taking responsibility for their food is by providing the organic method of gardening where the children can work with the soil and grow vegetables they will eventually eat. By using the rain water catchment system, children are shown ways of wisely using and preserving our natural resources.

-Most schools get out before the food is ready to be harvested. With vegetable gardens, it's important to make it a community program that will continue into the summer.

Reflection

-Reflection activities for a school garden project are essential for all grade levels. Taking a variety of forms, reflection can incorporate journal writing, dramatic plays, story telling, photographs, portfolio creation, group discussion, and oral presentations. The exercises should focus on the students' changing perceptions about the community, the importance of gardening and what it means to be a citizen and to serve one's community. Reflection exercises can also focus on what they've learned about the topics that they studied such as land, plants and ecosystems, and what other projects they'd like to pursue with that knowledge.

-Review garden use and activities. What worked well and what needs to be modified? Survey the teachers and students about what they liked and didn't like, and discuss the results with the garden team.

Contributors:
Dorothy Mullen, Garden Educator and Founder of The Suppers Programs, Princeton, NJ
James Nichnadowicz, 4-H Agent, Rutgers Cooperative Extension of Union County, NJ
Charles B. Cox, Professor/Asst. Director, 4-H Youth Development, Oklahoma State University, Stillwater, OK
Janet Fox, Professor and Associate Department Head, 4-H Youth Development, Louisiana State University AgCenter, Baton Rouge, LA

School Garden Resources

American Community Gardening Association, www.communitygarden.org

Best Practices for California Middle School Instructional School Gardens,http://www.csgn.org/images/pdf/BestPracticesforC AMiddleSchools.pdf

California School Garden Network Literature Review, http://www.csgn.org/research.php?cat=Historical

Center for Ecoliteracy, "Getting Started" http://www.ecoliteracy.org/

Chicago Botanic Garden – School Gardens, www.chicagobotanic.org/schoolgarden

Cornell Garden-Based Learning Website, http://blogs.cornell.edu/garden/get-activities/activities

Dorothy Mullen, www.DorothyMullen.org, www.TheSuppersPrograms.org

Garden Mosaics Program, http://www.gardenmosaics.cornell.edu

Hamel, Stephanie, Heckman, Joe, and Murphy, Stephanie. (May 10, 2010). Lead Contaminated Soil: Minimizing Health Risks. Publication Number: FS336, Rutgers NJAES Cooperative Extension, found at: http://njaes.rutgers.edu/pubs/publication.asp?pid=FS336

Iowa State University Growing in the Garden, http://www.extension.iastate.edu/GrowingintheGarden/

Junior Master Gardeners. Garden Lessons (Texas A and M), http://jmgkids.us/

Kinder Garden, http://aggie-horticulture.tamu.edu/kindergarden/pnote.htm

Louisiana State University School Garden Site: http://www.lsuagcenter.com/en/lawn_garden/master_gardener/school_gardens/

Mercer County Master Gardeners. Fact sheets from Rutgers, http://www.mgofmc.org/

National Gardening Association, www.kidsgardening.com

Princeton School Garden Cooperative Guide for Lessons, http://www.prs.k12.nj.us/GardenCoop/GardenCoopGuideNov07.pdf

School gardening lessons and programs, www.journeytoforever.org/edu_garden_link.html

The Edible Schoolyard, www.edibleschoolyard.org

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