# Sowing the Seeds of Success
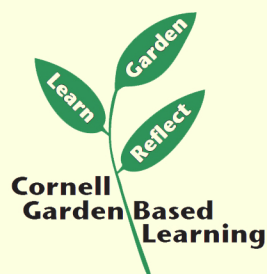
**Gardening program tools for teachers, parents, community leaders, horticulturists, Master Gardeners, and youth leaders.**

Learn • Garden • Reflect

Cornell University
College of Agriculture and Life Sciences

Cornell Garden Based Learning

AMERICAN HORTICULTURAL SOCIETY

**2016 Edition**

# Program Tools:

## *Sowing the Seeds of Success*

Designed in partnership with the American Horticultural Society, Sowing the Seeds of Success is designed to walk you through the organizational aspects of a gardening program. Find tools to help start, sustain, expand, and reflect on your program. Teachers, parents, community leaders, horticulturists, Master Gardeners, youth leaders, and other interested adults will find the process a useful tool. In fact, this same process can be useful for just about any community project.

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# Planning & Organizing

Consult the 'Before Going Further' Checklist (pdf) at each step of the process.

It seems that new gardens are springing up everywhere, and for good reason. Gardening projects are a highly visible way to beautify a community and inspire well-being among the many people who live, play, and work there. The bond between plants and people is a potent and historic one, destined to reconnect both the young and the young at heart to our environment. Whether we are striving to foster earth stewardship in school children, making literature come alive through an enchanting Peter Rabbit garden, or giving a facelift to an otherwise uninviting vacant lot, growing plants can be a powerful avenue through which we bring about positive change in our surroundings, and in our lives.

The horticultural aspects of a gardening program deserve scrutiny – indeed, they are critical. And, the instructional components are plentiful and offer rich rewards for educators seeking hands-on, inquiry-based learning opportunities for their audience. But the "people part" is just as significant, and is often overlooked in the excitement of getting a gardening program off the ground.

# Getting Started

## Where Did the Idea Come From

Developing a plan summary is a good way to ensure your gardening program starts off on the right track. Create your own Plan Summary with this Plan Summary Activity (pdf).

- At the science museum, did the staff agree that a garden would make a dynamic, hands-on exhibit, based on comments by visitors and support from volunteers—or did the director, an enthusiastic gardener herself, make a spontaneous decision that the staff should put in a garden?
- At the school, were most of the teachers eager to utilize a garden because of its opportunities for interdisciplinary education—or did one teacher decide, on a whim, that it would be nice to put in a planting that weekend?
- At the cooperative extension office, did the extension educators and their Master Gardener volunteers determine that a garden would make an excellent outdoor learning facility, based on community demand—or did the county coordinator ask the staff to put in a garden because it would be good public relations?

The long-term success and health of your program will depend a great deal on whether or not you've developed a broad base of interest for the project. Imposing a program on anyone, adult volunteers or youth participants, can squelch excitement and momentum. Take a step back–if need be–to generate support, ask for input, and cultivate ownership of the project among the people involved.

There are three approaches to implementing community projects.

Doing *to*: A top-down approach. For example: An agency feels that a gardening program is needed by the community, and goes ahead and implements it without community support. Essentially they "do the gardening project to" the community. Or, a group of adults think a gardening project would be good for students or community youth, so they go ahead and plan and build the garden. They do all this without youth support.

Doing *for:* Other well-meaning agencies may sense that there is a demonstrated need, so they do the gardening project *for* the community. But, without a broad base of involvement, these projects may fall by the wayside for lack of long-term support.

Doing *with:* The **best** approach is to collaborate in each phase of the project – to do it *with* the community. Community members engaged in each phase of the project are much more likely to feel committed over the long haul.

## Partnerships

- Identify potential partnerships with this exercise focused on Establishing Partnerships (pdf).
- Use the Garden Circle of Influence (pdf) to help establish and articulate the benefits to those involved with the project.
- Having a well-planned elevator speech is a good idea for any project, establish your own with this Elevator Speech Activity (pdf).

  Roles should be clearly defined before the spade ever meets the soil. Few garden projects function well without dedicated volunteers, staff, parents, teachers, or other educators working together with clearly defined roles. Ironing these out well in advance will save time, will ensure that the bases are covered, and will prevent tension that can come with wrongly made assumptions.

  When the advisory/planning committee first gets together there are a few things to do in order to keep meetings focused:

- Distribute a tight agenda, and stick to it.

- Iron out the project objectives, so that everyone agrees on the goals.
- Clearly define everyone's roles. If the gardening program will be large, form subcommittees to tackle portions of the project.

Do not be dissuaded just because your organization lacks the people to cover all aspects of the program. After all, is there any one group that can do it all? More importantly, would the program benefit from a "one-man band" anyway? If your program lacks diversity, partnerships will strengthen the program. In fact, partnerships will even enhance the agency that does have the skills at hand. Just be sure that it is clear what is expected of whom before the project begins, and that all parties have agreed to hold up their end of the bargain.

Adults:
- Who are the adults involved with the project: parents, teachers, club leaders, Master Gardeners?
- What are their roles: recruiting volunteers, serving on the planning committee, community outreach, fund raising, garden maintenance, etc?

Youth:
- Who are the young people involved in the project: students at a school, 4-H club members, youth who frequent a community center?
- What are their roles: in planning the garden, in generating support for the garden (enthusiasm, funds, materials), in building the garden, in caring for the garden?

Partnerships:
- What are some possible partnerships in your community: Elementary School – Master Gardeners – Local Nursery- 4-H Club – Garden Club – Nature Center?
- What roles will each partner play: planning the garden, providing expertise, supplying materials, building the garden, recruiting volunteers, raising funds, etc?

Administrative Support:
- Convincing administrators may be quite easy, or very difficult, depending on their philosophical approach to outdoor learning. Some administrators see this type of project as critical, and immediately recognize all the benefits. Others may view a growing project as unnecessary, as an "add-on," or even as a liability issue. Whatever their perspective, it is critical to involve administrators early on, and to keep them informed of your progress. It is even more critical if they do not fully support the program initially. Be prepared, you may want to present a one-page summary of your plan. A thorough approach will be the first step to persuading a hesitant director of the program's validity.

### The Importance of Ownership

Learn more with this case study and exercise focused on the [Importance of Ownership](#) (pdf). Every step of the way, think about ways to instill ownership. Passing plants and stakes down the line, inviting people to harvest parties, keeping the gardening program highly visible, and otherwise involving people at each step enhances the sense that the garden belongs to the participants.

- More people will appreciate the project and feel as excited about it as you do.
- More people will be committed to help caring for the garden, taking the burden off of one or a few people.
- More people with know about the garden and the effort that's gone into the project, helping to reduce vandalism.
- The garden will likely last over time, even when planners have moved on to another project or are faced with life changes that take them away from the garden project.

### Naming the Garden Project

Names spark zest, and even impart meaning. It would be a pity to go so far in a program only to wind up referring to it as the "Library Garden," the "Youth Garden," or the "School Garden." "Habitat Discovery" or "Salsa" gardens feel decidedly different from "Ladybug Land." By the same token, which would volunteers rather join: the "Garden Committee" or the "Green Team"? Holding a "garden-naming" contest can generate excitement, as well as community pride. Remind contestants of program goals, and encourage them to subtly weave the primary objectives of the garden into the title. Short, easy-to-pronounce names tend to be more memorable.

This contest offers yet another opportunity to develop a sense of ownership. Names can even change the flavor of the project. Michigan State's 4-H Children's Garden could have had a "Grain Garden," but instead opted for a "Cereal Bowl." It is much more creative, appealing, and descriptive, and paints a picture of how the garden might look.

### Logic Model

The CGBL logic model ([PDF download](#)) is a simple work tool to assist you in planning, organizing and assessing your garden project goals, activities, partners and more. The words within each box are only meant to be a guide; feel free to create your own.  This tool is priceless for planning effectively and will surely give you an edge when used for grant writing!

# Planning Your Design

A garden program has several phases. After you garner support, get people excited about the prospects, and gather a planning committee of ardent volunteers, it will be time to begin the planning and design portion of the project. This is the fun part; the possibilities are truly endless. During this

process, the planning committee will be constantly looking to the future, and assessing your group's commitment to the project, as well as the realistic expectations of implementation and maintenance. Some garden projects are very small in size and scope. These can be compact, attractive, well-maintained gardens that serve a need. Although all the school curricula may not directly relate to the garden, a garden still can enrich a curriculum within a grade level, and can offer several concrete activities for the students.

Other gardens are large in size and overall scope. One school in upstate New York restructured the K-6 curriculum around the school's garden program, and received major funding from a national corporation to overhaul its approach to computer technology, based on a garden-technology vision, which was conceptualized by the school's "dream team."

## What is Your Vision?

Including the community is the best way to ensure a successful and long-lasting garden project. Hosting a garden design charette is a fun way to learn what others' hope to get from the garden project and what their visions may be. Learn about Hosting a Garden Design Charette (pdf).

Whether your dreams are small or large, it pays to **start off small the first year**. Examine the overall vision of the gardening project, and choose one aspect that the planning committee can reasonably attain. It is much better to be wildly successful with a postage-stamp garden than to fail at a project so enormous in scope that it overwhelms everyone during the first go-round.

- What is the overall theme of the garden?
- If the gardening program flourishes, might there be opportunities for, and interest in, expansion?
- Try to paint a larger vision for the program, even if the garden itself will be diminutive.
- For example, a community group may plan a tiny garden outside the library, focused on a theme from a children's book. How might this theme change next year? If it works well, can more themes be added? Can a portion of the garden that is geared more for adults be incorporated, as well? Even if the group is reticent about tackling too much, it is healthy to explore long-term possibilities.

Be sure to set up a meeting with the groundskeeper, custodian, and other individual who oversees the grounds. Gaining their trust, and opening lines of communication, should occur as soon as the committee can articulate what the garden might look like. Invite this person to comment on the design, and ask if mowing the areas adjacent to the garden will be affected by the plan. Is there a better location, or slight adjustment that needs to be made? Find out in advance.

## Criteria for a Good Garden Site



Visit our downloadable checklist, Criteria for a Garden Site (pdf).
Learn about your soil type with this Soil Assessment Activity (pdf).

Criteria includes:
- Well-drained soil, free of heavy metals such as lead
- Full sun and protection from wind
- Proximity to a water source
- Nearness to classrooms or meeting place with seating and shade
- Storage space for tools and equipment
- Availability of additional space for composting, pathways, improvements, expansion

Other things to consider:
- Are there on-site materials that need to be removed, such as blacktop or debris?
- Should you perform a soil test before planning? If so, contact your local Cooperative Extension Office.
- Is the site location safe for participants? (Will motion-sensor lights be needed, and can they be installed?)
- Will you need a fence to prevent unwanted wildlife from entering?
- Is there a "garden guardian" who lives nearby who can watch over the site to help prevent theft or vandalism?
- Will you have a garden sign (or numerous signs) to educate visitors when no one is available to answer questions?
- How can you ensure the site is accessible to all?
- Are there public restrooms nearby?
- Is the site easy to get to? Accessible by public transportation? Is parking available? Does it have a bike rack?
- Have you communicated with the groundskeeper of the site?

Visit the Sustaining the Garden page for information about garden maintenance and summer care.

## Creating a Welcoming Space

*"I've been thinking a lot about equity and how to allow everyone to feel welcome in a garden-based learning program. I think that needs to be in the design process of any garden." –Myra Manning, Maine School Garden Network Coordinator*

Successfully engaging diverse community members is an important part of any garden project. Without diversity, the garden will lack representation from the whole community and thus will likely be less successful. Just as the garden is more interesting and beneficial with diverse plantings, a community project will have more sustained success with inclusion and input from diverse community members. Learn about Cultural Competency and Engaging Diverse Audiences (pdf) and visit the page about Effective Community Engagement.

Gardens should be designed so that they are accessible. "Accessible" has come to be synonymous with "accessible to wheelchairs," but it may also mean a garden designed with sensitivity to visual impairment, varying degrees of manual dexterity, or varying levels of emotional/mental functionality. Accessibility may require having wide, uncluttered paths with beds that are easy for everyone to reach, or it may suggest that plants are accessible—again, having no "no" signs. It can also mean accessible to strollers. A garden that is too complicated, with plant species that are difficult to distinguish from one another, or cluttered with Latin names, may be inaccessible to children who are having a first experience with a garden. Often, accessibility boils down to "making everyone welcome." Consider the abilities of volunteers as well as participants, particularly if the volunteers include older adults.

*"Inclusivity is a critical practice in garden design and activity in that it ensures that all children irrespective of ability (cognitive or physical), age, gender, culture, language or economic status are provided equal access and are able to experience the garden as independently as possible, without stigma and with equal enjoyment and achieved success."–Kaifa Anderson-Hall, former Program Director of the Washington Youth Garden at the US National Arboretum*

## Elements to consider for inclusivity:
- Incorporate multi-sensory plant materials.
- Use adaptive tools.
- Include shaded areas and places of respite- everyone appreciates an opportunity to sit on occasion.
- For signage, consider child-friendly images and multiple languages specific to the composition of users.
- Integrate culturally specific or diverse plantings for production gardens that match the cultural composition of the users.
- The entrance should be seamless to accommodate all abilities and sizes (no separate entrances).

- Integrate true raised garden beds – those elevated from the ground, accessible for seated, independent and supported standing individuals facilitates the engagement of different physical abilities.
- Consider including ADA compliant pathways or pathways wide enough for side-by-side movement and socialization for various degrees of aided (canes, walkers, wheelchairs) and non-aided (ambulatory) movement.

  *–Adapted from Kaifa Anderson-Hall, former Program Director of the Washington Youth Garden at the US National Arboretum*



**Expert Advice, A Word About Raised Beds**

Raised beds are neat, clean, easy to maintain, and if they are of an appropriate width (not more than 3 feet) they can be easy for children to work in. However, a word of caution is necessary. Jane Taylor, founder of the Michigan 4-H Children's Garden, warns that, "Most folks tend to slam-dunk rectangular raised beds in row by dull row." She suggests a wheel-shaped arrangement, so that the center can become a location for a gazebo, or a few tables and benches for community sharing.

This type of design is more friendly, and encourages the camaraderie desired for gardeners of all ages. She suggests that the ends of the beds be blunt, for safety reasons. Ms. Taylor also urges people to find ways to get kids inside the beds, by cutting small holes in the timbers and using stepping stones, chunks of concrete, old boards, or bricks for paths.

Cedar is an alternative for those with concerns about using pressure-treated lumber in raised beds. It is slightly more expensive but will be long-lasting.

## Designing For Children

Find out what national youth garden experts have to say about their Favorite Elements of Design (pdf).

A children's garden should be designed for children. In the most practical way, it should suit their smaller stature.

- Raised beds should be no more than 3 feet wide
- Benches and other seating should be sized appropriately
- Garden maintenance should employ youth-sized tools.
- Themes that pique the interest of children, preferably suited to their penchant for fantasy, or adapted to familiar themes, such as a Peter Rabbit or an alphabet garden.
- Stepping stones that lead them into areas of the garden work well
- Incorporate clearly defined areas where they can get close to plants. Do no assume they will "stay out of the garden"—they will not, and you should not want them to.
- Avoid "no's"; (no picking flowers, no walking on the mulch, no picking up stones, no playing in the water).
- Key words related to planning for kids: multi-sensory; gross motor activity; vivid color; safety; eating and tasting opportunities; interactive; interesting surfaces, such as sand and water; and attention grabbers.

Young children enjoy vibrant color, like to be immersed in flowers, and enjoy having suitable places to hide, such as beanpole teepees. There are endless numbers of fun elements to add:
- Brightly colored structures; scarecrows; interesting seating elements; painted stumps; sculptures made by the children; and brightly colored tiles.
- Height can be added with beanpole teepees, arches, pergolas, and even treehouses or gazebos.

**Themes with child appeal:**
- Pizza garden
- Teeny-tiny and giant garden
- A to Z flower garden
- Children's literature themes (For example, Beatrix Potter garden)
- House of sunflowers
- Sundial garden
- Pond garden
- Butterfly garden

- Garden of primary colors
- Fairy Garden
- Three Sisters Garden
- Salsa Garden
- Art Garden
- Moon Garden (Include plants that bloom at night such as moonflower vine and flowering tobacco, Nicotiana)
- Visit Kidsgardening.org for even more youth-focused garden theme ideas

*"I have found "thematic gardens" to be great sources of inspiration for designing educational gardens. For example, a rainbow-themed garden gives you an opportunity to integrate nutrition education by learning about the nutrient profiles of differently colored vegetables and fruits. A rainbow garden could also focus on flowers and weave in lessons on pollinators and beneficial insects that are each attracted to different flower colors and shapes. A second favorite thematic garden is a first aid garden to grow herbs and flowers that can be used as child-friendly medicine – calendula for making a healing salve, peppermint for brewing an iced tea, lavender for sewing a dream pouch… the list goes on!"— Carolina Lukac, Garden Education Manager for the Vermont Community Garden Network in Burlington, VT*

# Effective Community Engagement

Many successful community gardeners will say "gardening is the easy part;" it is the effective engagement and inclusion of community partners that can be easily overlooked. However, this is one of the most important pieces of any community project.

There are six videos relating to effective community engagement, refer to the on the CGBL website. Each video has several corresponding reflective questions.

## Introduction

**Introduction Reflective Questions**
- Why might it not be wise to 'persuade' people to garden?
- Bobby offers an example of working with aging gardeners. What are examples of other groups and the community specific needs they might have? How would you find out?
- How will you learn what roles community members will be interested in pursuing?
- Bobby acknowledges starting small. What are the most important pieces to put into place initially? What can wait till the program grows?

## Chapter 1: Getting Started with Healthy "Soil"

**Chapter #1 Reflective Questions**

- Bobby talks about the healthy 'soil' that is more than gardening – that is community. Regarding Parker Palmer's [Habits of the Heart](), when do you feel most aware of your interconnection to or interdependence with other people? When do you feel most disconnected?
- Reflect back on one of your first experiences when you realized that someone considered you to be "the other." What was that like?
- Describe a time you experienced someone else as "other" in a way that was uncomfortable for you. What made it uncomfortable? What did you do in that situation? What did you decide or assume about yourself, others, or life in general (maybe subconsciously) from that experience?
- Describe a time you made a positive connection with someone you had previously experienced as "other?" What did you do in that situation? What allowed you to make that connection in that situation?
- Describe a time in your life when you spoke out—either in speech, writing, or action—and saw the power of your own agency. When have you witnessed it in others?

## Chapter 2: Planning Your Garden *with* Community

**Chapter #2 Reflective Questions**
- Bobby talked about how everyone doesn't learn the same way. Reflect on some different ways in which you and others you know learn. What works best for you and others? When do you, or others you know, turn off to learning, and what contributes to that?
- How might you come to know what foods are the ideal choices to raise in the garden in your community?
- Bobby highlights one way that a garden uses a bulletin board to post important plans, events, and so forth. What organizational approaches will you engage people in creating and using?

## Chapter 3: Embedding the Garden into the Fabric of the Community

**Chapter #3 Reflective Questions**
- How will you "seed" your approach, what overarching themes will this garden rest on, such as a healing place, as Lucienne addresses?
- How as a facilitator can you "seed" your approach with the power of diversity? Who needs to be invited to the table?
- How can you foster a strong sense of belonging in the project?
- How can you cultivate a space in which people are eager to learn from one another, including the voices of young people and the aging?
- Parker Palmer talks about the wisdom of holding tension in a healthy way. Describe a challenge that you see that seems to bring up a lot of tension for your or others in your community.   What are some successful and healthy ways you've seen people deal with that tension? Without naming people or the specifics of any situation, what have you observed people doing that doesn't seem to work as well?

## Chapter 4: Caring for Your Garden and the Power of Food in Our Lives

**Chapter #4 Reflective Questions**
Bobby talks about the power of food in our lives – that people associate food *with* their lives. He names how this is embedded into the larger conversation about social justice and food justice, which

isn't only about access to food, but also include those foods that may be associated with a cultural preference.

- How might you learn about food needs and desires in your community?
- What are some ways of telling stories related to food that touch the hearts of people involved in *Seed to Supper* and illuminate the power of food in our lives?
- How does your community view the food that they both need and want?

## Chapter 5: Harvest, a Time for Celebration of the Fruits of Our Labor

**Chapter #5 Reflective Questions**
- Bobby names this as a time for celebration, truth telling and reflection. What went well, what went awry and what have we learned? Looking ahead, what specific steps will you engage in, to foster an atmosphere for safe truth telling?
- Bobby said that you may have come in "as a stranger….even as an imposter." What is your response to this?
- What is a plan for connecting the growth of the garden to the growth of the community? What telling things might you look for?

# Effective Youth Engagement

*"When it comes to working with children and youth in garden settings, all across the nation, we often miss the boat: adults typically plan, design and implement garden programs, inviting young people to the table after the garden is finished. While that isn't 'bad,' it surely misses an opportunity. Our research has shown that gardening interest is more strongly correlated with decision-making than garden activity. It's worth taking the time to engage young people in every step from the beginning." –Marcia Eames-Sheavly, Senior Lecturer & Senior Extension Associate at Cornell University*

## Meeting Youth's Needs Through Garden-Based Learning Experiences

It is thrilling to witness a child raise a marigold from a seed s/he has planted, or watch a teen-aged youth create a sunflower house for a younger sibling. Even as we are always interested in horticulture, we are stretching toward what constitutes an ideal experience for all gardeners – not just the garden content, but also the life skills gained through the experience. The Circle of Courage is a model of positive youth development which can inform exciting program goals to meet the needs of all participants. It is a model grounded in the principles of belonging, mastery, independence and generosity, and which integrates the cultural wisdom of native peoples and findings of contemporary youth development research.

**Mastery:  Learning by doing** *"I can."*

It isn't difficult to create a long list of all the ways in which someone can gain skills by interacting with the plant world. Hands-on activities, experiential learning, group investigation, and discovery are the backbone of a gardening experience. We encourage educators to focus on the long-term goals of learning and to provide prompt feedback.

A number of years ago, a panel of 4-H youth responded to questions posed by attendees. When asked what frustrates them about the adults in their lives, one teen responded, "You're all so terrified to see us fail. We can handle it! Let us work it out!" This beautifully exemplifies the desire for mastery. And although it can be one of the hardest lessons in life, in gardening as with everything else, plants die, our goals sometimes aren't realized, and the beautiful gardens of our dreams occasionally sport weeds. We aim to model and teach that failure and frustration are learning experiences, too.


**Belonging:  Cultivate relationships** *"I belong."*

In this busy culture of over-scheduled activity, it's easy to forget that more than ever, hanging out with each other has tremendous value. It can be ironic that educators may need to schedule 'down time' for program participants to get to know one another; doing so is every bit as important as the learning about tomato cultivars or how to compost. Rainy days and other occasions can be a wonderful chance for indoor activities aimed at cultivating connection. For example, older adults often have tremendous knowledge about gardening; talking with them can be a way to promote relationships outside the usual scope of young people's affiliations. It's not difficult to promote ties with family and community, since gardening is our nation's favorite hobby.

Because of all the activity that revolves around the garden, it isn't challenging to build in small group time to allow for the development of close relationships. Many of the crops we grow have come from all over the world; exploring where our food comes from and celebrating different ways of sharing and preparing food from the garden, for example, can be an exciting way to show respect for the value of diverse cultures. Perhaps most importantly, although plants need to be watered, and the weeds are ever present, a vital aspect of any program is remembering can be to have fun and enjoy one other. Without that, few participants may wish to return.

**Generosity:  Gestures of thoughtfulness & shared responsibility** *"I can make a difference."*



When we say the word generosity, frequently what comes to mind is the giving away of "things." No question, there is often a lot of produce or flowers to be shared when you're in the thick of a terrific gardening experience, and many people in our communities can benefit from shared food and beauty. But generosity can include much more. A skilled garden-based learning educator reinforces gestures of thoughtfulness, and asks participants to take responsibility for others. Critical reflection, as a part of a service-learning experience, can be an important pursuit that leads to compassion, a broader scope, and life-long interest in the community.

**Power:  Authentic youth engagement & decision-making** *"I matter."*
An area that can be over-looked in the rush toward efficiency and getting things done is fostering power, ownership and independence. For example, in the children's garden arena, often the people who are the most enthusiastic about gardens and gardening are adults. Nation-wide, these adults are calling the shots, designing gardens for children, developing educational programs for children, instead of thinking in terms of partnership. While this isn't 'bad,' it does reduce learning opportunities and the chance to engage audiences in decision making. A major thrust of our focus is fostering genuine participation in community garden-based projects and exploring ways to better engage participants in decision-making aspects of projects.

When it comes to gardening, there are myriad decisions to make, and before making any, we urge educators to reflect on how to share decision-making to ensure a strong sense of commitment. Include participants of any age in planning, encourage their input, and give them responsibility. There are many obstacles in gardening, from deer and other pests, to weather and site concerns; however, we shouldn't deprive children in particular of the thrill of overcoming a barrier. Their ideas are often more creative and less burdened with "shoulds" and "the way things are" than ours. Ideally, the power ought to slowly shift to participants through self-governance, with respect to garden planning, design, implementation and maintenance. It might mean revising our notion of committees, meeting structures, timing, and an entire approach to how a project is organized.

All of these four themes – mastery, belonging, power, and generosity – are relatively easy to work into any garden-based learning effort. Remember that the ultimate goal isn't just raising crops; it's growing competent, committed, reflective, and caring gardeners. Instead of thinking solely of our subject matter expertise, and the important content to be gained from learning about horticulture, it is equally important to consider program factors such as non-scheduled time, opportunities for friends to join in, chances to make a difference in the community, and avenues through which our young participants can voice an opinion.



**Your Program**

To include more opportunities for mastery, belonging, generosity, and power into your garden-based learning effort, try using the tool Planning for Positive Youth Development Through Garden-Based Learning. Consider an activity: planting pumpkins, planning a new garden, or hosting a harvest festival. How might you expand it? Use the planning sheet to dig deeper and get the most out of meeting the needs of participants in the process.

## Youth Involvement in the Garden

- This Coins of Strength Activity (doc), illustrates a strength-based approach to working with children and youth versus a deficit based approach.
- Do you engage children and youth in planning and decision-making in your program? Use the Hart's Ladder of Participation Activity (pdf) to find out!
- Learn more about effective youth engagement with this exercise, Considering Age Appropriate Activities (pdf).

**Recruiting Youth**

If you're having a difficult time recruiting youth for your project, take a step back and ask "where did this idea come from?" Think about where your project currently falls on the doing *to*, doing *for*, or doing *with* spectrum. Projects operating with a doing to or doing for approach, tend to have a harder time recruiting youth because they have to recruit youth! If your project is taking a *doing with* approach, youth have most likely been involved in generating or supporting the idea early on and — through their experiences — have developed a sense of ownership that keeps them coming back.

**Encouraging Youth Participation**

Often youth garden projects are set up with the assumption that adults plan and build the garden. Youth involvement starts with "fun" activities once the garden is in place. Young people have such great ideas and energy that it seems a waste not to involve them in every step of the process. Additionally, if your garden project is intended to be used by youth, involving them ensures that you're developing a garden that not only meets young people's needs but also one which they will find interesting and exciting.

**Including Youth as Partners**

The benefits of involving youth as partners far outweigh the barriers. If you think involving youth in planning will take too long, take a look at your timeline and consider whether it can be altered. Consider starting small and asking around among your volunteers and potential volunteers to see who might want to spearhead this aspect of the project.

Dr. Roger Hart, co-director of the Children's Environments Research Group, offers suggestions for involving children in community-based projects. A critical point he makes is to avoid efforts that "decorate" or "tokenize" children's connection to the project, since this does not represent true participation.

- An example of decoration is when children wear T-shirts promoting a garden program that they neither planned, nor designed, nor implemented.
- An example of tokenism might be a school in which children are involved in a contest to name the garden, but do not have any input in its planning, design, or implementation.

Hart created a "ladder" of participation to help us think about where we really are and where we'd like to be in terms of children's participation in our programs. This ladder was not created to suggest that we have to be "at the top" rung, but rather, that we ought to be aiming to get out of the lower rungs of non-participation, and think of ways to genuinely engage children and youth. These resources will guide you through: Using Hart's Ladder Ages 3-6, Using Hart's Ladder Ages 7-11 and Using Hart's Ladder Ages 12-18 (pdfs). Visit our Youth Grow curriculum page for an interactive activity that uses Hart's Ladder as the framework.



Roger Hart's Ladder of Young People's Participation

Rung 8: Young people & adults share decision-making
Rung 7: Young people lead & initiate action
Rung 6: Adult-initiated, shared decisions with young people
Rung 5: Young people consulted and informed
Rung 4: Young people assigned and informed
Rung 3: Young people tokenized*
Rung 2: Young people are decoration*
Rung 1: Young people are manipulated*

* Note: Hart explains that the last three rungs are non-participation

Adapted from Hart, R. (1992). *Children's Participation from Tokenism to Citizenship.* Florence: UNICEF Innocenti Research Centre.

**Programming for Older Youth**

If middle- and high-school aged youth are the target audience, a garden that offers hands-on experiences in the plant sciences, and in the related field of ecology, botany, plant pathology, and entomology, can be very rewarding. High school science teachers often feel that it is difficult to teach plant science because it is viewed by youth as less animated than animal science. In each of the situations below, gardening is combined with one or more disciplines to create a more ambitious experience for the older child.

- Composting is an appealing activity-based focus for older youth that also fosters environmental responsibility.
- Others may want to focus on a different type of stewardship—that of community service—by raising produce for soup kitchens and food pantries. One group of teenagers involved with the Broome County Cooperative Extension returned from a week among the homeless in Washington, D.C. to set up a gardening program to produce food for the hungry.
- Marketing programs are challenging, too, and can offer students a source of income, while giving them skills in horticulture, communication, and business management.

## Benefits and Barriers to Youth Participation

**Benefits:**

- Greater Interest: Increasing youth participation in a gardening program also broadens the roles young people can play in the project. For example, a talent in art, an interest in math, and a knack for organizing can all lead to a role for a young person who may not be as excited about "plants." In the same way that adults tend to find their niches of interest within projects, young people may discover that they have an opportunity to do something they enjoy too.
- Greater Ownership and Responsibility: People take greater responsibility for things in which they are invested; if you've contributed your time, energy, and ideas to the project, you're less likely to be destructive towards it or to let others be.
- Building Transferable Skills: Planning projects and making collective decisions requires many skills: communicating your ideas and considering others' ideas; reaching compromises, working together, problem solving; these are all skills that will benefit those involved in the future, regardless of the project or situation.
- Reduce Time and Costs: Some argue that involving young people in the planning and decision-making process can actually reduce time and costs; by going straight the "users" or "stakeholders," you reduce the risk of missing the mark and having to make changes.
- Confidence and Pride: Supporting youth in making meaningful decisions and respecting those decisions can boost their confidence in being able to enact change in their communities and in their own lives.

**Barriers:**

- Adults Have All the Knowledge: It's hard to make good decisions if you don't have all the information. It's also hard to feel ownership and responsibility for something if others don't trust you or feel that you can't handle all the information. Assess whether this barrier is just a matter of getting youth the information they need or if the adults are unwilling to share the knowledge they have.
- Power Distances: Young people are often very far away from the people with the power to make something happen. How many steps does it take to get from student to school district administrator or 4-H member to city council? Is there a way to bridge that gap more effectively?
- Perceived Capabilities: Young people can't do this; they don't have the knowledge/ understanding/ interest/ ability to make these decisions.
- It Takes Too Long: It would be great to have young people more involved but we want the garden finished by the end of next month. *(Ask yourself: Who sets the deadlines? Why are they set as such? How flexible are they? Are there benefits to taking more time?)*
- It's Not Always Easy: We don't have the time, expertise, or resources to involve youth in decision-making on this project. What can you do now with the time and resources you have? Can you start small and increase as you go along?

## "Taming" the Overly Enthusiastic Adult

When adult leaders launch a new effort aimed at increasing youth participation, they're surprised to find that their biggest program challenge isn't engaging young people; it's often curbing enthusiastic grown-ups who rush in to "help." Here are some ideas for fostering participation without bruising

feelings of would-be adult assistants along the way:

- Organize a meeting with all parents, teachers, and volunteers who intend to be involved with the project. Talk with them about your approach, what you're doing, what the children and youth will be responsible for, and how adults might support the project in other ways.
- If you're hosting an event for children and youth, consider hosting an adult-oriented event or activity concurrently. For example, while children and youth are talking and sharing ideas, adults can be in an adjacent room, generating lists of people in the community who could provide skills, talents, orfunding – or listening to a presenter on a topic of interest.
- Be very explicit about roles whenever adults are going to be present. For example, in a youth program held at Cornell, adult chaperones were sent a letter in advance that notified them of their roles.
- Organize a special evening opportunity for children and youth to teach their parents or guardians about what they've learned in the program. For example, at a harvest dinner or special event, children/youth might walk the adults through the garden, teaching or demonstrating one of the tasks they learned. This may give the adults a better appreciation for the capabilities of their children and youth. This event might also be an appropriate time to talk with children and youth about the roles of adults, things that adults may do to enhance the program, and when these might be most welcome.

## Additional Resources

Act for Youth, Positive Youth Development 101 Manual

# Engaging Volunteers



Every gardening project requires committed volunteers. Volunteers contribute a wealth of experience and enthusiasm. They also bring abundant skills, fresh ideas, and extra hands to help with garden activities. Volunteers often join because they care about the project and its participants. They may want to be more involved in their communities, meet new people, and "make a difference." Perhaps they become involved because their children are in the program, or they want to be associated with a worthy community effort. Before you can effectively manage volunteers, it helps to know their motives, in order to sustain a fruitful relationship that builds your program while meeting their needs as well.

Whatever their reasons for becoming involved, the following are the major components to ensure success with volunteers, as identified by the National 4-H Foundation.

- Identify and recruit people with the competence and attitudes essential to accomplishing the goals of the program
- Select and place volunteers in roles that meet their needs, and yours
- Orient volunteers to the goals of the project and the role that they will play
- Train volunteers in the specific skills, knowledge, and attitudes necessary for them to successfully accomplish their tasks
- Utilize volunteers' time and skills effectively
- Recognize and appreciate volunteers' contributions
- Evaluate volunteers' performance and provide useful feedback
- Help volunteers reach their desired goals within the project

## Establishing Roles for Volunteers

Before recruiting, define the role you want volunteers to play in your garden program. Create a list of specific jobs with detailed descriptions. For example:

- Do you want volunteers who can be there on a weekly basis or just for special events?
- Do you want them to help plan and prepare garden programs?
- Do you just want them to help with the activities?

Keep in mind that people volunteer for different reasons, and any group of people will have a wide range of talents. If you communicate the jobs available for volunteers to complete, then they can determine whether your opportunities match their interests and skills. The time you spend preparing for volunteers and establishing clear responsibilities will help you create an effective and efficient volunteer team.

All volunteers want to feel that they are contributing in a meaningful way. Volunteers benefit from taking part in both menial and highly important tasks. Many volunteers will continue to be involved if they develop a sense of pride and ownership of the project and believe that the role they play is truly effective. Involve them in as much of the planning and decision-making as possible to foster a sense of ownership and independence. Although you will certainly need help with some "grunt work," as long as volunteers know their efforts are helping the program, they will feel like valuable team members.

Certain parts of your garden design will require a skilled project leader to coordinate and complete construction. Find members of the garden team or school community to lead these specific projects, or, if necessary, find an outside expert to do the work.

## Recruiting Volunteers

Once you know how you are going to use volunteers, begin the recruiting process. Look for volunteers who will encourage exploration and inquiry-based learning during garden activities and who will approach the garden with a fun and adventurous attitude. Think outside the box too. Volunteers lacking gardening experience can often be just as helpful as those with gardening experience. They are eager to learn new skills and–more often than not–have another useful skill to share. Think about the types of skills you might need from volunteers. These might include carpentry, engineering, landscape design, grant writing and event planning.

*Try to recruit volunteers with a connection to the majority of garden participants' backgrounds (be it ethnicity, neighborhood, culture, language). –Mark Miller, Education Manager at [Franklin Park Conservatory and Botanical Gardens](#) in Columbus, Ohio*

Some volunteers will be available only for special events. For instance, a Boy Scout might develop an Eagle Scout project at your garden. Other volunteers–for example, a stay-at-home parent with a horticulture degree– may be available to help on a regular basis. Garden programs benefit from a diverse set of volunteers.

- Search for volunteers through local horticulture clubs (e.g, garden club members, college and university horticulture or sustainability clubs), "green industry" businesses (e.g. garden centers, landscape design firms), senior citizen organizations, service organizations (e.g. Cooperative Extension Service Master Gardeners and 4-H, Rotary, Boy Scouts, Girl Scouts, AmeriCorps and FoodCorps), and local volunteer service programs.
- Most schools find their strongest volunteers through parent groups. Reach out to parents in newsletters, on the school website, at parent meetings, and at open houses.
- The garden team members who help plan the garden will often be transformed into a core of strong volunteers.
- Recruiting older students to provide support for garden activities is another possibility. Elementary school students love to interact with middle school and high school students, and a mentoring relationship provides an excellent learning experience for both students involved.

As you reach out to potential volunteers:

- Schedule a special meeting to share information about the program and the opportunities available. If possible, hold this event during the same hours you typically need volunteer help. If people are available for the informational meeting at that time, they may well be available to volunteer in the future during the same time frame.
- Be sure to inform potential volunteers of your expectations, including time commitments and tasks. You may even consider writing a short volunteer job description to make sure the message is consistent. Be as specific as possible; give the dates and times their services will be needed.
- If you are working with a school garden, check your school's policy on volunteer recruitment procedures. Most schools require volunteers to complete a background check with fingerprinting before service can begin. Individuals should be informed of this type of requirement during the recruitment stage.
- You may find it helpful for volunteers to complete a short application so you know a little more about their interests and backgrounds. Requiring an application is also a good way to get emergency

contact information. A sample application can be downloaded from Cornell Cooperative Extension-Tompkins County (pdf).

- When people sign up or indicate an interest in volunteering, follow up with a phone call or in-person conversation to reiterate these expectations and give them a chance to ask questions. Not all individuals are a good fit with a school garden program, and it is best for both parties to figure this out during the recruiting stage rather than in the middle of the program.
- Consider making phone calls or sending personal invitations to individuals you have met who would be good volunteers or who have been recommended to you by others. Although mass recruiting is less time consuming, keep in mind that people like to be asked in person. It is a first step in making them feel important; it conveys respect and builds confidence.

The recruiting process may sound like a substantial undertaking, and it is. However, you will be rewarded by a supportive, dedicated, and informed volunteer group who will help sustain your garden efforts.



## Volunteer Orientation

Use this Volunteer Orientation Checklist (pdf) to ensure you provide thorough information.
You will likely receive interest from people who want to volunteer once-in-a-while and others who want to participate regularly. It is helpful for all volunteers to be given an orientation. Depending on the size and scope of your project and the degree of interest from volunteers, you may find you need to provide this orientation several times throughout the year.

It is recommended to begin by orienting them to the program. Start by reminding them of your expectations, as you noted in your publicity and/or job descriptions. Next, brief them on policies. For example, let them know where to park, where to sign in, and what the procedures are for screening. Provide the group with a tour of the garden. They need to know things like the locations of bathrooms, where tools are stored, water sources, etc.

Provide regular volunteers with a log sheet to track the hours they spend helping the program. Volunteer hours can be documented as "in-kind" donation for grant purposes and demonstrate documented community investment in the project. (You may want to have regular volunteers log information about drop-in volunteers as well.) And, be sure to introduce regulars to key personnel, for example: the principal and office secretaries if you are working with a school project.

## Volunteer Preparation

For volunteers who offer to help out regularly–and who you will want to encourage to take on more leadership roles–you will need to provide volunteer preparation to properly prepare them for their jobsand to assist with coordinating other volunteers. Always provide clear instructions as to what you want them to do and give them a chance to ask questions. To be successful, volunteers must know what is expected of them.

Provide background on any specific skills or knowledge needed to complete tasks by sending copies of your lessons a week ahead of time along with links to information on websites or a list of recommended books.

In addition to regular preparation and information related to activities and programs, it is a special treat for volunteers to attend "advanced preparation." For instance, you can invite a guest speaker to introduce a new curriculum or teach volunteers a new skill. Depending on their level of involvement, certain volunteers might be invited to attend workshops conducted for educators by school districts and other organizations. Preparation is a powerful tool to motivate your volunteers and keep them excited about your program.

**Volunteer Binder**
In addition to in-person orientation and preparation, make a simple Volunteer Binder that includes all the information volunteers need to know in writing for later reference. Some ideas of what you may want to include in the binder are:

- Contact information – garden leaders, regular volunteers, school principal, custodian
- Who to call if there is an emergency – 911
- Pertinent health information about any regular volunteers or participating youth
- Volunteer hours log-sheet
- Codes for any locks needed for garden program
- Blank volunteer application forms
- Postcards with garden program information
- Planting/harvest log-sheets

## Communication and Feedback

As previously mentioned, clear communication with volunteers is essential. When communication is poor, volunteers feel uninformed, unimportant, and under-appreciated. Disorganization and lack of communication will frustrate them, and they will quit. Here are a few communication tips for working with volunteers:

- Keep a good record of volunteers with up-to-date contact information and how they prefer to be contacted. It would be unfortunate to accidentally miss someone. This may be a simple spreadsheet or an online database. Use a method that works for you and easy to update.
- Establish a standard method of communication that is delivered consistently. This may be a weekly e-mail, a monthly newsletter, or a regular website posting. Choose a method that works well for you and your volunteers. By establishing a routine, you remind yourself to communicate with your volunteers, and in turn they have a place to go for the latest information. **Remember, not all volunteers have Internet access all the time**. Try to note which volunteers might prefer a phone call or letter.
- Create a written schedule of events that is accessible to all volunteers. It can be mailed out or posted on a website. Make sure you have an effective way to notify volunteers if any changes are made (via either e-mail or a phone tree).
- Hold a regular volunteer meeting either monthly or quarterly. Personal contact allows for more interactive discussions, and it is very important for volunteers to have a chance to provide you with feedback and suggestions for the program. This is also a great time for you to show your appreciation for their work. Provide snacks to share if possible.
- Provide members of the group with comments about their job performance. Although a formal evaluation may not be possible, volunteers need constructive feedback so they can learn and grow during this experience.

With your busy schedule, it may seem overwhelming to find time for this level of communication. If you feel that you cannot maintain strong communication, seek out a volunteer willing to assume this role. Communication is not a task that can be neglected even briefly without negative consequences. It is the key to a successful volunteer experience (for the volunteers and for you)!

## Retaining Volunteers

All the suggestions mentioned thus far will contribute to the satisfaction of your volunteers and help you retain them. In a school setting, you will naturally lose volunteers as students graduate and families move, but by adopting good techniques, you can decrease the number of people who quit because of a negative volunteer experience.

If you are concerned about volunteer retention, take time to find out why people sign up. Volunteers often pitch in because they care about the project and its participants. Some may have children in the program with whom they want to spend more quality time; others may want to be more involved in their communities, meet new people, or make a difference. To keep volunteers interested and motivated, it is important for you to understand and meet their needs as much as possible while still meeting yours. For instance, if someone volunteers because she wants to spend time with her child, but you never assign her to work with her child's group, she will not stick with it for long. Or, if someone volunteers in order to meet new people, and you always ask him to assist with individual preparation, he will get discouraged and quit.

Also remember that volunteers should support, not replace, educators. Although you may find volunteers who are willing to take on significant planning and educational delivery responsibilities, most volunteers will feel overwhelmed if left on their own to teach a full lesson, or will feel they lack proper guidance. Classroom teachers should be present during all garden activities.
As discussed earlier, not all individuals have the personalities and skills to be strong garden volunteers, so if you find your needs and their needs do not match, you may suggest other volunteer opportunities that would be better suited for them.

## Volunteer Appreciation

- Thank your volunteers with simple thank you's and smiles when they come to help or with a quick e-mail after activities.
- Give thanks with handwritten notes (from you and the students) or small gifts from the garden like pressed-flower bookmarks or herbal sachets.
- Recognize volunteers in newsletters and newspaper articles.
- Create awards or certificates for volunteers.
- Hold a special event each year focusing on volunteer appreciation, such as a ceremony in the garden or a luncheon. This event can be specifically hosted for garden volunteers, or you can work with other teachers to recognize volunteers in several programs.

Involve youth as much as possible in appreciation efforts. This helps them learn the importance of being grateful and showing respect for those who help them. It is an important life lesson that is often overlooked in our fast-paced society.

# Sustaining the Garden



There is more to sustaining your garden than keeping the plants alive.  Considering the time and resources invested, your garden program should serve as an education tool for this year's community members and for community members using it 10 years from now. This section provides tips from experienced garden educators on how to sustain your garden efforts. Visit the Planning Your Design page for information about site selection, developing a garden design, and making the site accessible to all. Visit the Effective Community Engagement page for more information about successfully engaging with the community.

## Developing a Maintenance Plan

- Help ensure garden sustainability with a Long-Range Maintenance Plan Activity (pdf).
- This Comprehensive Guide to Garden Maintenance (pdf) from The California School Garden Network, *Gardens For Learning* will help you keep your garden well-maintained.
- Use the School Garden Maintenance Schedule Template (pdf) from *Grow to Learn NYC* as a guideline.



Talk to people who have implemented community or school gardens, and ask them what was the biggest setback in their program. Many will say that they did not anticipate the level of maintenance required. Starting small, having a number of committed volunteers, and being very organized about the schedule for maintenance—who is responsible, and when—will minimize the demands.

Other matters to consider:
- In order to sustain the garden, your team must actively use the garden. If at all possible, plan garden time into the weekly schedule. While more time is ideal, even just an hour a week will have a dramatic effect on the gardens' well-being and on the relationship with the garden.
- Encourage and invite youth groups and others to use the garden (after establishing some basic guidelines for use). Ask for and be open to ideas they may have. Perhaps there's a way to incorporate garden produce into the school cafeteria or local food pantry.

These tools will help you integrate the garden into your daily curriculum:
- Curriculum Integration (pdf)
- Curriculum Mapping Activity for Science, Math, Language Arts and Social Studies (pdf).
- Curriculum Mapping Activity for Physical Education, Home and Careers and other Electives (pdf).

## What About Summer Care?

A commonly asked maintenance question is, "How do we utilize or maintain our school garden during the summer?" First, is a garden needed during the summer months? Some programs simply plant a spring garden that comes to fruition by the end of June. An alternative is to plant fall crops, such as pumpkin or winter squash, which require minimal maintenance over the summer.
Often, teachers will ask the custodian or groundskeeper to care for the garden over the summer, but that does not capitalize on building ownership, and it might not be fair to the groundskeeper. Stories are told of situations in which the groundskeeper, out of frustration, "accidentally" leveled portions of the garden over the summer. So, alternative plans may work more smoothly. Of course, as a courtesy, let the groundskeeper know who will be on-site during the summer, regardless of what plan you choose.



The ideal summer program may be one in which the garden is well-maintained, is utilized for activities, and has solid leadership.

Potential Alternatives:
- Ask the staff of a summer recreation program whether they would like to care for the garden, and simultaneously utilize it for activities.
- Put the garden up for "adoption." Take a master calendar to faculty, PTA, and other meetings and events, and ask individuals and families to sign up for a period of days or a week. What are the rules

for adoption? They can vary according to the garden's requirements for maintenance, but the minimum is generally to show up daily and to be visible, especially in the evenings, so that the community (and potential vandals) can see that the garden is much loved and well cared for. Weeding and watering are other basic requirements. Some people also add deadheading, staking, removing spent stalks, etc. to the list. Let people know what is expected of them in advance, and indicate where the hose and tools will be stored.

- Form partnerships among agencies, such as school, cooperative extension service, youth bureau, and other community groups. For example, a group of 4-H clubs might be willing to care for a small school garden if they can use the garden for activities, utilize the produce, and display produce and flowers at a county fair.

When it comes to maintenance, remember that frequent care is very manageable—much easier than attacking knee-high weeds only occasionally. As always, many hands make light work. Refer to the Partnership and Ownership sections in the Before Getting Started page for more information about establishing partnerships and the importance of ownership.



## Keeping Everyone in the Loop

It is critical to make everyone welcome. For example, groundskeepers at many institutions are the ones most attuned to the landscape around the facility, yet these VIP's are often left out of the loop when it comes to the process of planning, designing, and implementing a garden project. Inform support staff, volunteers, assistants, and others who work behind the scenes of your intentions, and seek out their various viewpoints. Most of the common-sense solutions to daily questions and concerns will come from the people in the trenches.

Whenever possible, reach out and share the garden program with the community. Because of the nature of gardening, it really is easy to remind people that the program is alive and well.

- Send a thoughtful bouquet to the new business in town, to the foyer of the nursing home, or to the chamber of Commerce.
- Offer to take a tray of bite-sized fresh vegetables to a community event, and work with children to help prepare it.

- Plant extra plants for the hungry, and donate to the local soup kitchen or food pantry. Participants might even prepare a meal form the produce they have grown, or festoon the tables with their flowers.
- Never provide blimp-sized zucchinis, wooden carrots, or tired lettuce. Anything that leaves the garden and travels into the community is representing your organization and should be top-notch.



Increased involvement will add value to its role as an educational tool. To use the garden effectively, make sure to match lessons and activities with your curricular goals, adopt good outdoor classroom management techniques, create measurements for success, and document all your efforts.

## Documenting Efforts

In the midst of an active garden program, it is easy to neglect the job of recording your efforts. But keeping track of your progress is critical. You will draw on this documentation as you share your work with administrators, community members, look for additional funds, and recruit new volunteers.

- Keep a notebook of your activities with detailed descriptions and photos.
- Track all donations of funds and materials along with the names and contact information of the donors.
- Log volunteer hours you and others put into the project, or better yet, give each volunteer a log sheet to keep track of their own hours.
- Log all the positive feedback you receive from youth, families, and community members.
- Take a lot of photos! Perhaps there is a volunteer willing to be the garden photographer, or if the budget allows, give each participant a disposal camera.

Visit our Evaluation Toolkit to learn new methods of collecting data and assessing your garden program's impact.

## Showing Your Appreciation

When all is said and done, there are probably a large number of people who have contributed to the success of the program. Never be miserly with gratitude. The planning committee may want to designate one individual to send thank-you notes to each person who has donated to, volunteered for, or otherwise shown support for the program. If the numbers are large and this is difficult, hold an event, such as a gardening lecture or workshop, and open it to all who are interested as a way of providing a public thank you. Be sure to invite all your benefactors.

Ways to share your program and show appreciation:
- Donate produce to the local food pantry or soup kitchen
- Take flowers to nursing homes, libraries, and other community centers

- Offer to set up an exhibit in a high-profile location such as a community center or bank, describing how the planning committee set up the program, and the exciting things that are happening there now
- Provide refreshments for hard-working volunteers
- Remember that letters of thanks that include quotes form the participants are especially thoughtful
- Be sure to thank foundation and corporate supporters immediately
- Hold a special harvest dinner for volunteers and donors
- As your project grows, keep supporters updated with a gardening program newsletter

# Benefits & Research

## Benefits of Garden-Based Learning

Gardening enhances the quality of life in numerous ways: providing fresh food, exercise and health benefits, opportunities for multi-generational and life-long learning, creating pleasing landscapes and improved environment, and bringing people together.

Garden-based learning programs result in increased nutrition along with environmental awareness, higher learning achievements, and increased life skills for our students. They are also an effective and engaging way to integrate curricula and meet learning standards, giving young people the chance to develop a wide range of academic and social skills.

Garden experiences foster ecological literacy and stewardship skills, enhancing an awareness of the link between plants in the landscape and our clothing, food, shelter, and well-being. They also provide children and youth with the time and space to explore the natural world–something that can occur rarely in today's era of indoor living.

**Why Garden With Children?**

Before beginning any new project, you often have to convince administrators that it will be a worthwhile effort. Depending on your approach, you may be able to satisfy a number of educational, community, and developmental needs. Here are some of the benefits:

- Generate pride among community members
- Instill a sense of ownership, pride, and responsibility among students
- Enhance the appearance, image, and popularity of a school or organization
- Improve the behavior and attitude of young people
- Provide a wholesome activity that keeps all kids engaged
- Connect children to the source of their food
- Heighten children's environmental awareness and promote earth stewardship
- Improve the quality of the curriculum, providing for more effective teaching
- Make valuable connections between disciplines or subject matter areas such as science, math, and social studies
- Foster science literacy

**Gardening in Schools**

You may be looking for ways to share the excitement of school gardening with other teachers, or you



might need to convince your administrators of the benefits of beginning a gardening program in your school. Although you are familiar with all the merits, you will need research-based justification as to why gardening is so important. Use this PowerPoint presentation Why Garden in New York State Schools? to get everyone on board. Designed as a guided presentation, or a stand alone that can run on its own, this will help you rally others and build enthusiasm for your

gardening program. Learn ways to incorporate gardening into school curriculum with this helpful pdf, Integrating a Garden into the School Curriculum. Visit the Sustaining The Garden page for more information on effectively using the garden.

Learn about the Academic Benefits of Garden-Based Curriculum with these helpful resources: Physical and Biological Sciences and Sustainability and Ecology (pdfs).

**Community Gardening**

Interest is expanding around supporting community gardening as numerous opportunities and benefits are being realized. Two organizations who have compiled much data on the benefits of community gardening include Gardening Matters and the American Community Gardening Association. In addition, Farming Concrete offers a data collection and evaluation toolkit. For even more information, check out University of Missouri Extension's Community Gardening Toolkit.



# Research That Supports Our Work

One of the realities of working within the world of garden-based learning is that, inevitably, you may need to write a proposal to support a program or help you initiate a new project. Fortunately, there is

research that you can draw from to advocate for your efforts. The following is a summary of research findings that you can cite in proposals, share with your board of directors, and use in countless other ways to support the important work that you are carrying out. Additionally, you'll find links with more helpful information.  Know of a great article that's missing? Please send it along to us!

Key Research Findings: Highlights from journal articles, fact sheets, curricula, research studies and more. Highlights includes several key benefit areas of garden-based learning including Nutrition and Environmental Awareness, Learning Achievements, Life Skills, Health, Wellness and Community Building. Research Supporting Garden-Based Learning organized on Zotero.

Collective School Garden Network Research Database: By encouraging and supporting a garden in every school, the Collective School Garden Network creates opportunities for our children to discover fresh food, make healthier food choices, and become better nourished. Visit their research database for a variety of articles.

Role of Plants and Landscape in Human Health: Useful resources to pursue a better understanding of the role of plants and landscapes in human health and well-being.
NatureRx (pdf) – A helpful list of articles Related to the Restorative Effects of Time in Nature Prepared by Dr. Don Rakow 6/2015. Visit here for the webpage version.

# Fundraising & Promotion



When you get a group of individuals together, begin to discuss program challenges, and it's inevitable: the topic of raising funds, not having enough funds, or a fear of lack of funding will probably surface. Develop a plan with this Fundraising Plan Worksheet (pdf). Regardless of the scope or audience of your garden project, at some point you will likely have to raise funds or secure in-kind donations to support the creation and maintenance of the garden, or to advance facets of the garden program. There are many strategies, ranging from grassroots approaches, that involve lots of people while garnering relatively fewer funds, to grants that can provide significant dollars, but require writing skill. Improve your chances of success by employing several approaches.

There is tremendous "in-kind value" in the time that volunteers, teachers, parents, administrators and community members lend to the program effort. Here, however, we will focus on two approaches to raising monies and donations: grassroots fundraising and grant writing.

*"I learned early on that asking is not about asking for a handout, but asking for partnership in achieving a shared goal or vision. There is simply no way an organization or nonprofit project can be successful without a lot of community input. That input takes many forms, and one important form is financial. Some people are uncomfortable talking about money, but it is a gift to educate community members about your work and invite them to take part in it! I can hardly think of a more rewarding project to be invested in as a philanthropist than in a youth-based garden (but then again, I am slightly biased!)." –Erin Marteal, Executive Director at the Ithaca Children's Garden in Ithaca, NY*



# Grassroots Fundraising

- Before approaching businesses, we suggest creating a Project Folder. Use this Project Folder Checklist (pdf).
- Having a well-prepared Elevator Speech is a good idea for any project, establish one using this Elevator Speech Activity (pdf).

From dollar drives to bake sales, this method is important since it doubles as a publicity opportunity and can create a strong sense of ownership among contributors. One school brought the circus to town each year to raise money for the garden. This fundraiser generated about $1000 annually, and of course, provided an enjoyable venue for hundreds of families and community members, all of whom were investing in the garden while having a good time. Another community program created small, inexpensive bouquets and sold dozens of them in the highly visible foyer of the local supermarket for Mother's Day.

Consider:
- These methods can be time and energy intensive.
- They are an excellent way to engage youth in the fundraising process, since young people can identify approaches and follow through on each aspect of planning and completion.
- All community members can participate.
- Car washes, tag sales, bake sales, bottle drives, selling seeds, bulbs or seedlings, penny and dollar drives have proven to be successful. With multiple approaches, the funds can add up considerably. Don't forget the circus and other unique fundraising opportunities.
- This approach increases awareness, participation, and ownership among those who help or contribute.

**Engaging Local Businesses**

Donations from local businesses can make a significant impact on a program, but require planning and coordination. It's wise to designate one person as a point of contact, so that businesses do not receive multiple requests, making your program appear disjointed. Sometimes stores have affiliated foundations to approach for materials; do your homework to find out. Some examples of requests:

- Plant, soil, and mulch donations from a nursery or garden center.
- Donation of a wheelbarrow, fencing or tools from a home improvement store.
- Monetary donation from a local bank.
- Refreshments provided by a grocery store or restaurant.
- Free rental of a rototiller and other tools.

**Document and Share Your Accomplishments**

All along the way, gather positive feedback, anecdotes, and evaluation data to highlight what you are doing well. There is an old fundraising adage that "money begets money." The more you can spread the news regarding the success of what you are doing, the more comfortable local businesses, private donors and others will feel about investing in a well-planned, known entity.

- Identify a point person with photography, video, and writing skills as a "documentarian."
- Contact the local news for an article, and then, include it with your project folder.
- Apply for a community award, and publicize it when you receive it.
- Make a point of thanking everyone who participates or assists with your program.

*"People want to give to this work! Community members and businesses I have talked to are SO enthusiastic about contributing and see the importance. However, people who are involved in garden programs are very hesitant to ask others in the community for donations and have a hard time telling their own story because they are often too humble to put themselves in the spotlight. Storytelling is a HUGE piece of this – narratives are so powerful in guiding the way we think about our environment, our food, our sense of power and self, and so much more. There are so many amazing stories that come out of this work, it is just a matter of pulling out all the details and getting them out there." –*
*Myra Manning, Maine School Garden Network Coordinator*

# Grant Writing

Learn to establish project objectives with this exercise, Establishing Measurable Objectives (pdf).

Grant writing is a way to secure larger funds and materials to develop your program. Since it can seem daunting, we encourage you to do your research. First begin by identifying small regional foundations or agencies that support projects in your location, county or state. Local arts-, environment-, or science-based agencies often work well as a jumping-off point. Securing a small grant can grow confidence and also provides demonstrated success in preparation for something larger.

Consider:
- It is an important courtesy to notify all program personnel, from your director to grounds crew, prior to preparation and submission.
- Read all grant guidelines carefully and do not hesitate to call the agency to ask for clarification.
- Include all the information outlined in the grant guidelines.
- Be attentive to page limits, and be certain to send the number of copies requested.
- Be concise and highlight your strengths.
- Convey enthusiasm, that you are well organized, have clear goals and objectives, and are planning a sustainable project.
- Highlight the accomplishments you have made so far, as well as the strengths of your program.
- You may include current challenges if you have a clearly identified plan for overcoming them.

**What no one ever tells you that is vital to your success**
- Begin writing *early*, well before the deadline.
- Write, read, and revise. Ask for review from multiple parties and perspectives, and revise again before submission.
- Be courteous. Identify key people with different skill sets well in advance. Ask them to read through the grant and provide edits. Give them a realistic time frame to do so! Asking them the day before the proposal is due, which suggests that they work into the evening, is highly inconsiderate and does not reflect well on you or your program.
- Remember that *real* people read these proposals. Complicated wording and jargon only make a proposal difficult to read. Stick with the basics of who, what, when, where, how, and perhaps most importantly, why this is critical and who will benefit from it.
- Read through it and ask yourself: can you remove words, and still carry the same meaning? Then, begin to prune. Someone in our program once removed 1500 words from a proposal, and still said the same thing – except, it was much clearer.
- Show appreciation when your organization receives a grant!
- Know when to quit. If rejected, it is appropriate to ask for reasons why, but do it in a way that leaves a good impression.

*"I always ask myself this question when I'm working on proposals: How would I feel if we got this grant? Does this proposal really line up with our strategic goals as an organization?"–Whitney Cohen, Education Director of Life Lab in Santa Cruz, CA*

**Deciphering grant language**

Most proposals require a rationale, background information, or justification. These sections provide important background into the nature of your request, as well as the reasons as to why your proposal is so vital to the topic identified as critical by the organization, such as student achievement, youth engagement, building community economic capacity, and so forth.

Each section will provide specific information requested. In general, be certain that there is an excellent connection between the goals of the funding agency, and what you are proposing. Do your homework, and include research with citations. You can find examples of research to support your work on our Benefits and Research page.

*Example excerpt*: "Our school garden program began with an elementary school curriculum only. We recognize the importance of engaging a teen-aged audience in outdoor settings, as well as how teen-aged youth can benefit from interactions with other members of the school community (citing research to support this). As our program has grown and generated interest among older youth, more than 20 young people have inquired about opportunities for a well-planned youth leadership project, in which they would gain the community service credits required by our school for graduation, by serving as mentors to children in the garden setting. We propose to create a new, well-planned opportunity for young people to engage in the decision-making process with adult leaders, and to become youth leaders of elementary-aged children, through a series of deliberately staged activities (which you describe concretely in the activities or methods section of the proposal). Research has shown that gardening interest is strongly correlated with decision-making among children and youth (and then cite it). We plan for further foster this interest among school children and their older youth mentors through…"

# Searching for Opportunities



Discover funding opportunities with this list of [Funding Resources](#) (pdf).

**Where to go from here?**

We encourage you to begin by searching for regional foundations or local businesses that may have affiliate foundations, such as Lowe's, Target or the Wegman's Family. Try different search terms, starting with familiar names for your region (e.g. Finger Lakes Region, Central New York) and adding terms such as foundation, funding agency. You can begin to focus your search with other terms (e.g. health, environment, arts, children, youth). Depending on your locale, "gardening" may be too narrow. A dedicated search will surface some local opportunities. For example, some programs in Central NY have benefited greatly from the generosity of the small and vibrant John Ben Snow Foundation.

In addition, contact your local:



- Chamber of commerce
- Community businesses
- Parent/teacher organizations
- Garden clubs
- Garden centers and nurseries
- Horticultural commercial organizations
- Lions, Kiwanis, and other civic organizations
- Cooperative Extension Service
- Foundations

As you grow in confidence there are larger foundations that offer rolling or continued opportunities to apply. Some websites and programs keep lists of agencies for fundraising. School Garden Wizard, the California School Garden Network and The North American Association for Environmental Education offer fundraising guidance and/or lists of fundraising opportunities.

# Promotion

Below you will find example brochures, letters, and press releases to help you promote and spread the word about your program.

Brochure:  It's helpful to have something to share with the public, whether it's general information about the garden or a special upcoming event.  You can fill in the blanks on this brochure template or create one of your own. Postcards are often a popular method for promotions, and you can save some money by printing 2 per page.

Co-educator Letter:  An important part of building ownership is working with your peers to get everyone on board with the power of the gardening program, and ultimately reaching your intended audience.  Modify this letter template with specifics to generate collaboration and cooperation among educator colleagues.

Letter to Families:  It seems as if more families than ever are interested in gardening.  This letter can be adapted to your program to highlight the benefits of gardening to families in diverse communities.

Press Release:  This general press release template has at its core the foundations of why gardens matter – adjust and change according to your program's particular emphasis.

Letter to Administrator:  It is imperative that your administrator is on board with your work.  This letter template can get you started in convincing administrators of the value of this effort.

Letter to Neighbors:  Bring everyone on board – including neighbors who may be intrigued with gardens, and may have questions about its value.

Letter to Volunteers:  There is tremendous opportunity to engage a diversity of volunteers, and any gardening program offers multiple ways in which people can get involved.  This letter can be adapted to get you started in reaching out to them.

# Evaluation Toolkit

*"Assessing and evaluating a youth garden program is extremely important, yet so easily overlooked. Think about pre-assessment activities at the start of your garden program!" —Carolina Lukac, Garden Education Manager at the Vermont Community Garden Network in Burlington, VT*

**Evaluation Toolkit**

Easy to use guidance, aimed at the educator with minimum experience with evaluation, for purposes of program improvement and documentation.

Measurable outcomes…impacts…assessments…Yikes!

For many, the idea of measuring the effects of your program is the single most daunting element of your work!  With all that educators are juggling today, evaluation shouldn't be painful.  In fact, learning more about your efforts, with the hope of improving your approach and telling your story to others, can be very rewarding.

In a perfect world, we would all have had detailed course work in program evaluation, or we would be working with a highly trained program evaluation specialist.  This typically isn't the case, and many of our plates are too full to take the time to reflect and plan for evaluation.

With this in mind, we have created a simple evaluation toolkit.  Our aim is to offer tools you can use in your programs, even while you're on the run.  Although this approach shouldn't replace a thorough, long term evaluation plan, it can provide you with very valuable information that you can use to improve a program, report results, and plan for the future.

**Ideally, evaluation:**

• Begins before the program starts; in other words, before you begin your program you have a rough plan in place for how you'll be measuring the desired outcomes in your participants.
• Is on-going. Throughout your program, you'll check with your plan to see how it's progressing, and perhaps modify it if you want more information.
• Includes at least three methods; this helps to strengthen validity.
• Is unbiased, objective, and neutral.  We'll take more about this with each of the methods below.

**Here you'll find a quick and easy guide to:**
Self Assessment (pdf)

Quality Circles (pdf)
The Quick Whip (pdf)
Straight Talk (pdf)

**Here are two evaluation activities that incorporate creative expression:**
Garden Drawing Evaluation (pdf)
Know and Show Sombreros (pdf)

**Evaluation Guidelines**
Here are some basic evaluation guidelines that will guide you through your program's evaluation process:

• *Reflect early and often* – Be sure to structure formal group reflection and evaluation activities at key points throughout the program. Try to make 'reflection' a daily habit rather than an end-of-project chore.
• *Provide a positive and supportive environment* – Ensure that participants feel that their opinions matter and that they can say what they feel without risk.  As a reminder, they are not obligated to respond.
• *Criticize constructively* – Start evaluation by talking about the program's good points. After the positive things have been highlighted, discuss program weaknesses and areas in need of improvement. What could have been done differently to make the project more effective?
• *Foster creativity* – Engage participants in reflection and evaluation through creative activities such as role plays, drawings, and games. These creative outlets can help program participants to think about what the program has achieved and how things could be done differently.
• *Apply the lessons learned* – Document the suggestions and lessons learned through the reflection and evaluation process and try to implement suggested changes in your program as soon as possible.

(Guidelines were adapted from "Creating Better Cities with Children and Youth: A Manual for Participation," by David Driskell.)

**Surveys**
Surveys are probably the most familiar method of gathering information. They allow you to compare or explain what your participants have learned, how they feel, how they act, or how they plan to act as a result of the program.

**Ideally, surveys:**
• Have specific objectives.

• Have clear, concrete, straightforward, unbiased questions.
• Make sense for your intended audience.
• Are appropriate in length.
• Are based on a firm evaluation plan
• Are reliable and legitimate.
• Are appropriately managed.
• Are followed with accurate reporting.

**What is a clear, concrete, straightforward and unbiased question?**
Since questions are the heart of the survey, it is important that you put thought into asking them in the most effective manner.  You do not want to be ambiguous, or lead your participants in any way.  For example, "What were the effects of this program?" is too broad and ambiguous, while "what did you like about this program?" assumes that they enjoyed an element of it.  Further, asking a child a lengthy question often misses the mark.

**Web-based surveys**
More and more, people are turning to the web to design quick surveys that are easy to access via the web, and offer a chance for you to get feedback from a broad audience.  You may want to check the web to see what you can find out about programs such as Web Surveyor, Zoomerang, or Survey Monkey.  Some people receive many surveys via email, however, so you'll still want to be sensitive to their time.

**Retrospective Post- then Pre-Test**
Many educators find that this type of survey is very helpful for measuring program impact.  In this case, you set up the survey so that it asks questions about how the participant feels or plans to behave now and how they felt before the program.  We've set up a sample survey as an example following an in-service for adult volunteers on engaging young people in garden planning and design.

**The Atmosphere**
When surveys are given, it should be a comfortable atmosphere.  There should be an adult or older youth present to answer questions, especially for younger children.  Allow for plenty of time, and the atmosphere should be free of peer pressure, fooling around, etc.
Here are some sample surveys for you to use or adapt to your program. Feel to modify the list of questions as needed.

• Sample 1: Post-test for children and youth (pdf)
• Sample 2: Pre-and post-test for children and youth program participants (pdf)

- Sample 3: Post-test for adult program leaders and volunteers (pdf)
- Sample 4: Retrospective post then pre-test test for adult leaders and volunteers (pdf)

**Interviews**

Interviews are a terrific way of learning more detailed information from a smaller number of participants, and are often used as a supplement to surveys. They can provide richness and meaning, since they are more open-ended in nature. You may want to purposely select participants for interviewing that may represent varied perspectives.

Although there are different approaches to interviewing, here we are referring to informal, conversational interviews.

**A successful interview:**
- Relies on thoughtful questions, yet moves with the natural flow of conversation.
- Maintains maximum flexibility to go where the interviewee leads.
- Is based on thoughtful, probing, and yet, not leading, questions.
- May take time!
- Shouldn't feel like an interview, but rather like a conversation!

**An interview asks questions about:**
- What a participant has done in a program.
- Skills acquired in a program.
- The participant's feelings about him- or herself, and attitudes as a result of the program.
- Behavior that may change as a result of the program.
- What the participant believes are a program's strengths and weaknesses.
- What the participant would change about a program.

**Adapting the interview:**

Consider allowing youth to give interviews as pairs. They may be intimidated by interacting with a different leader and may feel more comfortable with a peer. On the flip side, be wary of big groups. Often the stronger personalities in the group will dominate and youth who are quieter won't have a chance to share their feedback and ideas.

Invite a reporter or journalist from the local paper to interview the youth in your program. This is a great way to find out what youth think about the program and what youth have been learning about. You'll get some great press out of the visit and also be able to stand back, observe, and listen. Keep a note pad handy so you can jot down answers to questions and record memorable quotes.

**Here are two sample interviews:**
Interview Sample 1 (pdf)
Interview Sample 2 (pdf)

**Observation: What is observation?**

The purpose of observational data is to describe the setting that was observed, the activities that took place in that setting, the people who participated in those activities, and the meanings of what was observed from the perspective of those observed.
(Patton, Michael Quinn. 1990. Qualitative Evaluation and Research Methods. Sage Publications)

**Observational data should be:**
• Factual
• Accurate
• Thorough
• Based on direct experience
• Not have bias or interpretation

**Why is observation helpful?**
• Helps to better understand the context within which a program operates.
• Helps to highlight things that may routinely escape staff and volunteers.
• Helps to discover things that no one has paid attention to before, things people may forget, or things people may not be willing to mention in a survey or interview.
• Helps to move program evaluation beyond the selective perceptions of those involved.

**Who should observe?**

In a perfect world, you should enlist a trained evaluator!  Otherwise, a colleague or volunteer that doesn't have a vested interest in your program would be ideal.  Perhaps you can do this for each other – observe each others' programs.

**Types of Observation:**

As a courtesy to participants, let them know that their program is being observed, because you want to learn all you can about improving your effectiveness as an educator.

**Links**
Examples of observation (pdf) **|** Types of questions (pdf) **|** What you should observe (pdf)

Program Evaluation Overview (pdf): This document provides an introduction to the major concepts with program evaluations and provides some samples to illustrate points.

Measuring Program Quality: A Guide to Assessment Tools: This report by the Forum for Youth Investment provides potential users with useful information to guide their decision-making. Decision-making becomes an important process when determining which type of evaluation tools or processes will fit your program.

Building Quality Improvement Systems: Lessons from Three Emerging Efforts in the Youth-Serving Sector: This report from the Forum for Youth Investment provides a preliminary framework for planning any kind of program quality improvement work in the youth-serving sector.

The 2002 User-Friendly Handbook for Project Evaluation: This is a helpful handbook on evaluation from the National Science Foundation.

Science Teachers Efficacy Beliefs Instrument (STEBI): This site looks at self-efficacy in teaching science, which relates to one's ability to see oneself as a "do-er" and "teacher" of science.

The Harvard Family Research Project (HFRP) Out-of-School Time (OST) Program Evaluation Database: This is a compilation of evaluation profiles from Out-of-School Time (OST) programs and initiatives. It provides accessible information about the evaluation work of both large- and small-scale programs.

The Rochester Evaluation of Asset Development for Youth (READY) (pdf): The READY tool is an instrument designed to help youth serving programs evaluate the impact of their programs on youth development outcomes of participants.

Farm to School Curriculum Evaluation: The Farm to School work group in California reviewed curriculum for teachers to use with a farm to school program, and gathered reviews from others. This online form shows a model approach to curriculum evaluation.



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SOCIETY

*The following pages display each pdf linked in the previous document for easy printing access. The activities are presented in order of appearance.*

## Contents:

1. Before going Further Checklist
2. Plan Summary Activity
3. Establishing partnerships
4. Garden Circle of influence
5. Elevator speech activity
6. Importance of ownership
7. CGBL logic model
8. Hosting a garden design charrette
9. Criteria for a garden site
10. Soil assessment activity
11. Cultural competency and engaging diverse audiences
12. Favorite elements of design
13. Coins of strength activity
14. Hart's ladder of participation
15. Considering age appropriate activities
16. Hart's ladder ages 3-6
17. Hart's ladder ages 7-11
18. Hart's ladder 12-18
19. Sample application CCETC
20. Volunteer orientation checklist
21. Long-range maintenance activity
22. Comprehensive guide to garden maintenance
23. School garden maintenance schedule template
24. Curriculum Integration
25. Curriculum Mapping activity for science, math, language arts and social studies
26. Curriculum mapping activity for physical education, home and careers and other electives
27. Physical and biological sciences
28. Sustainability and ecology
29. NatureRx
30. Fundraising Plan Worksheet
31. Project Folder Checklist
32. Elevator Speech Activity
33. Establishing measurable objectives

# Before Going Further Checklist

Consult each step below to make sure your garden project begins and continues successfully.

## Before Going Further, Have You:

Getting Started

- ☐ Ensured that there is demonstrated interest in the project?
- ☐ Secured permission to carry out the garden program?
- ☐ Identified a core, committed advisory/planning group?
- ☐ Ensured community-based representation in this group?
- ☐ Defined roles: planning, maintenance, funding?
- ☐ Identified partners?
- ☐ Spoken with administrators?
- ☐ Looked into insurance matters?
- ☐ Looked for an adequate site?

Garden Design

- ☐ Consulted resources for ideas about the best type of garden design?
- ☐ Addressed accessibility issues for individuals with special needs?
- ☐ Considered a fully engaging activity program appropriate for all?
- ☐ Developed an inclusive garden design?

Maintenance

- ☐ Evaluated the need for and taken steps to organize a volunteer program?
- ☐ Developed a maintenance plan?
- ☐ Established how to utilize the garden during the summer?

Sustainability

- ☐ Welcomed interested individuals to the project?
- ☐ Taken steps to create ownership?
- ☐ Had open lines of communication and kept partners in the loop?
- ☐ Enlivened your project with a creative name?
- ☐ Developed plans for fundraising?
- ☐ Documented your efforts?
- ☐ Showed your appreciation to supporters?
- ☐ Taken time for evaluation and reflection?

**Most Importantly**

- ☐ **Included the community (children, adults and families) in each phase of the process?**

AMERICAN HORTICULTURAL SOCIETY

Cornell University
Cooperative Extension

Learn Garden Reflect
Cornell Garden Based Learning
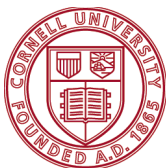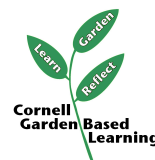
# Key Questions to Answer for Your Plan Summary

Developing a plan summary is a great way to ensure your gardening program starts off on the right track. Answer the questions below to create a plan for your project.

1. Why do you intend to begin this program?


2. What are your goals and objectives? List them.


3. How do you plan to evaluate your effectiveness?


4. Who is providing the leadership?


5. Who will be on the planning committee?


6. How do you intend to involve adults, children and families in the community?


7. What are your requirements for space?


8. What is the length of the program?


9. Roughly how much money is required? How do you intend to raise funds?
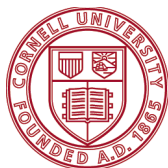
# The Partnership Approach

A gardening project is your golden opportunity to get to know and work with others in the community. Consider the following scenarios. In each case, the individual is aware of existing weaknesses, but turns these into strengths by rallying others in the community. The program often has many more interesting "layers" as a result.

*School-PTA-Historical Society Partnership*

You are a school teacher with a full agenda and limited time. After you interest other teachers and the principal in the gardening project, you approach the PTA and the local historical society for their support. The historical society will help, if you are willing to plant heirloom flowers and vegetables. The PTA is pleased, because the city's bicentennial is approaching, and they've been looking for a topic to delve into, so they choose the theme of horticulture, and will gladly help if they can use the garden as the focus of their bicentennial activities. You will tie the heirloom connection back to a social studies unit, which works well for you, too.

*Museum-Day Care-Native American Partnership*

You are a museum educator seeking a creative outdoor display. You decide to put in a "Three Sisters" garden of corn, beans, and squash as a way for your clientele to learn more about native people in a culturally sensitive manner. You enlist the help of preschoolers from a day-care center to plant in late spring. Later, you invite them back for a fall harvest celebration, at which a member of a local Indian Nation has generously agreed to come and provide some Iroquois stories. You gain from having the new exhibit and the extra help. The director of the day-care center is thrilled to have a meaningful way to expose her children to native culture; she offers to partner with you on another project. The kids enjoy getting their hands dirty, and meeting the storyteller. The storyteller is pleased to have the opportunity to share her art. She is also gratified that you have chosen to focus on the present, not just the past, with respect to Iroquois people, and the two of you look for ways to work together in the future. All this from planting a small garden.

*Alternative School-Garden Center-Cooperative Extension-Master Gardener Partnership*

You are a counselor in an alternative school and you have never gardened, but you have heard of the positive results of gardening programs, particularly in this environment. After reading everything you can get your hands on, you call a meeting with another school counselor, a local garden center owner, a cooperative extension educator, and two Master Gardeners. Although you are bursting with ideas, you all agree that it will be important to start the first year with a small group of motivated teenagers. The garden center will supply some vegetable plants, the extension educator will help you design a small
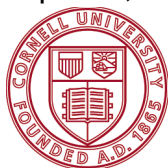
garden and the activities, and the other counselor will work closely with you in each initial session. The Master Gardeners will visit for two of the later sessions, and will assist the teens when they take produce to the county fair for judging. The other school counselor agrees to be the liaison between the administration and the project, while you focus more on the youth. You eagerly anticipate having these young people putting their produce on public display.

## Establishing Partnerships

Have you considered reaching out to:
- A local 4-H club, neighborhood watch group, nursing home, food pantry, afterschool program, job training program, an arts foundation?

Brainstorm, who can be approached to help make the dream a reality? Make a list below:
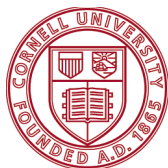
# Consider the benefits of garden-based learning to your circle of influence.

Write your program goals along the sides.  How do the benefits you include speak directly to those goals?
How might you articulate those benefits to all those involved, thus telling the good story of your work?

How can this school garden and garden-based learning benefit *your* students? **Students**

**Teachers** How can garden-based learning benefit you and your colleagues?

How can garden-based learning enhance the culture of teaching and learning at your school? **School Culture**

**Community** How can this school garden and garden-based learning benefit the community?

# Preparing Your Elevator Speech Activity
*Adapted from "The 30 Second Elevator Speech," University of California, Davis*

An elevator speech is a clear, brief message or "commercial" about you. It communicates who you are, what you're looking for and how you can benefit a company or organization. It's typically about 30 seconds, the time it takes people to ride from the top to the bottom of a building in an elevator.

**The bones of your speech:**
- Who you are and your connection to the garden project
- About the garden project and its role in the community; give a specific example of impact.
- Why you are interested in the listener and what collaboration or partnership could occur.
- What the benefits are of partnership or collaboration
- A call to action. For example: come visit the garden, attend our next meeting, make a donation, or lead a workshop at the garden.

**Write your speech:**
- Step 1: First write down all what comes up in your mind.

- Step 2: Then cut the jargon and details. Make strong short and powerful sentences. Eliminate unnecessary words.

- Step 3: Connect the phrases to each other. Your elevator address has to flow natural and smoothly. Don't rush.

- Step 4: Memorize key points and practice.

- Step 5: Have you really answered the key question of your listener: What's In It For Me?

- Step 6: Create different versions for different situations of your elevator speech.

# A Case Study: The Importance of Ownership

**Answer these questions after reading the two scenarios below:**

- In which scenario do more people have a sense of ownership?
- In which will the children feel that the garden is theirs?
- Which will have an easier time getting people to help with summer maintenance?
- Which will local businesses want to donate to?
- Which has a lesser chance of being vandalized?

**Scenario 1:** The planning committee has carefully thought out the school garden program and designed a beautiful plan. Each step of the way, they've included the participants and other partners, and have worked hard to be sensitive to the particular needs of the students and teachers. Now, it's time to build the raised beds. Four planning committee members work from dawn to dusk on Saturday to get them build and filled with soil. So why are they disheartened when Monday arrives and no one even notices the new beds? What did they do wrong? And, the groundskeeper has the nerve to grumble about the "dirt" they have spilled across the parking lot. They all have a lousy day, feeling unappreciated and resentful.

**Scenario 2:** Several weeks before the same Saturday, the committee beings to get people psyched up for the big "bed-building." A newspaper article appears, talking about how the school children are going to be "making their beds," and welcoming the community to join them. The committee invites the primary school children to come to the bed-building with their parents, and request that people bring along their garden tools and sandwiches. They encourage the community service groups and garden clubs to join them in the excitement as well. Friday comes, and the planning committee carefully marks out the garden design with a large bag of white flour, and cross their fingers it doesn't rain. Saturday arrives. The local donut shops have donated all their day-old donuts to the cause, and PTA members fix coffee and juice in the cafeteria, bringing trays of donuts and drinks out to the workers.

While one group mixes topsoil, compost, fertilizer, and lime in a large pile, others remove sod in the whimsical, curvy design that the children developed. They carefully edge the beds, and get the stepping stones ready. Another group is building a small archway. Children are racing around form the bed-building to the playground nearby. The groundskeeper and principal are working alongside the parents and the teachers. When the soil mix is ready, and the sod has been stripped, it would be easy to dump the topsoil/compost in the beds with a few wheelbarrows—but instead, the committee has arranged in advance to have about 75 buckets at hand, so everyone lines up in a "Bucket Brigade." The buckets are filled with topsoil, and passed down the line until the new beds are heaped with the healthy mix. Others stand by to work the topsoil mix
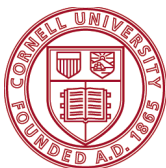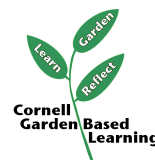
into the new beds.

The local television crew films this event for the six o'clock evening news (which, of course, the whole community will eagerly watch). Afterward, everyone helps to clean up. A volunteer sends thank yous to each organization that helped out, and puts a big THANK YOU in the school newsletter.
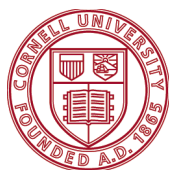
# Children, Youth, School, & Community Garden
# Logic Model

Often in our programs, we focus on activities, at the expense of looking at a program as a whole. Use this work sheet over time to think of the entire program picture, from your mission, vision, need and unique situation, all the way to what you hope to accomplish with all of your good work. Seen in this way, the "activities" are a path from mission to outcomes — just one part of the program story!

**Developed by Marcia Eames-Sheavly for the Cornell Garden-Based Learning Program.**

| Need/Issue/Situation | Inputs | Activities | Outputs | Short-term Outcomes | Long-term Outcomes |
|---|---|---|---|---|---|
| Our mission... | Partnerships... | In class, indoors, schoolyard, garden... | Young people engage in or try... | Satisfaction... | Life-long... |
| Our community... | Support needed from... | Projects... | Adults model... | Knowledge... | Healthier... |
| Young people need... | Contributors include... | Field trips... | The community creates... | Participation... | Support for... |
| We are concerned about... | Other... | Events... | Other... | Increased... | Achievement in... |

# Hosting a Garden Design Charrette

Including the community is the best way to ensure a successful and long-lasting garden project. Hosting a garden design charette is a fun way to learn what other's hope to get from the garden project and what their visions may be.

You may choose to have one longer session for the charrette or multiple shorter sessions. It may depend on the scale of your garden project and the community you are within.

**What is a design charrette?**
A planning session where citizens, designers and others collaborate to form a plan or design. It provides a gathering of ideas and offers immediate feedback to the designers. Most importantly, it allows everyone who participates to be a mutual author of the plan.

**Before the Event**
- Host the garden design charrette in an accessible community space where all will feel welcome. Schedule a date and time that will be most appropriate for community members.
- Advertise far in advance, giving plenty of time for individual's to get it on their calendar and set up transportation. Advertise in a variety of methods to ensure a wide variety of people learn of the event.
- Plan to provide light, healthy refreshments for the group.

**Setting Up the Event**
- Set the room up with groupings of tables, conducive to group collaboration. Provide large pieces of paper, markers, and rulers at each table.
- Have a sign-in sheet near the door and encourage participants to provide their names and contact information if they are interested in being involved with the garden project.
- Provide nametags for participants.

**During the Event**
- Have a key member of the advisory group introduce themselves and provide background information on the garden project.
- Go around the room and have each member introduce themselves and share their favorite vegetable.
  - If the group is quite large, start by having the members of each table grouping introduce themselves to each other.
- Provide the purpose and desired outcomes of the design charrette
  - Purpose is to bring community members together for a planning session of the future garden project. One hope is to allow everyone there to be a mutual author of the plan.
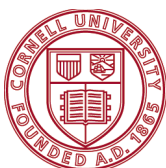
- By the end of the session, several designs will be made and presented. The core advisory group will collect them, compare them and put them into action.
- If the garden site had been established, describe it in detail and include a map or basic drawing of the plot of land.
- Provide some guidelines for the small group design sessions. For example:
  - Garden name
  - Garden theme
  - What types of plants will be grown in the garden
  - What structures will be in the garden
  - What will the garden look like? Draw out a plan.
  - Fundraiser ideas
  - Summer care ideas
- Ask that adults in each group include ample input from the youth in each group.
- Give the groups about 30 minutes to brainstorm together and draw out their garden vision. Then ask each small group to present their ideas to the full group. Encourage youth participants to present!
- As a facilitator, compare similar themes and draw parallels between design ideas.
- Work as a team to combine ideas and create the future garden design.

**Closing the Event**
- Thank all participants and reinforce the amazing work the group did together. Maybe even encourage a round of applause for themselves.
- Stress that participants should continue to be involved throughout the garden project. Provide them a way to get in touch with the advisory group and a place to learn of upcoming events.
- Make sure to collect all drawings and notes to use for future reference!
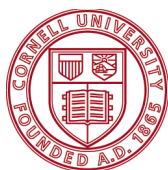
# Checklist For a Good Garden Site

Does your garden have:

- ☐ Well-drained soil, free of heavy metals such as lead
- ☐ Full sun and protection from wind
- ☐ Proximity to a water source
- ☐ Nearness to classrooms or meeting place with seating and shade
- ☐ Storage space for tools and equipment
- ☐ Availability of additional space for composting, pathways, improvements, expansion
- ☐ Security from theft and vandalism (do people who could watch over the site live nearby?)

Other things to consider:

- ☐ Are there on-site materials that need to be removed, such as blacktop or debris?
- ☐ Should you perform a soil test before planning? If so, contact your local Cooperative Extension Office.
- ☐ Will you build raised garden beds or plant directly into the ground?
- ☐ Is the site location safe for participants? (Will motion-sensor lights be needed, and can they be installed?)
- ☐ Will you need a fence to prevent unwanted wildlife from entering?
- ☐ Is there a "garden guardian" who lives nearby who can watch over the site to help prevent theft or vandalism?
- ☐ Will you have a garden sign (or numerous signs) to educate visitors when no one is available to answer questions?
- ☐ How can you ensure the site is accessible to all?
- ☐ Are there public restrooms nearby?
- ☐ Is the site easy to get to? Accessible by public transportation? Is parking available? Does it have a bike rack?
- ☐ Have you communicated with the groundskeeper of the site?

Notes:
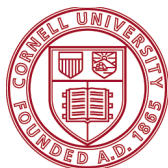
# Assessing Your Soil Texture Activity

This exercise asks you to go outside and meet the soil in your potential garden site. These are good tests to learn more about the unique characteristics of the soil. Do one, two or all three! Repeat these tests if you have more than one garden or landscape space that you want to check. Don't assume that all the soil in the garden or landscape is exactly the same. Be sure to include youth in the process!

**Things you will need for this activity:**

- Several days to complete it
- Soil samples, about 1 cup for every sample you want to test
- Spoon or small shovel
- Jar with tight fitting lid (quart size is best)
- Kitchen timer or stop watch
- Marker or tape to make marks on your jar

**1. Ribbon Test**

- Gather 1/2 a cup of soil from where you would like to test. Discard large rocks. If soil is VERY DRY, you may need to add a little water. If soil is VERY WET you will need to let it dry out. *Ideal moisture feels similar to a wrung out sponge.*
- Squeeze soil in your bare hand (so you can feel it with your skin!); if sample falls apart = Sand
- Try to make a ball with the sample. If you can make a ball = Loamy Sand
- If you have something that resembles a ball of soil, squeeze it slowly through your thumb and pointer fingers to try to form a ribbon as long as possible.

- Determine your soil type from the chart below.

| | Feels mostly gritty | Feels mostly smooth | Smooth and Gritty |
|---|---|---|---|
| Forms Ribbon shorter than 1" | Sandy Loam | Silty Loam | Loam |
| Forms Ribbon 1"-2" | Sandy Clay Loam | Silty Clay Loam | Silty Clay |
| Forms Ribbon longer than 2" | Sandy Clay | Silty Clay | Clay |
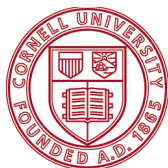
Cornell University
Cooperative Extension

## 2. Shaker Jar Test

- Pick several spots in the garden and dig with a trowel about 8" down below the soil surface.
- Fill a quart jar 1/2 full of soil, fill the rest with water & shake for 3 min.
- Let settle for 24 – 48 hours (heavy clay soils will take longer).
- Sand will settle first on the bottom, followed by silt, then clay, then organic matter (floating on top).
- Going Further: Each layer is a percentage of the entire layer of dropped soil particles. Measure each of the 3 layers and divide each layer height by the total height. Then multiply by 100 to find the percentage of sand, silt and clay. A soil that is abundant in clay will, of course, have the highest percentage of a clay component...and so on. Note: Any dark colored material floating in suspension in the water is organic. You will have to estimate how much of this you have or scoop it off to measure it in a dry jar of the same size and shape.

## 3. Percolation Tests

Outside Test:

- Dig a pit approximately 1 foot deep. Fill with water and allow to drain completely, then refill and measure depth of water. After 15 minutes, note depth and calculate rate as inches/hour.

Desktop Test

- Take several 2-liter soda bottles (or gallon jug or equivalent) with labels and tops removed. Poke several pencil sized holes around the bottom. Fill halfway with soil from test spots taken for above jar test. Fill once and let drain. Then fill again and time how long it takes to drain, while making observations as it flows through. Calculate inches/hour.

- Poor = < 4"/hr
- Moderate = 4" – 8" /hr
- Well = > 8"/hr

## Your Findings

- What color is your soil sample - be specific? Does it feel gritty or smooth?
- Did each of the tests above indicate the same soil type?
- What soil type did you determine you have? Clay, Sandy, or something in between?
- How will these findings affect your garden plan?
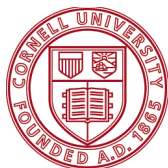
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# Cultural Competency and Engaging Diverse Audiences

Successfully engaging diverse community members is an important part of any garden project. Without diversity, the garden will lack representation from the whole community and thus will likely be less successful. Just as the garden is more interesting and beneficial with diverse plantings, a community project will have more sustained success with inclusion and input from diverse community members.

Steps for Inclusivity
- Build relationships
  - Learn about the community's needs/hopes/dreams
  - Meet them where they are
  - Understand where they are coming from
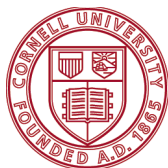
- Create a welcoming atmosphere
  - Share resources
  - Include everyone in decision making from the very beginning

- Increase accessibility
  - Transportation: Is there a bus stop nearby? Are bike racks available?
  - Encourage culturally diverse growing techniques
  - Include multilingual signage and educational materials
  - Consider wheelchair accessible raised beds

- Maintain relationships
  - Just as you would in a friendship: check in with, spend time with and maintain the relationship; don't let the relationship fall from your radar
  - Plan an annual garden celebration to honor the hard work and dedication of everyone involved

- Think of creative ways to partner with diverse organizations and agencies in your community

Adapted from the Natural Leaders Initiative, http://ccetompkins.org/community/natural-leaders-initiative.

# Expert Advice: Elements of Youth Gardens
When asked: "*What elements of design are crucial to a youth-focused garden?*"
Youth Garden experts from around the country had a lot to say!

**Whitney Cohen, Education Director of Life Lab in Santa Cruz, CA**

- A few things we love having in our Garden Classroom at Life Lab include:
    - Chickens, an observational beehive, and a worm bin ... the kids love visiting the animals!
    - A tunnel covered in plants.
    - A sink with 8 spigots right down at kid-height ... this has been a huge time saver when we have to wash hands as a group.
    - Lots of edibles that are delicious raw, like cherry tomatoes, sugar snap peas, and the like for garden grazing.
    - Root crops! Kids always flip out when they pull a carrot or beet or potato from the ground.
    - Nectar-suckers: Flowers kids can pick and then drink nectar from the bottom of ... here, or best one is a Jerusalem sage.
    - I also love seeing important regional crops featured in school gardens, like cotton, wheat, or sugar cane ... things kids all see in their daily lives but may have never seen growing on a plant.

**Carolina Lukac, Vermont Community Garden Network's Garden Education Manager in Burlington, VT**

- Shade structures can be very simple, but will be extremely useful.

- Design garden beds appropriate for children's size.

- Include a "digging garden" for very young children.

- Have your signage designed and painted by children.

**Erin Marteal, Executive Director of Ithaca Children's Garden in Ithaca, NY**

- Design space that allows children to create their own experience through manipulation of loose parts, elements, and plant material underpins successful child-orientated space. While creating beautiful, whimsical displays delight adults, an abundance of time, space, and natural materials allows for boundless child-centered exploration, and keeps kids coming back again and again.
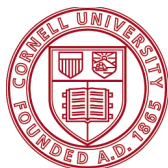
**Mark Miller, Education Manager at Franklin Park Conservatory and Botanical Gardens in Columbus, OH**

- A design focus based upon a child's perceptions and stages of development; child's scale, interactivity (both gross and fine motor skills) and movement. As for discrete elements: Plants (edible, decorative, fragrant, large & small), water that can be manipulated, free-form play area, areas where children can "hide" from adults, topography (high & low areas), areas/entrances that only they can use (and not adults).

**Myra Manning, Maine School Garden Network Coordinator in Augusta, ME**

- A garden design that makes everyone feel welcome.

- Getting input from stakeholders including teachers, parents, community members, and students themselves on what the garden should look like and what the goals are is also crucial.

- Utilizing permaculture and those design ethics, as gardens should be designed to limit the amount of management necessary and create as self-sustaining a system as possible.
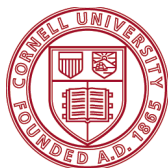
# Activity: Coins of Strength

*Goal:*
- To provide a quick experience that illustrates the strength-based approach to working with children and youth (as well as multi-generational groups and other diverse groups) versus a deficit based approach.
- To get people thinking about how our strengths are often our weaknesses as well—and getting rid of one will always impact the other.

*Materials:*
- Paper or wood circles (I use a rubber stamp of a quarter to make the circles look more coin-like but this isn't a requirement), I've also just used small post-it notes with good success but my favorite is just print the words on card stock and fold them and glue with the stick post-it glue. (last three sheet of this document)
- Room for people to circulate
- Markers

*Time:* Varies with how much processing you want to do

*What to do:*

| Plan A: *(when you don't have a lot of time or when you have people who don't know each other well)* | Plan B: *(works best when you have more time to process and/or people know each other better)* |
|---|---|
| <u>Preparation</u><br>Step One: Have the circles/cards filled out with the strengths/weaknesses listed below.<br>Step Two: Tape the circles up on the wall, or display on a table with the **strength showing**.<br>Step Three: Ask participants to choose one to three strengths that best fits them and remove it from the wall and tape it to their shirt (or just hold it).<br><br><u>Experience:</u> Have participants go around the circle quickly and introduce themselves and include their strength. Example: "My name is Cathann, and I'm Persistent."<br>NOW—Have the participants flip their circles over and go around again quickly introducing themselves again and including their weakness. Example: "My name is Cathann, and I'm Stubborn." There is usually a noticeable difference in how people feel after the second introductions.<br><br><br>Apply the experiential learning model to talk about the experience— | <u>Preparation</u><br>Step One: Have some circles blank and some already filled out (if you start with them all blank and ask participants to write down their greatest strength and then the flip side-- they don't seem to get it. I've found it really works best if I provide prompts and then include a few blank ones for the folks who don't find themselves in what I provide).<br>Step Two: Distribute circles onto tables along with markers – STRENGTH side up<br><br><u>Experience:</u> Ask participants to find a coin that best fits them. Let them know that if they don't find one that fits to create one of their own. Ask them to mill around and find one other person with whom to share their coin, including the flip side. As part of the sharing, have them give examples of the strength in their life and how it fits with the weakness. Note: be sure and remind those who created their own to think of the flip side of their coin. After they have shared with one other person, have them find another pair and repeat the activity.<br>Re-convene to a larger group and continue— |

<u>Share</u> what happened:
How did it feel to introduce you the first time?
How was it different the second time?

<u>Process</u> by asking some of the following:
Are the two different descriptions related?
What was important about what you just experienced?

<u>Generalize</u> the experience:
How do other people usually see you?
How would you like other people to see you?

<u>Apply</u> what was learned:
How might this experience help you in another situation?
How will you use this experience?

# THE COIN LIST

I've just created a list as I've gone.  I always find new ones whenever I do the activity but this list should get you started:

| Weakness/Liability | Strength |
| --- | --- |
| Short Attention Span | Many Interests |
| Irresponsible | Fun-loving |
| Distractible | Perceptive |
| Unpredictable | Flexible |
| Impulsive | Carefree |
| Loud | Enthusiastic |
| Stubborn | Persistent |
| Poor Planner | Spontaneous |
| Willful | Determined |
| Bossy | Leadership |
| Disorganized | Creative |
| Argumentative | Committed |
| Tests limits | Risk-taker |
| Manipulative | Negotiator |
| Anxious | Cautious |
| Explosive | Dramatic |
| Disobedient | Self-directed |
| Impatient | Eager |
| Rebellious | Nonconformist |
| Talks too much | Articulate |
| Boring | Stable |
| Critical | Analytical |
| Rigid | Organized |
| Aloof | Quiet |
| Picky | Detail - oriented |
| Arrogant | Logical |
| Flaky | Sensitive |
| Undisciplined | Imaginative |

| | | | | | |
|---|---|---|---|---|---|
| Many Interests | Fun Loving | Perceptive | Flexible | Carefree | Enthusiastic |
| Short Attention Span | Irresponsible | Distractible | Unpredictable | Impulsive | Loud |

| | | | | | |
|---|---|---|---|---|---|
| Persistent | Spontaneous | Determined | Skilled Leader | Creative | Committed |
| Stubborn | Poor Planner | Willful | Bossy | Disorganized | Argumentative |

| | | | | | |
|---|---|---|---|---|---|
| Risk Taker | Skilled Negotiator | Cautious | Dramatic | Self-Directed | Eager |
| Tests Limits | Manipulative | Anxious | Explosive | Disobedient | Impatient |

| Nonconformist | Articulate | Stable | Analytical | Organized | Quiet |
|---|---|---|---|---|---|
| Rebellious | Talks too much | Boring | Critical | Rigid | Aloof |

| Detail-Oriented | Logical | Sensitive | Imaginative | Energetic | Spontaneous |
|---|---|---|---|---|---|
| Picky | Arrogant | Irritable | Unpredictable | Hyperactive | Impulsive |

| Creative | Imaginative | Global Thinker | Flexible | Independent | Committed |
|---|---|---|---|---|---|
| Distractible | Always Daydreaming | Inattentive | Unpredictable | Argumentative | Stubborn |

| | | | | | |
|---|---|---|---|---|---|
| Clever | Responsible | Team Player | Innovative | Conceptual | Intuitive |
| Smart Aleck | Controlling | Dependent | Reckless | Head in the Clouds | Undisciplined |

| | | | | | |
|---|---|---|---|---|---|
| Rational | Analytical | Self-disciplined | Trusting | Integrative | Competitive |
| Uncaring | Nerd | Stick in the Mud | Gullible | Can't Focus | Aggressive |

| | | | | | |
|---|---|---|---|---|---|
| Playful | Sensible | Egalitarian | Flexible | Idealistic | Enthusiastic |
| Irresponsible | Boring | Defiant | Unpredictable | Unrealistic | Hyper-excitable |

# Hart's Ladder of Participation Activity

Do you engage children and youth in planning and decision-making in your program?  Let's use Hart's Ladder of Participation to find out!

Dr. Roger Hart (co-director of the Children's Environments Research Group) created a "ladder" of participation to help us think about where we really are and where we'd like to be in terms of children's participation in our programs. This ladder was not created to suggest that we have to be "at the top" rung, but rather, that we ought to be aiming to get out of the lower rungs of non-participation, and think of ways to genuinely engage children and youth.

**Activity:**

1. Read and reflect upon the 8 rungs of the ladder.

2. Which rung does your garden project fit into?

3. What steps can you take to reach a higher rung?

Below are the main points to consider from the ladder:

## Roger Hart's Ladder of Young People's Participation
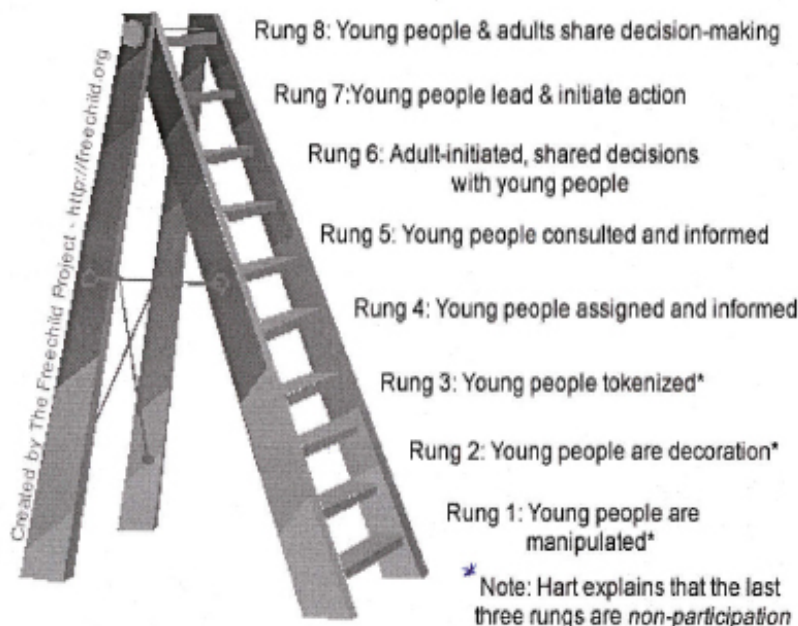
Created by The Freechild Project - http://freechild.org

Rung 8: Young people & adults share decision-making

Rung 7: Young people lead & initiate action

Rung 6: Adult-initiated, shared decisions with young people

Rung 5: Young people consulted and informed

Rung 4: Young people assigned and informed

Rung 3: Young people tokenized*

Rung 2: Young people are decoration*

Rung 1: Young people are manipulated*

\* Note: Hart explains that the last three rungs are *non-participation*

Adapted from Hart, R. (1992). *Children's Participation from Tokenism to Citizenship.* Florence: UNICEF Innocenti Research Centre.
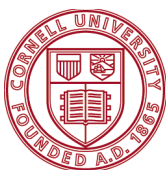
# Degree of Participation

8. Child-initiated, shared decisions with adults:

- Young people feel competent and confident enough in their role as community members to understand the need for collaboration and that in asking adults for their input, the project may be strengthened.
- There is abundant trust.
- Adults serve as listeners, observers and sounding boards (i.e. they don't jump in with their own designs on the project, or to organize the project).
    - For example, young people may determine that they want to clean up a wooded area in their community to create a nature trail. They learn about all aspects of creating such a trail, hold meetings to plan it, but check in with a friend's parent in local government, several parents, and a teacher with an interest in ecology, for their diverse ways of thinking about certain aspects the project.
- The goal isn't about "kids' power."

7. Child-initiated and directed projects:

- Adults notice a youth-led project emerging and allow it to occur in a youth-directed fashion.
- Hart places this second on the ladder because occasionally young people don't trust adults enough to seek their input. The caution with this rung is in children carrying out their projects in secret because of fear of adults, or being intimidated by them. An example is a literal secret garden that adults are not aware of.

6. Adult-initiated, shared decisions with children:

- Children are involved to some degree on every part of the process of garden planning, design, and implementation.
- Adults make no assumptions about what children want in the landscape.
- Children understand issues such as fundraising, garden design, organization and management
- Children understand how and why compromises are made, if they are necessary. They may also begin to cultivate a "language" of talking about this with others.

5. Children are consulted and informed about project:

- Project designed and run by adults, but the children's views and opinions are taken seriously. A good example is with a survey designed to gather young people's input into a school garden: children are informed of the purpose, they may be asked to volunteer, and afterward, they are fully
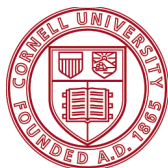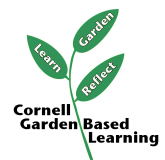
informed of the results.

4. Assigned but informed:

- Children are assigned to a project and may not initiate the project themselves, but they are fully informed about it (i.e. a school garden project).
- Children may still have a sense of real ownership of the project.
- A key aspect of this rung is the degree to which children are engaged in critical reflection. For example, are children just viewed as a free source of help for the garden project, or do they have a chance to reflect on it, consider it, and learn from it?

3. Tokenism:

- The most challenging and most common among very well-meaning adults. Adults are genuinely concerned about giving children a voice, but haven't really begun to think carefully about the best approach for this.
- The appearance of children's involvement is there, but in fact, they have had little choice about planning the garden project, communication around it, and no time in which to critically reflect and form their own opinions.
  - An example is that adults select charming, articulate youth to talk about the garden in a public venue, but those youth haven't had ample opportunity to critically reflect or consult with their peers. The key here is symbolic versus actual engagement and involvement.

2. Decoration:

- Involves, quite literally, decorating children. For example, they may sport garden T-shirts with no involvement in organizing or understanding the program.
- Adults use children to bolster the program as if the children are understanding participants. For example, adults make children sing garden songs at a harvest festival, and it may even appear that they wrote the song, or that they were involved in organizing the garden or the festival, when in fact they were not.

1. Manipulation or Deception:

- Adults consciously use children's voices to carry their own message about the gardening project. For example, they produce a garden poster, advertisement, or publication with drawings by children, when children aren't involved in the program planning.
- Adults may deny their own detailed involvement in meetings, planning, shaping the project because they think it diminishes the effectiveness or impact of the project – they may say that children are genuinely
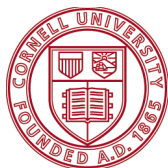
engaged, when engagement constitutes weeding or planting.
- Adults may design a garden, have kids do a simple planting, then tell the local newspaper that kids designed and built the garden.
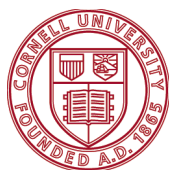
# Consider Age Appropriate Activities

Depending on the age of the children and youth in your program, there are many ways to incorporate opportunities for decision-making.


Reflect and ask yourself:


- Is there anything you are doing that could be done by the children and youth in your program?


- Are there any decisions that they could make?

    - Keep in mind that it is worse to set up false expectations by giving children the opportunity for input that isn't real. For example, if you know that your school garden must be in a certain location, and that the groundskeeper and administration have stated that it can only be so large in scale and scope, containing so many plants, then children's input may be limited to certain decisions.


- If certain decisions are made, and they are different from what you envisioned, can you live with them?


- Are there open-ended possibilities within your program design?


- Are there opportunities for determining elements within a designed activity? For example, you've decided that planting will take place over these three days, but is there a way that children and youth can decide what to plant?


- Can interested children and youth engage in further activities on their own?


- Can a special club be formed that isn't faced with some of the constraints of, for example, the school day?
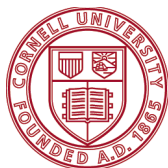
# Using Hart's Ladder – Ages 3 to 6

Children at this age are beginning to express ideas, ask questions, and engage in discussions. They are developing more independence and like to be provided with choices. Often they have developed likes and dislikes and are able to express them. Verbal and fine motor skills continue to develop and children are increasingly able to express ideas verbally and through drawings.

What kinds of decision-making and planning can children ages 3-6 dig in to? Three to six year olds may not be ready for allocating project funds. However, they do know what they like (e.g. red flowers, carrots, butterflies, blueberries, worms) and what they like to do (e.g. run, play, hide)! They are often open to change and eager to try new things (choices about growing really giant plants or tiny ones, raising "strange" vegetables like blue potatoes and round carrots). Start small and provide choices. Be willing to embrace inefficiency and accept a garden that takes shape slowly and is a little messy.

## Planning the Garden

- Be sure that children know what you mean by "garden."
- Read stories about gardens. Talk about the story: what the gardens look like, what's growing in them, and what the people and animals do in the gardens.
- Visit nearby gardens and or look at pictures of gardens. Be sure these are similar in size and scope to your project.
- Visit the area you are planning on creating the garden or the garden you are planning on revitalizing.
- Ask children what they envision themselves doing in the garden. You'll find out what they think will be fun about the garden and what they see themselves doing there. Knowing what they would like to do in the garden can help design things like paths, hiding places, and benches.
- Engage children in deciding what plants will grow in the garden: What types of plants would you like to have in the garden: trees, flowers, vegetables, fruits, shrubs, vines? What color flowers would you like to have in the garden? What types of vegetables do you want to grow? Provide pictures of what these plants look like. It's okay to narrow plants down to what works for your site. Provide children with reasonable choices (tomatoes vs. pineapple) and let them decide from there.

## In the Garden

- Don't hesitate to let children help prepare the garden. If you have to move soil or woodchips ask for their ideas on how to do that.
    - At Keuka Lake School, children moved an eight-yard soil delivery to their garden by moving the soil with buckets while they were outdoors playing. It took three weeks to complete but was worth the extra time.
    - At the Dryden Elementary school, a similar task was completed on a Saturday with children, youth, families and community members, and took a little more than an hour with a "bucket brigade."
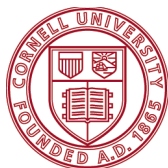
- Assess how important it is for your garden to have straight rows or flowers separate from vegetables and allow children to make decisions regarding where plants and seeds will be planted. Allow for experimentation. Picking a green tomato is not the end of the world. Making decisions on what to harvest when can lead to fun discoveries.

**Possible Activities**
- Tell a story about a new garden that children wanted to grow at their school, park, or backyard. If you already have a location in mind, describe it in the story (the garden was to be a big rectangle near the playground). In the story have all the people involved – the teachers, the children, the parents, the squirrels, the classroom hamster – and they are asked what they would like the garden to be like. What colors will you see there? Who will visit the garden? What will people do there? What type of plants will be there? Don't give any answers or overly "prompt," just tell that each of these people/creatures was asked. At the end of the story, ask the children how they would answer the questions.
- If you have a list of possible plants for the garden, make them into large flashcards with color pictures showing the character of the plant (tall vs. short; flowers vs. fruit or vegetable). Allow children to spend time looking and playing with them. Ask them to share with you the plants they like the best. The flashcard activity can also be done with types of plants: trees, shrubs, flowers, herbs, vegetables, and fruits as well as non-plant elements: paths, benches, water, tunnels, and curbs. To narrow down plant choices even further, tape the flashcards to the wall. Allow children a certain number of stickers and ask them to stick the stickers to the plants they want to have in their garden.
- Spend a lot of time asking children what they would like to do in the garden. They might not be able to equate read stories with providing a shady seating area but their answers can help guide you. For instance, if most children talk about eating vegetables or fruits, planting a flower garden might not be the best choice. If children talk a lot about seeing butterflies or catching ladybugs, choose plants that will attract them.
- If you need to move soil or wood chips to the garden plot, invest in child-size wheelbarrows and shovels or provide buckets or leftover plastic pots for scooping, carrying, dumping.
- Children's technique may not be perfect or their rows straight but show children how to plant a transplant or seeds and then let them try themselves. Use hula-hoops or large twigs to outline certain areas. Tomatoes go in the pink circle. Marigolds go in the yellow circle. Make sure you have a few more plants than you need. If plants are crowed after a few weeks, children can dig them out and plant them in another spot. Make sure to have enough tools for everyone.
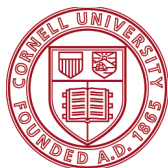
# Using Hart's Ladder – Ages 7 to 11

Children in this age group enjoy working with others and often begin participating in community activities and clubs. Their ability to reason and think systematically increases; thinking continues to be concrete, centered on what they can do or experience, but the ability to understand abstract ideas starts to develop in 9, 10, and 11 year olds. Children this age are highly verbal and with well-developed fine motor skills are able to express themselves in writing as well as drawing. They ask more fact-oriented questions (how? why?) and enjoy task-oriented projects. Many times they welcome challenges and enjoy finding solutions to what may be viewed as problems or program difficulties. For this reason, they may be ideal partners in devising a new garden program.

What kinds of decision-making and planning can children ages 7-11 dig into? Why limit youth involvement to interacting with the garden when it's being planted or once it already is? Seven to eleven year olds are developing new skills at a rapid rate and what better way to put them to use than in your gardening project! Think about all the tasks that are involved in the garden project: deciding what the garden's theme will be, charting garden expenses, figuring out the amount of wood chips needed, and writing letters for plant donations. Try involving youth this age from the beginning and be honest about all the known details as well as unknowns. Be realistic and allow enough time.

**Planning the Garden**
- Starting at the beginning and bringing young people up to speed. The first step to increasing participation is to involve youth from the beginning. If you have information about possible garden locations, existing funding or budgets, restrictions your school has placed on the garden, already donated plant material, put it out on the table from the very beginning.
- Build in opportunities to discuss challenges, restrictions, and barriers. Elicit feedback about possibilities for overcoming these challenges, and openly address the realities of the program environment (issues related to, for example, restrictions on what can be placed on school grounds, and what cannot). Brainstorm ideas for creative alternatives (stones placed to look like running water if water cannot be feasible on the site). Children at this age may welcome opportunities to provide creative substitutes!
- Be realistic about the amount of time it will take to complete the project with young people involved, especially if you're working with a large group like a grade level or entire school.

**Deciding what the garden will be and what it will look like**
- Ask young people all the questions necessary to generate a good vision of the what the garden will be: what will people do in the garden, who are those people, what types of plants will be grown, will the garden have a theme, how big should it be, what non-plant elements are needed.
    - Figuring out the details: Often adults are the ones laboring over
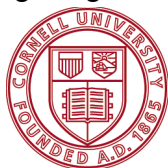
how much topsoil, compost, or mulch to order. Why not encourage young people do the measurements and math?

**Funding, supplies, and donations**
- Raising funds, gathering supplies, and requesting donations are all activities adults often presume young people aren't interested in or aren't able to participate in.
- What ways can young people help decide how to go about these tasks? Might they have a great fund raising idea? Perhaps they can write the donation request letter to a local nursery, or create a general request that can be duplicated and given to community members. Putting together request folders with information about the project, a wishlist, and general request letter are appropriate activities at this age. The sky's the limit with respect to enhancing the front of the folder with garden-related artwork.

**In the Garden**
- Installing the garden: How much pre-preparation do adults really have to do? Many young people arrive at their garden site to find a smooth, tilled, amended surface with paths in place. The process is much quicker with a rototiller and a couple parents with wheelbarrows but this can create a break in the feeling of ownership. Preparing a new garden is often a tough job. What better way to appreciate the work that goes into it that to participate? Youth can help to brainstorm ways to break it into manageable tasks so that it isn't overwhelming. Many hands make for lighter work.
- Maintaining the garden: Who decides what needs to be done, when it needs to be done, and who will do it? Often adults construct a framework: second graders weed, fourth graders water every other day. If the youth are new to garden they may have to get to know the tasks and time it takes to maintain a garden. After a period of experimentation try letting young people decide on schedules, tasks, and assignments.
- Uses of the garden: Are young people deciding what happens in the garden? Most gardens serve a main purpose: outdoor classroom, vegetable garden to supply a food pantry, beautification. When it comes to other uses, can youth make decisions about what they do there? Are young people free to visit the garden any time? Are they free to interact with the garden: weed or deadhead, pick beans, collect leaves for an art project?

**Possible Activities:**
- Set up at voting booth. At New Berlin Elementary, project coordinators narrowed down a list of low maintenance plants suitable for their area. Students had access to images and names of the plants over the course of several weeks. On "Election Day" each student was allowed to enter a mock voting booth, complete with curtain, and cast a vote for their top three plants. The fourth grade classes were in charge of tabulating the
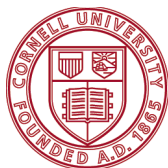
data and presented the results to the school through a variety of graphs and charts.

- Hang an idea mural in a common area like a cafeteria, gym, or community room. Head the mural with one or two questions: What will people do in the garden? What will the garden look like? Provide markers near by so that young people can add an idea or picture when the mood strikes. Allow a time period of the mural (a week or two) and also allow time for the ideas generated to be compiled.
- At E.J. Russell Elementary, students involved in designing a new courtyard garden for the school took a field trip to a botanic garden. They were provided with journals with question prompts or guided observations. Students filled the journals out during and after the field trip generating ideas for their garden.
- Introduce "garden math" with concepts such as square feet and cubic yards. Once young people have the tools to make these calculations, allow them to take measurements of the garden site and calculate how much soil, compost, and/or mulch that's needed.
- Rather than have a garden designer or landscape architect draw the plan for the garden, encourage an art class or artistic members of your group to draw both a planting plan (to scale on graph paper) and an artistic version of the garden plan. Engaging the assistance of a parent who is genuinely enthusiastic about children and youth participation, and willing to take the time to work with them to bring out their ideas, can be an ideal alternative.
- Keep a poster-sized budget posted where youth can add what's been spent, what's been earned, and the value of what's been donated on a regular basis.
- Look online to see which local nurseries and garden centers. Narrow down the list to those that carry the type of plants you need and write request letters that describe the project, your need, and the plants you are requesting.
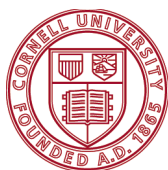
# Using Hart's Ladder – Ages 12 to 18

Youth in this age group move from concrete to abstract thinking. Increasingly, they are able to differentiate between how things are and how they may be. Youth prefer seeking out their own solutions rather than accepting solutions from adults. If a project is meaningless, they often lose interest since increasingly they feel the need to be part of something important. Their peers have great significance, and belonging to a group may feel like a high priority. Encouraging friends to work together, and allowing for plenty of "hang time", may ensure success with this age group.  What kinds of decision-making and planning can youth ages 12-18 dig in to? You may find that it's more difficult to get youth this age interested in your gardening project if they don't have some decision-making power. "Why are we doing this garden anyway? What's the point of me being here?" If the project has little meaning for them they aren't going to stick with it or have a very good time either. Youth at this age can take most everything seven to eleven year olds have been doing to the next level. Think of ways to switch the traditional adult/youth roles: can young people be the project leaders and adults offer input and advice? Are there ways to genuinely have this connect to what is meaningful to teenaged youth, with adults serving as their "coaches?"

## Planning the Garden
- Start at the beginning and bring young people up to speed.
- Keep an open mind. Adults often make assumptions about teens, and teens often are  frustrated about these assumptions and how they are viewed by adults. Begin with a clean slate, and listen to what they have to share. Increasing participation with teenagers often means starting with as few assumptions as possible.
- Present more about where the idea for a garden project originated and not all great ideas you have! For instance: the community center wants to use the empty space between the building and the sidewalk for something that will benefit the community center. What are their ideas for what would be most beneficial for the community center and for the teens that routinely visit it?
- Be sure the reason behind the project is a meaningful one. Are you beautifying a neighborhood, providing a resource for play or relaxation, growing produce for a local food bank, creating an entrepreneurship opportunity?
- Lay all the cards on the table: communicate all the knowns and the uncertainties, and any restrictions that are known.

## Deciding what the garden will be and what it will look like
- Allow youth to generate their own vision of the what the garden will be: what will people do in the garden, who are those people, what types of plants will be grown, how will those plants be used, will the garden have a theme, how big should it be, what non-plant elements are needed.
- Teenagers are increasingly able to think abstractly and will be able to focus on phases. What can we do this season, how can we build on it
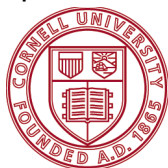
next season. What can we do with the budget we have? What can we do if we raise an additional $500? That said, everyone needs to see some results of their hard work. Consider working with teens to set up a framework that allows for some "instant gratification," as well as opportunities to grow over time.

- Teens may enjoy beginning with an internet search of what others around the nation are doing. You may want to provide a framework by giving a list of some sites to begin with.

**Figuring out the details**
- Be available to support the final stages of planning but avoid jumping in with quick fixes or possible alternatives.

**Funding, supplies, and donations**
- Don't underestimate young people's ability to work with a budget or generate creative fundraising ideas.
- Give youth room to problem solve about these issues but be available for questions or to provide resources.

**In the Garden**
- Installing the garden: Just like in the planning stage, involving youth from the beginning is important. Let them take the lead on organizing supplies, tools, and strategizing how to make things happen.
- Maintaining the garden: Who decides what needs to be done, when it needs to be done, and who will do it?
- Does the garden need "leaders" or "rules?" How are they determined and enforced?
- Encourage young people to create a medium through which decisions continue to be made.  With adults, this usually looks like a monthly committee meeting. What works for teens? An on-line forum through which they share ideas? Meeting on Saturdays for pizza and talking about issues that arise? Encourage them to consider ways to build in opportunities for consistent and regular contact around decision-making needs that arise.
- Uses of the garden: Are young people deciding what happens in the garden? Do they have a say on what happens to any consumables they grow?

**Possible Activities**
- Conduct a needs assessment. If your garden project is a result of an expressed community need, allow youth to go to the source to figure out how that need was identified and why a garden might be a good solution. Provide support in terms of contact names and the opportunity to role-play interviews but leave the questions up to them. If your project is the result of an area of land needing to be developed in some way, allow youth
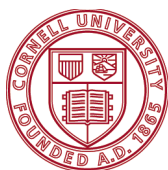
to decide if they can make use of it to support their program or interests or if they'd like to talk to other "stakeholders" about possible uses for the area.

- During the planning stage provide resources: plant catalogs, transportation to visit other gardens, and introductions to people.
- Provide an introduction to budgets and how they work and then transfer management to the youth in your program. This way they can be realistic in their planning and fundraising goals.
- There are limitless opportunities for teens to connect with community members. Consider a fun forum through which teens get together regularly for pizza (or other food), while meeting with various community members that can contribute ideas, funding, enthusiasm, and different perspectives that teens will benefit and learn from.

One faith-based program makes sure that there were always the "four F's" at every youth meeting, no matter what the activity is: fun, food, fellowship, and faith. Although the latter isn't necessarily appropriate for every program, the first three F's certainly can be. In addition, teens often welcome opportunities for altruism and generosity, and grow spiritually from the chance to care for others. Connecting service learning and community action to the project offers boundless possibilities for program offshoots.

For more ideas about youth community action visit:
http://nys4h.cce.cornell.edu/resources/Pages/YouthDevelopmentResources.aspx
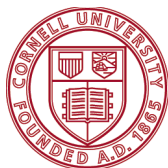
# Cooperative Extension of Tompkins County
# Long Term Volunteer Application

**(long-term commitment to the program (one year or more), involved in high-risk and unsupervised activities (chaperons, etc.), and help make decisions and direct the focus of the program)**

_____4-H          _____Agriculture          _____Food/Nutrition     _____Family/Parenting

—— Consumer/Financial Issues     ———Community Dev.        _____Environment

## Demographic Information

First Name: _____     MI: _____     Last Name: _____

Mailing Address: _____ _____ City: _____ State: _____ Zip: _____

Day phone: _____ Cell: _____ Evening/Other: _____

Email address: _____

Birthdate (*if under 18): _____     Gender:  ☐ Male      ☐ Female

Describe any physical or health accommodations that may be needed to allow you to fulfill this volunteer role:

_____

Ethnicity:  ☐ Hispanic ☐ Non-Hispanic

Race:  ☐ White/Caucasian      ☐ Asian      ☐ Black/African American      ☐ Native American/Alaska Native

☐ Hawaiian Native/Pacific Islander  ☐ Prefer Not To State

Interests/Hobbies (please list): _____

Emergency Contact:_____ Phone Number: (      )_____

## Volunteering Data

**General Organizational Roles: Please check those that interest you.**
☐ Board of Directors
☐ Program Advisory Committee
☐ Marketing the organization and/or programs
☐ Organizing or supporting events/activities Organizing or supporting events/activities
☐ Fundraising
☐ Office Work
☐ Other: _____
_____

**Transportation:** Do you have an independent and reliable means of transportation to and from volunteer activities?
☐Yes                    ☐No

**Approximately how many hours/week would you like to volunteer?** _____

**With which age group do you prefer to work?**
☐ Youth                    ☐ Adults

## Photo Release

By signing this form, I consent and give permission to allow Cornell Cooperative Extension the unlimited right to use photos, videos, direct quotes, and/or audio clips that they have of me participating in Cornell Cooperative Extension programs or events. I agree to give up my rights with regards to Cornell Cooperative Extension photos, videos, direct quotes, and/or audio clips of me. Further, by signing this consent and release form, I acknowledge that I understand and agree to the above request and conditions. I sign this form freely and without inducement.

**Please Circle:**      Yes      OR      No

## References

List two persons we may contact , <u>not related to you</u>, who have knowledge of your qualifications.

**Reference 1:**

Name: _____     Phone number: _____

Email:_____

Address: _____     City: _____     State: _____     Zip: _____

**Reference 2:**

Name: _____     Phone number: _____

Email:_____

Address: _____     City: _____     State: _____     Zip: _____

## Volunteer Agreement

*We are pleased that you have accepted a volunteer assignment to Cornell Cooperative Extension Association of Tompkins County (hereafter referred to as "CCE"). Please accept our sincere thanks for your valuable contribution to CCE.*

1.  I, _____(print name), agree that as a CCE volunteer my participation in the activities outlined in the attached volunteer position description is without monetary or other compensation.

2.  I understand that CCE shall have the right to suspend or release me as a volunteer at any time and for any reason, within the discretion of CCE. I also understand that I have the right to terminate this agreement, recognizing that if I receive significant training for the volunteer position that there is an expectation of volunteer service.

3.  I understand that CCE does not provide volunteers with medical insurance; therefore CCE is not responsible for any medical expenses incurred by me. Further, I understand that I am neither covered by Worker's Compensation nor  entitled to employee benefits as a result of my CCE volunteer affiliation.

4.  CCE will cover me as a volunteer under the CCE commercial general liability to protect me against any covered claims for injury to persons or damage to property arising out of my activities as a volunteer. In exchange for volunteer     liability insurance protection I, on behalf of myself, my heirs, and my representatives, do hereby release CCE and the Association, its officers, directors, employees, and other volunteers from any liability whatsoever for any injury to   myself, including death, or damage to my property that arises out of or is in any way related to my volunteer activities unless my injury is the result of the sole negligence of CCE or the Association. I understand that the liability insurance coverage only applies when I am on duty, acting in accordance with CCE guidelines for my volunteer assignment, and all other applicable pre-conditions for coverage under the CCE insurance policy are met.

5.  CCE agrees to provide the orientation, training, supervision, and support deemed necessary by CCE for the successful fulfillment of my volunteer responsibilities.

6.  I am aware of the terms and conditions of this agreement and agree that the provisions of this agreement do not   constitute a contract, either expressed or implied, for employment between CCE and myself.

7.  Background checks will be repeated on a regular basis; every year for the NYS Sex Offenders' Registry, every 3 years for the Criminal History File check and MVR check. The Volunteer Agreement and Code of Conduct will be reviewed every 3 years.

8.  I fully support the following statement: "Cornell  Cooperative Extension in Tompkins County provides equal program and employment opportunities."

9.  This agreement is valid until it is terminated by CCE or me.

*For Staff Only:* Provide one copy of this signed agreement to the CCE Association volunteer. Retain original copy for a minimum of 6 years from the time of the CCE volunteer's departure. If volunteer worked with minors, keep this agreement indefinitely.

## Background Check

All volunteers are required to authorize screening with the NYS Sex Offenders Registry & National Criminal History prior to being accepted for a volunteer position.  A criminal record will not necessarily bar an applicant. A criminal record will be considered as it relates to the requirements of the volunteer position for which you have expressed an interest. A national criminal file check and NYS sex offender screening is required for all enrolled volunteers.

Do you possess a valid Driver's License:    Yes                No

*NOTE: If the volunteer position you seek requires the transportation of others in your personal vehicle or use of CCE Association vehicles, you will be asked to complete a motor vehicle record request permission form. For volunteers who use CCETC vehicles it is required that you also take a defensive driving class and a driving test with a Van Committee member.

## CCE Volunteer Code of Conduct

CCE volunteers are required to accept and adhere to the following standards of behavior when engaged in assigned volunteer activities:

- Respect and adhere to CCETC rules, policies, and guidelines that relate to volunteer activity and the program I serve.
- Execute CCE business in an ethical manner.
- Preserve the confidentiality of information (and sign confidentiality agreement if required by my volunteer role) about program participants and CCE internal affairs that have been entrusted to me as affirmed by my signature on the Volunteer Confidentiality Agreement.
- Refrain from using my CCE volunteer status for personal or business financial gain. All funds raised in the name of CCE and or/4-H are property of CCE.
- Fulfill my assigned volunteer duties, including completion of required records or reports, in a timely manner.
- Use my time wisely and work cooperatively with Extension staff and other volunteers.
- Participate in required training programs and use the recommended policies and procedures.
- Accept supervision and support from professional Extension staff and/or supervisory volunteers.
- Respect and uphold the rights and dignity of all staff, other volunteers, and all individuals who participate in CCE programs, recognizing that people's values, beliefs, customs, and strengths differ.
- Encourage participation of and respect for individuals of diverse backgrounds, cultures, and perspectives.
- Refrain from the use of alcohol, tobacco, and inappropriate language.
- Commit no illegal or abusive act.
- Report all unsafe conditions and accidents to professional Extension staff as soon as possible.

## ACKNOWLEDGEMENT OF RISK

This form must be completed to participate in 4-H clubs and related activities…

I fully understand and acknowledge that there are inherent risks and dangers in my participation in the above activities and my participation in said activities and use of equipment or materials related to such activities may result in my injury, illness or death and damage to or loss of my personal property.

I understand other participants, accidents, forces of nature or other causes my cause these risk and dangers and I hereby fully acknowledge and accept these risk and dangers.

I am in good health and I am at or above the minimum age of 18 required to participate in this activity and I am able to participate in any strenuous physical activity associated therewith.

I herewith release, forever discharge and waive any right of recovery or subrogation against Cornell Cooperative Extension, its officers, directors, employees and volunteers from any and all liability whatsoever for any illness or injury, including death or damage to or loss of my personal property that I may sustain while I am participation in this program. This shall by binding on my heirs, successors, assigns, administrators and executors. Any claims or disputes arising out of my participation in the activity shall first be submitted to arbitrations and/or be venued in the Supreme Court of the State of New York of the sponsoring County Association, the choice of which shall be at sole discretion of CCE.

## Signatures

With my signature, I affirm that the statements made on this application are true. I understand that misrepresentation or omission of facts requested is cause for my non-appointment or removal as a Cornell Cooperative Extension volunteer. I authorize Cornell Cooperative Extension of Tompkins County (CCETC) to obtain pertinent information relative to my suitability to perform the duties of the volunteer position. I further release all parties supplying said information from all liability and responsibility arising from their supplying said information. I understand that my volunteer position is contingent upon signing the CCE Association Volunteer Agreement and Code of Conduct.

**Volunteer Name (print):** _____

**Volunteer Signature:** _____**Date:** _____

### ****Screening Authorization/Consent Form must accompany this application****

# Volunteer Orientation Checklist

Depending on the size and scope of your project and the degree of interest from volunteers, you may find you need to provide this orientation several times throughout the year.

- ☐ Orient them to the program, the neighborhood, and the school (if applicable).
- ☐ Remind them of your expectations, as you noted in your publicity and/or job descriptions.
- ☐ Brief them on policies.
    - o Where to park
    - o Where to sign in
    - o If there are procedures for screening.
- ☐ Provide the group with a tour of the garden.
    - o Show locations of bathrooms, where tools are stored, water sources, etc.
- ☐ Inform them of the volunteer log sheet to track the hours they spend helping the program.  Logging hours is very important as they can be documented as "in-kind" donation for grant purposes and demonstrate documented community investment in the project.
- ☐ Provide them with a volunteer binder.
- ☐ If at a school setting, be sure to introduce regular volunteers to key school personnel like the principal and office secretaries since they will be a regular face around the school.
- ☐ Include any other important information that is unique to your garden project setting.
- ☐ Include plenty of time for questions.

## Volunteer Binder

In addition to in-person orientation and preparation, make a simple Volunteer Binder that includes all the information volunteers need to know in writing for later reference. Some ideas of what you may want to include in the binder are:

- ☐ Contact information – garden leaders, regular volunteers, school principal, custodian
- ☐ Who to call if there is an emergency – 911
- ☐ Pertinent health information about any regular volunteers or participating youth
- ☐ Volunteer hours log-sheet
- ☐ Codes for any locks needed for garden program
- ☐ Blank volunteer application forms
- ☐ Postcards with garden program information
- ☐ Planting/harvest log-sheets

AMERICAN HORTICULTURAL SOCIETY

Cornell University
Cooperative Extension

Cornell Garden Based Learning
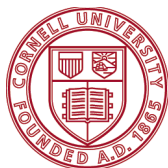
# Questions to Consider for a Long-Range Maintenance Plan

While formulating a maintenance plan, look down the road. This critical foresight will be much appreciated by those who take ownership of the program later on.

Look at the garden plan, and try to envision what the garden will look like in 5 or 10 years:

- What changes will have taken place in that time?
- What demands will these changes place on the caregivers?
- Will the garden contain structures, such as an arbor, pergola, fencing, or bridges that may need additional attention years later?
- Will the raised beds, water feature, or pathways possibly require repair in the future?
- Will garden signs need to be refreshed?
- Will you test the soil for toxins and chemicals?
- Who will plant, weed, water, and carry out the day-to-day maintenance?
- Are the same people involved now likely to be with the project in three years? For example, in a primary school, parents will move on with their children. How will you adjust your plans and be flexible in the future?


Notes:
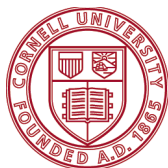
# Maintaining Your School Garden

T he excitement of Planting Day is hard to top, but it is the continual care and observation of plant growth that strengthens students' connection to the land and broadens their understanding of the environment and food systems. Once plants are in the ground, you will need to maintain the garden through regular activities such as watering, thinning, weeding, fertilizing, mulching, composting, and monitoring for pests. These activities promote healthy plants by providing for their needs. The five basic needs of plants are water, light, nutrients, air, and a place to grow.

**Water.** Plants use water for a number of important processes, including photosynthesis (production of food) and transpiration (evaporation of water from the leaves into air that cools the plant and creates pressure to move water from roots to leaves). Water also aids in the absorption of some nutrients.

**Light.** Energy from light is captured to use during photosynthesis.

**Nutrients.** Just as people need vitamins, plants need special nutrients to help them grow properly and for their biological processes to function. The top three essential nutrients for plants are nitrogen, phosphorus, and potassium. Most plant nutrients are provided by the soil, and we increase their availability through fertilization.

**Air.** Plants take in carbon dioxide and oxygen to use during photosynthesis.

**A Place to Grow.** Plants need a place to call their own with room to grow to maturity.

The need for each of these components varies by plant. Research your school garden plants to learn how to care for them properly. Plants also provide signals when they have a need. For instance, a plant needing water will wilt, and the leaves of a plant needing nitrogen will turn yellow. It is important for your students to discover and understand these signals.

This chapter provides background information on some of the techniques your team will employ to maintain the garden, along with an overview of seasonal garden tasks. It concludes with tips for dealing with such common challenges as how to maintain the garden during summer breaks and how to deal with vandalism.

California Department of Education

Western Growers Charitable Foundation

## Watering

As a general rule, during active growth most plants require about 1 inch of water (from rain or irrigation) per week. In hot, dry, and windy conditions they need more. In cool and humid conditions they need less. Feeling the soil around the plants is the best indicator of when it is time to water. The soil should be moist, but not too wet. Poke your finger about 1 inch down in the soil. If the soil feels dry, then it needs additional water.

Plants wilt when not enough water is getting to the leaves. However, do not automatically assume that you need to water wilted plants, because they may also wilt when there is ample or excessive water. Test the soil first. If the plants are wilted but the soil is wet, it is still a sign that the leaves are not getting enough water – but it is a root problem. If the plant is new or recently transplanted, it may just need some time for the root system to become established. Sometimes new roots cannot keep up with the water demands of the leaves. If the problem continues, it could mean the roots have a fungal disease. In this case, remove the plant and the soil around it to prevent possible disease spread.

When you or your students water, apply the spray to the base of the plant and avoid excessive moisture on the leaves. The plants are absorbing water through their roots, so the water needs to be in the soil. Additionally, water on leaves can lead to a number of disease problems. Water plants in the early morning to cut potential losses by evaporation. Apply water slowly to give it time to sink into the soil. If water is applied too quickly or with too much force, it will run off into drainage areas along with loose soil and new seeds. Children often water until the soil looks moist on the surface, but that might not be enough to benefit the plant. After watering, it is always a good idea to check the soil by poking a finger into the soil around the plant's roots.

A number of watering tools are available. Watering cans and garden hoses are the least expensive alternatives. However, they take quite a bit of time and close monitoring. Other alternatives are soaker hoses, drip irrigation, and sprinkler systems. These require less time and can be linked to automatic timers, easing the chore of watering during weekends and long breaks. These tools are more expensive, however, so you may need to look for additional funds or donations.

## Thinning

Many times more seeds are planted than can grow to maturity in the available space. Once the seeds germinate, you and your students need to "thin" your crop by removing some of the seedlings growing too close to each other. Although it is never easy to remove plants, if you leave too many plants in a small space they will compete for resources and will not be able to grow to their full potential.

When your students thin, instruct them to identify the healthiest seedlings and remove the others. One technique is to pull out the less-healthy seedlings. However, doing so risks disturbing the roots of the plants you want to keep. An alternative is to cut the tops off the unwanted seedlings, after which the roots will eventually decompose. Thinning can be a challenging activity for younger children, and they may need close guidance.

You can place thinned plants in a compost pile or worm bin. Also, some vegetable sprouts are edible and full of nutrients – perfect for a great nutrition lesson and tasting activity.

## Weeding

Weeds are plants growing in the wrong place. You should remove all such plants because they will compete for space, light, and water with your intended crops (and many times weeds will win, because they are well adapted to your conditions). First, you and your students need to learn how to identify the seedlings of your crops. After students know what to keep, they will know what to remove. Pull weeds by hand or remove them by hoeing or cultivating around the plants, staying far enough away to prevent damaging the wanted plants or their roots. With either approach, make sure the roots of the weed are completely removed.

To ensure that weeding does not become an overwhelming job, encourage students to monitor the garden continuously and remove weeds when they are small. If weeds are allowed to grow for too long, they will flower and spread seeds, which will escalate the weed problem. One simple way to decrease weed problems is to apply a layer of mulch to the soil.

## Mulching

Outdoor gardens benefit from the addition of 2 to 3 inches of mulch on top of the soil. The mulch helps to slow water loss from evaporation, moderate soil temperatures, decrease soil erosion, and decrease the spread of soilborne diseases. You can use a number of different materials as mulch, including shredded wood, leaves, straw, plastic, and newspaper. The various mulches offer different benefits. For instance, organic mulches (shredded wood, leaves, or straw) will eventually break down and help improve soil structure. Plastic mulches will increase the soil temperature. Choose mulch according to your plants' needs, mulch availability, and visual preferences.

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## Fertilizing

For healthy growth, all plants require certain nutrients. The three they need in the largest quantities are nitrogen (N), phosphorus (P), and potassium (K). Nitrogen is important for stem and leaf growth and for the photosynthesis process. Phosphorus promotes root growth and improves flowering and fruiting. Potassium contributes to root development, the overall growth of the plant, and disease resistance. Other essential nutrients are equally important, but plants require them in much smaller amounts.

Plants acquire most nutrients from the soil by absorbing them through their roots. During the site analysis discussed in Chapter 5, Designing Your School

Garden, you completed a soil test that provided information on the nutrient content. It is common to find that your soil is low in nutrients, especially the "big three." Since nutrients aren't always abundant enough in soil to support healthy plant growth, gardeners make up the difference by adding fertilizer.

A number of different types of fertilizers are available. Some deliver nutrients to your plant immediately; others release nutrients slowly over time. Examples of common fertilizers are liquid or solid synthetic fertilizers, slow-release pellets, compost, fish emulsion, and dried manure. Any product sold as a fertilizer will have a nutrient analysis on the label with three numbers. The numbers represent what percentage of the three major nutrients – nitrogen (first number), phosphorus (second number), and potassium (third number) – the fertilizer contains. The product label should also tell you how much to use for different crops and areas. Check with school administrators to see if there are any restrictions on the type of fertilizer your class may use in the garden. Always follow the warnings on fertilizer products and store in a secure location. Fertilizers should be handled by adults or under close adult supervision.

You might think that if a little bit of fertilizer will help your plant grow, a lot of fertilizer will result in an even better harvest. However, the phrase "the more the better" is *not* applicable to fertilization. Excessive fertilizer can contribute to plant diseases and lead to runoff of the extra nutrients. So make sure to apply only the amount you need.

Fertilizing is not a one-time event. As plants grow, they deplete the soil's available nutrients, so you will need to constantly monitor nutrient levels and provide additional fertilizers when needed. Keeping soil healthy is the key to maintaining healthy and productive plants.

## Composting

In the natural world, decomposers such as earthworms, sow bugs, slugs, molds, mushrooms, and bacteria use dead plants and animals as food, breaking them down into smaller particles and thereby releasing nutrients back into the soil. In the garden, we simulate this decomposition process by creating compost piles.

Compost piles are made up of garden waste and other organic matter high in carbon and nitrogen and exposed to moist conditions to attract decomposers. As the decomposers use the composted organic matter for energy and maintenance, they break it down into simpler molecules. This process gives off heat, which in turn speeds up decomposition. Compost can be made in freestanding piles (3- by 3- by 3-foot is an optimal size) or contained in special bins as long as it receives proper water and air movement.

Once the materials are broken down, the compost can be incorporated into the soil to increase the nutrient content and improve the structure. Check the California School Garden Network Web site at *www.csgn.org* for more information on creating a compost pile, or contact your local Cooperative Extension Service office.


Alicia Dickerson/Life Lab

# PROGRAM SPOTLIGHT

**What to Do When Things Go Wrong?**
*Extended Learning Program, R.D. White Elementary School, Glendale, CA*

Gardening is an exciting adventure for you and your students, but it is not without its challenges. The good thing is that students can learn as much (and sometimes more) from garden problems as they can from garden success. Garden Coordinator Mary Landau shares her story of garden challenges at R.D. White Elementary School:

"When you garden in a school setting, things don't always go as you have planned. When I first started gardening with the children at my grade school, we had to hand-water a very thin strip of ground on the east side of a building that was about 60 feet long. We decided to plant a row of sunflowers. The children wanted to grow the sunflowers, and were happy to carry the water to them every day for two months. What a pretty sight to see the row of plants against the white wall. It was time for them to blossom, and we were all very excited! The next day we just knew that the flowers would open up and smile at us.

"We went out to water them in the morning, expecting to see the yellow petals smiling at the sun. Instead, we saw that someone had come along the night before and had chopped off every one of their heads. The children couldn't believe



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> **Even when things don't work out the way one plans, something can be learned from allowing space and time for the project.**

what had happened to their hard work!

"Some of them were crying, and others were angry or dumbfounded. 'How could someone be so mean?!' 'Didn't they know how hard we had worked?' 'Didn't they have any respect for our garden?' You can just imagine the sadness that we felt.

"'What shall we do now?' I asked. Some of the children said we should rip the stalks out. What was the use in leaving them there? Others wanted to let them grow so that we could find out what they would do without their heads. We decided

to leave them in and see what happened. After a few days, we noticed that each of the stalks had grown four heads at the top! How amazing! Even though the four heads were much smaller than the original head, the plant had taught us a very important lesson. Even when things don't work out the way one plans, something can be learned from allowing space and time for the project. If the head hadn't been taken, we might never have known that a plant doesn't give up — it fights for its life. Plants are very tenacious. The children might not have experienced one of life's many wonders. I wouldn't be able to tell you this wonderful story that might bring you enough confidence to keep trying, even when things go wrong.

"Gardening with children needs to be a learning and growing experience. Remember that even farmers are not always successful at their farming. Crops do fail. Unexpected things happen. Yet life goes on. Success is wonderful, but knowing that things don't always go the way we plan is a very important lesson for all of us. It is often what you do with what life hands you that teaches you your best lessons."

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## Monitoring for Pests

Your garden ecosystem is home to many insects and other organisms, and only a handful of them are actually harmful to plants. Even when plant pests are present, they are not necessarily a threat to the garden. Like healthy people, healthy plants are usually able to ward off some stress and handle minor damage while continuing to perform well.

In order to keep pest problems to a minimum, the best practice is to monitor the garden regularly. Insect and disease problems are easiest to fix if caught early. Check the plants for plant–eating insects like aphids and scale (they often hide under the leaves). If found early, their populations can be controlled through handpicking or using a high–pressure water spray. Also look out for leaf spots, which can be a sign of fungal or bacterial disease. Remove leaves with signs of disease so it does not spread through the bouncing of irrigation and rainwater. Place plants you suspect of being diseased in the trash rather than a compost pile.

When you find signs of pests, your first step should be to identify what is caus–ing the problem. This can be an exciting investigative activity for your students. Once your sleuths identify the problem, you need to decide whether the damage is signifi–cant enough to warrant any action. Tolerate some plant damage. Observing the inter–actions in a garden ecosystem is an important part of the learning process for your students. Many plant pests have natural predators, and if you remove the pests, your students will never get to see the predators in action. For example, ladybugs are fero–cious aphid consumers. However, if you don't have any aphids, then you also won't attract any ladybugs.

If the damage becomes more severe, decide whether or not the plants are worth keeping. Disease problems are often a sign that the plants are not well adapted to the environment, so pulling them up and replacing them with crops better suited to the location may be the easiest solution. If you feel that more control is necessary, such as the use of pesticides, check with school administrators and main–tenance personnel. Schools have strict pest control regulations.

In addition to monitoring the plants and providing proper maintenance to promote good plant health, here are some addition–al techniques to minimize pest and disease buildup in the garden:

**Practice crop rotation.** Pests and diseases that affect cer–tain crops (or families of crops) build up in the soil if the same crop is grown in a particular bed year after year. By planting a different crop in the bed each year on a three–year cycle, you can avoid many problems.

**Discourage excess moisture on foliage.** Most fungal and bacterial diseases can infect plant surfaces only if there is moisture present. In regions where the growing season is humid, provide adequate space among plants so that air can circulate freely. Try to keep students out of the garden when it's wet so they don't spread disease organisms.

**Plant disease– and pest–resistant varieties.** Some varieties of crops are naturally less susceptible to problems, and

## COMMON PEST PROBLEM: GOPHERS

Gophers are small, grayish-brown, thick-haired burrowing rodents. They live and travel in underground tunnels that they dig with their large claws. Gophers eat plants from the roots up, pulling them into their tunnels. The best way to control gopher damage in a school garden is to install gopher wire as a physical barrier. Use galvanized mesh wire with openings no larger than 3/4 inch. Bury it in the soil at least 1 foot deep, and make sure you have enough wire so that the edges come up to ground level. If you need to overlap pieces of wire, overlap them by 1 foot. In a raised bed, staple the wire to the bottom of the frame. The deeper you bury it, the less the chance of catching or tearing it with digging tools.

plant breeders have developed many others. Look for resistance information in variety descriptions in catalogs and on seed packets.

**Plant appropriate varieties for your area.** Many plants will not thrive if they are grown in the wrong climate zone.

**Clean up your garden.** Diseases and pests can remain on infected and dead plant material, making it easy for them to attack other plants. Remove infected plant leaves, keep weeds to a minimum, and clean up the garden at the end of the growing season.

**Encourage beneficial organisms.** Make the garden inviting to pest predators such as ladybugs, wasps, lacewings, and birds. Flowers and herbs provide nectar to predatory insects, and a water source such as a fountain or bath will attract birds. Growing perennial plants (those that last two or more seasons) helps to pro-vide year-round habitats for beneficial organisms.

**Install barriers.** You can place floating row covers made of lightweight fabric over plants to protect them from invading pests. The fabric allows light, moisture, and air to pass through. However, if you cover a crop that requires insect pollination in order to bear fruit, you will have to remove the covers when the plants begin to blossom. Row covers may also deter some animal pests, but fences are often the only way to keep large, persistent creatures out of the garden. Use netting to protect fruit crops from hungry birds. A collar of newspaper, stiff paper, or boxboard cir-cling seedling stalks and extending 2 inches above and below ground prevents cutworm damage.

## Summer Maintenance

Maintaining a school garden during the summer amid vacation plans is a common challenge. You want to enjoy the break to renew your spirits, but you don't want to see all the hard work from the school year transform a beauti-ful garden into a jungle of weeds. Here are a few ideas:

**Choose low-maintenance plants to begin with.** Focus on growing plants that will thrive on their own with-out much attention. Two characteristics to look for are drought tolerance and vigorous foliage that will smother or out-compete weeds. Choices vary by region and with the amount of rain or irrigation available to the garden. Check with your local Cooperative Extension Service office for a list of plants recommended for your area.

**Use mulch.** A thick layer of mulch reduces weed growth, maintains soil moisture, and enriches the soil as it decays. In vegetable and annual beds, use inex-pensive organic mulch such as newspaper topped with straw. In perennial beds, add a 2- to 3-inch layer of more durable organic mulch, such as shredded bark.



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## ADDITIONAL GARDEN TASKS

In addition to ongoing maintenance, there will be seasonal garden tasks for your students to complete. Examples of these tasks:

**Fall**
– Plant and harvest fall vegetable crops
– Plant native and drought-tolerant plants
– Save seeds from summer-blooming annuals and perennials
– Gather leaves for composting
– Remove summer crops
– Plant spring-blooming bulbs
– Plant cover crops
– Mulch to provide protection against winter weather

**Winter**
– Plan the spring garden
– Force bulbs indoors
– Grow indoor plants from cuttings
– Obtain spring garden supplies
– Plant bare-root trees
– Start seeds indoors
– Prune fruit trees and perennial shrubs

**Spring**
– Clean out winter debris
– Prepare soil for planting
– Transplant seedlings
– Direct sow seeds
– Harvest spring vegetables

**Summer**
– Plant summer vegetables or prepare garden for summer break
– Schedule volunteers to help with summer care
– Keep weeds under control
– Deadhead flowers and harvest vegetables
– Collect supplies for fall garden

For more information on seasonal gardening tasks, sign up for a regional e-mail reminder from such organizations as the National Gardening Association, *www.garden.org,* or Rodale, *www.organicgardening.com.* They will send timely reminders of seasonally appropriate gardening tasks.

Monrovia

**Install irrigation.** Drip irrigation equipment is available at most home improvement stores, and you can set it up to run on inexpensive timers.

**Find volunteer help.** Enlist the help of parent volunteers or service organizations such as FFA, 4–H, Scouts, and church youth groups. Create a schedule so that the grounds are checked regularly. Provide detailed care instructions. If your class has planted summer crops, you can offer the harvest to the volunteers as a reward. You may want to hold a work day one Saturday per month to knock down weeds or perform other large tasks.

**Host a summer camp.** Many schools offer summer school classes or children's summer camps. Get in touch with teachers or summer camp counselors to see whether they are interested in taking advantage of your outdoor classroom facilities during the summer months in exchange for upkeep.

**Harvest in the spring.** Pick and use or distribute as much of the vegetable harvest as is ready. Pick flowers and press or dry them for art activities in the fall. Before leaving for the summer, remove all the plants and then do one of the following:

– *Cover it up.* Cover the garden with a thick layer of mulch to discourage weeds and decrease water loss. The mulch will break down over the summer, providing organic matter and enriching the soil for next year's crops.

– *Solarize.* Solarization is accomplished by covering moist soil with clear plastic to use the sun's energy to kill weeds and soil–dwelling pests.

– *Plant a summer cover crop.* A cover crop, sometimes called green manure, is a short–lived legume (e.g., beans) or grain (e.g., buckwheat) that you plant to prevent weeds, reduce soil erosion, and boost organic matter. It also helps maintain or even increase the nitrogen content of the soil. The next fall, till the cover crop into the soil and plant the new garden.

– *Plant for fall.* If there is not going to be much activity in the school garden during the summer, it might make

sense to plant a garden in late May or early June that will be ready for harvest in the fall. Many vegetable varieties have varied "days to harvest" times. For example, some corn varieties take 70 days to harvest and others need close to 100 days. Choosing crop varieties with long "days to harvest" times, like winter squash, pumpkins, popcorn and other grains, soybeans, tomatoes, peppers, and egg-plants will provide a bounty when you return to school.



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## Vandalism

There is nothing more discouraging to the students than to watch their garden become the victim of vandalism. After all the time and sweat poured into the garden, it is very frustrating to discover senseless damage. In addition to damage, sometimes a harvest is stolen, robbing students of the chance to taste the fruits of their labor. To decrease the incidence of vandalism:

**Choose a site in a protected or highly visible location.** Perhaps your school has a courtyard or an area protected by a fence. Although students should have the opportunity to explore the garden during the day, you can secure it at night and over weekends and breaks. Placing your garden where it is a centerpiece of the school can often deter vandals.

**Post signs with information about the garden.** Posting signs expresses a sense of ownership and lets outsiders know the purpose of the garden and who is maintaining it. Although it is not a foolproof security system, a sign that reads "Do Not Pick" or "Please Let Our Plants Grow" may deter unauthorized harvesting by invoking a sense of wrongdoing.

**Create a mobile garden.** Grow plants in containers with handles or wheels that can be moved out into the sun during the day, but secured indoors after school hours.

**Involve neighbors in the project.** The school's neighbors can help keep an eye on the garden when teachers and students are not around.

**Identify potential vandals and involve them in the garden.** If they feel like they are part of the garden, not only will that keep them from vandalizing the garden, it may also make them more protective of it.



Becky Button

# Class-use and Maintenance Schedule

**Instructions and Notes:** Fill in the chart below, indicating which classes and/or volunteers will work in the garden during the spring and fall growing seasons. Note: In May and June, you will probably need to water the garden *at least* once day. The best time to water a garden is in the morning.

|  | Monday | Tuesday | Wednesday | Thursday | Friday | Weekend |
|---|---|---|---|---|---|---|
| Early Morning |  |  |  |  |  |  |
| Mid Morning |  |  |  |  |  |  |
| Early Afternoon |  |  |  |  |  |  |
| Late Afternoon |  |  |  |  |  |  |
| After School |  |  |  |  |  |  |

*Adapted From A step-by-step guide to get your school garden growing, http://www.growtolearn.org/*
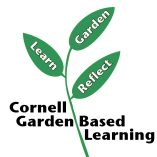
# Integrating a Garden into the School Curriculum

School gardens are living laboratories for learning! There are many different ways to integrate a garden into the school curriculum. Here are just a few examples:

| Curriculum | Example of Garden-Based Activities |
|---|---|
| **Language Arts** | • Read & write seasonal stories and poems<br>• Make a garden scrap book<br>• Produce a school garden newsletter |
| **Math** | • Count the number of seeds, plants, and flowers per plant<br>• Use fractions & percentages to calculate the number of seeds that germinate<br>• Measure plant heights<br>• Collect rainfall measurements |
| **Science** | • Investigate what plants need in order to grow<br>• Observe the life cycle of a plant<br>• Watch and record changes in the garden through the seasons<br>• Create beneficial habitats for wildlife and monitor the results<br>• Make weather observations through the seasons |
| **Geography** | • Study the water cycle<br>• Make different scale drawings and maps of the garden |
| **Computers** | • Use data collected in math and science class to produce graphs and charts on the computer<br>• Investigate garden topics on the Internet<br>• Upload gardening news onto the school website |
| **Social Studies** | • Interview older gardeners to find out how gardening practices have changed<br>• Cook different kinds of traditional foods from the garden harvest |
| **Art** | • Make collages using natural materials<br>• Draw & paint the garden at different stages<br>• Create posters to publicize the garden for fundraising<br>• Photograph the gardening year |
| **Physical Education** | • Get exercise through weeding and harvesting<br>• Try new fruits and vegetables and learn about healthy eating |
| **History** | • Study plants and their traditional uses as food, medicine, dyes, etc.<br>• Study gardening through history (i.e. victory gardens) |

*Adapted from www.gardeningwithchildren.co.uk
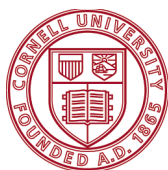
# Curriculum Mapping Template

The garden should not be an "add on" or one more thing on your plate.  Instead, it integrates all that you are teaching to maximize learning for students, to bring the curriculum to life, and to make your job a little bit easier.  Use this template as a way to look, at a glance, at the curriculum and some ways in which garden-based learning integrates with all that you are teaching.  We suggest you start small — that is, take one unit or set of lessons, and consider how this integrates with the garden.

| The Big Idea | Content | Processes/Activities | Processes/Activities | Assessment | Other, such as timeline, special considerations... |
| --- | --- | --- | --- | --- | --- |
| What should students know, understand, be able to do? | Connections to learning standards, curriculum objectives, etc. | Lessons, hands-on activities, other experiences in and around the garden. | Lessons, hands-on activities, other experiences in and around the garden. | Evidence of learning, opportunities for reflection for teacher and students. | |
| Science | | | | | |
| Math | | | | | |
| Language Arts | | | | | |
| Social Studies | | | | | |

# Curriculum Mapping Template

The garden should not be an "add on:" one more thing on your plate.  Instead, it should integrate with all that you are teaching, to maximize learning for students, to bring the curriculum to life, and to make your job a little bit easier.  Use this template as a way to look, at a glance, at the curriculum and some ways in which it integrates with all that you are teaching.  We suggest you start small — that is, take one unit or set of lessons, and consider how

| The Big Idea<br>What should students know, understand, be able to do? | Content<br>Connections to learning standards, curriculum objectives, etc. | Processes/Activities<br>Lessons, hands-on activities, other experiences in and around the garden. | Processes/Activities<br>Lessons, hands-on activities, other experiences in and around the garden. | Assessment<br>Evidence of learning, opportunities for reflection for teacher and students. | Other, such as timeline, special considerations... |
|---|---|---|---|---|---|
| **Physical Education** | | | | | |
| **Home and Careers** | | | | | |
| **Elective:** | | | | | |
| **Other:** | | | | | |

**The Academic Benefits of a Garden-Based Curriculum**

**Part One: Physical and Biological Sciences**

School gardens can be enormously beneficial components of K-12 education. The aesthetic benefits of School Gardens are self-evident, but the more important impact of the school garden is its quantifiable contribution to academic achievement, healthy social interaction, ecological consciousness and personal nutritional responsibility. In this series of one-page briefs, we will cite and explain the evidence in support of these benefits.

One of the most powerful effects of garden-based learning is an increased aptitude for the natural sciences. As a matter of course, students who work with a school garden are directly exposed to a variety of plants. This exposure provides a great opportunity for education about plant biology and the process of growth. This, however, is only one dimension of the tangible benefits of garden-based learning. Introducing structured horticultural instruction into the classroom has also improved standardized test scores across the board. These are just a few examples of studies which have demonstrated the considerable impact of school garden curricula on science achievement tests:

- Science achievement of 3rd, 4th, and 5th grade students was studied[1] using a sample of 647 students in Temple, TX. Of the two control groups, one combined gardening activities with science instruction; the other used only science instruction. The experimental groups scored significantly higher on the science achievement test.
- The Junior Master Gardener curriculum was introduced once per week for two hours in three Louisiana elementary schools.[2] Texas A&M science achievement tests were administered pre-and post-intervention. Results showed a significant difference between the experimental classes' pre-test and post-test scores, while there was no significant difference between the pre-and posttest scores of control classes.
- Hands-on environmental education programs were introduced into several schools[3] for the purpose of evaluating their efficacy. Results for schools with such programs show better performance on standardized measures of academic achievement in reading, writing, math, science and social studies. Classroom behavior improved, as well.
- The objective of a 2003 study[4] was to investigate the impact of an outdoor environmental program on elementary school students' creative and critical thinking and attitude toward these two subjects. Results indicated that students learned math and science content and were also thinking at the higher levels of synthesis and evaluation within the theoretical framework of Bloom's taxonomy.

[1] Klemmer, C.D., Waliczek, T.M., & Zajicek, J.M. (2005). Growing minds: the effect of a school gardening program on the science achievement of elementary students. *HortTechnology*, *15*(3), 448-452.
[2] Smith, L., & Motsenbocke, C. (2005). Impact of hands-on science through school gardening in louisiana public elementary schools. *HortTechnology*, *15*(3), 439-443.
[3] Lieberman, G.A., & Hoody, L. (1998). Closing the achievement gap: using the environment as an integrating context for learning. *Sacramento, CA: CA State Education and Environment Roundtable*,
[4] Waliczek, T.M. (2003). Exploring impact of outdoor environmental activities on children using a qualitative text data analysis system. *HortTechnology*, *13*(4), 684-688.

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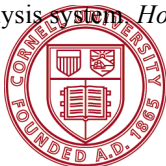
- In yet another study,[5] children who participated in horticultural activities demonstrated more group cohesiveness and more knowledge of plant anatomy than those who did not participate in the activities.

Overall, the academic consequences of implementing a school garden curriculum are plentiful and overwhelmingly positive.  An excellent guide illustrating age-appropriate activities by grade is available from the California Department of Education.

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[5] Bunn, D.E. (1986). Group cohesiveness is enhanced as children engage in plant stimulated discovery activities. *Journal of Therapeutic Horticulture*, 1. 37-43.
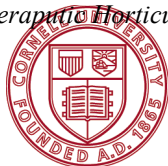
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## The Academic Benefits of a Garden-Based Curriculum

## Part Two: Sustainability and Ecology

School gardens are enjoying a resurgence of popularity in the United States, and with good reason. School and community gardening programs foster ecological consciousness and allow students to participate directly in a sustainable system. In this, part two of our series of one-page briefs, we provide the foundation for the huge impact upon students' attitudes and behaviors regarding conservation ecology.

An emerging and critical issue, particularly emphasized in research at the primary school level, is conservation, ecology, and the sustainable use of natural resources. We maintain that an ideal way to incorporate these topics into a curriculum is through the use of school gardens. A garden-based curriculum allows students to grapple with important biological concepts in a hands-on environment, and additionally it encourages understanding.

- Two environmental education classes at Missouri Botanical Garden were evaluated[1] to determine their effects upon attitude and knowledge change in elementary school children. The lesson plan about the water cycle increased positive attitudes toward learning about plants and the environment. This lesson had a more in-depth hands-on component, which may account for the difference in results.
- A study[2] was conducted to determine whether a food systems-based approach to a middle school curriculum resulted in increased knowledge and concern about ecology and food systems. Control and intervention schools were compared. Significant improvements were found for the intervention school in overall eco-literacy assessment scores, garden subscale scores, and health.
- A primarily qualitative study presented in Australia showed that "school-based community gardens represent a significant opportunity to embed nutrition, physical activity and environmental sustainability into mainstream curricula."[3]
- Project GREEN, Garden Resources for Environmental Education Now, is a garden program designed to help teachers integrate environmental education into their classroom using a hands-on tool, "the garden." A Texas A&M study[4] showed that students participating in the Project GREEN garden program had more positive environmental attitude scores than those students who did not participate. Second grade students, in both the experimental and control groups, had more positive environmental attitudes than fourth grade students. In addition, this research found a significant correlation between the number of outdoor related activities students had experienced and their environmental attitudes.

[1] Kahtz, A.W. (1995). Impact of environmental education classes at missouri botanical garden on attitude and knowledge change of elementary school children. *HortTechnology*, *5*(4), 338-340.

[2] Murphy, Michael, & Schweers, Erin. (2003). Evaluation of a food systems-based approach to fostering ecological literacy. *Proceedings of the Final Report to Center for Ecoliteracy*, http://www.ecoliteracy.org

[3] Somerset, Shawn. (2005). School-based community gardens: re-establishing healthy relationships with food. . *Proceedings of the Paper presented at National Conference of Home Economics Institute of Australia, Hobart, Tasmania*.

[4] Skelly, Sonya. (1997). The effect of project green, an interdisciplinary garden program, on the environmental attitudes of students. Retrieved from http://www.hort.vt.edu/HORT6004/network/schoolgardens.html
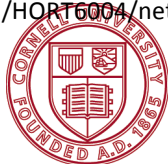
The utility of school gardens for education about sustainability and ecology is indisputable. If you are interested in starting a school garden program, an excellent guide illustrating age-appropriate activities by grade is available from the California Department of Education. Also visit the Grow Your Program resources within the Cornell Garden-Based Learning Program website.
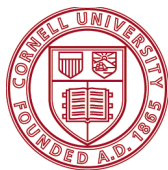
- **Articles Related to the**
**Restorative Effects of Time in Nature**
**Prepared by Dr. Don Rakow**
**6/2015**

Bowler, D. E., L. M. Buyung-Ali, T. M. Knight, and A. S. Pullin. 2010. A systematic review of evidence for the added benefits to health of exposure to natural environments. BMC Public Heath 10: 456 – 466.

Cha, A. E. 2015.  In the future, doctors may tell you to take two 'doses of nature' and call in the morning. The Washington Post. 04/08/15.

Journalist's Resource. 2014. Health benefits of urban vegetation and green space: research roundup. http://journalistsresource.org/studies/environment/cities/health-benefits-urban-green-space.

Kohlleppel, T., J. C. Bradley, and S. Jacobs. 2002. A walk through the garden: can a visit to a botanic garden reduce stress? HortTech. 12(3): 489 – 492.

Lee, A. C. K. and R. Maheswaram. 2010. The health benefits of urban green spaces: a review of the evidence. J. of Publ. Health 33 (2): 212 – 222.

Miller, D. 2014. A prescription for nature.  National Parks Conservation Ass'n. News. Spring, 2014.

Mitchell, R. 2013. Is physical activity in natural environments better for mental health than physical activity in other environments? Social Sci. & Med. 91: 130 – 134.

Outdoor Wire. 2015. Time spent outdoors boosts conservation action. www.theoutdoorwire.com/story/1426052534qjbtr8fkcqj

Penn Medicine News. 2015. Penn Medicine study finds being near greened vacant lots lowers heart rates. www.uphs.upenn.edu/news. Retrieved 4/08/15.

Russell, R., A. D. Guerry, P. Balvanera, et al. 2013. Humans and nature: how knowing and experiencing nature affect well-being. Ann. Rev. Environ. Resour. 38: 473 – 502.

# Fundraising Plan Activity Sheet

**Brainstorm Ideas for Grassroots Fundraising**
Who can you engage? Write down a list of potential partners in your community.

**Plan Ahead for Grant Writing**

**Write down your over-arching goal statement:**
*Example: We propose to create a new, well-planned opportunity for young people to engage in the decision- making process with adult leaders, and to become youth leaders of elementary-aged children, through a series of deliberately staged activities.*

**Write two clear, measurable objectives:**
*Example: To teach youth leaders how to effectively engage the interest of third grade children in gardening activities.*

    **1.**

    **2.**

**Link those two measurable objectives to intended outcomes, by writing the words, 'as a result of...' in front of the statement:**
*Example: As a result of providing opportunities for youth leaders to engage with third graders...*

- *10 youth will learn garden-based learning activities to teach to school children.*
- *75 third graders will be inspired by the opportunity to interact with older youth mentors, increasing their interest in the garden and in serving as youth leaders in the future.*
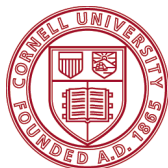
# Project Folder Checklist:

Before approaching businesses, we suggest creating a Project Folder.
This concise packet of relevant program materials can be used to represent your program and its needs. It can be left with a business for further review. Know your tax status and to whom checks should be written before you approach businesses.

Consider including:

- ☐ An enthusiastic endorsement letter form the director, principal, or coordinator, stating that the gardening project is superb, is well organized, and has his or her full support
- ☐ One-page project description
- ☐ List of people (which will grow) who are supporting the project
- ☐ List of specific needs
- ☐ Garden plan
- ☐ Quotes and/or drawings by participants
- ☐ Other appropriate inserts


This is yet another opportunity for community participation. Seek family and youth input as to which inserts they feel are needed.

# Preparing Your Elevator Speech Activity
*Adapted from "The 30 Second Elevator Speech," University of California, Davis*

An elevator speech is a clear, brief message or "commercial" about you. It communicates who you are, what you're looking for and how you can benefit a company or organization. It's typically about 30 seconds, the time it takes people to ride from the top to the bottom of a building in an elevator.

**The bones of your speech:**
- Who you are and your connection to the garden project
- About the garden project and its role in the community; give a specific example of impact.
- Why you are interested in the listener and what collaboration or partnership could occur.
- What the benefits are of partnership or collaboration
- A call to action.  For example: come visit the garden, attend our next meeting, make a donation, or lead a workshop at the garden.

**Write your speech:**
- Step 1: First write down all what comes up in your mind.

- Step 2: Then cut the jargon and details. Make strong short and powerful sentences. Eliminate unnecessary words.

- Step 3: Connect the phrases to each other. Your elevator address has to flow natural and smoothly. Don't rush.

- Step 4: Memorize key points and practice.

- Step 5: Have you really answered the key question of your listener: What's In It For Me?

- Step 6: Create different versions for different situations of your elevator speech.



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# Establishing Measurable Objectives Activity

Be certain that your objectives are measurable, and that they align with your intended outcomes. You only need three to six well written objectives. Too many may be difficult to assess and follow through with.

Let's practice:

- Write one objective.
    - *Example: To teach youth leaders how to effectively engage the interest of third grade children in gardening activities.*
- Then ask, can you measure to evaluate your effectiveness in achieving this objective? How?
    - *Example: Yes, by observing, surveying, and/or interviewing children and youth.*
- Now, take the words "as a result of" and place it at the beginning of your objective. This will illuminate the related outcomes. Be as specific as you can.
    - *Examples: As a result of providing opportunities for youth leaders to engage with third graders…*

        - *10 youth will learn garden-based learning activities to teach to school children.*
        - *After participating in an Act for Youth training, 10 youth will demonstrate leadership competencies, will increase in self-confidence, and learn effective communication strategies.*
        - *Youth will have opportunities to display their newly acquired leadership skills in other areas of the school setting identified as critical by a committee on teen behavior, including the school cafeteria, outdoor recreation area, and during assembly.*
        - *75 third graders will be inspired by the opportunity to interact with older youth mentors, increasing their interest in the garden and in serving as youth leaders in the future.*
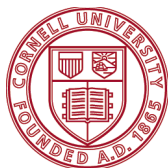        - *Youth leaders and third grade students will take home lessons learned and begin family gardening at home.*
        - *Teachers will have capable assistance in the garden, allowing them to focus their attention on involving students in planning the newly forming wildlife habitat.*
        - *Administrators will observe demonstrated successes and provide continued support for the garden.*

As you can see, one clear objective can generate a number of positive outcomes to choose from. You need not list all of them; these illuminate the possibilities. The important point: focused, clear, measurable, and aligned.

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# Funding Sources

**American Honda Foundation**

1919 Torrance Blvd., Torrance, CA 90509

(310) 781-4091, http://www.honda.com/community/applying-for-a-grant

Awards grants ranging from $10,000 to $50,000 to national nonprofit agencies for youth education programs in math, science, the environment, and technology.


**Captain Planet Foundation**

133 Luckie St NW. Atlanta, GA 30303

(404) 522-4270, http://captainplanetfoundation.org/

Funds projects that promote understanding of environmental issues, focuses on hands-on involvement, and involves children and young adults (K-12). Grants awarded range from $250 to $2500.


**The Chronicle of Philanthropy**

1255 23rd St. NW. Washington, DC 20037

(202) 466-1200, www.philanthrophy.com

A biweekly newspaper (print and online) for charity leaders, fundraisers, grant makers, and others involved in philanthropic enterprise.


**Environmental Protection Agency**

Environmental Education Grants Office of Environmental Education (1704)

1200 Pennsylvania Avenue, NW, Washington, DC 20460

www.epa.gov/enviroed/grants.html

Web site lists grant programs that support environmental education projects, and also has a useful grant-writing tutorial. Grants under $25,000 are administered through regional offices.


**Foundations On-Line**
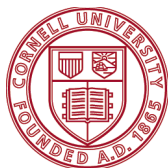
[www.foundations.org](www.foundations.org)

An extensive Web directory of charitable grant makers.

**General Mills Corporations**

Boxtops for Education Program

250 Victor Street, Highland Park, MI, 48203

(888) 799-2444, [www.boxtops4education.com](www.boxtops4education.com)

Elementary schools can earn up to $10,000 by collecting box tops in this fundraising program.

**General Mills Foundation Grants**

PO Box 1113, Minneapolis, MN 55440

(612) 540-2211, [https://www.generalmills.com/Responsibility/general-mills-foundation/grants](https://www.generalmills.com/Responsibility/general-mills-foundation/grants)

Supports programs that emphasize student achievement, literacy, job training, efficiently using existing resources, early childhood development, and other areas. Grant levels vary from $1000 to $100,000.

**Hasbro Children's Foundation**

 PO Box 200, Pawtucket RI 02862

 (401) 431-8151, [http://corporate.hasbro.com/en-us/community-relations/childrens-fund](http://corporate.hasbro.com/en-us/community-relations/childrens-fund)

Supports programs for disadvantaged youth up to age 12, their families, and communities, in the areas of health, education, and societal needs.

**National Gardening Association**

Youth Garden Grants

180 Flynn Ave., Burlington, VT 05401

(800) 538-7476, [http://garden.org/about/grants/](http://garden.org/about/grants/)
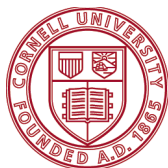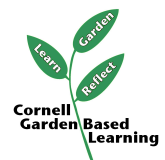
Awards of tools, seeds, and garden products valued at more than $750 to help initiate or sustain a gardening program. See inside back cover for more details.

**National Tree Trust**

Growing Together Program

Partnership Enhancement Program

1120 G St. NW, Ste 770, Washington, DC 20005

(202) 628-8733, http://treetrust.org/

Programs, grants, and information on tree planting to introduce children and adults to benefits of trees.

**National Wildlife Federation**

Wild Seed Funds

PO Box 1583, Merrifield VA 22116-1583

1-800-822-9919, www.nwf.org/habitats

Grants of $250 awarded for schoolyard habitat projects. See next section for their educational programs.

**Toyota Tapestry Grants for Teachers**

c/o National Science Teachers Assoc.

1840 Wilson Blvd., Arlington, VA 22201

(703) 243-7100, www.nsta.org

Awards grants of up to $10,000 each for innovative science projects at the middle and high school levels.
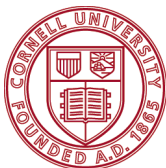
## Upcoming Workshops, Meetings, and Programs:

**Date 1**
Meeting at …

**Date 2**
Workshop on …



## Contact Information

**Email:**     *insert a web address*

**Phone:**     xxx – xxx – xxx

**Mailing Address:**

Address line 1
Address line 2
Address line 3

*Follow us on Twitter and Facebook, if applicable*



**Cornell Garden Based Learning**

gardening.cornell.edu

*Please insert some information about your organization here, e.g. a slogan or general introduction about your purpose*
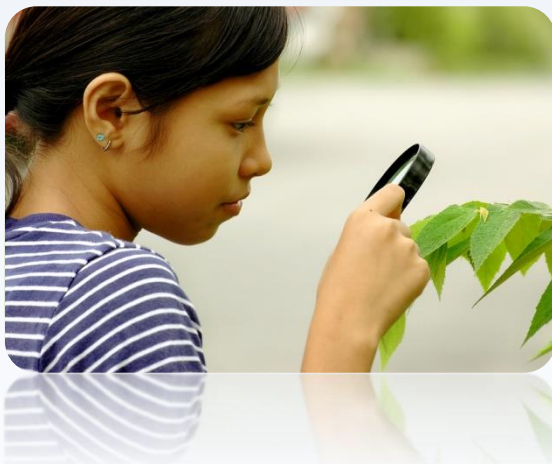
## What is Garden-based Learning?

Garden-based learning programs result in increased nutrition and environmental awareness, higher learning achievements, and increased life skills for our students. They are an effective and engaging way to integrate curriculum and meet learning standards, giving young people the chance to develop a wide range of academic and social skills.

Garden experiences foster ecological consciousness by providing time and space to explore the natural world. This hands-on work also promotes community values, such as friendship, cooperation, and communication.

Garden-based learning results in healthy young minds and bodies, and provides a unique tool to engage student interest both inside and outside of the classroom. At its core, garden-based learning strives to create a strong foundation for integrated learning and youth development.

## Our Mission

*Insert a short paragraph about your organization here – this statement should be concise and easy to understand.*

## Our Work

*Please insert a few paragraph regarding the work of your organization. This can include any or all of the following suggestions:*

- *Information regarding your objectives*
- *Overview of ongoing and past projects*
- *Profiles of some of the people involved in your group*
- *Your methods to achieve your goals*
- *Accomplishments / goals reached*
- *What separates your group from alternatives? Why are you special?*
- *Interesting facts and statistics*

## We thank our partners for their continued support:

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Cornell
Garden Based
Learning

Learn  Garden  Reflect

| | Contact Information |
|---|---|
| *INSERT LOGO HERE* | *Insert program contact information here* |

Dear (Co-educator),

School gardens offer unparalleled tools for K-12 education, and Cornell Garden-Based Learning (CGBL) provides educators with the gardening resources and professional development to support engaging, empowering, and relevant learning experiences for youth and children.  We look to adopt the programs, activities, and educational materials of CGBL for use in our setting.  Research has shown that garden-based learning engages young people and creates a vibrant foundation for integrated learning and youth development.  We are committed to the planning, design, and implementation of a garden.

Like most projects, gardens function best with many dedicated volunteers, staff, parents, or educators to assist, and **we seek your support and assistance as we move forward with our plans**.  With both the support of faculty and administration, the establishment of our garden will proceed easily and efficiently, and the rewards will be plentiful across the entire academic spectrum.

Gardens engross students in active and engaging real-world experiences.  Research has evaluated the use of garden-based learning, and the results are clear – gardens provide a solid foundation for the education and growth of young minds.  Students step outside the classroom, and receive new opportunities for physical activity.  By creating new access to healthy food, gardens educate students about personal nutrition responsibility. This interaction with nature enforces positive values regarding environmental issues, such as the sustainable use of natural resources and conservation ecology.

This new-found ecological consciousness translates to increased aptitude for natural sciences as well as improved academic achievement.  Studies show that garden-based learning increases standardized test scores across the academic spectrum, and you may wish to use the garden for teaching as well. Teachers can incorporate its tools into a vast variety of curricula,

including language arts, math, history, social studies, and physical education.  Garden-based learning also reinforces classroom behavior and life skills.  By encouraging students to work together, the program promotes responsibility, patience, and cooperation.  Research shows that nature brings children (and communities) closer together.

A garden project is our golden opportunity to get to know and work with others in the school community – plus, it will *certainly* benefit our kids at every grade level.  As our project continues to progress, and we sow the seeds of engaging education, we hope we can count on your support. *(This sentence should elaborate on ways to get involved, e.g. do you want them to volunteer time or expertise?)* Your involvement and support can make a tremendous difference in the lives of our youth.

Cornell University
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# Cornell Garden-Based Learning

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| | Contact Information |
|---|---|
| *INSERT LOGO HERE* | *Insert program contact information here* |

Dear (LAST NAME) family,

Perhaps you like to grow tomatoes during the summer, or maybe you just like to do a little weeding in your flower garden.  Gardening is one of the most popular hobbies in the United States, and research has revealed the extensive benefits of this activity.  Our organization works with Cornell Garden-Based Learning (CGBL), which provides the gardening resources to support engaging and empowering learning experiences.  **Garden programs engage young people** and create vibrant foundations for integrated learning and youth development.  We sincerely hope that you will explore the programs, activities, and educational materials of CGBL, and make gardening part of your family life.

The benefits of gardens far exceed the typical aesthetic rewards – gardens bring families closer together and create a foundation of cooperation and healthy living.  Natural environments – particularly gardens – provide settings where **parents may interact with their children** and teach them the values of hard work, patience, responsibility, and communication.  Kids get excited for nature and the outdoors, and families can share significant bonding time.

By providing a home-grown source of fresh fruits and vegetables, family gardens support healthy diets and nutritional responsibility – youth learn about the value of their food.  As American kids spend less time outside, and the rate of obesity rises, **gardens provide an excellent way to encourage healthy eating habits and physical recreation**.  Research shows that interactions with nature mediate childhood stress and reduce the symptoms of attention deficit disorder (ADD). Plus, interactions with nature enforce positive environmental values and promote the conservation of natural resources.

Gardens provide a solid foundation for the education and growth of young minds, which leads to an increased aptitude for natural sciences as well as **improved academic achievement**.  Garden-based learning increases standardized test scores across the academic spectrum,

including language arts, math, history, and social studies.  **It reinforces good classroom behavior and life skills.**

**We encourage you to build a garden in your backyard, visit your community garden, or even just grow plants near the windowsill** – small steps can make a tremendous difference in the lives of your children.  Whether you currently garden or not, the free resources from our organization and CGBL will get you started.  Your household or community garden can become an important tool to improve and maintain your family well-being while providing rewarding and entertaining recreation.

Cornell Garden-Based Learning

| | Contact Information |
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| *INSERT LOGO*<br>*HERE* | *Insert program contact information here* |

*TITLE GOES HERE (Conveys name of organization and upcoming event)*
*Subtitle goes here – conveys benefits of gardening on youth development*

Mounting evidence shows that garden-based learning engages young people and creates a vibrant foundation for integrated learning and youth development.  Cornell Garden-Based Learning (CGBL) provides the necessary gardening resources and professional development to support engaging, empowering, and relevant learning experiences for children.  *(Add a few specific lines about your organization: why are you special? How to do you help people? What is your goal/mission? What have been the results?)*

*(Insert a quote from either an administrator, a volunteer, or an excited child – the quote should build excitement for gardening and allude to some of the many rewards of garden-based learning.)*

The results are clear – gardens provide a solid foundation for the education and growth of young minds.  Children learn outside the classroom for active and engaging real-world experiences.  As American kids spend less time outside, and the rate of obesity rises, gardens provide an excellent way to encourage healthy eating habits and physical recreation.  Research shows that interactions with nature promotes mental well-being and instills positive environmental values experiences; kids learn about the value of fresh food, natural resources, and sustainable practices.

This new-found ecological consciousness translates to increased aptitude for natural sciences as well as improved academic achievement.  Studies show that garden-based learning increases standardized test scores and improves youth behavior.  Kids learn to be leaders and mentors; they learn overcome obstacles, solve problems, and share the harvest. By encouraging youth to work together, the program promotes responsibility, patience, and

cooperation.  The activity of gardening enforces social interactions and helps children to build healthy friendships.  Certainly, nature brings children and communities closer together.

 *(This last paragraph should describe the upcoming event(s) – who? What? Where? When? Why? And how? -  and relate it to the rewards of gardening, as described above.  If this is a repeated event, you should mention the previous results.  If it is a new event, you should describe your expectations. Why should the community care? Why is it newsworthy?)*

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# Cornell Garden-Based Learning

**Cornell Garden Based Learning**

| | Contact Information |
|---|---|
| *INSERT LOGO HERE* | *Insert program contact information here* |

Dear (Administrator):

School gardens offer unparalleled tools for K-12 education, and Cornell Garden-Based Learning (CGBL) provides educators with the gardening resources and professional development to support empowering learning experiences for youth and children.  We look to adopt the free programs, activities, and educational materials of CGBL for use in our setting. Research has shown that garden-based learning engages young people and creates a vibrant foundation for integrated learning and youth development. We are committed to the implementation of a garden, and we want to share its benefits with our school.

Beyond the aesthetic benefits, gardens offer real-world experiences that are fundamental to improving the test scores, life skills, and physical health of our students, culminating in a safer, stronger school.

Gardening experiences provide one more tool for the instruction of natural sciences, but studies show that garden-based learning raises standardized test scores *across the board.*  Our garden will be applicable in multiple curricula, from physical education and language arts to social studies, history and math. It will provide another way to reach our kids, particularly those who do not respond to typical classroom settings. Students will improve their problem-solving, and gain the confidence to deal with larger issues.

Evidence shows that garden-based learning improves behavior as well, promoting responsibility and healthy social interactions. By encouraging students to work together, our gardens will develop their abilities to communicate and cooperate – this will result in a safer, happier, and more productive school.

For physical activity, our garden will provide as an alternative to gym classes and athletics. Students learn about the importance of a healthy diet while getting outdoor exercise.  This interaction with nature instills positive environmental values and promotes the sustainable use of natural resources

*(This paragraph should discuss how you plan to fund and organize your garden – do you need funding? Where will the space be located? Who will be in charge? Why will it – or why will it not – cost the school?)*

Our garden will become a valuable asset to our school.  By utilizing the resources made available through CGBL, as well as the support from our school community, we anticipate quickly assembling our garden and implementing it use.  The proposed construction, in itself, will provide an opportunity to engage and educate our youth, and overtime, the value of the garden as a producer of fresh food and educational resources will certainly exceed the immediate price of labor and materials.  We look for your support as we continue to investigate and apply this new initiative in youth development and integrated learning.

Cornell University
Cooperative Extension

Cornell Garden-Based Learning

Cornell Garden
Based Learning

| | **Contact Information** |
|---|---|
| *INSERT LOGO HERE* | *Insert program contact information here* |

Dear (LAST NAME) family,

Perhaps, you like to grow tomatoes during the summer, or maybe, you just like to pull the weeds from your flower garden.  It is common for many households to garden, and research has revealed the extensive benefits of this activity.  Our organization works with Cornell Garden-Based Learning (CGBL), which provides the gardening resources to support engaging, empowering, and relevant learning experiences.  Garden programs engage young people and create vibrant foundations for integrated learning and youth development, and we sincerely hope that you will participate in our community garden activities.  With the support and involvement of our entire community, our garden will surely benefit the well-being of your family and our entire community

The benefits of gardens far exceed the typical aesthetic rewards – gardens bring families and communities closer together and create a foundation of cooperation and healthy living.  Natural environments – particularly gardens – provide settings where parents may interact with their children and teach them the values of hard work, patience, responsibility, and communication.  Gardens allow entire communities to share labor and rewards; they enforce cooperation, cohesiveness, and unity.

By providing a local source of organic fruits and vegetables, community and family gardens support healthy diets and nutritional responsibility – they also provide an excellent outdoor activity for physical recreation.  As Americans spend less time outside, and the rate of obesity rises, gardens provide an excellent way to encourage healthy eating habits and exercise.  Interactions with nature improve cognitive functioning and concentration – studies show that nature helps people manage their stress and restores their energy.  Plus, interactions with nature enforce positive environmental values and promote the conservation of natural resources.

Gardens provide a solid foundation for the education and growth of young minds, which leads to an increased aptitude for natural sciences as well as improved academic achievement. Garden-based learning increases standardized test scores across the academic spectrum, including language arts, math, history, and social studies.  It promotes improved youth behavior and life skills.

Whether you currently garden or not, we strongly encourage your family to join the rest of the community and use the resources provided by our organization and CGBL.   Your household or nearby public garden can become an important tool to improve and maintain your family well-being, and it will give you an excellent opportunity to establish neighborhood ties and develop lasting friendships.

Cornell University
Cooperative Extension

Cornell Garden-Based Learning

Cornell Garden
Based Learning

| | Contact Information |
|---|---|
| *INSERT LOGO*<br>*HERE* | *Insert program contact information here* |

Dear (Volunteer),

Gardens offer unparalleled benefits for the nurturing of young bodies and minds, and Cornell Garden-Based Learning (CGBL) provides the necessary gardening resources and professional development to support engaging, empowering, and relevant learning experiences for children. Research has shown that garden-based learning engages young people and creates a vibrant foundation for integrated learning and youth development. However, to effectively implement this learning strategy, our organization needs **the complete cooperation of hardworking and dedicated volunteers**.

The seeds of our garden will surely grow from community involvement and cooperation. Gardens function best with many dedicated volunteers, staff, parents, or educators to assist. We seek your support and assistance as we move forward. It is important for volunteers to fulfill their assigned responsibilities and to share their enthusiasm about gardening – encouraging youth participation is key to the success of our program. With the integrated support of volunteers and excited participants, the establishment of our garden will proceed easily and efficiently, and the rewards will surely be plentiful.

Gardens engross students in active and engaging real-world experiences. Research has evaluated the use of garden-based learning, and the results are clear – gardens provide a solid foundation for the education and growth of young minds. Kids step outside the classroom and receive new opportunities for physical activity. As American kids spend less time outside, and the rate of obesity rises, gardens provide an excellent way to encourage healthy eating habits and physical recreation.

Studies show that garden-based learning increases standardized test scores and improves youth behavior. By encouraging kids to work together, the program promotes responsibility,

patience, and cooperation.  Research shows that nature brings children (and communities) closer together.

*(This paragraph should provide information on ways to volunteers, e.g. how can they volunteer? what jobs are available? How much time should they anticipate giving? Who should they contact? Are there any meetings they can attend? Are there any additional resources to read?)*

A garden project is your golden opportunity to get to know and work with others in the community – plus, it will *certainly* benefit our local kids.  As our project continues to progress, and we sow the seeds of youth development, we hope we can count on your support. The time you volunteer can make a tremendous difference in the lives of our children.

Cornell Garden-Based Learning

## Self-Assessment

We often neglect to ask our participants to critically reflect on themselves and what they are learning and enjoying (or not) as participants in our programs. You might want to ask participants to **assess their own experience**.

Many educators already include journals, often as nature or garden journaling. Explicitly asking them questions to reflect upon in their journals can provide more useful information about what your participants are getting out of the program.

Ask them questions that focus on:

**Program impacts:**

- What have you come to understand about gardening and how did you come to know it?

- What has had the biggest impact on your learning?

- How have your thinking, opinions, and beliefs about the garden changed through this program?

**Personal statements that indicate what might be influencing those changes:**

- "I never realized that there is so much to do in the garden…."

- "There's a lot more to organic gardening than I knew…"

**Problems and challenges (related to program *content* or to the *process* of learning):**

- What difficulties did you encounter and how did you resolve any problems?

- Were there any challenges you haven't been able to resolve?

**The learning experience:**

- What contributed to your successful learning? Unsuccessful learning?

- Why do you consider it to be successful or not so?

**Personal opinion and experiences, or statements of belief:**

- "The hands-on experience helped my learning a lot because…"

- "I enjoyed learning this topic in particular because…"

-  "I didn't like that activity so much because…."

## Quality Circles

When you have an additional assistant with your group, such as a program assistant, volunteer, or teenaged youth helper, you can take advantage of this additional layer of leadership by engaging your assistant in an embedded assessment technique called a quality circle.

**Quality circles should happen when:**
- There is a fairly high level of trust in the program.
- The educator is genuinely open to feedback and will not feel bad to hear of some program improvements that ought to be made.

**How a quality circle works:**
- After each program session, ask the assistant to select four to five youth to stay after the program for a 5 - 10 minute quality circle.
- When this occurs, you should not be present, so that you're not aware of which participants have remained.
- Ideally, over the course of the program, all students have the opportunity to participate in a quality circle.

**The assistant should prep the group by letting them know that:**
- this will be a constructive conversation;
- all feedback is welcome;
- the participants will remain anonymous; and
- less is more – in other words, they should focus on the most significant learnings or barriers to those learnings in the program.

**The assistant should then ask the group:**
- During the session today, did you learn something?  Was it enjoyable?
- If so, what was it that you learned or enjoyed? If not, why not?
- What were the "highlights," and what were the "lowlights?"

The participants can have a brief discussion about these questions with the assistant.

**Specific quality circles:**
The educator may occasionally pose specific questions for the quality circle to consider. They can pass these questions along to the volunteer or assistant to ask the group. For example, "today I tried a new thing by having you work

cooperatively in small groups.  How did this compare to working as a whole group last week?  Did you enjoy it?  Did you learn more that way?"

**Follow-up:**
The assistant can write up a summary of the discussion in an email to the educator, or meet them to discuss it in person.  It's always good to ask the assistant to present the highlights first, followed by the lowlights!

If concerns were raised during the quality circle, try to address them as soon as possible, so that the participants know that their feedback has been heard and respected.

## The Quick Whip

Sometimes, despite our best planning, we haven't prepared a survey, we've neglected to plan for a quality circle, or we just didn't get it together to have someone observe our program.  Don't despair!
The "quick whip" is a great way to still grab some information at the end of the program. It's basically a quick go-around. Ask simple and direct questions that the participants can answer on the spot with not too much thought.

For example, ask the group:
- Was there one thing you learned today?  If so, what was it?
- Go around the room and ask participants to describe it.  Record what they share.

Or, ask for a show of hands:
- How many of you learned something new today?
- Count the number of hands and record as a percentage.

Modify these questions for whatever you're interested in learning about…

## Straight Talk: A Peer Evaluation Model

The peer evaluation model of Straight Talk was developed by [Growing Green](#) an urban, organic agricultural training program that develops life-skills and provides meaningful work to low-income, at-risk youth in Buffalo, NY.  The program includes a peer evaluation component that they've called 'Straight Talk'. Here are the basic principles of their Straight Talk model:

**Straight Talk – Speaking It**!

- **Be kind**: Speak to others the way you hope they will speak to you.
- **Call it as you see it**: Think carefully about both strengths and areas for improvement, and tell the truth, even if it is hard.
- **Speak the details**: Describe moments and examples that illustrate your point. Do not generalize, because generalities are hard to believe.
- **Balance the scales**: People will find it easier to hear your message if you provide a balance of positive feedback and constructive criticism.
- **Pick and Choose**: Talk only about the essentials. Less can be more and can help people focus on one or two areas for improvement**.**
- **Read the listener**: Watch the person to whom you are speaking to carefully; talk to them as if in a personal conversation, not as if you are an angry teacher or policeman.

**Straight Talk – Hearing It!**

- **Open up**: Remain open while receiving feedback. Notice if you begin getting defensive or stop listening.
- **Look up**: Make eye contact with the person when they are speaking to you. Without it, the speaker won't know if you're hearing the message.
- **Listen up**: Good listening takes practice. Stop your inner voice so that you can hear the other person's words. Don't allow yourself to get distracted.
- **Store it up**: People are telling you important information. Pay attention and remember what they said. When finished, think back on what you heard. Absorb it. Ask for clarification if you need it.
- **You decide**: You are the only person who can decide what feedback you want to act on. Be honest and courageous.

**Straight Talk Feedback Form:**

- Print out a copy of this form for each participant.
- Ask them to indicate something they liked about the program in the left hand column under the plus sign.
- Ask them to indicate something they would like to change next time in the right hand column under the delta sign.

| + | Δ |
|---|---|
|   |   |

## Garden Drawing Evaluation

**Objective:**
Use drawings as an effective way to gather information with young children. This activity is an example of how you can use drawings to uncover what children have learned about gardening through your program.

**Time:**
- 30 minutes during the program pre-session
- 30 minutes during the program post-session

**Materials:**
- Blank pieces of paper
- Crayons, colored pencils, and markers

**Instructions:**
This pre- and post-test activity will help to highlight the children's changes in perspective. Do this activity on the first day of program, before any other activities, and one week after the program has finished.

**Pre-Session:**
- Provide children with blank pieces of paper, markers, crayons, and colored pencils.
- Ask them to write their first names and ages on the back of each paper they draw on.
- Ask children to draw a garden, any garden.
- Say something like: "It can be a garden you've seen before or a garden that you imagine. It's your garden, so can include whatever you'd like."
- Note: You must be very careful not to influence participants when introducing the activity or during the activity. Be careful not to use leading examples or questions (e.g. "you can draw a vegetable garden or a flower garden", "are there any animals in your garden?", "who visits your garden?").
- Give children between 15 and 30 minutes to draw before the drawings are collected.

**Coding:**
Set aside some time when you are not working with the children. Code drawings based on the presence or absence of ecological and social aspects of gardens:

| Ecological | Social |
|---|---|
| Flowers | People present |
| Different types of flowers (e.g. daisies, tulips, sunflowers) | People gardening |
| Vegetables | People interacting (e.g. gardening together, playing together) |
| Vegetables growing appropriately (e.g. carrots and potatoes underground) | People of different generations (e.g. adults, children) |
| Fruit | Structures (e.g. shed, picnic table, house, school) |
| Fruit growing appropriately (e.g. apples on trees, blueberries on bushes) | Signs |
| Soil | Activities other than gardening (e.g. playing, eating, bike riding) |
| Sun | The time it takes to garden |
| Water (e.g. water source, hose, watering cans, rain) | Commitment, caring, ways of expressing feelings about the garden |
| Different Colors | |
| Insects or animals present | |
| Trees, shrubs, or other plants near garden | |

**Post-Session:**
One week after the program ends, ask the children to draw a garden.
It can be any garden they would like.
Code the drawings again based on the presence or absence of the ecological and social aspects.

**Compare:**
Compare and contrast the children's pre- and post-drawings to determine if any change in understanding of gardens is expressed.

**Modify:**
If you are working with younger children (5-6 year olds) or with special needs audiences whose drawings aren't easily interpreted, you may have facilitators visit with children toward the end of the drawing exercise. Ask facilitators to carry a post-it note pad and denote the participants' name. They can simply ask the participant to "tell me about your drawing." Once again, caution your facilitators to be careful not to ask leading questions (e.g. is that an apple tree?).

Ask facilitators to record the participant's response to the question. After you collect the drawings, attach the post-it note to the drawing for reference when coding.

## Know and Show Sombreros

**Purpose**
Children create wearable pieces of art by decorating newspaper hats, as a way to their knowledge of a question of interest.

**Objective:**
The objective of this activity is to make wearable works of art that show children's understanding of a question of interest, such as the benefits of plants to people. This activity is both a creative arts project as well as an effective evaluation tool. If you make the hats as a pre- and post-test, you can note the difference between what the children included before, and after, the program.

**Time:**
- 1 hour during the program pre-session
- 1 hour during the program post-session

**Materials**
- 2-inch clear tape
- Newspaper
- Miscellaneous art supplies (markers, yarn, glitter, pipe cleaner, tissue – whatever you can think of!)

**Instructions:**

This activity needs to be done twice – once during the program pre-session and once during the program post-session. The rationale behind this is that through comparing these activities, you will be able to identify a change in a group of children's knowledge or understanding of your program's subject of interest.

**Make the Hat**
- Place the middle of two large, square sheets of newspaper on the top of a student's head.
- Lay the rest of the paper flat against the student's head.
- Tape around the newspaper starting right over the ear, and continue wrapping until the tape goes all the way around the student's head.
- Curl up the edges of the newspaper to form the brim of the hat.

**Decorate the Hat**

- During the pre-session, simply ask, without prompting, a question of interest related to your project goals, such as: what are the benefits that plants provide us? Or, what do plants need to grow? Encourage them to be creative, but do not offer suggestions or prompting.
- Encourage children to decorate their hats, with different art supplies, to show what they know.

**Describe the Hat**
- When everyone's finished their hats, encourage them to show their creation and talk about what each decoration or item means.
- As they do this, jot down the numbers and range of responses.
- For example, when asked what plants need, children may show water drops, and a sun. Note those as examples of two different needs. Note, too, any misinformation you see presented.

**Post-Session:**
- Repeat this activity again at the end of your program's session. Again, jot down the numbers and range of responses.
- Is there a difference? At the end of the session, are children able to identify more, or present a broader/deeper understanding of the plant world?
- For example, they may now note that plants need sun, water, nutrition, time to grow, a good location, and care.

You've just completed another evaluation method and most likely had some fun while doing it!

This activity was used with permission from the Junior Master Gardener Program. For more information, visit http://www.jmgkids.us

<u>**Survey Sample #1**</u> (Post-test for children and youth program participants)

Hello! We want to know about the garden project you're doing and how you feel about it. We have some questions for you to answer so that we can try to make our projects better in the future!

**Which of these things have you done in your gardening program?**
- ❑ I planted seeds
- ❑ I watered the plants and flowers
- ❑ I took weeds out from the garden
- ❑ I picked vegetables when they were ripe
- ❑ I helped with composting
- ❑ I talked with the adult leaders about my ideas
- ❑ I helped plan things to do
- ❑ I helped make decisions
- ❑ I helped find answers to problems
- ❑ I got to be in charge of some of the things we did
- ❑ I helped raise money for the garden
- ❑ I helped decide what to do with money for the garden
- ❑ I was a member of a committee
- ❑ I talked to other people about the garden
- ❑ I helped write an article about the garden
- ❑ I showed other kids how to do things, like planting
- ❑ I looked after the younger kids

**Which of these things did you learn from working with the garden?**
- ❑ How to plant a garden
- ❑ How to look after a garden
- ❑ How to decide what plants are best to grow
- ❑ More about vegetables, herbs, and flowers
- ❑ How to tell the difference between the plants and weeds
- ❑ How to get rid of insects and pests
- ❑ How to use different tools in the garden
- ❑ How to work together with other people to reach a goal
- ❑ More about nature and the environment
- ❑ More about my school
- ❑ More about my town
- ❑ How to make decisions
- ❑ How to find answers to problems
- ❑ How to talk about important things with adults

**Survey Sample #2** (Pre- and post-test for children)

For each question, color in the face that matches how you feel about the statement.

| In this program I feel that…. | No, I strongly disagree | I disagree | No opinion | I agree | Yes, I strongly agree |
|---|---|---|---|---|---|
| 1 I can make a difference in the world. | ☹ | ☹ | 😐 | ☺ | ☺ |
| 2 I have responsibility for how others feel. | ☹ | ☹ | 😐 | ☺ | ☺ |
| 3 What I have learned is useful and helpful to me. | ☹ | ☹ | 😐 | ☺ | ☺ |
| 4 What I have learned is useful and helpful to others. | ☹ | ☹ | 😐 | ☺ | ☺ |
| 5 I belong to a caring community. | ☹ | ☹ | 😐 | ☺ | ☺ |
| 6 My family could be involved in this program. | ☹ | ☹ | 😐 | ☺ | ☺ |
| 7 I am valued and I matter. | ☹ | ☹ | 😐 | ☺ | ☺ |
| 8 I am given chances to make decisions affecting me. | ☹ | ☹ | 😐 | ☺ | ☺ |
| 9 I am asked to give input into decisions. | ☹ | ☹ | 😐 | ☺ | ☺ |
| 10 I am free to discover. | ☹ | ☹ | 😐 | ☺ | ☺ |
| 11 I am given chances to succeed. | ☹ | ☹ | 😐 | ☺ | ☺ |
| 12 I believe I can do what I set out to do. | ☹ | ☹ | 😐 | ☺ | ☺ |
| 13 I understand that failure and frustration are learning experiences. | ☹ | ☹ | 😐 | ☺ | ☺ |

**Survey Sample #3** (Post-test for adult program leaders and volunteers)

For each question, color in the face that matches how you feel about the statement.

| In this program the children and youth…. | | No, I strongly disagree | I disagree | No opinion | I agree | Yes, I strongly agree |
|---|---|---|---|---|---|---|
| 1 | Participate in discussions regarding the project | | | | | |
| 2 | Are informed about the issues facing the project | | | | | |
| 3 | Participate in project decision making | | | | | |
| 4 | Participate in project planning | | | | | |
| 5 | Contribute to problem solving | | | | | |
| 6 | Serve in leadership roles | | | | | |
| 7 | Carry out project activities | | | | | |
| 8 | Take initiative in carrying out project activities | | | | | |
| 9 | Make financial decisions about the project | | | | | |
| 10 | Participate in advisory committees | | | | | |
| 11 | Assume responsibility for carrying out the ongoing tasks of the project | | | | | |
| 12 | Develop publicity about the project | | | | | |
| 13 | Share information with other community groups about the project | | | | | |
| 14 | Prepare written reports about project activities | | | | | |
| 15 | Train new participants | | | | | |
| 16 | Evaluate project activities | | | | | |
| 17 | Report to project funders | | | | | |

1 = almost never, 2 = rarely,
3 = about half the time, 4 = often, 5 = almost always

| | Before the in-service program, did I? | End of the program will I? |
|---|---|---|
| Ask youth for input on garden design, or another element of the garden, in advance of its planting. | 1  2  3  4  5 | 1  2  3  4  5 |
| Ask myself, is there anything I am doing that the youth could do instead? | 1  2  3  4  5 | 1  2  3  4  5 |
| Encourage youth to work through a challenge without my "hovering." | 1  2  3  4  5 | 1  2  3  4  5 |
| Find out which kinds of garden activities youth find most appealing. | 1  2  3  4  5 | 1  2  3  4  5 |
| Seek youth input on how to deal with garden maintenance. | 1  2  3  4  5 | 1  2  3  4  5 |

**Interview Sample #1 -** (For adult program leaders)

This interview focuses on identifying the degree of youth participation in the program. Ask adult programs the following questions:

- How are youth involved in the project?

- What types of activities do youth do?

- Where do you think the project rests on the Ladder of Participation? (Ladder included below)

- Where do you hope the project would ideally rest on the Ladder?

- Are there aspects of the Ladder that you are struggling with?

- Are there any barriers that you perceive as preventing you from reaching your desired level on the Ladder of Participation?

- How do adults view the level, ability, and success of youth participation in the project?

- What are the most challenging aspects of youth participation in the project?

- What areas of youth participation in the project have been successful?

8 Child-initiated, shared decisions with adults

7 Child-initiated and directed

6 Adult-initiated, shared decisions with children

5 Consulted and informed

4 Assigned but informed

3 Tokenism

2 Decoration

1 Manipulation

Degrees of participation
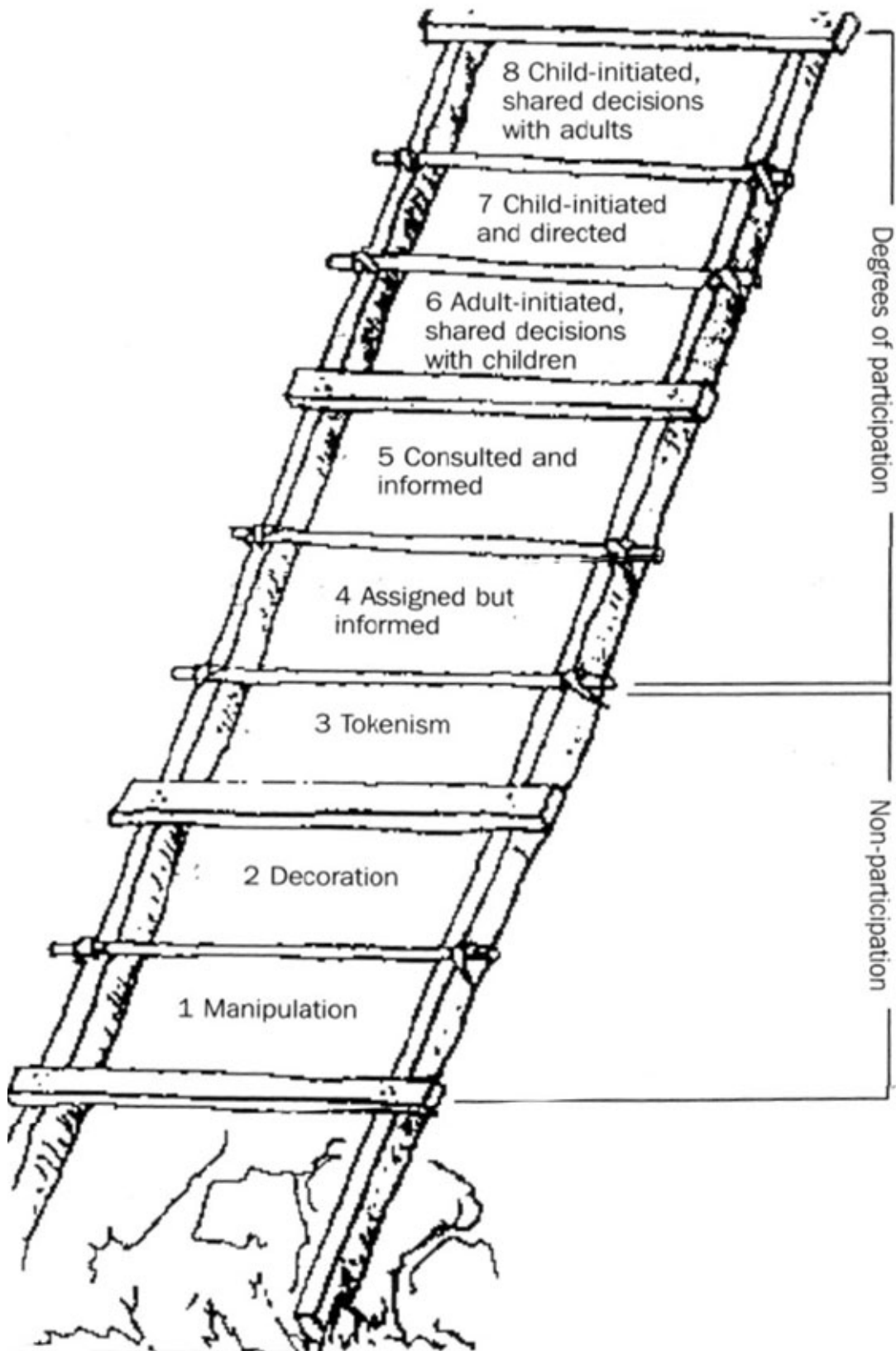
Non-participation

**Interview Sample #2 -** (For children and youth program participants)

This interview focuses on identifying the degree of youth participation in the program. Ask the children and youth program participants the following questions:

- What did you think of the program session today?

- What is it like to be a participant in the program?

- What have you done in the program?

- How do you/ will you feel when this program ends?

- What would you change about the program next time?

- Do you feel like your opinion is valued?

- If so, please provide an example of how it has been valued.  If not, why not?

- Are you encouraged to give input into the program?

- If so, how?  And if not, why do you believe that this is the case?

- Do you feel comfortable to ask questions?

- If so, please elaborate on the types of questions you might ask adult leaders.

- Do you like how the adults respond to you?

- If so, what is an example of what you like?  If not, what is an example of what you don't like?

- Are your ideas included?

- If so, how, and if not, why do you believe that they are not?

## Examples of Observation

What's different between these two examples?

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**High quality observation**:
A 5th grade girl entered the room a minute late, and took a seat adjacent to three 6th grade girls; all were dressed in t-shirts and blue jeans. All four girls then leaned forward and began to plant seeds, having a conversation about a previous planting activity as they did so. All four were laughing and talking (about equal in the degree to which they were talking/interacting), and two of them had soil on their clothing. One girl asked a question about the earlier activity, and two of them responded at the same time with the answer, laughing as they did so. They completed the planting and cleaned up without being asked by the leader. They ended by asking the leader what next week's activity would be.

The leader set up the planting activity before the girls entered the room. During the activity, the leader periodically asked questions, began to set up for an activity with another group, and conversed with the girls about a community event. She also offered a snack, and left the room for a short while to take a phone call. She closed by asking the girls what they wanted to do next week, when the girls asked her what next week's activity would be. The leader and three of the girls decided to clean up the courtyard during the time they would be meeting next; one girl indicated she would be at softball practice the following week.

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**Poor quality observation**:
The girls were fully engaged. The leader trusted the girls to let them work on their own.

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You should always have a clear intention about what you are going to observe…
For example, will you observe the program as a whole, or a specific
programming goal (such as youth leadership)?

Below is an example of types of questions that have been tailored for an observer
looking for evidence of youth leadership in a program. Feel free to tailor the
questions below, to your own specific evaluation goals.

- How do youth enter the room?  Whom do they talk with and what do
  they do?
- Do the adults use strategies to facilitate/ invite youth initiative and youth
  voice?  If so, what are these strategies?
- Do the adults guide youth and offer direction?  Do they instruct or tell
  them what to do?  If so, describe.
- Are the youth speaking up?  Do they offer suggestions for alternatives or
  creative approaches?
- What is the adult response to these suggestions? Do the youth speak to the
  program leaders about their ideas and suggestions for the project?
- Are the youth asking questions?  How do adults respond to these
  questions?
- Are youth suggestions incorporated?  Is there a plan in place for
  incorporating youth suggestions?  If so, who creates this plan?
- If future efforts are planned, who will do the follow up, the youth, adults,
  or both?
- Who makes decisions?
- Are there youth who are not actively participating?  What does this look
  like?  How do others (youth and adults) respond to those who do not
  actively participate?
- Is there laughter and conversation?  Or is it quiet?
- Are participants standing, sitting, or moving around?  How do they move
  in relationship to one another?

**What you should observe:**

● **The program setting:**
The physical environment in which the program takes place.

● **The human and social environment:**
Ways in which people organize themselves into groups and sub-groups;
Patterns of interaction and frequency of interaction between people;
Decision-making patterns;
Social characteristics of group members.

● **Planned program implementation activities and formal interactions:**
What goes on in the program?
What do people do in the program?
What is it like to be a participant?
Look at the sequence of the activity: beginning, middle, end, and consider:
Who is involved?
What is being done and said by staff and participants?
How do they go about what they do?
Where do activities occur?
When do things happen?
What are variations?
What are signals an activity is ending?
How do participants react to the ending of the activity?

● **Informal interactions and unplanned activities:**
Look at what's happening during unstructured or free time -- this is a good time to ask participants:
What did you think of what went on this morning?
Was it clear to you what they were trying to do?
What did you think of the session today?
How do you think what went on today fits into your overall program interests?
*Remember: Everything that goes on in or around the program is data!

● **Nonverbal communication:**
Take note of the ways in which participants dress, express affection, physically space and arrange themselves in the physical setting. These can all offer nonverbal cues about what is happening in the program.

● **Observing what does *not* happen:**

If program goals indicate that certain things are supposed to happen, and they do not happen, it is worth noting that as well.

# Program Evaluation Overview

One aspect of gardening and providing garden programming that is often overlooked is evaluation.

**Benefits**

Advantages to providing evaluation information (data) about a garden and garden programming include:

* Demonstrate accountability to stakeholders including participants and funders.
* Generate a much clearer picture of program outcomes and impacts.
* Continue or increase support of the garden and programming.
* Create an opportunity to:
  * Increase participant satisfaction and success.
  * Streamline and improve programs.
  * Discovering new activities or ways of aggregating tasks.
  * Collect vital feedback about the program providers.
  * Alter the garden and program to better meet participants' critical needs.
  * Find positive secondary outcomes.

**Getting started**

A plan to evaluate a garden and/or gardening program should be created and implemented at the very beginning, when the garden is in the conceptual phase.

**What data to collect**

Identify what you want to know about your garden and gardening program. Consider all your invested resources, activities and stakeholders (including paid staff members, volunteers, funders and participants). What are the desired outcomes and impacts? Additionally, determine what evidence do you need to answer your questions?

**Quantitative evaluation** emphasizes gathering numbers and providing hard data. Some possibilities include:

* How many people actively participate in the garden?
* How many families are positively impacted by the garden programs?
* How many pounds of fresh vegetables and fruits are produced for military families?

Another example of quantitative evaluation data is testing program participants to measure their increase in knowledge, skills, abilities (and even perceptions) after gardening for a set period of time. The easiest way to measure the change is to perform a pre-test/post-test evaluation. Give participants a set of questions when they first begin the program and/or first start to garden, and then give the same participants the same set of questions after they complete a period of programming and/or gardening. Measure the difference in responses.

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<p style="text-align:center">Sample 1 Pre-test/Post-test (Knowledge Exam)</p>

For each of the following questions, fill in the blanks with the correct answer.

1. What are the three (3) main benefits of mulching plants? _____, _____, and _____

2. The essential nutrient that aids green growth is _____?

3. The pH of the soil is _____ if it is 6.2?

Multiple choice responses to questions can also be used, just as in standard tests:

4. If the pH of the garden soil is 6.2, it is:   A) alkaline   B) neutral   C) acidic

Another way of performing pre-test/post-test evaluation, best used to test skills and abilities, is to ask participants to demonstrate/perform a set of skilled activities (adding compost to soil or planting a vegetable, for examples) as they first begin the program and then again after they finish. Observe and measure the difference.

Participant perceptions can even be measured by giving them a pre-test/post-test set of questions having to do with perceptions and value statements (about themselves, the program, gardening in the military or a combination of whatever you wish to measure).

<p style="text-align:center">Sample 2 Pre-test/Post-test (Perception Survey)</p>

For each of the following statements, think about how much you agree or disagree with the statement.  Please circle the number that best tells us how much you agree, starting with 1 (Strongly Disagree) all the way up to 7 (Strongly Agree).

| | Strongly Agree | | | | | | Strongly Disagree |
|---|---|---|---|---|---|---|---|
| Organic gardening is not the best method for growing vegetables | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Participating in the X Base Garden program has a lasting affect on base families | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A garden is more successful when team management is used | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Most military personnel do not understand the significance of gardening as a therapeutic activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Youth involved in the gardening program go home and forget most of what they learn | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Military rank is very apparent, even in a garden | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Teaching adults gardening is best done by non-military professionals | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Quantitative evaluation can perform double duty, providing data for the program managers and educational activities for the participants. For example, experiments can be conducted where one part of the garden receives drip irrigation and the other part of the garden receives overhead watering, measuring how much water is saved and how well plants grow with each watering method. Garden managers save water and discover the best watering method for their garden; participants learn the advantages and disadvantages of different watering methods.

Given its simplicity, a quantitative approach to evaluation might appear to be the easy choice. However, **qualitative evaluation** has its own inherent value, too, and can be relatively easy to incorporate into your approach. Examples of this include:

- Interviewing garden program participants (representative quotes can be powerful additions to reports)
- Observing garden activities
- Videotaping the garden and participants (which is also great for accountability)
- Recording the artwork for and about the garden created by participants
- Encouraging gardeners to keep a journal
- Training participants to interview and record each other's thoughts (both gaining program managers valuable data and teaching participants interview skills)

The impact of qualitative data, if presented in the appropriate way, can be immense. When a funder or base commander reads a participant quote in a report that states "This garden saved my life," the strength of qualitative evaluation data becomes very clear. A fortified way of conducting evaluation is to combine numbers with quotes/visuals through a mixed-method approach, collecting both essential quantitative and qualitative data.

**When to collect data and use**

Another aspect of evaluation involves when data is collected and acted upon. **Formative** evaluation means collecting garden and/or program data from the beginning and instituting corrections and changes immediately based upon the data. For example, it might become clear that participants are more successful if they garden as a family unit, so the program managers institute changes immediately to allow or encourage this activity. **Summative** evaluation means collecting data throughout the life of the garden or program and then analyzing the data when activities end, mainly with an eye to altering the next garden or program based upon the findings. Both have their advantages and disadvantages. Again, a fortified way of conducting evaluation is to combine both formative – making appropriate changes along the way – and summative – making changes at the end of activities for the next garden or program.

Whichever method or approach is chosen, it is very important to create an evaluation plan and implement it from the very beginning of the garden and programming. Always incorporate a feedback loop to find out how well you, the managers, are doing and what actions can be taken to improve the garden and/or program.

**Consents**

A few words must be said about obtaining consent from anyone who you choose to interact with for evaluation purposes. Any research or evaluation that is conducted through the auspices of an educational institution in the US must pass through a rigorous review (institutional review board) to insure the health, safety and privacy of participants. This includes, but is not limited to, the following. Research & evaluation participants:

- will be given the choice of participating without any coercion,
- have the option of ending participation at any time,
- have no undue burden placed upon them in the course of the research/evaluation
- can expect their private information to be protected,
- can expect that all reports with their words or video/audio recordings with them included have their expressed, signed consent,
- will be told about any potential physical or emotional harm from participating in the research before participating,
- are told, in detail, what the purpose of the research/evaluation is, and what their participation entails,
- are given contact information to report any misconduct on the part of researchers and/or evaluators,
- are given contact information to obtain a copy of the final report or video.•

**Military Installations**

Almost all military installations already have similar procedures in place to inform and consent potential participants in studies; you should initially check with the installation administration to find and implement these procedures. If there are none in place with the installation or organization you are working with, consider setting up your own consent procedures; however, don't reinvent the wheel. There are many sources to find an appropriate template to set up and implement consent procedures. For example, the US Dept. of Health & Human Services has an Office for Human Research Protections (OHRP) with a cache of general information, existing protocols and sample documents:
http://www.hhs.gov/ohrp/archive/irb/irb_guidebook.htm

# The READY Tool

## A Youth Development Outcomes Measure

By Premini Sabaratnam, MPH and
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*University of Rochester, Division of Adolescent Medicine*

Promoting positive youth outcomes is increasingly recognized as an important focus for youth serving organizations in order to both prevent negative outcomes and prepare youth to fully reach their potential. Youth serving programs need ways in which to measure the impact of their programs in order to provide quality services that meet the needs of youth. Measuring youth development outcomes, however, is challenging. By its nature, youth development is a broad concept that includes many different outcome and indicator areas. How these outcomes are defined can also vary depending on the source and the framework used. Existing surveys that measure positive youth outcomes or assets such as the Search Institute's Profiles of Student Life: Attitudes and Behaviors, can provide important information at a community level, but may be too detailed and lengthy for use in program evaluation. The READY Tool was developed to be a brief, easy to use program evaluation tool designed to measure four core youth development outcomes.

## What is the READY Tool?

The Rochester Evaluation of Asset Development for Youth (READY) tool is an instrument designed to help youth serving programs evaluate the impact of their programs on youth development outcomes of participants. The instrument consists of 40 items which measure four core youth development outcomes along with program participation, connectedness to program, and socio-demographics. It is a self-report, pencil and paper survey designed to be completed by program participants ages 10 and older. The survey is written at a fourth grade reading level and takes, on average, about 10 – 15 minutes to complete.

> The four core youth development outcomes measured by READY include:
>
> 1. Basic Social Skills
> 2. Caring Adult Relationships
> 3. Decision Making
> 4. Constructive Use of Leisure Time

Two of the four core outcomes listed in the box above include additional subcategories. Basic Social Skills includes measures related to communication, self control, and empathy, and Caring Adult Relationships includes staff relationships and program effect on other caring adult relationships.

### Tool Adminstration and Report Details:

The tool is designed in a manner that allows programs to self-manage both administration of the survey and analysis of the data. The survey is included in Microsoft Word ® format as part of an easy to use CD-ROM toolkit. This allows programs to personalize the survey by entering the program name and program staff titles prior to printing. The toolkit also includes data entry and analysis software created in Microsoft Excel ®. Program staff can enter collected survey data, and the software program will automatically analyze the data and generate a program score report including frequencies and averages for each survey question, as well as summary scores ranging between 0 and 100 for each of the following youth development constructs:

- Self Control
- Communication
- Empathy
- Staff Relationships
- Decision Making
- Program Effect (Caring Adult Relationships)

The scores are also stratified by participants' self-reported length of involvement in program, intensity of participation, and connectedness to program. Summary data related to participants' leisure time activities are also included.

## How and Why was the Tool Developed?

The READY Tool was developed in Monroe County, New York as a collaborative effort between the Rochester-Monroe County Youth Bureau, the United Way of Greater Rochester, the University of Rochester, Division of Adolescent Medicine, and a variety of youth serving agencies. Between 1999 and 2002, representatives from these entities participated in the Youth Development Outcomes Measurement Project that resulted in the development of the READY Tool.  Participating community-based youth serving agencies and organizations included:

- Baden Street Settlement
- Big Brothers Big Sisters of Greater Rochester
- Boy Scouts of America, Otetiana Council
- Boys & Girls Club of Rochester
- The Center for Youth
- Charles Settlement
- Community Place of Greater Rochester
- Girl Scouts of Genesee Valley
- Hochstein Music School
- Southwest Area Neighborhood Association
- Urban League of Rochester
- YMCA of Greater Rochester

Early in this project, participants recognized that while positive youth development was a priority at a community level and at a programmatic level, there were no existing tools that allowed programs to easily evaluate their impact on youth development outcomes.  The project participants identified a need for a youth development outcomes measurement instrument that would be easy to use, easy to administer, applicable to a variety of youth serving organizations, and useful for assessing program impact on youth development outcomes.

The team began by first identifying youth outcomes and indicators that would be important to measure. Using a consensus building process, the project team agreed upon four priority youth development outcomes that were applicable to a variety of youth serving programs and that were most important for ongoing program improvement. The core outcomes identified were basic social skills, caring adult relationships, decision making, and constructive use of leisure time.

Survey questions were written and adapted from a variety of sources to measure the four core outcomes. Additional questions to measure socio-demographics, program participation, and program connectedness were also included in the survey. The first draft of the survey was piloted using cognitive interviews with 48 youth who were participating in various programs both in urban and suburban areas. Each young person was asked to complete the survey and was then interviewed by a research staff member to assess how the youth interpreted each question and the response options, to identify any wording that was difficult to understand, and to get feedback and suggestions. Based on the cognitive interviews and youth feedback, some questions were revised and some were eliminated all together. The next iteration of this survey was then field tested with 389 participants between the ages of 10 and 19 to test whether the instrument was feasible for use by youth serving programs, and whether it measured the four core outcomes. The field test demonstrated that the instrument could indeed be feasibly administered by staff at both drop-in and structured programs.  Factor analyses of the data revealed that the items on the survey reliably measured the four core outcomes and related constructs.

For additional information on the development and psychometric properties of the tool please visit *www.urmc.rochester.edu/gchas/div/adol/leah/resources.HTM*.

## What Programs Can Use READY, and How Can it be Used?

READY is appropriate for use by most programs that serve adolescents and that have an interest in measuring the four outcomes that the tool addresses. It can be used by both "drop-in" programs such as open recreation programs, and by more structured programs that include regular daily or weekly meetings. Administering the tool at predetermined intervals allows programs to track their scores on youth development constructs over time; READY is not intended to be administered as a pre/post survey.

The READY Tool and summary scores can be used for a variety of purposes. Tracking scores over time allows organizations to gauge what impact a program is having on participant outcomes. Score reports can be used for internal quality improvement purposes by identifying program strengths, as well as opportunities for improvement. The scores can also be used to identify

# "Get READY" in Erie County, New York
## Susan Morisson, Director, ACT for Youth of Erie County

The READY Tool Project has clearly become an integral part of the ACT for Youth Initiative in Erie County. It has provided an important vehicle for our Partnership to unify key community stakeholders, including government, education, non-profit and faith-based youth providers and diverse funding sources, around a research-based, data-driven, outcome-focused approach and common performance indicators.

*History and Successes:* When Erie 1 BOCES, the ACT lead agency, brought the READY Tool to its CDP in 2003, two ACT CORE Partners, Erie County Youth Services and the United Way of Buffalo and Erie County, major funders of local youth services, expressed interest in the Tool since they quickly realized that the Tool could provide them with validated data to assess agency programming, something they never had before. Soon, Erie County Youth Services made the READY a requirement of its nearly 50 agencies, and the United Way also strongly encouraged its agencies to use the tool. Another CORE

*"The data generated by the READY Tool has enabled us to secure additional funding by being able to demonstrate "need' in certain target areas. We were able to generate nearly $100,000 of additional funding from private foundations after our County funding was cut."*

**- Youth Agency**

Partner, the Amherst Youth Board and the Municipal Youth Boards and Youth Bureaus, advocated for local youth bureaus to use the tool as well. Currently, over 75 agencies in Erie County administer the READY Tool regularly and word of the READY Tool has quickly spread throughout our community. Both funders and providers have approached us to learn how they can become part of the project. For example, early this year, the Buffalo Board of Education, another CORE ACT Partner, which is working to establish accountability measures to ensure supportive learning environments for its students, has asked to be included in the Project. By the end of 2006, ACT plans to have an additional 75 in-school and after-school providers in the Buffalo Schools trained in the effective use of the READY Tool, as well as engaged in the positive youth development strategies that will contribute to supportive learning environments.

*"Most importantly, the READY Tool helped us, the administration and staff to understand our kids better. I never knew some of these things about them. I think this information and the insight that results from it will help us to connect with our kids better."*

**- Youth Agency**

*"The READY Tool is really a gift to our community. It enables us to make a major stride toward becoming research-based, data-driven and outcome focused in our efforts to serve youth. I feel like we aren't just scatter-shooting anymore."*

**- ACT Core Partner**

After, the initial READY Score Reports were generated, it became apparent that participating agencies needed capacity building in several areas targeted by the Tool. As a result, working with the University of Rochester, ACT for Youth at Erie 1 BOCES developed a continuous improvement planning process specific to the READY Tool for participating agencies to utilize. With support from Erie County Youth Services, ACT also began providing ongoing training and technical assistance to support agencies in successfully implmenting this continuous improvement planning process at the program and organizational level. For example, last year BOCES and ACT provided training on "Youth Voice and Adult/Youth Partnership" since READY revealed that this was a common area of weakness among participating agencies. The on-going data generated by the READY Tool continues to inform the training and development agenda of our ACT Partnership, as well as to enhance our collaborative efforts to better serve youth.

training and technical assistance needs. Programs may also choose to use READY data to both demonstrate effectiveness to funders and to seek out additional funding sources for youth development focused programming.

## How Can Funders Use the READY Tool?

Funders of youth serving programs, particularly community funders, can use the tool to track community wide progress towards positive youth outcomes. Scores on the measured constructs can help funders identify community best practices along with possible training and technical assistance needs. Data can also be aggregated to create community wide benchmarks.

## What Does it Take to Use READY?

Implementation training, ongoing technical assistance, and use of the READY toolkit are available to interested users through the University of Rochester, Division of Adolescent Medicine and the ACT for Youth Center of Excellence. Fees are based on the number of users and the level of training and technical assistance (TA) required. Options include:

1. Implementation training and TA provided directly to end user organizations.

2. Implementation training provided for end users, and continuous training and TA provided to a lead agency which agrees to provide direct TA to a group of end users.

## To learn more about the READY Tool please visit:

*www.urmc.rochester.edu/gchas/div/adol/leah/resources.HTM* **OR** *www.actforyouth.net*

## Or refer to:

1) Klein JD, Sabaratnam P, Matos M, Smith SM, Kodjo C, Lewis C, Ryan S, Dandino C. Development and factor structure of a brief instrument to assess the impact of community programs on positive youth development: The Rochester Evaluation of Asset Development for Youth (READY) tool. *Journal of Adolescent Health*, in press.

2) Sabaratnam P, Klein JD. Measuring youth development outcomes for community program evaluation and quality improvement: Findings from dissemination of the Rochester Evaluation of Asset Development for Youth (READY) Tool. *Journal of Public Health Management and Practice*, in press.

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**The Center of Excellence invites you to visit the ACT for Youth website where additional copies of this newsletter and many other youth development resources are available.**

*www.actforyouth.net*



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