



Growing School and Youth Gardens in New York City

A Guide to Resources **2009**



GreenThumb
City of New York
Department of Parks & Recreation

Cover photos courtesy of Garden-to-School Café Project Evaluation, 2009, New York State Department of Agriculture & Markets (Garden-to-School Café is a project of the New York State Department of Agriculture & Markets in partnership with NYC Department of Education Division of SchoolFood, GreenThumb/NYC Parks & Recreation, Cornell Cooperative Extension, Added Value, and Baum Forum).

TABLE OF CONTENTS



I. INTRODUCTION	1
a. What Is School Gardening?	1
b. Overall School Gardening Guides	2
c. Inspiration: Exemplary Gardens Near and Far	3
II. GETTING STARTED	5
a. Evidence Base	5
<i>Websites and Publications</i>	5
<i>Articles</i>	7
b. Resources for Starting a Garden	8
c. Identifying Partners	10
III. GARDEN PLANNING AND DESIGN	12
a. Local Resources	12
b. Online and Other Resources	13
c. Mapping Your Garden: A Tool	15
IV. CURRICULUM	17
a. Curriculum Principles	17
b. Teacher Training	18
c. Garden-Based Educators and Facilitators	19
d. Curricula	20
e. Nutrition-Related Curricula and Resources	23
V. GARDENING: INDOOR AND OUTDOOR	26
a. Horticulture Instruction and Advice	26
b. Supplies:	28
<i>Indoor Preparation and Growing</i>	28
<i>Outdoor Gardening</i>	29
c. Soil and Soil Testing	30
d. Seeds, Seedlings, and Trees	30
e. Compost	31
f. Pest Management	33
VI. BEYOND THE CLASSROOM	34
a. Farm: Farming Education Centers	34
b. Cafeteria: Garden-to-Cafeteria Table	37
c. Community: Youth Development & Intergenerational Programming	38
d. Environment: A Sustainability and Greening Sampler	40
VII. FUNDRAISING	42
VIII. CREDITS	46

I. INTRODUCTION: What Is School Gardening?



New York City is unquestionably urban. Yet, today, it is full of green and growing spaces—in its parks, in its community gardens, and, increasingly, in its schoolyards.

A school garden can take any number of forms: a raised bed in a schoolyard or an EarthBox in a classroom, a section of a community garden blocks from school or a rooftop greenhouse, a flower bed bordering the school building or lettuce growing in water in a classroom. It can be simple or elaborate, involve a small number of students or a whole school, as well as parents and community neighbors.

While the school gardening movement has roots reaching back a century in New York, interest in integrating gardens into school life is burgeoning today. The reasons why are clear. Gardens present myriad opportunities for experiential learning and academic achievement in virtually all subjects. In addition, as the dramatic rise in rates of obesity and diabetes among children causes great concern, garden-based learning promotes both healthful eating and physical activity in the school setting. For New York’s urban children, it provides early firsthand knowledge of the natural world, fostering a sense of environmental stewardship that can last a lifetime. Working cooperatively in the garden also facilitates children’s social development.

Even though the benefits are apparent, implementing gardening and garden-based learning in your school may be challenging. This directory includes resources to guide you through the various stages of conceiving, designing, planning, implementing, maintaining, and harvesting the bounty of your school garden. Many resources are local, while others are accessible online.

This section includes overall school gardening guides that provide:

- an overview of school gardening;
- step-by-step instructions; and
- a portal to other resources.

To learn what a thriving school garden looks like, contact one of the New York City gardens listed here or learn about other sources of inspiration through the links to additional model school gardens.



Overall School Gardening Guides

Gardens for Learning - Creating and Sustaining Your School Garden

California School Garden Network

<http://www.csgn.org/publications.php>

A comprehensive guidebook (with a link to order a free copy) that addresses all aspects of school gardening and provides a strong foundation to support the growing school garden movement. It was developed by a team of experienced garden educators, nutritionists, state officials, and other garden experts. This is a must-have for anyone looking to enhance learning through the use of gardens in schools.

American Horticultural Society

http://www.ahs.org/youth_gardening/index.htm

A list of resources for starting a garden with young people. Includes curricula, supplies, grants, and educational materials.

The School Garden Wizard

Chicago Botanic Garden

<http://www.schoolgardenwizard.org>

Download guides in PDF format that will walk you through the process of creating a school garden, from writing a proposal to integrating the garden into your curriculum and maintaining the garden throughout the entire year.

Kids Growing Food

Cornell Agricultural Outreach & Education/Agriculture in the Classroom

<http://www.nyaged.org/aitc/kgf.html>

The main goals of Kids Growing Food are to increase appreciation and understanding of agriculture, nutrition, and the food system by getting students involved in food gardening—at school, or very close by—and to create “garden classrooms” that provide authentic experiences and help educators meet state and national Learning Standards.

Growing Schools; Growing Schools Garden

<http://www.teachernet.gov.uk/growingschools/>

The Growing Schools website has been designed to support teachers in using the ‘outdoor classroom’ as a resource across the curriculum for pupils of all ages. See “The Year of Food and Farming,” a national program designed to reach children in every school from September 2007- July 2008, and the virtual Growing Schools Garden, <http://www.thegrowingschoolsgarden.org.uk/>.

Digging Deeper: Integrating Youth Gardens Into Schools & Communities - A Comprehensive Guide

Kiefer, Joseph and Martin Kemple, Food Works and the Common Roots Press in Partnership with the American Community Gardening Association (ACGA), 1998.

RootsNet@Plainfield.Bypass.com

A beautifully illustrated step-by-step guide for organizing and constructing children's gardens. The book is full of seasonal gardening activities and project ideas designed to cultivate high academic performance across the subject areas.



**Inspiration: Exemplary Gardens
Near and Far**

New York City 

Adlai Stevenson High School

1980 Lafayette Avenue
Bronx, NY 10473
Contact: Meg Hunnewell, (917) 364-8813.

Bronx Green Middle School

2441 Wallace Ave
Bronx, NY 10467
Contact: Kelly McLane, Garden Coordinator & Educator, (718) 689-3973,
bgmsgardencoordinator@gmail.com.

Diamante Garden

306-310 E. 118th St.
New York, NY 10035
Contact: Migdalia Bernal, (917) 292-1161.

“Enchanted Garden”

John F. Kennedy High School
99 Terrace View Avenue
Bronx, NY 10463
Contact: Paula Edlavitch, (914) 715-8926, PEdlavi@schools.nyc.gov.

John Bowne High School

63-25 Main Street
Flushing, NY 11367
The longstanding Agriculture Program at John Bowne HS includes classroom instruction in Plant Science and Animal Science, combined with learning by doing. Supervised work experience includes activities on the school’s land laboratory, which encompass gardens, a greenhouse, an orchard, and animal barns.
Contact: Steve Perry, Assistant Principal (718) 263-5555, Sperry@school.nyc.gov.
http://www.johnbowne.org/apps/pages/index.jsp?uREC_ID=64257&type=d

“Paradise Garden”

P.S. 4K
676-696 Glenmore Avenue
Brooklyn, NY 11207
Contact: Harry Peterson, (917) 692-5564.
http://schools.nycenet.edu/d75/P4K/exem_pro.htm

Added Value

Added Value & Herban Solutions, Inc.
370 Van Brunt Street
Brooklyn, NY 11231
Contact: (718) 855-5531
<http://www.added-value.org/>

Added Value is a non-profit organization that creates opportunities for the youth of South Brooklyn through the operation of a socially responsible urban farming enterprise. Working with the New York City Department of Parks and Recreation, Added Value is transforming a once dilapidated playground into vibrant community resource where young and old sow, nurture and harvest plants on a 2.75 acre urban farm.

Beyond NYC

Edible Schoolyard

<http://www.edibleschoolyard.org>

The Edible Schoolyard integrates gardening into the curriculum and lunch program of Martin Luther King Jr. Middle School in Berkeley, CA. It involves the students in all aspects of farming the garden—along with preparing, serving, and eating the food—as a means of awakening their senses and encouraging awareness and appreciation of the transformative values of nourishment, community, and stewardship of the land. The website includes curricula, tool kits, supplies, grant information, and technical support.

Edible Schoolyard New Orleans

<http://www.esynola.org/>

The Edible Schoolyard, New Orleans (ESY NOLA), at the Green Charter Middle School and New Orleans Charter Middle School, integrates organic gardening and fresh seasonal cooking into the school's curriculum, culture, and food programs. As in the original Edible Schoolyard, students are involved in all garden and food preparation aspects of the program.

Food For Thought: The Ojai Healthy Schools Program

<http://www.foodforthoughtojai.org/index.html>

Food for Thought is a non-profit, grassroots, community-driven effort, working in partnership with the school district, to bring locally grown fruits and vegetables, nutrition education, and agricultural literacy to the children of the Ojai Unified School District. Healthy minds, bodies, and environment are the objectives that guide every aspect of the program, including its garden-based learning components.

Troy Howard Middle School

Belfast, ME

http://www.sad34.net/%7esteve_tanguay/garden.html

A model for integrating gardening into school curriculum, the student-run garden produces food for the school's cafeteria and provides food for local soup kitchens. Students staff a school-based farm stand to help fund the garden.

II. GETTING STARTED



How do you move from your excitement about creating a gardening opportunity for students to making it reality? The very first steps have to do with establishing the key relationships that will make it possible. It's essential to have the support of your school's principal and other leaders. You'll also need to create a core gardening team of teachers, staff, and parents and gain the critical cooperation of school custodial staff.

Partnerships with other groups can also be important for a gardening program to flourish. If you're planning a garden on school grounds, you'll have to give some thought to who maintains it during the high growing season months when school is not in session. After-school, summer school, or day camp programs can be sources of garden care outside of school hours. Gardeners from nearby community gardens may be interested in helping tend a school garden. With many community gardens already established near schools, it can be worthwhile exploring the possibility of students gardening in a partner community garden, off school grounds.



Evidence Base

The sources below will:

- help you win over your principal and other colleagues with evidence of the numerous benefits to be derived from school gardens;
- walk you step-by-step through the process of starting a garden; and
- help you identify potential gardening partners in New York City.

Websites & Publications

Why Garden in New York State Schools?

Cornell University Dept. of Horticulture, Garden-Based Learning Program

<http://www.hort.cornell.edu/gbl/>

Are you looking for ways to share the excitement of school gardening with other teachers and educators? Need to convince your administrators of the benefits of beginning a garden in your school? Although you're familiar with all the merits, are you looking for research-based justification of why gardening is so important? This downloadable PowerPoint presentation is designed as a guided presentation or a stand-alone that can run on its own, to help you rally others and build enthusiasm.

Evaluation Summary – 2007 Grant Winners

National Gardening Association

<http://www.kidsgardening.org/grants/2007-evaluation-summary.asp>

Summary of results and comments collected as part of an evaluation of grantee programs, including data about the numbers of children participating, settings, types of

subjects taught through gardening, and relationship to educational standards, and evidence of effectiveness of gardening program through a number of measures.

Research & Policy Supporting Garden-Based Learning
California School Garden Network

<http://www.csgn.org/page.php?id=9>

This section of the CSGN website provides access to research articles, reports, and related documents that provide the research base for considering garden-based learning within various educational settings. It features resources to assist in assessing the outcomes and impacts of gardening with children.

School Garden Program Overview

A Healthy Nutrition Environment: Linking Education, Activity, and Food through School Gardens

California Department of Education

<http://www.cde.ca.gov/LS/nu/he/gardenoverview.asp>

A downloadable summary of the research-based evidence that California's school gardens have impact on children's health, nutrition, and academic achievement.

School Gardens Measure Up: What Research Tells Us

National Gardening Association

<http://www.kidsgardening.com/dig/digdetail.taf?action=print&id=952>

A compilation of the findings of research on a variety of measures, including literacy skills, self-esteem, environmental attitudes, nutrition, social skills and behaviors, and special needs.

Revisiting garden based learning in basic education: Philosophical roots, historical foundations, best practices and products, impacts, outcomes, and future directions

American Horticultural Society

[http://www.ahs.org/youth_gardening/pdf/040909_Revisiting_%20garden basic education n.pdf](http://www.ahs.org/youth_gardening/pdf/040909_Revisiting_%20garden_basic_education.pdf)

This summary by Daniel Desmond of a study commissioned by the Food and Agriculture Organization of the United Nations' Extension, Education and Communication Service and the UNESCO/International Institute for Educational Planning (IIEP) describes garden-based learning, relevant literature, principles, best practices, impacts, and outcomes. A complete copy of the report can be downloaded from [ftp://ftp.fao.org/sd/SDR/SDRE/GBL paper for SD.doc](ftp://ftp.fao.org/sd/SDR/SDRE/GBL_paper_for_SD.doc).

School Gardens Plus Nutrition Lessons Equal Science Literacy

National Science Teachers Association

<http://www.nsta.org/publications/news/story.aspx?id=53348>

Summary of findings from recent studies. NSTA Reports--Debra Shapiro, 2/5/2007.

Healthy Gardens Healthy People

Collective Roots

<http://www.collectiveroots.org/initiatives/healthygardenshealthypeople>

Collective Roots works with youth and adults to design and sustain organic gardens and project-based education that is integrated into the core needs of schools,

communities, and environments. The website includes references to sources of evidence about the various benefits of gardens and the links between health and school gardens.

A Child's Garden of Standards
California Department of Education

<http://www.cde.ca.gov/re/pn/fd/documents/childsgarden.pdf>

This downloadable guide is designed to show how garden-based education strongly supports the state's academic content standards. Although it is not a curriculum, the guide links specific lessons to specific standards for grades two through six and offers support for the educational value of garden-based learning.

Articles 

Alexander, Jacquelyn, Mary-Wales North, and Deborah K. Hendren (1995). "Master Gardener Classroom Garden Project: An Evaluation of the Benefits to Children." *Children's Environments* 12(2): 123-133. Retrieved from http://www.colorado.edu/journals/cye/12_2/12_2article9.pdf

Graham, H., D.L. Beall, M. Lussier, P. McLaughlin, and S. Zidenberg-Cherr, (2005). Use of school gardens in academic instruction. *J Nutr Educ Behav*, 37(3), 147-51.
<http://lib.bioinfo.pl/pmid:15904578>

Graham, H. and Sheri Zidenberg-Cherr (2005). California teachers perceive school gardens as an effective nutritional tool to promote healthful eating habits. *J Am Diet Association*, 105 (11):1797-800.
<http://lib.bioinfo.pl/pmid:16256767>

McAleese, Jessica D. and Linda L. Rankin (2007). Garden-Based Nutrition Education Affects Fruit and Vegetable Consumption in Sixth-Grade Adolescents. *J Am Diet Assoc.* 2007;107:662-665. Retrieved from <http://oahu-ces.hawaii.edu/FVMM/forms/Garden-Based.pdf>

Ozer, E. J. (2007). The Effects of School Gardens on Students and Schools: Conceptualization and Considerations for Maximizing Health Development. *Health Education & Behavior*, 34(6), 846-863.
<http://heb.sagepub.com/cgi/content/abstract/34/6/846?rss=1>

Zaplatosch, Jaime (2006). Do Youth Gardening Experiences Lead To Greater Education Opportunities?, Master of Education thesis, DePaul University Chicago, Illinois.
<http://www.kidsgardening.com/jzthesis.pdf>



Resources for Starting A Garden

Gardens for Learning - Creating and Sustaining Your School Garden **California School Garden Network**

<http://www.csgn.org/page.php?id=36>

A downloadable comprehensive guidebook that includes step-by-step information, instructions, and resources for anyone looking to enhance learning through the use of gardens in schools. This key reference guide was developed by a team of experienced garden educators, nutritionists, state officials, and other garden experts.

The School Garden Wizard

United States Botanic Garden and Chicago Botanic Garden

<http://www.schoolgardenwizard.org>

Download guides in PDF format that will walk you through the process of creating a school garden, from writing a proposal to integrating the garden into your curriculum and maintaining the garden throughout the entire year (includes section on “making the case” plus sections on every other relevant aspect). Easy drop-down menus.

Let's Start a School Garden

Center for a Livable Future/

Johns Hopkins Bloomberg School of Public Health

<http://www.jhsph.edu/clf/PDF%20Files/Toolkit.pdf>

An excellent downloadable PDF toolkit for starting a school garden, including justification for gardening, organizing, design considerations, and numerous resources.

Aggie Horticulture Network

Texas A&M University

<http://aggie-horticulture.tamu.edu/kindergarden/Child/school/sgintro.htm>

This site provides a good introduction to school gardening, including a step-by-step guide to building a school garden, ideas for themes and curricula, and ways to incorporate nutrition education into gardening. Also includes an outline of a year's worth of weekly gardening lesson plans.

School Garden Program

San Diego County, University of California Cooperative Extension

<http://cesandiego.ucdavis.edu/School%5FGardens/>

Step-by-step information on how to start and sustain a school garden, from the planning and design through supplies and garden management responsibility.

School Gardens

Better School Food

http://www.betterschoolfood.org/what_you_can_do/school_gardens.cfm

Includes “10 Reasons Why School Gardens Are An Excellent Idea,” and links to resources, including those detailing how to start a garden.

Growing Gardens

<http://www.growing-gardens.org/portland-gardening-resources/school-gardens.php>

Growing Gardens works to build community gardens throughout Portland, Oregon and

involves students in school gardens as well as after-school clubs, summer garden camps, teen service and parent/child workshops. The website includes information on starting a garden, garden-based curricula, and other gardening and farm-related information, primarily links to other great sources.

Inch by Inch, Row by Row: A Garden Overview For Teachers and Parents
Smithsonian Institution – Seeds of Change Garden

http://www.mnh.si.edu/archives/garden/seasons/garden_overview.html

A practical guide to implementing an educational garden, with concrete advice for all steps of development, from goal-setting through garden maintenance and fundraising.

American Horticultural Society

http://www.ahs.org/youth_gardening/index.htm

Includes links to the National Children & Youth Garden Symposium, the Partnership for Plant-Based Education, a National Database of Children's Gardens, and an extensive list of resources for all aspects of planning and implementing school gardens.

Green School Guidelines

Antioch New England Institute

http://www.anei.org/download/11_guidelines_full_version.pdf

The guidelines address five key components of Green Schools, including: curriculum integration, school grounds enhancement, community-based integration, school sustainability, and administrative support. A matrix illustrates different levels of guideline implementation.

How to Start a Slow Food in Schools Project

Slow Food USA

http://www.slowfoodusa.org/education/SFIS_guide_final_draft_revs41.pdf

Slow Food in Schools is a national program that embraces, unifies, and promotes the efforts of school gardens, cooking classes, and taste education projects organized by Slow Food convivia (chapters) across the country. This downloadable document provides a step-by-step guide to starting a Garden-to-Table project as well as information on types of projects, model Slow Food in Schools projects, funding guidelines, and numerous informational resources.

Urban Agriculture Notes: School Gardens

City Farmer

<http://www.cityfarmer.org/schgard15.html>

This Canadian site links to current and past school gardening projects and contains information on books, organizations, and other resources.

Getting Started: Guide for Creating School Gardens as Outdoor Classrooms
Center for Ecoliteracy

<http://www.ecoliteracy.org/publications/getting-started.html>

Available free to schools nationwide, *Getting Started*, designed and published in collaboration with Life Lab Science Program, includes instructions for selecting and preparing sites, maintaining gardens, and connecting gardens to the classroom.

Contact: info@ecoliteracy.org to request a copy by telling about your program.



Identifying Partners

OASIS NYC

<http://www.oasisnyc.net/gardens/resources.htm>

New York City Open Accessible Space Information System Cooperative (OASIS) is an interactive mapping site that contains links to local community gardens, including contact information for each, as well as information about starting a community garden and sources for supplies.

GreenThumb

City of New York/Parks & Recreation

www.greenthumbnyc.org

GreenThumb is the largest community gardening program in the country, with over 600 member gardens serving 20,000 city residents. It has been helping to strengthen gardens, gardener skills, and communities since 1978 and is a key resource for school gardens. GreenThumb can help identify potential partner community gardens and provides materials and technical assistance, including educational workshops.

Council on the Environment of New York City

<http://www.cenyc.org/>

Interactive NYC map enables user to locate open space (including community gardens), environmental education, Greenmarket, and other CENYC program sites. The Open Space Greening Program (OSG) empowers people in neighborhoods throughout the city to create, manage and sustain community gardens and park/playgrounds.

Green Apple Map

<http://greenapplemap.org/page/lomap>

Green Apple Map has produced energy, composting, and youth-oriented maps with a focus on environment and climate care, some of which are downloadable. LoMap, with a Chinese, Spanish, and English legend, was created by youth for youth of lower Manhattan. The composting map identifies compost projects throughout the city.

Learning Gardens

City Parks Foundation

<http://www.cityparksfoundation.org/index1.aspx?BD=16718>

Learning Gardens establishes communal gardens in NYC parks as outdoor environmental education programs that involve schoolchildren along with community members, such as senior and day care centers, families, and community organizations. They serve over 2,500 community members, children, and teachers through school, out-of-school and summer programs.

Apple Seed; Green Branches Library Learning Gardens

Horticultural Society of New York

<http://www.hsny.org/html/appleseed.htm>

Apple Seed is a horticultural and environmental education program of the Horticultural Society of NY, providing innovative hands-on activities and exploratory plant studies for public school children, grades K-6. The program also provides teacher

training, afterschool classes, and Family Garden workshops. Apple Seed makes a two-year commitment to each school, and reaches about 650 students every year. It includes relationships with and field trips to GreenBranches gardens at public libraries.

Trust for Public Land

http://www.tpl.org/tier3_cdl.cfm?content_item_id=18995&folder_id=2928

The Trust for Public Land owns 64 community gardens throughout New York City, and works side-by-side with dedicated community gardeners to transform vacant lots into vibrant spaces where nature and community thrive. TPL provides technical, design, organizing, and material assistance. It brings school children into the gardens for field trips and environmental education, builds new gardens adjacent to schools, and works with community to develop informal science and arts summer programs for children.

New York Restoration Project

<http://www.nyrp.org/gardens/index.php?sub=0>

The NYRP partners with community gardeners throughout the five boroughs of New York City to ensure that many existing community gardens thrive and forever remain open space.

III. GARDEN PLANNING AND DESIGN



A school garden can be as extensive as a schoolyard transformed with ponds and pathways winding among cucumber vines and sunflowers, or as simple as a few containers on the window sill. You'll need to consider the options: indoor or outdoor garden, raised beds or in the ground, gardening in containers (including EarthBoxes), on the rooftop, in a greenhouse, or hydroponically.

Some factors to consider in planning and designing your garden include the availability of space, light, water, and soil; who will have access to the garden; when and for what kinds of activities people will be in it; and what would be necessary to secure its safety.

The resources below will provide assistance in planning and designing your school garden site, including exploring the different forms of gardens.



Local Resources

GreenThumb

City of New York/Parks & Recreation

www.greenthumbnyc.org

GreenThumb, the largest community gardening program in the country, helps to strengthen gardens, gardener skills, and communities. It provides materials, garden advice, activity planning, and technical assistance, including educational workshops, for teachers and school personnel and other gardeners. Each spring, GT sponsors an annual Grow Together citywide educational event as well as workshops and educational sessions throughout the year.

Magnolia Tree Earth Center

<http://newarkwww.rutgers.edu/~gelobter/cucrej/html/magtree.html>

The Center's programs and services promote community action, advance the knowledge of ecological science and the cultural arts, and promote leadership skills among youth. Through workshops, lectures, and hands-on teachings, the trained staff provides technical assistance in landscape and garden projects. MTEC offers single and multi-session workshops and after school programs that emphasize active, hands-on and outdoor learning.

Contact: (718) 387-2116; 677 Lafayette Avenue, Brooklyn, NY 11216.

New York City Department of Education, Division of School Facilities Central Hdqtrs., 44-36 Vernon Boulevard, Long Island City, NY 11101

When addressing specific school site issues, start with your school principal and custodian. If you need facility-related assistance beyond that, it may be necessary to contact the Department of Education's Division of School Facilities.

Contact: (718)349-5799; Field Operations - Custodial Operations (Salvatore Calderone, Director), (718) 349-5736, SCalder@schools.nyc.gov. Field Operations -

Facilities Management (Frank Borowiec, Director), (718)349-5649,
FBorowi@schools.nyc.gov.



Online and other resources

School Garden Wizard **Chicago Botanic Garden**

<http://www.schoolgardenwizard.org/>

This invaluable site includes numerous resources related to garden planning and design, including a cost estimate worksheet, tips on the design process, drawings, and needed supplies.

Kids Gardening **National Gardening Association**

<http://www.kidsgardening.com/>

Includes information on garden design, school greenhouses, hydroponics, and classroom projects, as well as stories about and advice from existing gardens. The GrowLab curriculum available through the website is specifically geared toward classroom growing.

Let's Start a School Garden **Ctr. for a Livable Future, Johns Hopkins Bloomberg Sch. of Public Health**

<http://www.jhsph.edu/clf/PDF%20Files/Toolkit.pdf>

An excellent downloadable PDF toolkit for starting a school garden, including justification for gardening, organizing, design considerations, and numerous resources.

How to Start a School Garden **ECoM's Marin Food System's Project**

http://www.eecom.net/mfsp/projects_school_garden.pdf

A brief and clear downloadable guide with specific information particularly helpful in choosing and designing a garden site.

Green School Guidelines **Antioch New England Institute**

http://www.anei.org/download/11_guidelines_full_version.pdf

The guidelines address five key components of Green Schools, which include school-based gardening, including: curriculum integration, school grounds enhancement, community-based integration, school sustainability, and administrative support. A matrix illustrates different levels of guideline implementation.

School Garden Resources **Nebraska Statewide Arboretum**

<http://schoolgardens.unl.edu/>

This website offers resources to help design, maintain, and utilize an outdoor space for educational purposes.

School Garden Program

San Diego County, University of California Cooperative Extension

<http://cesandiego.ucdavis.edu/School%5FGardens/>

Step-by-step information on how to start and sustain a school garden, from planning and designing one through identifying supplies and setting up systems to manage it.

Boston Schoolyard Initiative

<http://www.schoolyards.org/home.htm>

Describes the inclusive community design process used as part of the Boston Schoolyard Initiative (BSI), a public/private partnership that was formally launched in 1995 and is still in operation. By the end of 2010, the BSI will have worked with and improved schoolyards at approximately 85 schools for all grade levels across Boston's many diverse neighborhoods.

Urban Harvest

<http://www.urbanharvest.org/programs/cgardens/startguide.html>

A Houston-based non-profit that teaches organic gardening techniques, helps neighborhoods build community gardens, creates outdoor classrooms at schools, and more. Includes specifics about budgeting, construction, and supplies for starting a school or community garden.

Gardening Within Arm's Reach: Gardening and experiencing nature for the visually handicapped. How to set up a garden with this in mind.

Schuman, Hans (1998) Bartimeus, Zeist. The Netherlands.

Designing a garden specifically for children with visual impairment.

Posted on <http://www.cityfarmer.org/schgard15.html>

The Growing Connection

<http://www.TheGrowingConnection.com/>

The Growing Connection (TGC) is a grassroots project developed by the Food and Agriculture Organization of the United Nations and supported by a progressive coalition of private and public sector partners. It links people and cultures through low-cost water-efficient and sustainable food growing innovations, using technology and information exchange. All participants in the program use the EarthBox system, which can be used in classrooms as well as outside.

Get Your Hands Dirty: Growing Schools

<http://www.teachernet.gov.uk/growingschools/resources/teachingresources/detail.cfm?id=298>

The Growing Schools website, from the UK, has been designed to support teachers in using the "outdoor classroom" as a resource across the curriculum for pupils of all ages. *Get Your Hands Dirty* helps teachers consider the issues involved in growing plants or caring for animals in schools. Free downloadable materials with ideas, practical advice, educational reasons, and case studies.



Mapping Your Garden: A Tool

The following is a great method that will allow you to visualize your garden space as it is now, which will help you to envision what you, your students, and your colleagues want it to look like in the future.

Materials:

- 1) 3 people to measure the lot and write down measurements
- 2) 50 – 100 foot tape measure
- 3) 4 pieces of 8 ½ " x 11" graph paper
- 4) Pencils
- 5) Ruler
- 6) Compass
- 7) String
- 8) Stakes (large moderately straight sticks can be used as a substitute)
- 9) hammer

Procedure:

- 1) Tape the 4 sheets of graph paper together:

1	2
3	4

2a) If your lot has a building beside it, use the edge of the building as a guideline and place stakes at either end, measure the length.

2b) If your lot is in the open, make your own guideline with string. Place stakes on the border from one end of the garden to the other.

3) Repeat the above step for the entire perimeter. Once you have the dimensions of the plot, use one square on your graph paper for each foot (or a different ratio if you like) and draw your lot on the graph paper.

4) Place a compass directly on level ground inside the garden. Note which direction is north and double-check this by turning the compass slightly in either direction. Note north, south, east, and west on the margins of the graph paper

5) Starting at the top left corner of your lot map, note the permanent structures, plants, bodies of water, planting beds, etc. Place a stake next to the item and a stake where the top of your map is and measure the distance, do the same for the distance from the left side of the map.

6) Measure the size of the item you wish to add and, using the distances from step 5, count the appropriate number of spaces down and across from the top left corner of your map. Once you're sure of its corresponding location on the map draw the item and label it.

Essential items that should be included on the map include:

- a) adjacent buildings
- b) shrubs and trees
- c) water hydrants or spigots
- d) sidewalks and streets
- e) pathways/walkways
- f) fences or walls
- h) rubble heaps or rocks
- j) large holes you want filled.

Once you have your lot map you can make copies and begin to draw in future projects and plans. The above exercise can be used in lessons, especially math and history classes where geometry and geography are topics covered.

IV. CURRICULUM



Gardening offers a window into numerous academic subjects. Through direct, hands-on experience, students can explore the biology of plants, the water cycle, and decomposition. They can read and write poetry inspired by the seasons. They can learn about—and grow—traditional foods historically eaten by different ethnic groups. They can measure garden sites in centimeters and inches and determine the volume of soil needed to fill a raised bed. They can discover the incomparable taste of a nutritious fresh tomato snack. The teaching and learning opportunities in garden-based education are limitless.

Curricula and teaching guides have been developed for all grade levels, from pre-kindergarten through high school. A number are directly linked to city, state, and federally mandated standards, which makes them easier to adopt and implement in a New York City school setting.

In this section, you will find:

- resources on curriculum principles and ways to link garden-based learning to academic standards;
- local sources of teacher training and professional development;
- organizations that provide garden-based education to school groups;
- garden-based curricula, curriculum guides, and classroom projects; and
- nutrition-related curricula and resources.

Note: The inclusion of materials and sources here does not indicate an endorsement of them.



Curriculum Principles

A Child's Garden of Standards

California Department of Education

<http://www.cde.ca.gov/re/pn/fd/documents/childsgarden.pdf>

This downloadable guide is designed to show how garden-based education strongly supports the state's academic content standards. Although it is not a curriculum, the guide links specific lessons to specific standards for grades two through six and offers support for the educational value of garden-based learning.

Linking State Standards to Your School Garden

California Foundation for Agriculture in the Classroom

<http://www.cfaitc.org/gardensforlearning/>

A companion piece to California School Garden Network's (CSGN) book, *Gardens for Learning: Creating and Sustaining Your School Garden*. Created by educators, for educators, this free downloadable resource aligns the activities identified in *Gardens*

for Learning to the K-6 teaching standards mandated by the California State Board of Education.

Green School Guidelines

Antioch New England Institute

http://www.anei.org/download/11_guidelines_full_version.pdf

The guidelines address five key components of Green Schools, including: curriculum integration, school grounds enhancement, community-based integration, school sustainability, and administrative support. A matrix illustrates different levels of guideline implementation.

Parents' Primer

Kids Gardening

National Gardening Association

<http://www.kidsgardening.com/family.asp>

Ten links to teach parents or educators how to engage children in gardening activities. Everything from safety and maintenance to creative and fun projects.



Teacher Training

Wave Hill

www.wavehill.org/education/

A public garden and cultural center in the Bronx. Wave Hill's school partnerships and professional development programs enable young children, teenagers, and teachers to experience nature first-hand. Outdoor, inquiry-based learning is the hallmark of these innovative programs, which use Wave Hill's grounds and local open spaces as living laboratories for natural science exploration. Inquiry-based professional development workshops provide the time for educators to reflect, try new methods and develop their own curriculum with outdoor experiences.

Contact: (718) 549-3200 x396; education@wavehill.org.

Center for Food & Environment

Teachers College, New York, NY

www.tc.edu/life/index.html

Offers professional development activities, including summer institutes, in partnership with the Center for Ecoliteracy, on *Rethinking Food, Health, and the Environment: Making Learning Connections*.

Contact: Pamela Koch, Project Director, pkoch@tc.edu.

Programs for Teachers - Children's Education at the Garden

New York Botanical Garden

http://www.nybg.org/edu/child_educ/teacher_programs.php

Children's Education at the Garden provides innovative, hands-on professional development workshops, seminars, and summer institutes for science educators.

Contact: (718) 817-8177.

Magnolia Tree Earth Center
Hattie Carthan Memorial Garden

<http://newarkwww.rutgers.edu/~gelobter/cucrej/html/magtree.html>

Hands-on techniques are used to teach children about horticultural and environmental science issues. Staff development sessions and resource packets are available for educators.

Contact: (718)387-2116.

Stone Barns Center for Food & Agriculture

http://www.stonebarnscenter.org/sb_school/teacher_programs.aspx

Stone Barns offers workshops for teachers. Programs in 2008-09 have focused on school gardens: “Growing School Gardens to Teach Health, Wellness and Sustainability” and “Using School Gardens, Outdoor Classrooms and More to Teach Health, Wellness and Sustainability.”

Contact: (914) 366-6200, info@stonebarnscenter.org.



Garden-Based Educators and Facilitators

Learning Gardens

City Parks Foundation

<http://www.cityparksfoundation.org/index1.aspx?BD=16718>

Learning Gardens (LG) establishes communal gardens in NYC parks as outdoor environmental education programs that involve schoolchildren along with community members, such as senior and day care centers, families, and community organizations. LG educators develop and implement a series of environmental education lessons—in science, math, language arts, social studies, creative arts, and history—in the garden. During the colder months, CPF’s educators extend lessons to the classroom for children, parents, and teachers. CPF also offers technical assistance to teachers and other school staff.

Contact: Geimy Colón, Coordinator, (212) 360-1485 or Nicole Porto, (212)360-2744.

GreenSchool Workshops

New York Botanical Garden

http://www.nybg.org/edu/child_edu/greenschool.php

GreenSchool workshops for grades K-8 begin indoors with an inquiry-based lesson and hands-on activities, and are followed by an exploration of either the Enid A. Haupt Conservatory, the Forest, or the Botanical Garden grounds. Teaching methods are adapted to different learning styles and developmental needs. Programs for younger grades may incorporate storytelling, movement, and sensory explorations, while those for older grades are built around experiments, observation, and sketching activities.

Contact: (718) 817-8797.

Apple Seed

Horticultural Society of New York

<http://www.hsny.org/html/appleseed.htm>

Apple Seed is a horticultural and environmental education program providing innovative hands-on activities and exploratory plant studies for public school children,

grades K-6. The program also provides teacher training, afterschool classes, and Family Garden workshops. *Apple Seed* makes a two-year commitment to each school, and reaches about 650 students every year.

Contact: Pamela Ito, Director of Children's Education, (212)757-0915 x106, pito@hsny.org.

Learn It, Grow It, Eat It

Council on the Environment of New York City

<http://www.cenyc.org/ee/lge>

Learn It, Grow It, Eat It is aimed at improving the health of young people through nutrition education and improved food access in their schools and communities. The project encourages young people to take control of their health on the cusp of adulthood through knowledge, choices, and action. The program gives students nutrition information; helps them make the connection between the environment and food consumption through hands-on gardening; and introduces healthy food choices that they can incorporate into their diet through in-school food preparation.

Contact: David Saphire, dsaphire@cenyc.org or Lenny Librizzi, llibrizzi@cenyc.org.

Environmental Education Projects: Garden Science

New York Restoration Project

<http://www.nyrp.org/programs/index.php?sub=1&p=1>

At the Riley-Levin Children's Garden in Swindler Cove Park and in schoolyard gardens established by NYRP at several locations, NYRP's educators guide students in raising their own vegetables, flowers, and herbs during in-school, after-school, and summer gardening programs, in which students learn about botany, plant ecology, and nutrition. Lessons complement the elementary and middle school Life Science curriculum.

Contact: Akiima Price, Chief of Education and Programming, (212) 333-2552, aprice@nyrp.org.



Curricula

Gardens for Learning - Creating and Sustaining Your School Garden **California School Garden Network**

<http://www.csgn.org/page.php?id=36>

A downloadable comprehensive guidebook. Chapter 3, "Linking Gardens to School Curriculum," includes dozens of specific ideas on how to integrate gardening with classroom curriculum in all subject areas and advice on how to link a garden-based curriculum to standards. The "Resources" section includes descriptions of numerous on-line and print curricula, teaching, and training resources, including a Curriculum section with over one hundred garden-based lessons to create, expand, and sustain garden-based learning experiences.

Kids Gardening

National Gardening Association

<http://www.kidsgardening.org/growingideas/projects/library.html>

A rich collection of varied year-round garden-based classroom projects, with detailed

descriptions for implementing them, curriculum connections to educational standards, and resources upon which to draw.

Linking Food and the Environment (LiFE)
Center for Food & Environment, Teachers College
New York, NY

<http://www.tc.edu/life/>

An upper elementary and middle school inquiry-based science and nutrition program with four modules: Growing Food, Farm to Table & Beyond, Food & Health, and Choice, Control, & Change (C3). Helps students learn to think critically about food, food system, and personal health issues and to connect what they learn in the classroom with actions in their everyday lives. Addresses many of the national standards for scientific literacy and some federal guidelines for encouraging healthful eating. CFE also offers professional development for schools implementing the curriculum.

Contact: Pamela Koch, Project Director, pkoch@tc.edu.

Food, Land, and People: Resources for Learning
New York Agriculture in the Classroom

<http://www.nyaged.org/aitc/flp.html>

New York's Ag in the Classroom program is a partnership between Cornell University, NYS Department of Agriculture and Markets, the NYS Education Department and the NY Farm Bureau. It is the state affiliate agency for *Food, Land, and People*, which has produced a science- and social sciences-based pre-k through 12 curriculum, *Resources for Learning*. The curriculum, implemented throughout the US, consists of 55 hands-on lessons, developed and tested by more than a thousand educators. The subjects range from environmental science and stewardship to human populations and land use issues. Twenty lessons are available in Spanish. NY Ag in the Classroom has aligned the lessons with New York State Learning Standards in all curriculum areas and provides facilitator training.

Life Lab: Garden-Based Learning That Supports a Sustainable Future

<http://www.lifelab.org>

Since 1979, the California-based Life Lab Science Program has been supporting science and garden-based education through publications, professional development, and innovative programs. The popular Life Lab Science Program, an elementary school hands-on science curriculum as well as activity guides, can be ordered through the website. Website also includes teacher training workshops, events, project models, and garden-based learning videos.

Garden Mosaics
Cornell University Cooperative Extension

<http://www.gardenmosaics.cornell.edu/index.htm>

Garden Mosaics' mission is "connecting youth and elders to investigate the mosaic of plants, people, and cultures in gardens, to learn about science, and to act together to enhance their community." It comprises a youth science education program, international online databases focused on gardening, and free online Science Pages and stories about gardens, gardeners, and communities. Science education materials available in English and Spanish.

Ag in the Classroom

United States Department of Agriculture

<http://www.agclassroom.org>

This webpage is a rich resource for teachers. The National Resource Directory section of the website provides an extensive resource list of Agriculture in the Classroom and K-8 educational materials, including lesson plans, as well as downloadable curriculum guides.

California Foundation for Agriculture in the Classroom

www.cfaitc.org

The website provides free, downloadable lesson plans for grades k-12, a Teacher Resource Guide, and other materials.

Garden-Based Learning

Cornell University Department of Horticulture

<http://www.hort.cornell.edu/gbl/>

Resource for garden-based learning, from seed to harvest, for youth and adults. Great activities, lesson plans, publications, and evaluation resources.

Harvest of History

Farmers' Museum

http://www.harvestofhistory.org/for_teachers.html

An interdisciplinary curriculum and website focused on making NY State agriculture history come alive for the fourth-grade classroom. Some projects are short-term, while others span the gardening season. Find out where food comes from, how and where it grows, compare life in 1845 with our modern world, and then produce your own movie with the Village Videomaker.

Web-Based Learning Units: Gardening With Young Children

Penn State University, Better Kid Care Program

<http://betterkidcare.psu.edu/AngelUnits/OneHour/Garden/GardenLessonA.html>

Descriptions of and guides to one-hour activities that offer creative learning through gardening, from simple indoor through outdoor activities.

Junior Master Gardener Curricula

Texas AgriLife Extension Service, Cooperative Extension system

<http://www.jmgkids.us/index.k2?did=6019§ionID=6019>

The Junior Master Gardener program engages children in hands-on group and individual learning experiences that promote a love of gardening, develop an appreciation for the environment, and cultivate the mind. JMG encourages youths to be of service to others through service learning and leadership development projects and rewards them with certification.

Center for Environmental Education Online

http://www.ceeonline.org/curriculum/search_results.cfm?Category_ID=27

This is a list of curricula, sorted by grade level, lesson length, and academic discipline, with links to each curriculum. CEE Online's curriculum library offers lesson plans for classes of all ages.

Sustainable Agricultural Resources for Teachers, K-12
Alternative Farming Systems Information Center, US Department of Agriculture

http://www.nal.usda.gov/afsic/AFSIC_pubs/k-12.htm

This site, last updated in 2002, includes a very extensive, comprehensive list of resources, including many curricula, contacts, books and articles, some of them organized by grade level.

Ideas and Curricula for School Gardens
Texas A&M University

<http://aggie-horticulture.tamu.edu/kindergarden/Child/school/curric.htm>

This section of the A&M School Gardens site includes dozens of ideas for garden-based activities, links to curricula and lesson plans, and ideas for garden themes.

Schoolyard Habitats Program
National Wildlife Federation

<http://www.nwf.org/schoolyard/>

The program has assisted over 2800 schools and outdoor education providers nationwide in the development of outdoor habitat areas designed to protect wildlife and enhance the educational experiences of students, teachers and community members. In addition to providing materials such as *Schoolyard Habitats®: A How-to Guide for K-12 School Communities*, the program offers teacher training courses and curricula.

Digging Deeper: Integrating Youth Gardens Into Schools and Communities - A Comprehensive Guide

Kiefer, Joseph and Martin Kemple, Food Works and the Common Roots Press in Partnership with the American Community Gardening Association (ACGA), 1998.
RootsNet@Plainfield.Bypass.com

A beautifully illustrated step-by-step guide for organizing and constructing children's gardens. The book is full of seasonal gardening activities and project ideas designed to cultivate high academic performance across the subject areas.

Nutrition-Related Curricula and Resources 

CookShop
Food Bank for New York City

<http://www.foodbanknyc.org/go/our-programs/nutrition-and-health-education>

CookShop Classroom, a teacher-led curriculum, is designed to increase elementary school children's consumption of whole and minimally processed plant foods through hands-on exploration and cooking activities in the classroom. The curriculum can be integrated across multiple subject areas, including science, literacy and math.

Cookshop for Teens: EATWISE empowers NYC high school students to raise awareness among peers about food issues and work to increase access to healthy food. Contact: Margrethe Horlyck-Romanovsky, Director of Nutrition and Health Education, mhr@foodchange.org.

FamilyCook Productions

<http://www.familycookproductions.com>

FamilyCook Productions exists to bring families together around delicious, fresh food while positively impacting their health and well-being. FCP offers three field-tested, school-based curricula teaching culinary skills and basic nutrition in the fun framework of international cultures and offer a training certificate program to certify educators in skills necessary to teach these curricula.

Contact: Lynn Fredericks, (212) 867-3929, lynn@familycookproductions.com

Community Food Education Program

Just Food

www.justfood.org

Just Food is a non-profit organization that works to develop a just and sustainable food system in the New York City region. The CFE Program trains and works with volunteers in NYC communities to facilitate and multiply interactive Food Education Workshops. The workshops teach new, creative cooking skills and storage options, emphasize the direct relationship between wellness and food, provide easy-to-use nutrition information, and explain the value of local foods and sustainable food systems.

Contact: Angela Davis, CFE Program Coordinator, (212) 645-9880 ext. 239, or Angela@justfood.org.

Days of Taste

American Institute of Wine and Food

<http://www.aiwf.org/site/days-of-taste.html>; www.aiwf.org/newyork/

Days of Taste is a discovery-based program for fourth and fifth grade children to learn about food and how it weaves its way through daily life from the farm to the table.

Contact: New York Chapter, Nerrisa Charles, 718-522-6688, aiwf@beardallis.com.

Sylvia Center

www.sylviacenter.org

The Sylvia Center offers garden-to-table nutrition education year-round in the downtown Manhattan Children's Learning Kitchen and in New York City classrooms all over New York City. A multi-session curriculum combines instruction in culinary skills, gardening projects, and field trips to local farmers' markets and community gardens. The organization's programs inspire young people to discover good nutrition through joyful, delicious experiences with healthful, seasonal fruits and vegetables.

Food Studies Institute

<http://www.foodstudies.org>

A collection of curricula integrating academic disciplines with food, nutrition, culture, and the arts. Home of award-winning *Food is Elementary* curriculum created by Dr. Antonia Demas that teaches children about food and nutrition through dynamic multi-cultural lessons that engage all the senses.

Get Growing--From the Ground Up!

Food & Nutrition Service, United States Department of Agriculture

http://www.fns.usda.gov/tn/Educators/garden/starting_garden.html

Contains grade-appropriate (K-12) activities that are both fun and educational to help students understand the connection between agriculture and a healthy diet.

CHANGE Curriculum

Washington State University King County Extension

http://king.wsu.edu/Nutrition/documents/change_introduction_001.pdf

The downloadable Cultivating Health And Nutrition through Gardening Education (CHANGE) curriculum teaches nutrition through gardening and cooking, helping elementary school children discover their own personal connection to healthy food, good nutrition, and the natural world. In addition to teaching nutrition and health, the lessons integrate the disciplines of science, math, language arts, and environmental studies and reinforce the state's academic content standards. Includes instructions on building a light rack and raised bed.

Nutrition to Grow On Toolkit

County of San Diego Health & Human Services Agency and Univ. of California Cooperative Extension Family Nutrition Program

http://www2.sdcounty.ca.gov/hhsa/documents/Toolkit-How_To_Manual.pdf

Provided by the University of California Cooperative Extension, *Nutrition to Grow On* is a standards-based curriculum for 4th-6th grade students and includes nine educational lessons, each containing a 60-minute nutrition lesson and a 30-minute gardening lesson that address Nutrition and Health, Arts, History, Mathematics, Environmental Studies, and Science. The Toolkit is a “‘How To’ Manual for creating your own *Nutrition To Grow On* Toolkit.”

Sustainable Schools Project

Shelburne, VT

<http://www.sustainableschoolsproject.org/curriculum/index.html>

Currently being piloted in some Vermont schools, the program is designed to help schools use sustainability as an integrating context for curriculum, community partnerships, and campus practices. Two integrated curriculum units—Food Cycles in Our Community (1st grade) and Food Foundations (kindergarten)—can be downloaded.

V. GARDENING: INDOOR AND OUTDOOR



Whether an experienced gardener or a novice, you're likely to have questions about preparing, planting, growing, maintaining, and composting in your school's garden. Fortunately, New York City boasts a number of great sources of help, and there are more on-line. In addition, you'll likely need a variety of supplies for indoor and outdoor growing, including lights, seeds, tools, and lumber among others.

In this section, you'll find resources for:

- local and on-line horticulture instruction, advice, and technical assistance;
- supplies, including seeds, lights, and EarthBoxes;
- soil testing to ensure soil safety for food production;
- composting in NYC and in the classroom, along with sources of free compost and discounted composting supplies; and
- pest control and integrated pest management (IPM) information.



Horticulture Instruction and Advice

GreenThumb

City of New York/Parks & Recreation

www.greenthumbnyc.org

As the largest community gardening program in the country, GreenThumb provides materials and technical assistance, including general garden advice, educational workshops, garden workshops, and activity planning as well as tools, lumber, topsoil, and plan materials. GreenThumb sponsors an annual Grow Together event and workshops and educational sessions throughout the year.

Contact: Rasheed Hislop, School Garden Outreach Coordinator, (212)788-8070, rasheed.hislop@parks.nyc.gov.

Bronx Green-Up

The New York Botanical Garden

http://www.nybg.org/green_up/

The outreach program of the New York Botanical Garden, Bronx Green-Up provides horticultural advice, technical assistance, and training to community gardeners, school groups, and other organizations interested in improving urban neighborhoods through greening projects. At the heart of Bronx Green-Up are the community gardens of the Bronx and a compost education program.

Contact: (718) 817-8026, bronxgreenup@nybg.org.

Brooklyn Greenbridge

Brooklyn Botanic Garden

<http://www.bbg.org/edu/greenbridge/>

The community horticulture program of the Brooklyn Botanic Garden provides technical assistance, classes, and occasional giveaways of plants, seeds, bulbs, and compost. Greenbridge facilitates networking between Brooklyn community gardeners through workshops and special events.

Contact: (718) 623-7250, greenbridge@bbg.org.

Horticultural Society of New York

<http://www.hsny.org/html/horticulturist.htm>

Trained and experienced staff and the largest horticultural library in Manhattan provide information and advice on plant and garden questions. Call, email, or stop by the library at 148 W. 37th Street, between Broadway and 7th Avenue on the 13th floor. Also maintains a blog, provides private consultations, offers classes, and partners with organizations.

Contact: Alex Feleppa, Director of Horticulture, (212) 757-0915 ext.115, afeleppa@hsny.org.

City Farms

Just Food

www.justfood.org

The City Farms program works to increase food production, marketing, and distribution via community gardens throughout NYC. In partnership with other NYC groups with expertise in horticulture, leadership development, and other subjects, Just Food offers workshops, training materials, and networking opportunities. The comprehensive City Farms Toolkit (\$40) is available for purchase through the website. It comprises over 70 tip sheets touching on everything from planting calendars to soil care to season extension as well as a resource directory.

Contact: (212) 645-9880, info@justfood.org.

Council on the Environment of New York City

<http://www.cenyc.org/>

The Open Space Greening Program (OSG) provides best practices workshops, services, tools, donated plant material, open space planning/mapping information and other services. Grow Truck provides tools, donated supplies, plants, and horticultural advice and assistance to gardening groups all over New York City.

Contact: (212) 788-7935.

Cornell University Cooperative Extension

<http://nyc.cce.cornell.edu/emerginginitiatives/foodsecurity.php>

CUCE in New York City strengthens neighborhood food security by improving access to healthy, nutritious, locally-grown foods, and by increasing awareness about nutrition and health practices. Offers community-based educational programs, including workshops in urban agriculture techniques, in targeted areas and provides information on horticulture-related subjects.

Contact: John Ameroso, Extension Associate, (212)340-2946, jma20@cornell.edu.

Gardening Resources, Department of Horticulture
Cornell University Cooperative Extension

<http://www.gardening.cornell.edu/>

CCE's portal to gardening information at Cornell. Includes growing guides, fact sheets, and links to innumerable resources.

Garden Time Online

<http://www.gardentimeonline.com/PlantInformation.html>

Useful information on growing everything from herbs to trees. Lists over 1,200 free online gardening resources, with state-by-state gardening information.

Kitchen Gardeners International

<http://www.kitchengardeners.org/>

KGI produces a monthly e-mail newsletter with information about food policy, recipes, gardening tips and lessons, ideas for promoting organic kitchen gardens and sharing the harvest with others, and on-line educational resources concerning organic gardening, composting, cooking, food storage/preservation, seed exchanges, and more.

NYC School Gardens listserve

<http://groups.google.com/group/nyc-school-gardens>

This Google Group listserve was established by GreenThumb as a forum where those involved in school gardens can share questions, information, resources, and experiences.

Garden in Every School Registry

National Gardening Association

<http://www.kidsgardening.com/School/register.asp>

Share your growing experience and communicate with other school gardeners through this registry of school gardens, greenhouses, and schoolyard habitats. Documents projects nationally and internationally.



**Supplies: Indoor Preparation & Growing - Lights,
Flats, Seeds, EarthBoxes**

Kids Gardening

National Gardening Association

www.gardeningwithkids.org

The online store of Kidsgardening.com features a wide range of supplies for classroom growing, including GrowLab Light Gardens, seed starting, and container gardening supplies. The "Indoor Gardening" section of the Kids Garden News also includes links to instructions on building your own light systems and securing donations of supplies.

Operation Green Plant

America the Beautiful Fund

http://america-the-beautiful.org/free_seeds/index.php

The Operation Green Plant Program provides free flower, vegetable, and herb seeds and flower bulbs, along with instructions. Applicants must submit a short letter, application, and payment for shipping and handling.

The Growing Connection

UN Food and Agriculture Organization

<http://www.TheGrowingConnection.com/>

The Growing Connection (TGC) is a grassroots project developed by the Food and Agriculture Organization of the United Nations and supported by a progressive coalition of private and public sector partners. It links people and cultures through low-cost water-efficient and sustainable food growing innovations, using technology and information exchange. All participants in the program use the EarthBox system, which can be used in classrooms as well as outside. Students grow food, conduct horticultural experiments, and share their lessons and experiences with each other using IT connectivity.



**Supplies: Outdoor gardening - Tools, Lumber,
Soil, Water Systems, Fencing**

GreenThumb

City of New York/Parks & Recreation

www.greenthumbnyc.org

GreenThumb, the largest community gardening program in the country, supports community and school gardens in New York City. In addition to sponsoring the annual Grow Together event and providing workshops, advice, and technical assistance, GreenThumb provides materials such as tools, lumber, topsoil, and plan materials. Contact: Rasheed Hislop, School Garden Outreach Coordinator, (212) 788-8070, rasheed.hislop@parks.nyc.gov.

Grow Truck

Council on the Environment of New York City

<http://www.cenyc.org/openspace/growtruck>

Grow Truck, part of CENYC's Open Space Greening (OSG) program, delivers garden tools, plants, and horticultural advice to community groups in all boroughs. Grow Truck loans specialized and common manual garden tools, and distributes donated plants, soil, and other garden supplies for greening projects large and small. Contact: (212) 788-7935.

Brooklyn Greenbridge

Brooklyn Botanic Garden

<http://www.bbg.org/edu/greenbridge/>

The community horticulture program of the Brooklyn Botanic Garden provides technical assistance, occasional giveaways of plants, seeds, bulbs, and compost. Contact: (718) 623-7250, greenbridge@bbg.org.

Home Depot and other retailers

Individual Home Depot stores may make donations of products, including containers, lights, lumber, and plants. Contact the manager of local Home Depot stores to discuss any possible options. Other local hardware and nursery suppliers may also consider donating products.



Soil and Soil Testing

Cornell Nutrient Analysis Laboratory (CNAL)

Cornell University

<http://cnal.cals.cornell.edu>

The Cornell Nutrient Analysis Laboratory provides accurate and cost effective analysis of soil, plant, and water samples for farmers, growers, extension educators, state and federal agencies, regulators, home gardeners, researchers, and many others within the state, nation, and world.

Contact: (607) 255-4540, soiltest@cornell.edu.

Soil and Plant Tissue Testing Laboratory

University of Massachusetts

www.umass.edu/plsoils/soiltest

The lab provides testing to identify soils contaminated with lead or other heavy metals, along with tests for other variables that can have an impact on gardening decisions.

Contact: (413) 545-2311, soiltest@psis.umass.edu.

Natural Resources Conservation Service

United States Department of Agriculture

<http://soils.usda.gov/teachers.html>

Information for teachers and students, including soil profiles for each of the 50 states, soil facts, and information on soil issues specific to urban gardens.



Seeds, Seedlings, and Trees

Operation Green Plant

America the Beautiful Fund

http://america-the-beautiful.org/free_seeds/index.php

The Operation Green Plant Program provides free flower, vegetable, and herb seeds and flower bulbs. Applicants must submit a short letter, application, and payment for shipping and handling.

Seed Donation Program

Seeds of Change

<http://www.seedsofchange.com/donations/default.asp>

Depending on availability, Seeds of Change shares 100% certified organic, open-pollinated seeds with organizations that promote education and sustainable living

through organic gardening projects. The website includes a form that must be submitted to receive available seeds for only the cost of shipping and handling.

National Arbor Day Foundation

<http://www.arborday.org/shopping/memberships/memberships.cfm>

Upon joining the National Arbor Day Foundation, members receive ten free trees that are guaranteed to grow. The six- to twelve-inch trees will be shipped free with easy planting instructions. A six-month membership is \$10.



Compost

NYC Compost Project

NYC Department of Sanitation

<http://www.nyccompost.org/program/index.html>

The NYC Compost Project was created in 1993 to provide compost outreach and education to city residents and businesses. Its programs are carried out by Department of Sanitation-funded staff at the city's Botanical Gardens and the Lower East Side Ecology Center. Each Project location hosts a home composting demonstration site and a composting telephone helpline, and offers a variety of compost-related workshops and classes for residents, teachers, school groups, and others, and offers compost bins for sale at a discount, subsidized by DSNY.

Compost Givebacks are held every fall and spring. NYC residents with a registered vehicle can pick up unlimited amounts of compost for FREE (while supplies last). It is recommended that you bring your own shovels and containers. Compost bins, normally \$70, are also available to NYC residents at the Givebacks for \$20.

Workshops on composting in the classroom:

- Brooklyn Compost Project
Compost Helpline: (718) 623-7290
Workshop Registration: (718) 623-7220
Website and Directions to the Garden: www.bbg.org
Email: compost@bbg.org
- Bronx Compost Project
Compost "Rotline": (718) 817-8543
Website: www.nybg.org
Email: bronxgreenup@nybg.org
- Manhattan contact: Carey through the RotLine at (212) 477-3155
Email: carey@lesecologycenter.org
- Staten Island Compost Project
Compost Helpline: (718) 362-1010
Email: ask@sibg.net

- Queens Compost Project
Compost Helpline: (718) 539-5296
Email: compost@queensbotanical.org

<http://www.nyccompost.org/how/index.html>

Literature on “how to” for those that want to start their own composting bins.

<http://www.nyccompost.org/resources/internet.html>

Links to composting information for teachers and numerous other resources on the science, implementation, and beneficial uses of compost.

Composting in Schools

Cornell Composting

<http://compost.css.cornell.edu/schools.html>

A comprehensive site with sections describing the rationale for composting in schools, detailed instructions on various indoor and outdoor composting methods, materials needed, science and engineering of composting, teachers’ guides, lesson plans, instructions, and more.

California Integrated Waste Management Board

State of California

The CIWMB site has numerous pages with specific information about compost, from the science, benefits, and logistics of composting to suppliers of materials:

Compost: what is it?

<http://www.ciwmb.ca.gov/organics/CompostMulch/CompostIs.htm>

Sources of compost and mulch

<http://www.ciwmb.ca.gov/organics/SupplierList/default.asp>

Making your own compost pile

<http://www.ciwmb.ca.gov/Organics/HomeCompost/>

Vermicomposting (composting with worms)

<http://www.ciwmb.ca.gov/organics/Worms/>

US Composting Council

www.compostingcouncil.org

The USCC is a national, non-profit trade and professional organization promoting the recycling of organic materials through composting. The USCC is the only national organization committed to the advancement of the composting industry. The website includes educational materials and other information.

Composting Council of Canada

<http://www.compost.org/commEdInit.html>

A national non-profit, member-driven organization with a charter to advocate and advance composting and compost usage. It serves as the central resource and network for the composting industry in Canada. Website contains educational, promotional, and research articles and composting tips.

Master Composter.com

www.mastercomposter.com

This website is created and maintained by an individual who is a certified master composter in Texas. Subscribers gain access to educational resources and other information about many facets of composting.

EEK! Environmental Education for Kids!

Wisconsin Department of Natural Resources

<http://www.dnr.state.wi.us/org/caer/ce/eeek/earth/recycle/index.htm>

EEK! Is both an electronic magazine for grades 4-8 and a resource for teachers. The "Recycling and Beyond" activity pages are designed to be accessed directly by children. A step-by-step guide for kids to worm composting, instructions on building a wooden vermicomposting box, and other composting activities and information.

Starbucks

Some Starbucks locations give away FREE coffee grounds to gardeners upon request. Visit your local Starbucks to see if they are participating.



Pest Management

Pest Control Services

NYC Department of Health & Mental Hygiene

<http://home2.nyc.gov/html/doh/html/pest/pest.shtml>

Website contains information on pest, and specifically rat, control strategies and services. Call 311 with a complaint about rats or other pests at a specific location.

NYS Integrated Pest Management Program

Cornell University

<http://www.nysipm.cornell.edu/>

Description of Integrated Pest Management (IPM), its principles and practices, as well as a teaching curriculum.

Cornell Gardening Resources: Pests

Cornell University

<http://www.gardening.cornell.edu/pests/index.html>

A comprehensive set of online and other resources about identifying and managing insects, diseases, weeds, wildlife, poisonous and invasive plants and other pests.

California Statewide Integrated Pest Management Program

University of California

www.ipm.ucdavis.edu

Site about using beneficial organisms and non-chemical means to control pests. Includes links to publications, educational materials, and newsletters.

VI. BEYOND THE CLASSROOM



If your school garden has piqued the students' curiosity about where food comes from, how it grows, and what a farmer's life is like, it may be time for a farm visit! Within New York City and just a short drive beyond, there are several farms that students can visit for day or overnight experiential learning trips. And don't forget that the botanical gardens also offer extensive greenhouses and gardens for horticultural experiences.

Growing food and incorporating it into your classroom nutrition education may change the way your students and their families think about what they eat. There are efforts underway locally and throughout the country to transform school lunch, breakfast, and snacks by making it healthier and fresher. You'll find links in this section to information about the movement to bring fresh food from local farms and school gardens to the school lunchroom.

Youth gardening can have an impact well beyond the classroom and school. A number of youth leadership and community development programs engage young people in horticulture, arts, and environmental issues and work. The garden is also a place where young and old may meet to share stories, learning, and a common enterprise. Some local opportunities are included in this section.

Finally, growing healthy fruits and vegetables through sustainable methods is just one aspect of putting environmental awareness and sustainability principles into action. This section also includes links to organizations and resources focused on sustainability, greening, and environmental stewardship in New York City and beyond.

In this section, you'll find resources on:

- the Farm: Farming Education Centers;
- the Cafeteria: Garden-to-Cafeteria Table;
- the Community: Youth Development and Intergenerational Programming; and
- the Environment: A Sustainability and Greening Sampler.



The Farm: Farming Education Centers

Added Value

370 Van Brunt Street, Brooklyn, NY 11231

<http://www.added-value.org/>

Added Value is a non-profit organization promoting the sustainable development of Red Hook by nurturing a new generation of young leaders through the operation of a

socially responsible urban farming enterprise, the Red Hook Community Farm. Added Value hosts a variety of educational programs during the school year. Teachers may choose to come for a half-day or day-long service learning project in which they explore the Farm while learning about the social, economic, and environmental issues related to urban agriculture. A school may also choose to develop a long-term relationship with the Farm in which students use exploratory learning to support standards-based educational opportunities. Some activities include growing produce in dedicated planting beds and agricultural and food-related educational and arts activities. Contact: (718) 855-5531.

**Queens County Farm Museum
Floral Park, NY**

<http://www.queensfarm.org>

The Queens County Farm Museum is the only working historical farm in the city. The farm encompasses a 47-acre parcel that is the longest continuously farmed site in New York State. The site includes historic farm buildings, a greenhouse complex, livestock, farm vehicles and implements, planting fields, an orchard, and herb garden. The Farm Museum offers programs for students in grades pre-K to 9, from September to June. Contact Education Department, (718) 347-3276 Ext. 14, info@queensfarm.org.

**Gericke Organic Farm Education Project, Clay Pit Pond State Park
Staten Island, NY**

Cornell University Cooperative Extension of NYC

<http://nyc.cce.cornell.edu/emerginginitiatives/farmlocations.php>

A farm since the late 1700s, and an organic farm from the 1940s to the 1970s as well as today, Gericke Farm is a 22-acre tract maintained and developed for production, marketing, and environmental education and outreach, using approximately 8 acres of cropland to grow vegetables, tree fruits, brambles, grapes, herbs, flowers, perennials, native plants, and to raise bees and chickens. Through a partnership between NYS Parks and Recreation, CUCE-NYC, and the NYC Board of Education, Gericke Farm has become a full-time, off-site school and agricultural laboratory for young adults with special needs.

Contact: John Ameroso, Extension Associate, Emerging Initiatives, (212) 340-2946, jma20@cornell.edu.

Stone Barns Center for Food and Agriculture

http://www.stonebarnscenter.org/sb_school/student_programs.aspx

Located near Tarrytown, NY, Stone Barns' school programs for K-12 include a farm visit and an experiential activity to engage students in learning about the importance of ecological, community-based farming. Programs are linked to the New York State Learning Standards.

Contact: (914) 366-6200, info@stonebarnscenter.org.

Sylvia Center

Katchkie Farm

Kinderhook, NY and Manhattan

<http://www.katchkiefarm.com/index-2.html>

The Sylvia Center, a non-profit organization located on a 60-acre organic farm in Columbia County, aims to improve the lives of nearby at-risk children by giving them

the opportunity to connect with nature and learn about nutritious and healthy eating through joyful hands-on experiences. The Sylvia Center also interacts with students in the NYC school system. Company chefs, cooks, and event professionals create educational experiences in the Great Performances kitchen in Manhattan and bring these students to the farm when possible.

Contact: (518) 758-2166, info@katchkiefarm.com.

Hilltop Hanover Farm

<http://www.hilltophanoverfarm.org>

The Hilltop Hanover Farm and Environmental Center, located in Yorktown Heights, NY. was purchased in 2003 by Westchester County for agricultural preservation, drinking water protection and the promotion of environmental stewardship through demonstration projects and programs for sustainability. Westchester County is dedicated to providing a regional education center that offers programs on healthy and sustainable food production, researches and teaches skills for small-scale suburban and urban farming techniques, and illustrates sustainable living practices such as alternative energy sources.

Contact (914) 962-2368.

Suffolk County Farm and Education Center

Yaphank, NY

Cornell University Cooperative Extension of Suffolk County

<http://counties.cce.cornell.edu/suffolk/Programs/SCFhome.htm>

The Suffolk County Farm and Education Center is a model farm education facility and also a real working farm. It is open to the public year round. Visitors are able to see a century old working farm that still holds a tie to the past through the historic hay barn, while showcasing present-day agriculture. Youth education programs are available for children pre-K to 12th grade and for those with special needs.

Contact: (631)852-4600.

Visiting Students Program

Hawthorne Valley Farm

Harlemville, NY

<http://www.vspcamp.com/>

Hawthorne Valley Farm is a 400-acre biodynamic farm, comprised of pastures, fields, woodlands, and a 12-acre market garden, located close to the Massachusetts border and about 35 miles southeast of Albany. The Visiting Students Program brings school classes into a unique weeklong farm experience during which students, teachers, and farmers live and work together. The rhythms of nature and farm life take children beyond the classroom and the everyday course of hectic, modern life.

Contact: (518) 672-4790, helen@vspcamp.com.

The Farm School

Athol, MA

http://www.farmschool.org/prog_visitschools.html

Programs for visiting schools are the centerpiece of The Farm School in north-central Massachusetts. Each school year, 1,500 children join farmers and naturalists on the farm for three- to five-day programs.

Contact: Patrick Connors, Director, (978) 249-9944, Patrick@farmschool.org.

Seeds of Solidarity Education Center, Inc.

Orange, MA

<http://www.seedsofsolidarity.org/>

A nonprofit organization that provides people of all ages with the inspiration and practical tools to use renewable energy and grow food in their communities. The organization is based at Seeds of Solidarity Farm, which grows and markets specialty greens, garlic, and flowers. Solar greenhouses are used to extend the growing season and renewable energy and fuels power home and farm.

Sustainable Table

<http://www.sustainabletable.org/schools/programs/>

Provides links and information on farms that are centers of education on sustainable agriculture.



The Cafeteria: Garden-to-Cafeteria Table

Community Gardens Program

NYS Department of Agriculture & Markets

www.agmkt.state.ny.us

The NYS Department of Agriculture & Markets promotes sustainable school gardens. It is piloting a Garden-to-Café project, in collaboration with the NYC Department of Education Office of SchoolFood, which introduces fresh, local food from school gardens into their school cafés.

Contact: Christina Grace, (718)722-2834, christina.grace@agmkt.state.ny.us.

Office of SchoolFood

New York City Department of Education

<http://www.opt-osfns.org/osfns/default.aspx>

Homepage of SchoolFood, which is the largest school food service provider in the United States, providing meals to students in over 1,600 locations including NYC public elementary, middle, special education, high schools, charter and some non-public schools. SchoolFood serves over 860,000 total meals each day.

NY Harvest for NY Kids Week

Pride of New York (NYS Department of Agriculture & Markets)

http://www.prideofny.com/farm_to_school.html

The website is New York's Farm-to-School program resources and New York Harvest for New York Kids information center. This annual celebration is an opportunity for schools and communities to learn about New York agriculture, enjoy locally-grown foods, and inspire healthy food choices. Cafeterias feature NY farm products; classrooms do food tastings; students visit farms and farmers' markets, or harvest their school gardens.

Rethinking School Lunch

Center for Ecoliteracy

<http://www.ecoliteracy.org/programs/rsl.html>

Rethinking School Lunch is a comprehensive guide for revamping school lunch

programs by addressing issues of health, education, and well-being. RSL builds on the premise that hands-on experience growing and preparing food is a powerful way for children to discover that healthy food tastes good, and to learn about the cycles, seasons, other processes of nature, and the relationship between the health of natural and social systems.

New York Coalition for Healthy School Foods

<http://www.healthylunches.org/>

The Coalition works to promote optional plant-based entrees, healthy snack foods, farm-to-school programs, and nutrition education to encourage healthier choices.

Cornell Farm-to-School Program

<http://farmtoschool.cce.cornell.edu/>

The program provides resources for extension educators, food service directors, farmers, parents, and students to support efforts to forge and strengthen farm-to-cafeteria connections in New York K-12 schools, colleges, and universities. Communications are maintained through listserves, newsletters, and an active website.

National Farm-to-School Network

<http://www.farmtoschool.org/>

Website for the national network of Farm-to-School programs that connect schools with local farms with the objectives of serving healthy meals in school cafeterias, improving student nutrition, providing health and nutrition education opportunities that will last a lifetime, and supporting local small farmers. Links to resources, online forums, and events.

School Lunch Initiative

Berkeley Unified School District, Berkeley, CA

<http://www.schoollunchinitiative.org/index.shtml>

The SLI connects healthy lunch, experiential learning in gardens and kitchen classrooms, and formal academic subjects. The website provides information about the collaborative and its public and private partners, along with tips and resources. The project began in 2004 to design and implement curriculum and food service innovations in a public school setting.



The Community: Youth Development and Intergenerational Programming

Added Value

<http://www.added-value.org/>

Added Value is a non-profit organization promoting the sustainable development of Red Hook, Brooklyn by nurturing a new generation of young leaders through the operation of a socially responsible urban farming enterprise, the Red Hook Community Farm. Added Value hosts a variety of educational programs during the school year. Food grown on the Farm is sold at Farmers' Markets, to local restaurants and donated to those in need.

Contact: (718) 855-5531.

Learn It, Grow It, Eat It
Council on the Environment NYC

<http://www.cenyc.org/ee/lge>

Learn It, Grow It, Eat It is aimed at improving the health of young people through nutrition education and improved food access in their schools and communities. The project encourages young people to take control of their health on the cusp of adulthood through knowledge, choices, and action. The program gives students nutrition information; helps them make the connection between the environment and food consumption through hands-on gardening; and introduces healthy food choices that they can incorporate into their diet through in-school food preparation.

Contact: David Saphire, dsaphire@cenyc.org or Lenny Librizzi, llibrizzi@cenyc.org.

Green Guerillas

www.greenguerillas.org

Green Guerillas uses a unique mix of education, organizing, and advocacy to help people cultivate community gardens, sustain grassroots groups and coalitions, engage youth, paint colorful murals, and address issues critical to the future of their gardens. Their youth programs -- the *Youth Mural Project* and the *Youth, Art & Environment Fellowship Program* -- engage young people as partners in community gardens while nurturing their artistic and leadership skills, environmental awareness, and commitment to community action.

Contact: Manhattan office, (212) 594-2155; Brooklyn office, (718) 906-1000.

Forest Project, Garden, & Gallery Summer Internships
Wave Hill

http://www.wavehill.org/education/high_school_internships.html

Wave Hill offers internships that engage students in forestry work, science study and enrichment activities, and Garden & Gallery Summer Internships, which provide opportunities for career development in the arts, horticulture, education and communication. The Forest Project Summer Collaborative empowers teenagers as citizens of an urban environment, and helps them pursue academic and personal fulfillment. This program uses Bronx natural areas and green spaces for ecological study and job training.

Contact: Forest Project Manager, (718) 549-3200 x223, or forest@wavehill.org.

The Food Project

www.thefoodproject.org

Based in the Boston area, The Food Project's mission is to grow a thoughtful and productive community of youth and adults from diverse backgrounds who work together to build a sustainable food system. It engages young people in personal and social change through sustainable agriculture, produces healthy food for residents of the city and suburbs, cultivates a national youth network, and is a capacity-building resource for other organizations.

Growing Ventures: Starting a School Garden Business
National Gardening Association

<http://www.kidsgardeningstore.com/11-3110.html>

This book, published by and available for purchase through the NGA, is for educators, with stories of student entrepreneurs, created "to inspire, advise, and guide those who

want to launch or enhance a business with youngsters." It includes step-by-step guidelines, activities, and worksheets for engaging students in planning and implementing a garden-related business.

Garden Mosaics

Cornell University Cooperative Extension

<http://www.gardenmosaics.cornell.edu/index.htm>

Garden Mosaics' mission is "connecting youth and elders to investigate the mosaic of plants, people, and cultures in gardens, to learn about science, and to act together to enhance their community." It comprises a youth science education program, international online databases focused on gardening, and free online Science Pages and stories about gardens, gardeners, and communities. Science education materials available in English and Spanish.



The Environment: A Sustainability and Greening Sampler

NYC Community Garden Coalition

<http://www.nyccgc.org/>

A non-profit organization that advocates for the preservation of community gardens in New York City.

Contact: (212) 926-8648.

Cloud Institute for Sustainability Education

<http://www.sustainabilityed.org/>

The Cloud Institute offers a variety of products and services to help public and independent schools, school systems, and their communities teach and learn for a sustainable future. Provides professional development for educators and curricula on a range of sustainability-related skills and issues, including curricula on sustainable food systems for secondary school grades.

Contact: (212) 645-9930, Charlene@sustainabilityed.org.

Sustainable South Bronx

www.ssbx.org

Sustainable South Bronx is devoted to pursuing environmental justice through innovative, economically sustainable projects that are informed by community needs.

Contact (718) 617- 4668, ssbinfo@gmail.com.

Project for Public Spaces

<http://www.pps.org>

PPS provides technical assistance on a variety of projects to support communities to create public spaces. Such projects include transportation and public markets. PPS provides training courses and planning and design services.

Contact (212) 620-5660, pps@pps.org.

Young Citizen Pruner

Trees NY

http://www.treesny.com/trees_youth.htm

The program provides training, lifetime skills, and NYC Department of Education-approved academic credit. It offers both academic and community service opportunities, as well as after-school and summer training program opportunities.

Contact (212) 227-1887, info@treesny.com.

New York City Department of Parks and Recreation

<http://www.nycgovparks.org>

The NYC Department of Parks and Recreation provides a multitude of opportunities for students to learn about and interact with the natural environment. It operates Urban Park Ranger Nature Centers, which offer programs in parks throughout the city.

Contact: Call 311 or 212-NEW-YORK (from outside New York). Main address: The Arsenal, Central Park, 830 Fifth Ave., New York, NY 10065.

Schoolyard Habitats

National Wildlife Federation

<http://www.nwf.org/schoolyard/>

The Schoolyard Habitats project helps schools, teachers, students, and community members in using school grounds as learning sites and for wildlife conservation. NWF recognizes the efforts of schools across the country by certifying schools that provide essential habitat for wildlife, as well as schools that integrate the use of their sites as teaching tools into their curriculum.

Action for Nature

<http://www.actionfornature.org/>

A website that includes stories of young people who have taken action to improve and protect the environment. AFN sponsors the International Young Eco-Hero Award, which honors children and teens ages 8 to 16 who have taken action to protect nature and preserve a healthy environment.

Regen Kids

Rodale Institute

<http://www.kidsregen.org>

“Regen Kids” contains activities, projects, features, and forums focused on promoting understanding of and commitment to “regenerating” the link between soil, food, and health.

VII. FUNDRAISING



Grant funds and in-kind donations targeted to school gardening and environmental education are available through a number of sources, which are included below along with some broader education grant directory sources.

Kids Growing Food

Cornell Agricultural Outreach & Education/Agriculture in the Classroom
<http://www.nyaged.org/aitc/kgf.html>

The main goals of Kids Growing Food are to increase appreciation and understanding of agriculture, nutrition and the food system by getting students involved in food gardening—at school, or very close by—and to create “garden classrooms” that provide authentic experiences and help educators meet state and national Learning Standards. Annually, teachers are invited to submit garden mini-grant proposals. Schools receive a cash award to help them establish or maintain a food garden. Grant recipients are offered workshops at two or three sites each year, are provided education and gardening materials, and become part of the Kids Growing Food Network. Schools are welcome to join the network without receiving a grant. Now in its 11th year, Kids Growing Food has awarded over 300 garden grants in New York.

School and Youth Garden Grants

National Gardening Association

<http://kidsgardening.com/grants.asp>

List of in-kind grants awarded by the National Gardening Association. To be eligible a school must plan a garden with at least 15 kids aged 3-18 and must complete a year-end impact report.

Youth Garden Grants Program

National Gardening Association and The Home Depot

<http://www.kidsgardening.com/YGG.asp>

One hundred twenty-five grants were awarded for the 2008-09 school-year. Priority given to those with a focus on nutrition, environment, education, entrepreneurship, or community. Winners receive up to \$1,000 in gift cards to Home Depot and Gardening With Kids store.

Healthy Sprouts Awards

National Gardening Association and Gardener’s Supply Company

<http://www.kidsgardening.com/healthysprouts.asp>

These awards support schools and community organizations that use gardens to teach about nutrition and to explore the issue of hunger in the United States. For the current grant cycle, NGA will present awards to 20 programs. The top five will receive gift certificates to Gardener's Supply valued at \$500; 15 more will each receive a \$200 gift certificate. All will receive a curriculum package from NGA.

Wuzzleburg Preschool Garden Awards

National Gardening Association and Wow! Wow! Wubbzy!

<http://www.kidsgardening.com/grants/2008-wubbzy.asp>

Grants of garden tools and garden- and nature-oriented teaching materials valued at \$1,000 as well as a teacher's guide awarded to 75 exemplary preschool programs across the country.

Hooked on Hydroponics

National Gardening Association & The Grow Store with Progressive Gardening.org

<http://www.kidsgardening.com/grants/HOH.asp>

Grants of hydroponic growing equipment packages along with curriculum and reference materials for 36 elementary through high schools.

Mantis Awards for Community and Youth Gardens

National Gardening Association and Mantis

<http://www.kidsgardening.com/grants/mantis.asp>

Mantis tiller/cultivators are awarded annually to twenty-five non-profit recipients, including schools.

Lowe's Outdoor Classroom Grant Program

<http://www.lowes.com/lowes/lkn?action=pg&p>AboutLowes/outdoor/index.html>

Lowe's Charitable and Educational Foundation, International Paper, and National Geographic Explorer! classroom magazine have partnered to create an outdoor classroom grant program to provide schools with additional resources to improve their science curriculum by engaging students in hands-on experiences outside the traditional classroom. All K-12 public schools in the United States are welcome to apply.

Seeds for Education

Wild Ones

<http://www.for-wild.org/seedmony.html>

The Lorrie Otto Seeds for Education Grant Program gives small monetary grants to schools and other non-profit educational organizations to establish outdoor learning centers, including school gardens.

Slow Food in Schools Micro-Grant

http://www.slowfoodusa.org/index.php/programs/in_schools_detail/slow_food_in_schools_micro_grant/

Slow Food in Schools offers micro-grants of up to \$1,000 to support Garden to Table projects for new projects (Sprouting Seeds) and for capacity-building and professional development (Double the Batch).

Good Food Gardens

Readers Digest, Share Our Strength, & Food Network

<http://www.rd.com/rdconnection/goodfoodgarden/index.jsp?trkid=redirect>

In partnership with Share Our Strength and Food Network, Reader's Digest and sponsors are underwriting the creation of five new edible Good Food Gardens in schools and communities, as part of a commitment to nutrition education and healthy food.

Good Food Gardens will be awarded to nonprofit 501(c)(3) organizations, schools with a valid NCES code, or local government entities that serve children and youth.

Let's Start a School Garden: A Step-by-Step Guide for Baltimore Area Educators

www.jhsph.edu/clf/PDF%20Files/Toolkit.pdf

Although designed for the Baltimore area, the guide includes national resources, including organizations that provide financial assistance to garden programs.

Captain Planet Foundation

<http://www.captainplanetfoundation.org/default.aspx?pid=3&tab=apply>

The foundation provides grants for hands-on environmental projects involving children. Proposals are accepted four times a year; maximum award is \$2,500.

North American Association for Environmental Education

<http://eelink.net/pages/Grants+-+General+Information>

The grants section includes resources on fundraising and specific grant sources for environmental education, including gardening.

Grant Wrangler

<http://www.grantwrangler.com/index.html>

A bi-weekly email update on the latest K-12 school and teacher grants.

Environmental Education Grants Program

US Environmental Protection Agency

<http://www.epa.gov/teachers/grants.htm>

The EPA offers funding targeted to environmental education and provides links to other funding sources.

National Environmental Educ. & Training Foundation Grants & Awards

http://www.neefusa.org/about/grants.htm?searched=grants&highlight=ajaxSearch_highlight+ajaxSearch_highlight1

Through awards, grants, and other opportunities, NEEF provides funding, recognition, and partnerships for educators incorporating environmental education into learning environments.

SchoolGrants

http://www.k12grants.org/grant_opps.htm

Federal and State grant opportunities for schools as well as a connection to foundations around the country.

Foundation Center

<http://www.fdncenter.org/>

The Foundation Center provides education and training on the grant seeking process. The FC collects, organizes, and communicates information on U.S. philanthropy while conducting and facilitating research on trends in the field.

Home Depot

Individual Home Depot stores may make donations of products, including lumber and plants. Contact the manager of local Home Depot stores to discuss any possible options. The Home Depot Foundation (www.homedepotfoundation.org) awards grants to non-profit organizations sponsoring projects that fall into one of its two focus areas (affordable housing and healthy community trees) and is developing a Green Cities Initiative focused on sustainable community development.

VIII. CREDITS



The resources in this directory were drawn, in part, from several wonderful compilations. Many thanks to all who have done the detective work of finding and identifying resources, and sharing the results, some of which are incorporated in this guide:

Columbia University School of Social Work students Caroline Angle, Michele Carroll, Brooke Dumain, Tara Nolan, and Megan Pappas.

Resources for GreenThumb Gardeners, GreenThumb, City of New York/Parks & Recreation, Summer 2000. (212) 788-8070.

Schools, Food and Gardening: Resource Guide, prepared by Baum Forum and Slow Food USA for *Schools, Food and Gardening: Cultivating a Healthy Future* (NYC), held on Saturday, April 21, 2007. www.baumforum.org and www.slowfoodusa.org.

Community Gardens Program of the New York State Department of Agriculture and Markets. (718) 722-2834.

Let's Start a School Garden: A Step-by-Step Guide for Baltimore Area Educators, developed by the Center for a Livable Future at the Johns Hopkins Bloomberg School of Public Health. www.jhsph.edu/environment.

How to Start a Slow Food in Schools Project, Slow Food USA. Available at www.slowfoodusa.org/education.

"School Gardens Policy and Practice," prepared by students in Food Policy at The New School, prepared 2009.

prepared 2009 by
Leslie F. Boden, MSUP
Community Health &
Sustainable Food Systems Planner
for
GreenThumb
City of New York Parks & Recreation
49 Chambers Street, Room 1020
New York, NY 10007
(212) 788-8070
www.greenthumbnyc.org