

# CHAPTER 1

## Introduction to School Food Gardens

School food gardens naturally inspire inquiry, exploration, and innovation as students participate in real-world, hands-on experiences to dive into learning about science, health and nutrition, and food origins and systems — choose any topic and you're likely to find a way to teach about in a garden setting!

While the phrase “food garden” may call to mind tidy rows of vegetables, the reality is that school food gardens run the gamut, from windowsill plantings to raised-bed gardens to small-scale urban farms. You'll find them in classrooms and courtyards, and on playgrounds and rooftops. The possibilities are as plentiful as the benefits they provide to youth gardeners. Gardening educators, families, and community volunteers are quick to acknowledge that food gardens are a powerful, effective, and flexible teaching tool that has a positive impact on the physical, mental, social, and emotional growth of participating youth.

The *Seeds of Success Toolkit* compiles a wealth of knowledge gathered from school gardeners across the country to provide you with the information and inspiration you need to initiate and sustain a successful school food garden. We offer the who, what, where, why, when, and how behind developing a youth garden program so that you can feel confident in your planning and implementation.

This introductory chapter is designed to provide you with an overview of youth and school food garden programs and offers answers to the questions:

- Why garden with kids?
- What is a youth garden? What is a youth garden program?
- Where can you plant a school food garden?



### Getting Started: Why Garden with Kids?

Begin planning your school food garden program by taking the time to identify the why behind your efforts and explore all the options. A garden program is an ongoing investment of time and resources, not a one-time project, so careful planning and consideration are critical for success. Defining your motivation and understanding the range of possibilities for implementation not



only help you chart your course, they also allow you to easily make adaptations when challenges arise.

Gardens offer youth a calming, safe, dynamic space that also serves as a living science and food lab and allows them to explore, imagine, create, and connect. Youth garden programs provide opportunities for hands-on learning that is rich with “teachable moments” and real-life problem-solving. Gardening offers opportunities for:

- Multidisciplinary, active learning
- Physical activity
- Improved nutrition through increased consumption of fruits and vegetables
- Learning about food systems
- Nurturing environmental awareness and stewardship
- Personal growth
- Supporting mental and emotional health
- Community improvement
- Social awareness
- Horticultural therapy
- Fun!

**Multidisciplinary, active learning.** As gardeners, kids play the part of observers, questioners, doers, and problem solvers. The garden can add life and depth to studies by inspiring students to participate in their own education. By actively doing, investigating, and inquiring, students build understanding in a meaningful context. Beyond offering an investigative approach to learning key science concepts, the garden provides a natural context for explorations across the curriculum, including

language arts, mathematics, cultural studies, history, the arts, and more. The garden can serve as a centerpiece for these studies or can be used to enhance them.

*KidsGardening.org related resource:*  
[Connecting the Garden to the Classroom](#)

**Physical activity.** Digging, planting, and weeding the garden are energizing physical activities.

**Improved nutrition.** When kids raise fruit and vegetable plants, they are motivated to try new foods, which can lead to healthier eating choices. Gardens can also increase access to fresh fruits and vegetables at home and at school.

*KidsGardening.org related resources:*  
[Grow a Rainbow](#)  
[Teaching Nutrition in the Garden](#)

**Food system knowledge.** Most kids (and adults too!) no longer have a direct connection to the production, processing, and delivery of their food. Gardens provide firsthand experience that allows them to better understand what goes into getting food to their table.

*KidsGardening.org related resource:*  
[Sustainable Gardening Ideas from Around the Globe](#)

**Environmental awareness and stewardship.** In the garden, kids interact one-on-one with nature. Through these interactions, they learn that plants need air, water, light, and nutrients, and when kids provide these essentials, they become responsible caretakers. They also explore the



web of interactions among the living and non-living players that sustain life. By doing so, they develop a greater understanding of and appreciation for the natural world.

*KidsGardening.org related resource:*  
[Wildlife Inventory](#)



**Personal growth.** Students learn so much through planting a seed, watching it sprout, and caring for it as it matures. One look at the face of a child who has harvested a carrot from the earth, and you know the value of this experience. Gardening builds confidence, self-esteem, and pride as the kids reap the rewards of their hard work and patience. Additionally, working as a team towards a common goal develops communication and leadership skills and opportunities to learn peaceful ways to resolve conflicts.

*KidsGardening.org related resource:*  
[Nurturing Resilience in Gardens — and Kids](#)

**Mental and emotional health.** A garden can be a space for social-emotional learning and mental health-promoting activities. Research has shown benefits of time in gardens and nature includes a decrease in stress and anxiety as well as increased feelings of calm and relaxation. Garden activities can allow youth to express feelings, thoughts, and ideas. They can also offer opportunities to self-regulate and learn patience, compassion, and empathy.

*KidsGardening.org related resource:*  
[How Youth Gardens Can Support Social Emotional Learning](#)

**Community improvement.** Youth gardens help beautify the environment, allow young people to take action to improve their surroundings, and inspire cross-generational connections. School food gardens specifically can also provide youth with opportunities to contribute to local food supplies. Providing nourishing food for friends, family members, and neighbors can be a powerful experience for young people. Members of the community often respond with increased local pride and support for the gardening efforts.

**Social awareness.** The garden sets the stage for discussing, investigating, and responding to local and global food and hunger issues. Young people can learn about food production, food distribution, agricultural technology, and land resources. They may even choose to become part of the solution and address some of these problems locally.

*KidsGardening.org related resource:*  
[Celebrating Diversity in the Garden](#)

**Horticultural therapy.** Trained horticultural therapists can use the garden to craft

treatment activities to achieve physical, mental, and emotional therapeutic goals.

*KidsGardening.org related resource:*

[Designing a Healing Garden](#)

**Fun!** Above all, gardening is fun! It is a skill that, once acquired, can turn into a rewarding, lifelong hobby. Spending time outside, exploring in the soil, watching seeds grow, and harvesting the garden's bounty can be enjoyable and memorable ways for kids to spend their time.

*KidsGardening.org related resource:*

[Self-Expression in the Garden](#)

## Youth and School Food Gardens Defined

A **youth garden** is a garden space that is specifically designed for – and often by – young people to help them learn about plants, connect to nature, and be involved in the gardening process from planting to harvest. The youth garden is the foundation of a **youth garden program**, which can be defined as a coordinated series of activities that engage youth in the growing of plants to achieve specific goals.

A **school food garden and school food garden program** share the above definitions with a defined focus on growing edible plants and providing food-related activities and experiences.

As you might expect, with such broad definitions both youth gardens and garden programs can vary widely in size and scope. Successful gardens and programs are tailored to meet the needs of their target audience and to maximize the space and resources available.

For example:

- A garden space can be a compact area with a collection of containers or it can span several acres.
- Some programs meet monthly or weekly, while others provide youth time in the garden every day.
- Some are active year-round, while others are active only during the growing season.
- Some programs focus on growing food crops only, while others also incorporate habitat gardens to support pollinators and benefit wildlife.

There is no ideal or model youth garden program, and every situation is unique! Strive to create a program that best meets your needs and goals given the reality of your site and available resources.

## Types of Youth Gardens

Here are some examples of common youth garden program structures that can be employed in school settings:

- Classroom Gardens
- Garden Clubs
- Summer Camp Garden Programs
- Community Gardens
- Youth Garden Clubs
- Service Learning Projects
- Entrepreneurial Programs
- Work Training Programs
- Horticultural Therapy Programs



## Classroom Gardens

Classroom gardens are closely tied to the curriculum, ensuring that instructional time can be used for garden lessons. They require careful coordination between teachers, administrators, and volunteers and may include both outdoor and indoor garden activities. Classroom garden programs offer educators a valuable tool to incorporate inquiry-based, hands-on learning, and can be used to enhance the teaching of just about any subject.

Connecting the garden to required curriculum standards is especially important for school garden programs because ultimately the mission of the school is to help students master these standards. Fortunately, as living laboratories, school gardens provide a natural context for explorations across the curriculum, allowing for creative approaches to addressing many national, state, and locally mandated standards. By actively participating, investigating, and inquiring, youth are able to build understanding in a meaningful context. Health, career, and life skills classes are also natural fits for a school food garden.

### To make these links:

- 1 Consider which aspects of the curriculum might benefit from hands-on, minds-on, garden-based experiences.
- 2 Review the standards and curriculum goals and make a list or map of the areas that could be covered.
- 3 Create a list of garden tasks, projects, and goals, and look for overlap with the students' outcomes detailed in the standards.
- 4 Develop activities or locate existing activities that fit your curriculum goals.



Below, find ideas for connecting the garden to different subjects:

### Connecting the Garden to the Academic Curriculum

**Science.** A garden provides ample opportunities for making science inviting and relevant to students' lives by inspiring active exploration and problem-solving. The garden encourages inquiry as students use their senses, reasoning, communication skills, and existing knowledge to explore questions. These experiences can help improve students' attitudes toward science. Key science concepts that can be explored in the garden include organisms, life cycles, basic needs, structure and function, diversity, plant anatomy, adaptations, food webs, decomposition, interdependence, ecological principles, pollination, and diversity of life.

**Language Arts.** The garden provides an inspirational setting for students to exercise imagination and language skills. Documenting the gardening process through journal writing

and newsletters involves creative thinking. Language skills develop as students learn to identify plants using field guides, create signs, read related children's literature, record experiments and results, or create a cookbook.

**Math.** Math becomes practical and relevant when students implement the concepts they have learned in the classroom in a real-life garden setting. Planning, designing, and planting a garden require mathematical problem-solving and practice. Math skills used include addition, subtraction, multiplication, counting, measuring, and plotting. Students can also create and maintain garden-related businesses, such as plant sales or farmers' markets, and can assist in the financial management.

**Social Studies and History.** The garden can provide a hook for exploring cultures and engaging students in appreciating traditions and diversity through examining people-plant relationships. The garden is the perfect place to learn about Indigenous and Native American practices. For example, a Three Sisters Garden, filled with beans, corn, and squash, shows how plants rely upon each other, provide support, and work together to yield a more bountiful harvest. Through the garden, youth can also gain insight into different time periods (Middle Ages or Victorian Era, for example) by examining the culinary, religious, medicinal, and cultural significance of plants throughout history. Food gardens can serve as a rich tool for students to share and learn more about their own and their peers' cultural roots.

**Culinary Arts.** A school garden is a natural fit with a health and wellness curriculum, functioning as an incredible platform to cultivate an understanding and appreciation

for nutrition and cooking, both essential life skills. A school garden is a personalized grocery store, filled with fresh foods ready for youth to pick and prepare. Giving students the opportunity to not only grow their own food, but to also harvest, prepare, and taste it, creates excitement about and investment in healthy food options.

*KidsGardening.org related resource:*

[Indoor Gardening](#)

## Garden Clubs

With heavy demands on in-school instructional time, you may need to look beyond the traditional school day to find time to get youth into the garden. Before school, afterschool and lunchtime programs and clubs are great spaces for additional focused study of and interaction with school gardens. Unlike classrooms beholden to the pressure of learning standards, extracurricular programs have the freedom to tackle projects teachers may struggle to incorporate into their daily schedule. Such flexibility allows for truly organic development and implementation of programming that can vary with the seasons, emphasizing garden maintenance and outdoor exploration during the growing months, and food preparation/preservation and food systems work when weather confines programming to an indoor arena.

## Summer Camp Garden Programs

A summer camp is also a wonderful way to provide support to a school garden when classes are not in session. In cooler climates, summer is the prime growing season and summer programs can be used to help maintain gardens that were started in the spring. Most summer programs are less



structured than school-year programs, giving youth gardeners more time to explore and observe. Lessons and activities are often informal and much of the garden time is spent on the actual care of the garden and fun things like cooking and art. Summer garden programs may build their own garden space or partner with an existing school garden program and provide maintenance while students and teachers are on summer vacation.

**“Respect for nature has translated to respect for oneself. Caring for garden plots in cooperative teams of two has led to partners caring for each other’s welfare — as well as the vegetable plants! The divergent concepts of teamwork and self-reliance have become real and consequential to these students. Their willingness to taste fruits and vegetables previously unknown or disliked has grown a dramatic 95%.”**



**—JOE BLANTON  
JANOWSKI ELEMENTARY, TX**

Many school districts host summer meals programs, and these programs can be great partners with summer garden camps, such as by using freshly harvested garden produce and supporting cooking- and nutrition-related activities.

## **Community Gardens**

Many community gardens dedicate a portion of their grounds to youth gardeners. With the leadership of dedicated volunteers, youth can

participate in an organized fashion through regular garden work days and planned activities, or a space can just be left open for self-directed investigations and play while their families are there working in their own plots. Schools can partner with local community gardens in a number of ways to offer opportunities to their students. For example, if close in location, a community garden may offer space for educators to use on a regular basis. If not nearby, they may offer field trips to the garden and/or special programs they can bring to the school to share. Community gardens may also be willing to donate produce to the school for tasting activities or other events.

A community garden often sets the stage for discussing, investigating, and responding to local and global food, hunger, and health issues. Youth can learn about food production and food distribution, examine food cultures, including the social and economic forces that shape them, and begin to think critically about food justice and equity. They may even choose to become part of the solution and address some of these problems locally by donating garden produce to local food banks or taking produce home. The garden activities can serve as a springboard to build community and social awareness, launching the next generation of food and health advocates.

*KidsGardening.org related resource:*

[Starting a Community Garden on School Grounds](#)

## **Youth Garden Clubs**

Youth garden clubs can be started at schools, community gardens, community centers (libraries, YMCA’s, Boys and Girls Clubs, etc.),



or even in home gardens. A youth garden club can be informally organized with the help of an adult volunteer or can offer a more structured organization by participating in an existing garden program, such as The Junior Master Gardener Program. Many youth garden clubs are focused on community service, and their activities contribute to beautification efforts or the production of food to increase the local food supply rather than focusing strictly on academic topics.

## Service Learning Projects

Gardens are powerful centralizing themes for service learning projects, which invite youth to identify issues in their communities and brainstorm creative solutions. These projects promote student leadership and encourage social awareness, while simultaneously meeting real needs and inspiring change. Service learning projects can be offered during the school day or as an extracurricular activity.

Perhaps youth are passionate about teaching members in their community how to cook meals from whole ingredients or take care of a garden. Or they see a lack of social spaces in their community and seek to create a garden where people can spend time with their families. Perhaps they notice that local stores carry a very limited selection of fruits and vegetables and believe that by sharing produce from their school garden they could increase access to fresh foods. Whatever the project or focus, using a service learning model can provide the framework for students to do something they are passionate about for their community. Here are some ideas for service learning projects:

- Organize a group of peers to volunteer at a local food shelf on a weekly basis.

- Create a mentorship program with a local nursing home.
- Host a series of culinary workshops using garden produce.
- Plan a free community dinner featuring student grown produce.
- Create a pay-what-you-can farm stand.
- Plant a native plant garden for local wildlife and pollinators.
- Adopt a spot in the neighborhood to foster beautification efforts.

Creating a strong community connection increases the number of people invested in your program. This not only helps spread out the work of the garden, but also may help you find the resources needed to sustain your program over time.

*KidsGardening.org related resource:*  
[Service Learning: Helping Kids and Communities Grow](#)

## Entrepreneurial Programs

Garden activities can yield products that consumers are willing to purchase. Taking advantage of this benefit, youth garden programs can focus on the creation and operation of a business. From upper elementary school to high school, gardens provide versatile platforms for entrepreneurial projects, which in turn allow youth to step into leadership roles and gain valuable job experience. Whether youth participate in a formally coordinated internship program or pilot a creative business model as part of a more informal project, they can gain a plethora of work-readiness skills through garden-inspired businesses. This provides kids not only with gardening know-





how and real-world business experience, but also the means to raise funds for their school or community. Potential products include fresh fruits, vegetables, herbs, and flowers through a venue such as a Farmer's Market, or value-added items such as herbal soaps, jars of salsa, or cut flower arrangements.

There are many ways to organize a youth garden business. Funds collected can be shuttled back into the garden program to help maintain and sustain the gardens. Or the funds can be used to pay the participating youth, giving them a true sense of ownership in the business. This decision will likely be informed by your motivations for starting a business. For example,

- Do you want to fundraise for your garden program in a creative and engaging way? Consider having students volunteer their time and allocate any profits to a garden fund.
- Do you want to give youth a more formal work-and-learn experience? Consider ways to fund this type of program and how to pay your student employees.

No matter how you organize your youth garden business, the result is the same – youth get hands-on experience and learn important life skills.

## Work Training Program

Youth garden programs teach valuable job skills that can ultimately help youth find employment in the horticulture industry. There's a large job market and high potential for self-employment in areas such as the production of nursery crops, landscape design and maintenance, and the production and sale of fruits and vegetables. Work training programs are common at schools and through

community centers, such as botanical gardens and community colleges.

## Horticulture Therapy Programs

The therapeutic benefits of spending time in a garden are well-documented. With the help of trained horticultural therapists, as well as special educators, occupational therapists, and physical therapists, the garden and garden programs are great learning spaces for youth with disabilities.

This list is intended as inspiration as you brainstorm ways to incorporate a garden program into your school or community's culture. Keep an open mind and don't feel limited by these suggestions. Whether you have 30 minutes a week and a handful of planters or 30 hours a week and 5 acres of land, you can design an effective garden program to positively impact the youth in your life.

## In Summary

The benefits of youth gardens, and especially school food gardens, are diverse and plentiful. Your youth garden program should be tailored to meet the needs of your target audience while maximizing the use of the available space and resources. In the next chapter, we outline the steps to launching a successful kids' gardening program.

