

# School Gardens



## Objective

- *Students will learn what it takes to grow food to encourage consumption of whole, healthy foods.*



## Key Messages

**Studies indicate that garden-based nutrition education has been shown to significantly increase children's consumption of fresh fruits and vegetables.**

- Sixth-grade students involved in a garden-based nutrition education program more than doubled their daily fruit and vegetable consumption from 2 servings to 4.5 servings, as well as increased their intake of vitamins A and C and fiber. A comparison group of students who received nutrition education only without the gardening component did not achieve the same results.<sup>1</sup>

- Fourth-grade students who received garden-based nutrition education had higher preference for and were more willing to try vegetables such as peas and zucchini compared to students who received nutrition education only, and such preferences persisted for at least 6 months.<sup>2-3</sup>

### **Garden-based education increases academic achievement.**

- Use of an experiential garden-based science curriculum that included lessons on horticulture, health, nutrition, environmental science and leadership for 3rd-5th grade students is associated with a significant increase in mean science scores compared to students who received science curriculum without gardening.<sup>4</sup>
- Research indicates a positive relationship between garden-based learning and student positive attitude toward classroom content, interest and excitement for learning and improved interpersonal relationships.<sup>5</sup>
- Improvements in overall math and science GPA, standardized psychosocial questionnaires and science achievement tests are associated with environment-based learning settings such as school gardens.<sup>6-7</sup>





## Key Strategies

**Note:** strategies are adapted from “Creating and Growing Edible Schoolyards: A Manual for School Professionals”<sup>8</sup>

- **Outline your vision for your garden.** Include how you anticipate it being used and by whom, as well as its location and scope.
- **Gain administrative approval for the garden.** Present your concept to school administration and seek approval and support for next steps.
- **Create a garden action plan.** Outline the who, what, where and when of creating, implementing and maintaining the garden. Continue to tweak this plan and expectations as you learn how to most efficiently manage the garden.
- **Work with your curriculum director and school administrators to integrate garden activities into classroom curriculum.** Review materials in the resources for implementation section for curriculum suggestions.
- **Create a garden advisory committee** to plan, implement, maintain and sustain the garden with time and resources. Consider inviting food service staff, parents, teachers, students and community volunteers.
- **Promote the school garden and gain school community support.** Advertise the garden at parent group meetings, in newsletters sent home to families and at staff meetings. Connect with local organizations that support your garden’s mission.
- **Locate additional funding sources for equipment and seeds.** There are many grant and in-kind opportunities that support school gardens.



## Sample Policy Language

“The school district will support the use of school property to promote nutrition, physical activity, and curricular and co-curricular activities through school gardens. The school district will support the sustainability of school gardens through activities including, but not limited to, fundraising, solicitation of community donations, use of existing resources, and allocation of school district funds.”<sup>9</sup>

“The school district supports the incorporation of school gardens into the standards-based curriculum as a hands-on, interdisciplinary teaching tool to influence student food choices and lifelong eating habits.”<sup>9</sup>

“The superintendent has the authority to designate school property as a school garden and negotiate the terms of the agreements and licenses needed to create and maintain a school garden.

The superintendent will ensure that the development of a school garden includes necessary coordination with appropriate representatives of the school buildings and grounds department.”<sup>9</sup>





## Success Stories

### **Meadowview Elementary School, ISD 192, Farmington, MN**

Meadowview Elementary School started a school garden with financial assistance from the Minnesota Statewide Health Improvement Program. In the three years since the initial start-up, the garden has been self-sustaining and continues to expand in size and output. The garden has benefited from donations, including a shed and gazebo from a couple of local Eagle Scouts. The first year the garden consisted of 10 plots - nine rented and one made available for the Farmington Food Shelf. Twelve additional plots were added during the second year, bringing the total to 21 rented plots and one dedicated to growing produce for the food shelf. Meadowview is proud of the garden and that with the help of generous volunteers, they have donated hundreds of pounds of food to the food shelf.

### **Garlough Environmental Magnet Elementary School ISD 197, West Saint Paul, MN**

As an environmental magnet school, Garlough takes a unique approach to learning. Each classroom in grades K-4 has their own raised garden bed that was constructed as an Eagle Scout project. The school year kicks off with students weeding and harvesting the garden. Each classroom also starts a worm composting bin. Each day throughout the school year students add organic waste from their lunch to the bin. By the time spring approaches the students have nutrient-rich soil to add to the gardens and have researched what they would like to plant. The work that the students do to plan the garden is designed to meet a range of school standards, including math, reading and science. For example, the fourth graders put in plants for a salsa garden every year, and at harvest time they put their measurement skills to the test as they follow the recipe. Second grade curriculum is heavy in plant science so they get a jumpstart with classroom grow lights to begin their seedlings in the winter. Other grades perform soil studies or investigate insects and animals in the gardens. At the end of the day, students are always eager to taste the fruits of their labor!

It has not been difficult to sustain the gardens from year to year, even over the summer when school is out. By saving seeds to use the following year, the gardens are sustained at a low cost. In addition, Garlough partners with a local nature center that supports their gardening efforts with a staff naturalist to help guide classroom projects. The nature center also supplies supplemental seeds. Parents have been eager to volunteer their time to help in the gardens over the summer and families organize a schedule to care for the garden.

### **Pilot Knob Elementary School, ISD 197, Eagan, MN**

The Pilot Knob Elementary School garden is an important part of the school's health and wellness program because it provides students the opportunity for physical activity, learning how to grow healthy foods and much needed fresh air! All Pilot Knob students work in the garden and get to harvest the produce. Students begin the gardening process in late winter by planting seeds indoors. The garden is also used as a teaching tool. Students learn about science and math when planting in the garden. In the summer months parents and students volunteer their time to weed, water and harvest. The lettuce grown in the Pilot Knob garden is donated to a nearby Eagan Food Shelf. As Pilot Knob's garden continues to expand, they hope to have enough produce to serve in the lunchroom when students return to school in the fall.

***Want more? Check out videos of school gardens in action across the country here.***

[http://www.heart.org/HEARTORG/GettingHealthy/HealthierKids/TeachingGardens/Teaching-Garden-Videos\\_UCM\\_436623\\_SubHomePage.jsp](http://www.heart.org/HEARTORG/GettingHealthy/HealthierKids/TeachingGardens/Teaching-Garden-Videos_UCM_436623_SubHomePage.jsp)



## Resources for Implementation

- **University of Minnesota Extension School Garden website:**  
<http://www1.extension.umn.edu/food/farm-to-school/school-gardens/>
- **Let's Move! School Garden Checklist:** <http://www.letsmove.gov/school-garden-checklist>
- **Life Lab School Garden Resources:** <http://www.lifelab.org/for-educators/schoolgardens/>
- **Minnesota School Garden-based curriculum:**  
<http://www1.extension.umn.edu/food/farm-to-school/school-gardens/curriculum/>
- **Creating and Growing Edible Schoolyards: A How-to Manual for School Professionals:**  
<http://www.health.state.mn.us/divs/hpcd/chp/cdr/nutrition/docsandpdf/CreatingandGrowingEdibleSchoolyardsManual.pdf>
- **Cornell Garden-based Learning:** <http://blogs.cornell.edu/garden/grow-your-program/>
- **MN School Garden and Farm to Cafeteria Safety: A Food Safety Manual:**  
<http://www.co.olmsted.mn.us/OCPHS/reports/Documents/SchoolGardenFoodSafetyLowRez%20.pdf>
- **Garden-to-Cafeteria Program Protocol Example:**  
<http://www.thelunchbox.org/content/denver-public-schools-garden-cafeteria-gtc-program-protocols>
- **USDA memo RE: sourcing food for school meals from a school garden:**  
[http://www.fns.usda.gov/cnd/governance/Policy-Memos/2009/SP\\_32-2009\\_os.pdf](http://www.fns.usda.gov/cnd/governance/Policy-Memos/2009/SP_32-2009_os.pdf)
- **Legal Issues Impacting Farm to School and School Garden Programs in Minnesota:**  
<http://publichealthlawcenter.org/sites/default/files/resources/ship-f2s-school%20garden%20legal%20issues-2011.pdf>
- **Gardening Matters:** <http://www.gardeningmatters.org/node/16>

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*Smart Choices is a partnership of the Dakota County Public Health Department and school districts in Dakota County committed to making the healthy choice the easy choice by creating opportunities for healthy eating and physical activity before, during and after school.*

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