



School Garden Toolkit



Chicago Public Schools



HEALTHY CPS

— OFFICE OF STUDENT HEALTH & WELLNESS —

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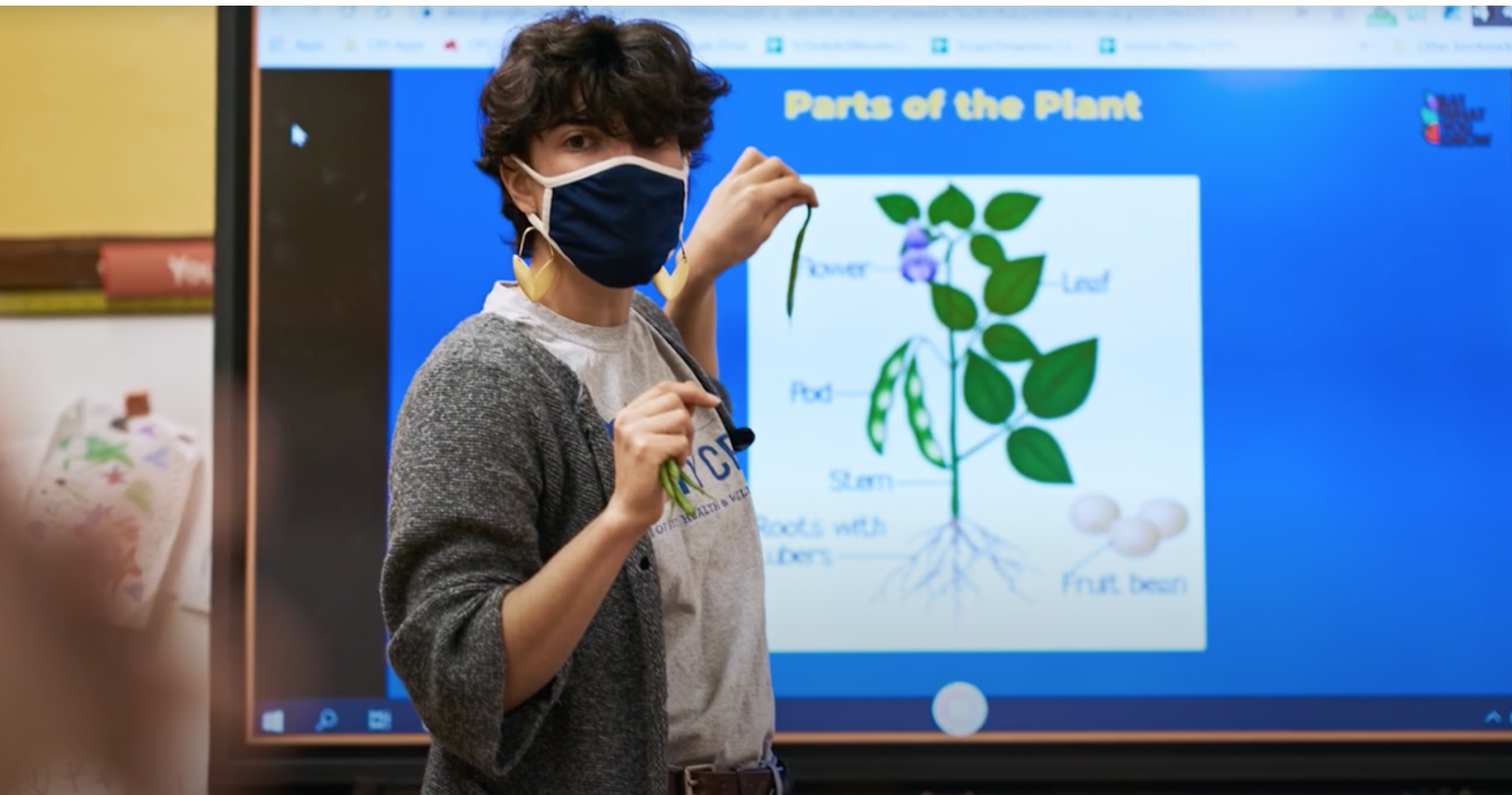
CPS Vision for School Gardens

At Chicago Public Schools, our mission is to provide a high-quality public education for every child, in every neighborhood, that prepares each student for success in college, career, and civic life. School gardens and enriching experiential learning opportunities are critical to this mission. A thriving edible garden can awaken students' natural curiosity, enhance wellness, and foster environmental stewardship and leadership within school communities.

This School Garden Toolkit provides resources to support the creation, maintenance, and academic integration of growing spaces. Additionally, this guide outlines strategies to align your school garden with the Chicago Public Schools (CPS) wellness policies. The aim of this toolkit is to support our district in sustaining robust garden-based and environmental education for a more sustainable future.

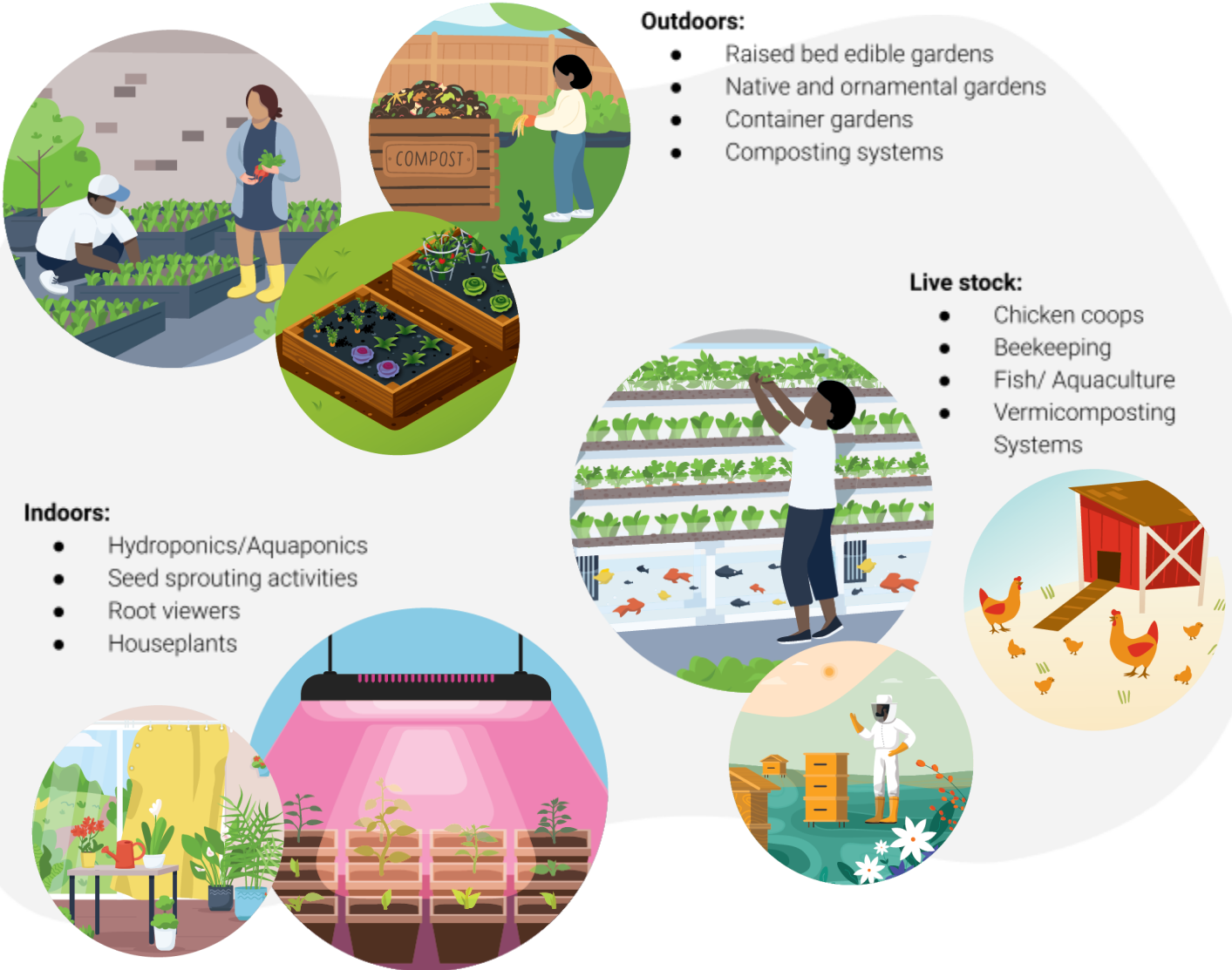
CPS School Garden Team

The CPS School Garden Team works within the Office of Student Health and Wellness (OSHW). Our team supports all public and CPS charter schools across the district in creating viable and sustainable garden-based programming and infrastructure that suits the individual needs of each school. We work with all schools and school partners to increase food literacy and nutrition education in the district. Additionally, our team is responsible for facilitating Farm to School related events, providing professional development and training to educators and school communities, and delivering technical assistance and consultations for creating or expanding garden-based programs.



What is a School Garden?

School gardens are not confined to the traditional outdoor vegetable growing space. At CPS we expand the concept of gardening to include:



In this toolkit you will see the language of gardens, growing, and growing spaces used interchangeably, but keep in mind that this is meant to describe any agricultural or growing related activities on school campuses. The “Get Growing” section of this toolkit provides guidance on the creation and maintenance of edible garden spaces, and further details on other growing practices are included in separate instructionals.

CPS School Gardens and Student Wellness

The CPS Office of Student Health and Wellness recognizes the benefits of gardens on the [Whole Child](#), a core value in CPS' vision. [Healthy CPS](#) is an initiative that provides schools with guidance and support to adhere to state and district health and wellness policies. Gardens have a myriad of wellness benefits:

- **Social Emotional Learning (SEL):** School gardens have great potential to help students develop socially and emotionally; gardening can help students gain self confidence and self efficacy, learn strategies for emotion regulation, encourage them to make responsible and caring decisions, and develop relationships and empathy via teamwork/collaboration.^{1,2}
- **Nutrition education:** Gardens deepen students' connection to the source of their food, which can challenge their perception of vegetables and encourage them to build healthy food habits. Studies show that gardening increases vegetable consumption among youth, which has positive impacts on public health.³ According to [CPS Wellness Policy](#), "schools must provide nutrition education programming linking the classroom, dining center, and school garden (where applicable)" (Section III, 2).
- **Stress reduction:** Gardening has been shown to mitigate stress and help students feel more calm.⁴ Outdoor growing spaces can be utilized as an alternative classroom, offering students the opportunity to connect with nature and observe their environment.

CPS School Gardens and Student Learning

School gardens have long been recognized as one of the most powerful teaching engines that schools can offer students of all ages. Hands-on gardening activities and lessons can link to the entire school curriculum, including math, science, literacy and creative arts. Garden-based education has been shown to support academic achievement.⁵



CPS School Gardens and Climate Justice

Today we are faced with a climate crisis that is not only exacerbated by the environmental consequences of our industrial agricultural system, but threatens the stability of the food system itself. Industrial agriculture is one of the largest contributors to greenhouse gas emissions⁶ and has severe impacts to soil⁷ and water quality.⁸ Here in Chicago, we're confronting an environmental justice crisis where the impacts of environmental degradation and pollution fall disproportionately on communities of color on the South and West sides. A garden can offer space for students to critically engage with these issues, connect with the natural world, and ground lessons of environmental justice in the classroom through experiential learning.⁹

CPS School Gardens and Food Equity

We realize that there is a direct correlation between school gardening and the desire to support a more just and ecologically sustainable food system. CPS acknowledges the broken history of enslavement and colonialism and its effects on our current food system. We see these imprints in the disparities of land ownership across race, the continued exploitation of farm workers, and the disproportionate burden of environmental degradation and food insecurity on BIPOC communities. In Chicago, historic institutional racism and ongoing disinvestment in our South and West sides have contributed to limited access to fresh and nutritious foods, resulting in disproportionately lower health outcomes.¹⁰ While school gardens are not the single solution to food insecurity nor environmental racism, they do play a role in a more regenerative future where students have the opportunity to build meaningful connections with the land and food that are nutritionally and culturally appropriate and free from exploitation.

LEARN MORE > [CPS Equity Toolkit](#)





School Garden Programming

Create a School Garden Team

A school garden team is the backbone to the long term success and sustainability of a garden-based program. It is essential to have a group of individuals to support the garden space throughout the school year and over the summer; a team provides opportunities for collaboration and integration of the garden into the larger school culture and community. A school garden team should include at least one teacher and one administrator. Parent/ caregiver, student, and community engagement is encouraged. Garden team members are highly encouraged to join the [CPS Garden Educators Cohort](#), a Google group that facilitates peer-to-peer learning, district-wide communication, and sharing of best practices regarding school garden education.

It is recommended to establish one's garden team at the beginning of each school year to account for any staffing changes and effectively plan for the seasons ahead. Additionally, the [CPS Wellness Policy](#) indicates that schools with gardens must include a garden team representative on their school wellness team (Section VII, 2).

The questions below serve as a guide to help you think through the roles of garden team members and how to best plan your garden programming.

Guiding Questions

- What is your school's mission and vision for this garden space? How can the garden support your school's larger goals?
- Who are the individuals in your school community who would be an asset to your school garden?
- Is there anyone with gardening experience who can champion the growing efforts?
- What are your expectations for garden team members? Will there be specific roles for each member on the team?
- How will your school delegate garden care and maintenance? Can you create a schedule for planting, watering, weeding, and harvest?

Student Engagement

Involving students in the garden planning process ensures that they will have a greater sense of ownership over the garden. Students who are involved in all stages of gardening are more likely to be invested in garden maintenance, and will develop greater interest in consuming the school garden produce! While there are endless ways to involve students, some suggestions include:

- Consulting student groups like the green team or student voice committees
- Using surveys to determine what students would like to grow, eg. favorite fruits and veggies
- Creating "garden visioning boards" with pictures or cutouts from seed catalogs
- Incorporating student art into the garden.



Community Engagement

A school garden is a powerful tool for ongoing community engagement. Sustaining a school garden over the summer will require the support of your school community. We encourage you to think about different opportunities for promoting parent and community involvement in garden efforts. For example, presenting at your school PAC or LSC meeting, creating a garden table at report card pick up, distributing seedlings, or hosting community garden plantings or harvest days.

Eat What You Grow

The *Eat What You Grow!* (EWYG) certification program allows schools to utilize produce grown on school grounds in the cafeteria and classroom. The [CPS Wellness Policy](#) states that “All schools with edible gardens that intend to offer or serve food from the garden during the school day must adhere to the guidelines, policies and procedures outlined within the Eat What You Grow manual” (Section IV, 10). If you are interested in becoming an EWYG certified school, you can learn more [here](#). The certification requires that two staff members complete the EWYG training and submit the required documentation.

LEARN MORE > [Eat What You Grow! Manual](#)

CPS Farm to School

The CPS Farm to School program brings the bounty of the Midwest into Chicago lunchrooms. Through delicious, locally sourced meals and opportunities for farmers to teach kids about their craft, students are given a direct connection to the food they consume. Please visit cpsfarmtoschool.com to learn more.

Funding School Garden Programs

Funding can be a large barrier to starting, maintaining, or expanding your school gardens. At this time, schools are responsible for sourcing funds for material costs in maintaining gardens. While many schools host garden fundraisers, there are also a number of school gardening grants that are available to CPS schools. We suggest keeping an eye out for grants on the following listing pages and connecting with partner organizations who can also support with resources. Please see the list of organizations at the end of this toolkit. For any CPS school that needs seeds, the district offers free seeds via the CPS Seed Bank. Place an order [here](#).

Grant listings:

- [Agriculture in the Classroom](#)
- [Kids Gardening](#)
- [Seed Your Future](#)

Get Growing!

This section provides information on starting and maintaining edible garden spaces, or reviving existing ones. Follow these guidelines to have a healthy, productive, and beautiful outdoor garden! Further guidance on ornamental gardens or alternative growing techniques (eg. indoor growing, aquaponics/hydroponics, etc.) is included in separate instructionals.

Choose Your Location

Choosing your outdoor garden location is a critical decision. In order to build a new garden space, a representative from the OSHW Garden Team must conduct a Site Review and Sign Off (SRSO). The recommended location and materials used must be approved by the Program Manager of School Gardens prior to installation. If you are building a new garden space, please contact gardenteam@cps.edu to begin the SRSO process. Consider these suggestions for choosing your location, and see the *EWYG* manual for details on garden installation and material use policy:

- **Avoid contamination** - The garden must be situated in an area that is free from contamination. Avoid dumpsters and construction areas.
- **The more sun, the better** - Install the garden in the area that receives the most sunlight. In order for many crops to grow adequately, they must receive direct sun for 6-8 hours.
- **Find the water source** - Locate a functional water source around the building (a water key may be needed to open the spigot). Make sure that a hose can reach from the water source to the garden area.
- **Garden surfaces** - Concrete, pavers, grass, mulch, and gravel are all suitable surfaces for a garden. For a garden to be ADA accessible, it must be built on a concrete or paved surface. Keep in mind that concrete heats up in direct sun, so the soil will require more water.





Building Your Garden

Due to the risk of native soil contamination, *all CPS gardens used for food production must be planted in raised beds or containers*. There are various options to consider when installing your garden. First, determine your school's capacity for maintenance— remember you can always start small and expand the garden later. Keep in mind:

- Raised beds must be a minimum of one foot deep for installation on concrete or pavers, and 1.5 feet on all other porous surfaces; they must be lined with geotextile fabric at the bottom of the bed.^{11,12}
- If a school is ADA accessible the garden beds must be a height of no more than 34 inches and no less than 18 inches above the floor to be accessible to students with disabilities and must be ADA (Americans with Disabilities Act). Here are options for building materials:
 - Wooden raised beds have a natural look and can be painted or decorated. *Do not use treated wood when growing edibles!* **MORE INFO >** [Wooden Raised Beds](#)
 - Metal raised beds require less upkeep than wood, though are prone to rust over time and can get very hot in the summer sun. **MORE INFO >** [Metal Raised Beds](#)
 - Other materials may be used such as stones, fabric grow bags, hollow tiles, bricks, logs, “plastic lumber” made of recycled plastic, or unpainted concrete blocks.
- Container gardens are also a great option. Any plant can be grown in containers if they're large enough for the roots to grow.

Soil Preparation Guidelines

Soil is the foundation from which healthy plants grow! Follow these guidelines for soil prep, and see the EWYG manual for further details on soil safety and testing:

- **Use only bagged/imported soil** - Do not use soil from school grounds, as it may be contaminated. In raised beds, line the beds with geotextile landscaping fabric and use a raised bed soil mix. For containers, use potting soil only. Fill the beds or containers until the soil is about two inches below the top.
- **Soil revitalization and fertilization** - Every spring, it is highly recommended to amend your soil. This can be done by adding two inches of bagged soil mix or compost to the top of the bed, which gives a boost of organic matter and nutrients. If your garden already has high organic matter content, additional amendments such as slow release organic fertilizer can be added to improve soil quality.

MORE INFO > [Soil Preparation Guidelines](#)

Recommended Garden Supplies

Find a place to store your supplies– a locked shed or chest near the garden space is ideal, and additional storage space can be allocated indoors. The following supplies are highly recommended:

- **Tools** - shovels, rakes, hand trowels, hand rakes/cultivators, gloves (can be labeled for each student)
- **Watering** - hose, hose reel, spray nozzle, watering cans
- **Labeling** - large popsicle sticks, non toxic permanent markers
- **Trellising** - tomato cages, bamboo stakes, garden wire, twine
- **Pruning/harvesting/maintenance** - tubtrugs, loppers, shears, scissors
- **Transport** - wheelbarrow, cart etc.

MORE INFO > [Gardening Supplies and Materials](#)

Crop Planning

Once the garden is installed, it's time to begin planting! The first step is to choose what you would like to grow. Here are some ideas to get started:

- **Choose your plants.** Include a variety of veggies, fruits, herbs, flowers and/or natives. Perennials come back on their own every year, whereas annuals will not grow back after the winter and have to be re-planted.
- **Consider seasonal gardening and timing.** Some plants grow best in hot weather, whereas others prefer cool weather. Some plants also grow quickly, whereas others need a longer time to develop.
- **Plan according to the school year.** If your school's goals are to harvest during the school year, select fast growing crops to plant in the spring and fall. Make a plan for summer garden maintenance.
- **Plant for pollinators!*** Adding flowers and herbs into the garden will attract bees and butterflies.

**The bees knees! We need bees in order to help pollinate our plants so we can grow delicious fruits and vegetables. Many people are concerned about bees in the garden. Don't worry –they're just looking for flowers,*



*not for us! If we leave them alone,
they'll leave us alone too.*

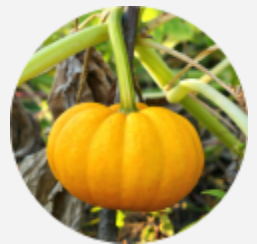
Garden Design Tips & Techniques

These are garden design concepts that can help your garden be productive and beautiful:

- **Plant by height** - Plant short or trailing plants in front, and tall or climbing plants in the back.
- **Plant by color** - Group like colors together. For example, plant violas or nasturtiums along the front edge of the garden to create a row of color.
- **Companion planting** - Grow companion plants near each other. Combine veggies, flowers and herbs to encourage pollination and discourage pests.
- **Vertical growing** - Place a trellis in the back of the garden for climbing plants. Get creative with trellising!

Plant these near a trellis and watch them climb!

- Peas
- Cucumbers
- Pole beans
- Melons
- Mini pumpkins



Planting Techniques

Ideal planting techniques depend on what and when you are planting. See the Planting Guides for further details:

- **Seed starting** - Seedlings can be grown or “started” early in order to get a jumpstart on the garden season. This requires grow lights and materials for indoor growing.
- **Direct sowing** - Certain plants are best seeded directly into the garden. Direct sowing requires diligent watering in order to ensure germination.
- **Transplanting** - Once seedlings are established, they can be planted into the garden. Transplanting makes it easy to determine proper plant spacing.

Tips to keep in mind for plant spacing:

Give plants space to grow! Some crops can be planted very close together, and others need more space. The amount of space a plant needs depends on how large their root systems are. Square foot gardening is a helpful method to determine proper plant spacing! If plants grow too closely together, they can be thinned out or transplanted.

MORE INFO > [Garden Planting Guides](#)

Labeling

While planting, make sure to label your seeds and plants– this helps you remember what you planted, and helps others identify the plants.

- Use popsicle sticks or garden stakes. Get creative!
- Write the name of the plant and the date it was planted.
- Use nontoxic permanent markers only– do not use toxic or water-based markers that leach into the soil.





Maintenance

Proper maintenance is necessary for a healthy, thriving garden:

- **Watering** - Water is life! Delegate responsibilities among your team and classrooms. Plan to water every other day. Water consistently, as inconsistent watering can lead to issues that can cut your garden season short.
- **Mulching** - Mulch serves multiple purposes– it retains moisture, suppresses weeds, and preserves soil structure. Mulch your garden in late spring or throughout the summer.
- **Weeding** - Weeds are any plant you don't want in the garden. Weeding is necessary to reduce competition among plants for space, sunlight, and nutrients.¹³
- **Fertilizing** - Add compost or organic fertilizer about once per month in order to give your garden a boost of nutrition and organic matter.
- **Training** -Train vines like tomatoes up a trellis and secure them with garden wire or twine. This is a fun teamwork activity!
- **Pruning** - Old or dead leaves must be removed from the plants, or they can become prone to infestation and disease. Use pruning shears and compost the plant waste.
- **Pest/critter control** - Learn to distinguish beneficial insects from pests.¹⁴ In case of pest infestation, use diluted organic/nontoxic sprays. If critters invade the garden, a short fence can be installed. Remove fallen or rotting fruits/veggies to avoid attracting rodents.

Harvesting and Consumption

Harvesting involves various techniques. For more information on harvesting and food safety, see the EWYG protocol:

- **“Cut and come again” is a harvesting technique used for greens and herbs** – harvest individual leaves or sprigs on the bottom of the plant, and allow the smaller leaves on the inside to keep growing.
- **Picking fruits and vegetables** – Harvest individual fruits and veggies by picking them individually and letting the plant or vine continue to grow.
- **Harvesting the whole plant** – Plants like cabbage, broccoli, cauliflower, or root veggies are usually harvested as the whole plant, and can then be replaced with another plant.

Here are suggestions for ways to utilize school garden produce:

- Incorporate garden produce into the school cafeteria and salad bar (where available)
- Students can create signs that link the garden and the cafeteria (eg. “Harvest of the Day”)
- Students can use freshly harvested garden produce to make simple snacks in the classroom
- Track harvest weights and measurements of garden produce (can also be used as a math exercise)

Composting

Composting is the biological process of transforming plant waste into humus, which is the dark organic matter component of soil. Humus is what makes soil rich and healthy! Our garden can function as a closed-loop system by having a compost pile for garden waste.¹⁵ Composting systems must be approved by the Program Manager of School Gardens. Contact gardenteam@cps.edu for more information on starting a compost bin at your school.



Consider these tips:

- **Choose your compost bin.** There are various types/styles of compost bins to choose from – which type fits your school best?
- **Alternate greens and browns!** Greens are fresh plant waste that is richer in nitrogen, and dry browns are carbon-rich. Layer browns like mulch, wood chips, or sawdust on top of greens in order to help with the decomposition process.
- **Add water occasionally!** The compost pile should stay moist, but not overwatered.
- **Aeration is key!** Turn or mix the pile to add oxygen, which helps aerobic bacteria do their job.

There are a select number of schools that participate in the CPS Commercial Composting program each year. This program redirects cafeteria waste to a commercial composting facility to reduce the amount of food waste in the landfill. Learn more about commercial composting and CPS sustainability [here](#).

Summer Maintenance

In order to keep the garden growing over the summer, it must be properly maintained. Basic summer maintenance includes watering, weeding, and harvesting:

- If your school is in session, create gardening clubs where students can be engaged in maintenance.
- If your school is not in session, consider connecting with parent volunteers or community members who could help keep the garden maintained. Utilize this opportunity to strengthen community connections!
- In the case that summer maintenance is absolutely not possible, select crops that grow quickly, plant in the spring, and harvest.

End of Season

What should you do in the garden when the growing season is coming to an end?

- **Season extension** - Try extending the growing season by installing row cover or low tunnels in the garden. This technique works well for growing greens into early winter.
- **Putting the garden to bed** - It is recommended that the garden be put to bed at the end of the growing season, or whenever regular maintenance is not possible. Once you've finished the final harvest of the school year, remove all plant material and cover the garden with a layer of leaves or mulch to help retain soil quality.

MORE INFO > [Season Extension and Putting the Garden to Bed](#)

Growing in the Classroom

We understand that it is not always possible to grow outdoors, but there are so many options to integrate food-based education and literacy into your classroom. Here are some ideas for starting small and indoors:

- Seed sprouting activities
- Root viewers
- DIY greenhouses
- Grow lights and microgreens
- Hydroponics
- Aquaponics

Grow Light Systems

There are many different kinds of grow light systems, ranging from a simple desktop light to a multi-tiered shelf system. Grow lights allow students to start seedlings indoors or grow microgreens right in the classroom. Starting a small classroom nursery is a great way to affordably grow seedlings to transplant into the outdoor garden or to use for community events and fundraisers. Many schools grow plants for a Mother's Day sale or to be distributed during report card pick up days. Get creative!



Ornamental Gardens

Ornamental gardens include plants that are grown primarily for aesthetic/decorative purposes rather than as edible crops. Types of ornamentals include flowers, trees, shrubs, ground covers, grasses, bulbs, or nursery stock; ornamental gardens can feature annuals or perennials. These gardens may include plants that are either native or non-native, however native plants are encouraged as they are suitable for the local climate and are essential to maintaining a natural ecosystem balance.

Butterfly gardens contain ornamentals that support the entire life cycle by providing elements for each stage of a butterfly's life. Rain gardens can be aesthetically pleasing. The plants provide food and shelter for many birds, butterflies, and beneficial insects, such as dragonflies, which eat mosquitoes. Plants can include a combination of shrubs, grasses and flowering perennials where the soil medium is between 6 and 8 inches deep. Ideally, plants should consist of native wetland and prairie grasses, and wildflowers.



Suggested designs incorporate perennial flowers in the spring and summer, and vividly colored or patterned shrubs and grasses in the fall and winter. Please adhere to the following guidelines for planting any ornamental gardens:

- Any non-edible plants used for ornamental purposes can be planted in native soils on school grounds; however, as a safety precaution it is recommended to place landscape fabric or cardboard over the native soil and top with imported garden soil.
- There should be no digging of trenches in order to create garden beds, as this could be a safety hazard.
- Avoid using reclaimed materials in all CPS gardens, no matter the type (i.e pallets, tires, railroad ties, etc).

Chicken Coop Guidance

Maintaining a chicken coop in a school garden can be a great way to teach students about animal care, sustainability, and food production. Here are some general instructions on how to maintain a chicken coop in a school garden:

Plan and prepare the coop: Before bringing chickens to your school garden, it's important to plan and prepare the coop. The coop should be clean, secure, and protected from predators. It should also have adequate space for the number of chickens you plan to keep, as well as nesting boxes, perches, and a feeder and waterer.

Coop placement: A chicken coop should be placed at a safe distance from any buildings to ensure the health and safety of both the chickens and the occupants of the building. The distance will depend on a few factors such as the size of the coop, the number of chickens, and the proximity of the buildings.

As a general guideline, it's recommended to place a chicken coop at least 20-30 feet away from any buildings. This will help to prevent the spread of diseases and pests from the chickens to the buildings and vice versa. Additionally, this distance will help to reduce any unpleasant odors that may emanate from the coop. If you have a smaller coop or only a few chickens, you may be able to place it closer to the building, but it's still important to ensure there is enough distance to prevent any issues.



Provide proper nutrition: Chickens need a balanced diet that includes protein, grains, and vegetables. They also need access to clean water at all times. Consider working with a local feed store or agricultural extension office to determine the best feed for your chickens.

Keep the coop clean: A clean coop is essential for the health of your chickens. Regularly clean out the coop and nesting boxes and add fresh bedding. Chickens produce a lot of manure, so it's important to regularly remove it from the coop and compost it.

Monitor for signs of illness: Keep an eye on your chickens for signs of illness, such as lethargy, loss of appetite, or changes in behavior. Consult with a veterinarian if you suspect a chicken is sick.

Keep the chickens safe: Chickens are vulnerable to predators such as dogs, foxes, and raccoons. Ensure that the coop is secure and that the chickens are safely locked up at night.

Involve students: Encourage students to be involved in the care of the chickens. This can include feeding, watering, and collecting eggs. It's a great way for students to learn about responsibility, animal care, and food production.

Overall, maintaining a chicken coop in a school garden requires planning, preparation, and regular care. With proper attention and care, your chickens can be a valuable addition to your school garden program.



Beekeeping Guidance

Keeping bees on CPS property can be a great educational opportunity for students to learn about the environment and the importance of bees as pollinators. However, it is important to follow proper guidelines to ensure the safety of students, staff, and the bees. Here are some guidelines to keep in mind.

Before starting a beekeeping project on CPS property, make an appointment with the CPS Garden Team gardenteam@cps.edu to ensure that your school campus is conducive to keeping hives and to site out the most optimal space, if allowed, to house bees on the school's property. Per CPS policy no more than five hives total will be allowed on any school property but the actual number permitted must be approved by the Program Manager of School Gardens prior to installation.



Locate the hives in a safe and secure area: Choose a location for the hives that is away from high-traffic areas and where students and staff are not likely to accidentally disturb the bees. The hives should be secure and protected from the elements, such as wind and rain.

Establish a beekeeping team: Establish a team of teachers, students, and community members who are knowledgeable and experienced in beekeeping. This team can oversee the project and ensure that proper protocols are followed.

Provide a water source: Bees need a source of water, so provide a clean and shallow source, such as a bird bath or small pond, close to the hives.

Use protective gear: Ensure that beekeepers wear protective gear, including suits, gloves, and veils, when working with the bees.

Provide adequate equipment: Ensure that the bees have access to adequate equipment, such as hives and protective gear for beekeepers. The equipment should be of good quality and well-maintained to ensure the safety of the bees.

Develop a safety plan: Develop a safety plan that outlines protocols for bee stings, allergies, and other potential risks. This plan should be shared with all staff members and students, and everyone should be trained on what to do in case of an emergency.

Here is a beekeeping safety plan to help minimize the risk of injury:

- **Wear protective clothing:** Always wear protective clothing when working with bees. A bee suit, veil, gloves, and closed-toe shoes will protect you from bee stings.
- **Choose the right time of day:** Bees are more active during the day, so it's best to work with them in the early morning or late evening when they are less active.
- **Work with a partner:** It's safer to work with a partner when handling bees. This way, you can watch each other's backs and help each other if something goes wrong.
- **Keep bees calm:** Bees can be agitated by loud noises, vibrations, and strong smells. Try to keep the environment calm and quiet when working with bees.
- **Use smoke:** Smoke can help calm bees and make them less likely to sting. Use a smoker to produce smoke and direct it towards the bees.
- **Keep a first-aid kit nearby:** Accidents can happen, so it's important to have a first-aid kit nearby in case of bee stings or other injuries.
- **Know your allergies:** If you're allergic to bee stings, make sure you have an EpiPen or other emergency medication nearby. It's also a good idea to work with a partner who knows how to use the medication.
- **Stay alert:** Always be aware of your surroundings when working with bees. Look out for signs of an aggressive hive, such as bees flying in a circular pattern or bouncing off your protective clothing.
- **Practice good hygiene:** Bees are attracted to sweet smells, so avoid wearing perfumes or scented lotions when working with bees. It's also important to wash your hands and equipment thoroughly after working with bees to avoid spreading diseases.

Educate students: Use beekeeping as an opportunity to educate students about the importance of bees, the role of pollinators in our ecosystem, and the benefits of honey and other bee products. Incorporate lessons on beekeeping into the curriculum to ensure that students are learning about bees in a structured and meaningful way.

Monitor the hive: Regularly monitor the hive for signs of disease or other problems. Ensure that the bees are healthy and that the hive is well-maintained.

Follow ethical beekeeping practices: Practice ethical beekeeping practices, such as avoiding the use of pesticides and ensuring that the bees have access to adequate food and water.

By following these guidelines, our schools can create a safe and educational environment for beekeeping projects on their property.



Garden-Based Curricula

- [Big Green: Ready, Set Grow \(K-8\), Real Food Lab \(9-12\) curricula](#)
- [Chicago Park District: Small is All Curriculum](#)
- [Denver Urban Gardens: Healthy Bodies, Healthy Gardens \(K-8\)](#)
- [Edible Schoolyard: Resource Library \(preK-12\)](#)
- [Farm to School: Exploring Hydroponics\(K-2\)](#)
- [Farm to School: Exploring Hydroponics](#)
- [Freshfarm: Foodprints Curriculum \(preK-5\)](#)
- [Garfield Park Conservatory: Activities and Lesson Plans \(preK-12\)](#)
- [Kids Gardening: Resources for Educators \(K-12\)](#)
- [Pilot Light Food Education Center \(K-12\)](#)
- [Seven Generations Ahead: Sow and Grow \(1-8\), Roots and Fruits \(3-5\), Linking Plants and Food \(5-8\)](#)
- [Slow Food USA: Good, Clean, and Fair School Garden Curriculum \(K-5\), Garden to Cafeteria Toolkit](#)
- [USDA Food and Nutrition Services: The Great Garden Detective Adventure \(3-4\)](#)
- [University of Illinois Extension: School Gardening Curricula and Lessons \(preK-12\)](#)
- [Whole Kids Foundation: School Gardens Activity Guide \(K-5\)](#)

Local Agriculture/Gardening Organizations

- [Advocates for Urban Agriculture](#)
- [Angelic Organics Learning Center](#)
- [Big Green](#)
- [Chicago Botanic Garden - Windy City Harvest](#)
- [Chicago Community Gardens Association](#)
- [Chicago Park District - Community Gardens](#)
- [Chicagoland Environmental Network](#)
- [Gardeneers](#)
- [Illinois Farm to School Network](#)
- [Neighbor Space](#)
- [Openlands - Building School Gardens](#)
- [Plant Chicago](#)
- [University of Illinois Extension - School and Community Garden Resources](#)
- [Urban Growers Collective](#)



Additional Resources and Toolkits

- [Annie's Homegrown: How-To Guide for Five Kinds of Children's Gardens](#)
- [Collective School Garden Network](#)
- [EPA: Growing Gardens in Urban Soils](#)
- [Equity in Farm to School](#)
- [Kids Gardening](#)
- [Life Lab](#)
- [National Farm to School Network](#)
- [School Garden Support Organization Network](#)
- [The Edible Schoolyard](#)
- [USDA Food and Nutrition Services: Planning Toolkit: School Gardening](#)
- [Whole Kids Foundation: School Garden Resources](#)
- [Wisconsin School Garden Network](#)

CPS Guides

- [*Eat What You Grow! A Food Safety Manual*](#)
- [Garden Planting Guides](#)
- [Soil Preparation Guidelines](#)
- [Season Extension and Putting the Garden to Bed](#)
- [Gardening Tools and Supplies](#)
- Raised Beds:
 - [Wooden Raised Beds](#)
 - [Metal Raised Beds](#)

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- ⁴ "How familiar are you with the benefits of school gardening on promoting student mental health?" [National Center on Safe Supportive Learning Environments](#).
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- ¹⁰ "Mayor Lightfoot and Community Leaders Release Food Equity Agenda for Chicago." 2021. [City of Chicago](#).
- ¹¹ Geotextile is typically defined as any permeable textile material used to, prevent contamination from native soils to clean soil, increase soil stability, provide erosion control or aid in drainage.
- ¹² "Reusing Potentially Contaminated Landscapes: Growing Gardens in Urban Soils. 2014. [Environmental Protection Agency](#).
- ¹³ "Weeding." [Chicago Botanic Gardens](#).
- ¹⁴ "How to Identify Beneficial Insects." [Chicago Botanic Gardens](#).
- ¹⁵ "Composting." [Chicago Botanic Gardens](#).

Photo Credits

- CPS Farm to School Program
- Margo Mejia, CPS Garden Programs Coordinator