

SOUTH CAROLINA GARDEN TOOLKIT



SOUTH CAROLINA
FARM *to* SCHOOL



SOUTH CAROLINA
FARM *to* EARLY CARE
& EDUCATION



SOUTH CAROLINA FARM *to* SCHOOL

South Carolina Farm to School

The South Carolina Farm to School program aims to facilitate communication, education, and opportunities for farmers, distributors, and institutions to support healthy, locally produced food throughout South Carolina.

SC Farm to School is a collaborative partnership between the SC Department of Agriculture, SC Department of Education, SC Department of Social Services, and Clemson University. SC Farm to School seeks to increase the amount of South Carolina grown products sold to institutions, such as schools, early care and education centers, hospitals, military installations, and other businesses.

The core goals of South Carolina Farm to School include providing education to food service staff on procuring and preparing local products, promoting South Carolina Grown within cafeterias and food service operations, facilitating nutrition and agriculture education activities, and creating hands-on experiences such as farmers markets, CSA programs, and institutional gardens.

South Carolina Farm to School supports sites in implementing four components:

1. Source at least two SC grown foods each month
2. Promote Certified SC Grown in the cafeteria, canteen, or other food venue
3. Integrate nutrition and local food education
4. Establish a vegetable garden, farmers' market, or CSA

For more information, visit our website at scfarmtoschool.com.

This toolkit was developed by members of the South Carolina Farm to School Program. We hope this comprehensive resource enables you to begin a successful garden.

Special thanks to LauraKate Anderson, Katie Pfeiffer, Ben Sease, Anna Hartrampf, Amy T. Weaver, Dylan Nitzkowski, Justina M. Siuba, Kristin Ryan, Emily M. Joyce, and Stephanie Finnegan.

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Welcome to the South Carolina Garden Toolkit

This toolkit is the second updated version of the “Eat Smart...it’s in the Garden” Garden Toolkit © 2010, which was a collaborative effort of the South Carolina Department of Agriculture and Eat Smart, Move More South Carolina. The South Carolina Garden Toolkit references some of the same resources originally cited and builds upon the foundation to include new resources, in-depth gardening information, and tailored elements to include child care centers.

HOW TO USE THIS TOOLKIT

This toolkit is comprised of 8 essential components; each is a separate chapter in order to follow the natural progression of establishing a garden. In the first few chapters, the toolkit discusses how to start a garden and once it is established, how to harvest and monitor the garden. The last two chapters highlight the garden as a learning tool in the classroom and creative ways to leverage resources to ensure the sustainability of the garden. There are many templates and reference guides found on individual pages. You can make copies or adapt the templates as you see fit. For further reading, refer to the Additional Resources provided at the end of each chapter.

Why Garden?

Establishing a
Garden Committee

Planning a Garden

Executing the
Garden Plan

Maintaining and
Monitoring the Garden

Harvesting from
the Garden

Integrating
Curriculum

Cultivating
Resources

Why Garden?

If you are looking to start a garden at your school or child care center, you may need help encouraging others that a garden would be a great addition to the learning environment.

Gardening provides a wide-range of benefits for children as shown in the table below. It exposes children to fresh foods, light to moderate physical activity and the opportunity for social interactions. Engaging children in the gardening process can promote learning, support the development of new skills, strengthen social skills, and build healthy habits. As children plant and tend to a garden, they will feel a sense of pride as the garden produces fruits and vegetables planted by their own hands.

ACADEMIC GROWTH	SOCIAL/EMOTIONAL DEVELOPMENT
Hands-on learning opportunities that appeal to a variety of learning styles	Development of interpersonal relationship skills
Creative learning and exploration	Stress release
Sensory experiences from digging in the soil to touching, smelling, and tasting the produce	Community outreach and social responsibility awareness
	Therapeutic activity with the potential to impact mental health and well-being
PHYSICAL BENEFITS	ENVIRONMENTAL APPRECIATION
Fine and gross motor skill development	Development of an appreciation for natural areas and green space
New food experiences and being more likely to try fruits and vegetables	Understanding the complexity of nature and the need to protect it
Vitamin D from the sun	

In addition to the benefits children receive, it is important to consider the benefits caregivers, teachers, and community members experience from gardening:

- Engagement and connection to children
- Gardening experience that can be used at home or in other settings
- School or center pride
- Fundraising opportunities

Establishing a Garden Committee

Establishing a committee is important for ensuring the success of a garden. The first step is to create a team who can work together to plan, create, maintain, and sustain the garden. The committee should consist of key individuals who will actively participate in meetings, provide their knowledge of gardening, and share responsibilities. Each garden committee will look and function a little differently depending on what the needs for the garden are.

The number of members should be based on the size of the garden. Decision making can be challenging when the committee is too large, but the work can become overwhelming if the committee is too small. A group with six or seven members is common and allows for easy discussions and successful decision making.

Once a committee has been established, a garden coordinator should be selected. This individual should be dedicated, organized, and considered a leader by the committee members. Selecting an individual with garden and leadership experience is encouraged. The garden coordinator will be responsible for communicating among members, scheduling garden events, planning volunteer shifts, and organizing committee meetings. To allow everyone the opportunity to participate in the gardening process, the garden coordinator should delegate responsibilities among committee members. It is important to think about how different members can participate and contribute within the garden committee. The responsibilities should be divided based on the skill sets, strengths, and garden experience of committee members so that the tasks are not placed on one person. Members will be more willing to take on roles that build on their individual strengths and work with their schedules.

The garden committee should discuss what types of fruits and vegetables to plant, the location of the garden, the type of garden that will be planted, how to gain useful and affordable resources and establish times to work in the garden.

Tip

Remember to include people who have a direct role or connection to your program. When people are actively involved, they are typically more supportive and the garden is more likely to succeed.



POTENTIAL COMMITTEE MEMBERS AND OTHER SUPPORTERS INCLUDE:

Early Care and Education

DIRECTOR/OWNER	The director/owner is a key member who ultimately gives approval for the establishment and installation of a garden. The director/owner can provide year round oversight to the garden, recruit community and parental involvement, help with fundraising, and create menus to include garden produce. The director/owner can ensure that caregivers receive training on integrating nutrition and agriculture education into the classroom.
KITCHEN STAFF	Kitchen staff is critical for making the best use out of the produce that comes from the garden. They can develop new recipes that incorporate garden produce and provide guidance on food storage and safe handling practices.
CAREGIVER (REPRESENTATIVE OF EACH AGE GROUP)	Caregivers have the best knowledge to determine what is developmentally appropriate when gardening with young children. They can assign garden responsibilities to children based on their age and stage of development. Caregivers can also incorporate nutrition and agriculture education activities into daily routines.
PARENTS/GUARDIANS	Parents/guardians are influential role models for children. Invite parents/guardians to participate on the early care and education center garden committee because informed parents/guardians are more likely to carry over what children are learning and doing at your center into their homes. Getting families involved will strengthen the success of the garden.
ADDITIONAL COMMUNITY MEMBERS: LOCAL FARMERS COMMUNITY MEMBERS/ LEADERS MASTER GARDENERS CLEMSON EXTENSION AGENTS	Additional community members to consider for an early care and education center garden committee can be a great resource for those who might not have much gardening experience. Local farmers can provide their knowledge and experience to help with the garden. Community members and leaders can help identify and collect resources that are necessary for the garden to last many years. They can also act as a liaison for local community events and government, provide assistance with garden maintenance throughout the year, and provide gardening knowledge and supplies. If you are new to gardening, a master gardener in your area can provide helpful advice and resources for your garden.



Schools

ADMINISTRATION	Administration is key for giving approval for implementing the garden. Administration can schedule time for teacher workshops, help with fundraising, gain community and parental support, involve volunteers in the planning process, and fulfill other leadership responsibilities.
TEACHERS	Teachers should be involved in a number of activities to include: incorporating the school garden into their lessons, coordinating activities, planting crops, seeking resources, recruiting volunteers and spreading information about garden activities to the community and school.
STUDENTS	To benefit from school gardening, students should be involved in all stages of the process. By including students from the beginning, they gain ownership of the garden and an understanding of where their food comes from.
SCHOOL NURSE AND HEALTH EDUCATORS	Having the school nurse and health educators involved with the garden will help connect the school garden to the health and well-being of your students. They can assist with finding health related connections such as food safety, nutrition, physical activity and hygiene in the garden. The nurse can be available in case of potential bug bites or scratches that can happen while working in the garden.
FOOD SERVICE STAFF	The food service staff will help to make the best use of produce by preparing taste tests in the classroom or incorporating produce in the cafeteria. In addition, staff members can provide leftovers from the cafeteria for composting and provide guidance on food safety concerns.

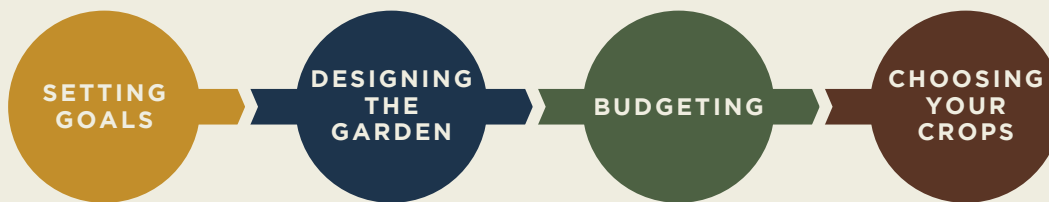


LIBRARIAN AND MEDIA SPECIALISTS	<p>School librarians and media specialists can aid in finding resources related to school gardening for students, teachers, and parents.</p>
MAINTENANCE/ CUSTODIAL STAFF	<p>Maintaining the garden proves to be a challenging task for many teachers and garden committee members. Maintenance/custodial staff can help maintain the garden during academic breaks and assist with storage. They can provide information about chemicals used on school grounds near the garden for the safety of those individuals participating in the garden or eating produce from the garden. Including maintenance/custodial staff will also prevent them from unknowingly harming any garden progress that has been made.</p>
FAMILY MEMBERS/ PTO/SCHOOL IMPROVEMENT COUNCIL	<p>Involve parents in the school garden committee because they can provide resources, supplies, funds, and volunteer their time to assist in the coordination and maintenance of the garden. Some parents may have gardening experience and can assist in planting, harvesting, and general upkeep.</p>
ADDITIONAL COMMUNITY MEMBERS: LOCAL FARMERS COMMUNITY MEMBERS/ LEADERS MASTER GARDENERS CLEMSON EXTENSION AGENTS SUPERINTENDENTS	<p>Additional community members to consider for the school garden committee can be a great resource for those who might not have much gardening experience. Local farmers can provide their knowledge and experience to help with the garden. Community members and leaders can help identify and collect resources that are necessary for the school garden to last many years. They can also act as a liaison for local community events and government, provide assistance with garden maintenance during the summer and school year and provide gardening knowledge and supplies. If you are new to gardening, a master gardener in your area can provide helpful advice and resources for your garden.</p>

Planning a Garden

The garden committee will be most successful in starting a garden with a plan in place. During this combined group effort, think about as many aspects of the garden as possible to guide your decisions. Outlined in this chapter are four steps for the garden committee to follow.

Here are the key steps to follow when planning a garden:



SETTING GOALS

Have the entire garden committee present when discussing a vision for the garden. This will provide everyone with an opportunity to share their input and ideas for their goals of the garden. At the initial garden committee meeting, start with an open group discussion of the following questions:

Why does everyone want a garden?

Some of the benefits include helping establish better eating habits, learning how to grow food, and building community relationships. Realize that many people may have different reasons for wanting to participate in this garden, which will add diversity and flexibility to the committee.

What will the garden look like?

There are different types of garden options and what can be planted. Think about the location and scale of the garden, how many people will be involved, what types of plants the committee wants to grow, and how much the garden will produce.

How much time, energy, and money do you want to invest in this garden?

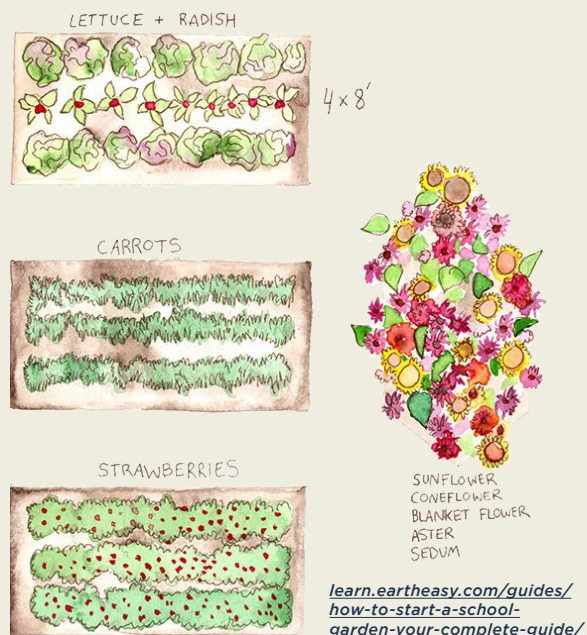
Setting realistic expectations about your resources will help guide decision making about the garden. It is always a good idea to start small; keep in mind there is always room to grow!

Here are some additional things to consider when setting goals:

- How can you expand beyond just a garden?
- What experiences and activities do you hope to incorporate into the classroom?
- What role will the community play in the garden?
- Who are you growing the produce for?
- What other community partners will the garden support?
- How will the garden impact the children's attitudes and decisions toward healthy food choices?
- How can you raise awareness about getting food from the farm to the table?

DESIGNING THE GARDEN

The design phase is a creative part of the garden planning process which allows for a unique garden to be created based on the individual contributions of the garden committee. Their contributions will help them remain active and engaged once the garden is established. When searching for ideas, some places to look are other early care and education centers/schools, botanical gardens, magazines, garden shows, and online resources. Include the ideas of children in the design phase; their imagination will drive their interest in participation. To keep the garden design on track, reference the shared vision and goals previously set. It is important to conduct an initial assessment before beginning the design process. The assessment should include an inspection and evaluation of the growing and environmental conditions of potential areas. The table below has criteria to consider when designing the garden site.



ELEMENT	ASSESSMENT CRITERIA
GARDEN LOCATION	Is it located away from potential contamination sources (garbage cans, septic systems, utilities, wildlife)? Is it in a location that can be monitored to reduce vandalism?
SIZE AND EXISTING FEATURES	Does the land accommodate the desired garden size? Does it interfere with other garden activities?
SOIL	What is the nutrient content, soil texture, pH level and history of the soil?
SUNLIGHT	How much sunlight does the space receive? Are there shaded areas? Gardens typically need 6 hours of full sunlight.
WATER SOURCES	Is there a safe water source nearby?
WATER FLOW AND DRAINAGE	Does the water pool anywhere or does it drain away?
IN-GROUND UTILITIES	What types of utilities are in the ground? Call 811 before you dig!
ACCESSIBILITY	How close is the potential location to the early care and education center/school? Can children, staff, and volunteers easily access the garden? Is the site handicap accessible?
SECURITY AND SAFETY	Will there be a fence built around the site? How close is the site to traffic?
FUTURE USES	What are the long-term goals for the garden? How much energy and money does the garden committee have to invest? How will the garden grow over time? How will children continue to be involved in the garden?

After the location has been selected, start creating a list of what will be included in the garden. Listed below are components typically found in a garden. After the assessment, decide where to locate the garden and which components to feature in the garden. After an initial tour, start creating a garden component inventory of infrastructure and landscape features. This will help the committee determine what to include in the garden.

COMPONENT	FUNCTION
GARDEN BEDS	Deciding the type of garden beds that is most appropriate (in-ground, raised, and/or container) will help determine the garden space. Garden beds can be different shapes and sizes. For example, a raised bed in a U-shape allows for better accessibility and more efficient use of garden space. Remember to keep growing areas no more than 4 feet wide so that everyone will be able to reach the plants. More details about types of garden beds can be found on page 11.
WALKWAYS	Walkways help control traffic flow and reduce the risk of plants getting damaged.
IRRIGATION	Deciding how to irrigate the garden is crucial. Drip irrigation and water conserving sprinkler systems will save time, reduce watering costs, and often result in a healthier garden.
SITTING AREAS	Sitting areas like benches or hay bales under some shade will provide space for conducting outdoor lessons and relief from the sun.
TOOL SHED	A tool shed provides a central location for storage, organization, and protection.
COMPOST AREAS	A designated compost area allows children the opportunity to learn about the composting process.
FENCING	Constructing a fence provides a barrier to protect the garden.
TREES/SHRUBS	Incorporating trees not only adds dimension and character, but also benefits the surrounding environment.



Choosing which garden bed to use is important when selecting the type of garden, and this will depend on the available resources and interests of the garden committee. Below are descriptions to help you decide which garden bed is the best fit for your location.

In-Ground Garden Beds



PROS	CONS
Existing soil is free, may already be healthy and contains minerals	Less control of soil nutrients and composition
Less equipment and materials necessary to start the bed	Less permanent
Easier irrigation	

Raised Garden Beds



PROS	CONS
Control soil composition	Restricts root growth by limiting nutrient uptake and increasing competition for nutrients
Attractive, tidy, and clearly defined	Root systems dry out more quickly in hot climates
Protects root systems away from contaminated soil and water logging	
Structure for controlling pests/weather	
Easy on the back and more accessible	
Extends the growing season	

Container Gardens



PROS	CONS
Control soil composition	Limits what can be grown depending on the size of the container
Mobile, can be indoor or outdoor	Root systems dry out more quickly in hot climates
Can occupy extra or marginal space in a garden	
Great for growing herbs and flowers	
Can transform and recycle almost anything into a container	

The table below lists commonly used supplies for each type of garden.

IN-GROUND GARDEN BEDS	RAISED GARDEN BEDS	CONTAINER GARDENS
Tiller	Raised bed structure	Seed starter trays
Wheelbarrow or wagon	Wheelbarrow or wagon	Watering can
Hose & soaker	Hose & soaker	Shovels
Hoe	Shovels	Buckets
Shovels	Spades	Garden gloves
Spades	Buckets	Spades
Garden gloves	Garden gloves	Soil
Seed starter trays	Watering can	Rain barrel
Rain barrel	Hoe	Hose & soaker
Watering can	Soil	
Sprinkler	Rain barrel	
Rakes	Seed starter trays	
Soil amendments	Sprinkler	
Buckets	Rakes	
Mulch	Mulch	
Seeds & transplants	Seeds & transplants	
Twine	Twine	
Stakes	Stakes	
Pesticides	Pesticides	
Flowers	Flowers	
Herbicides	Herbicides	

Tip

After deciding on the type of garden and components, sketch the proposed area.

Draw what is already in the garden space, what components will be added and where the components will be added. This visual will provide an idea of what the garden will look like and how much space will be needed.

Themed Gardens

While designing a garden may seem intimidating, one method to help provide focus for the garden is to choose a theme. Inspirations for themes can come from topics within the curriculum, the children's interests or even a favorite book or movie. Some examples of garden themes include:

Alphabet Garden

Plant crops that begin with each letter of the alphabet. Children can design and create garden markers for the different letters.



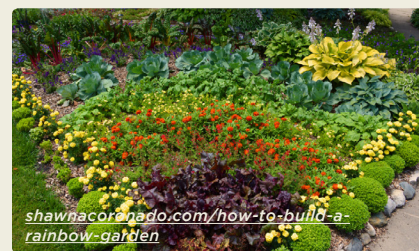
Pizza or Salsa Garden

Grow plants that you could put on a pizza or use to make your own homemade salsa.



Rainbow Garden

Grow plants in the order of the colors in the rainbow. (ROYGBIV)



BUDGETING

As a part of the planning process, the garden committee should create a preliminary budget. This is an important step for the committee to take when deciding what is possible with the available garden funds.

The following table is a sample budget of items typically needed for a garden. This may not be a complete list of everything needed to plan a complete budget; use this table as a guide.

GARDEN SUPPLIES	QUANTITY	COST
Seeds	10 packets @ \$3	\$30
Seeding trays	10 trays @ \$15	\$150
Bags of gardening soil	4 bags @ \$25	\$100
Bags of Miracle-Gro®	2 bags @ \$20	\$40
Organic fertilizer	2 bags @ \$20	\$40
Lime	2 bags @ \$10	\$20
Weed barriers	5 rolls @ \$12	\$60
Children's gardening gloves	75 gloves @ \$2.50	\$187.50
Adult gardening gloves	10 gloves @ \$2.50	\$25
Adult gardening tools (rakes, shovels, hoe)	\$200	\$200
Children's tools	10 @ \$7	\$70
Water hoses	2 @ \$60	\$120
Sprinklers	3 @ \$10	\$30
Wheelbarrow	1 @ \$250	\$250
Wagon	1 @ \$149	\$149
Tomato cages	5 @ \$7	\$35



Tip

When reviewing your budget, remember to ask two things:

1. Is everything in the budget allowed to be purchased according to any funding guidelines? Ask your funder if you have questions!
2. Where is the best place to purchase materials? Shop around before making all your big purchases. There are many community members and organizations willing to donate garden items. Keep this in mind when you start buying tools, supplies, and soil for the garden.

CHOOSING YOUR CROPS

There are many things to consider when choosing your crops:

- What will you grow and how much?
- When do crops need to be planted?
- Do the children have favorite fruits and vegetables?
- What is easy to grow?

Some plants are easier to grow while others are less expensive. The table below will help you select what to plant based on your garden plan.

EASY TO GROW CROPS	COST CUTTING CROPS	HERBS
Radishes	Sweet Potato	Parsley
Summer Squash	Zucchini	Chives
Cucumbers	Cucumbers	Rosemary
Beans	Heirloom Tomatoes	Thyme
Peas	Peppers	Dill
Sunflowers	Eggplant	Mint
Cilantro	Garlic	Marjoram
Corn	Lettuce	Oregano
Lettuce	Broccoli	Sage
Carrots	Squash	Basil



Determine what can be grown during each of the four seasons. Due to the climate zones in South Carolina, there are many fruits and vegetables that grow year round. Vegetables can be divided into cool and warm season crops. Clemson Extension's Home & Garden Information Center can help guide you to what grows best throughout the year in your area.

WARM SEASON VEGETABLES PLANT IN SPRING TO HARVEST BEFORE SCHOOL IS OUT FOR SUMMER										
PLANT VARIETIES	WHEN TO PLANT									DAYS TO MATURITY FROM SEED
	Early March	Mid March	Late March	Early April	Mid April	Late April	Early May	Mid May	Late May	
Beans										55
Cantaloupe										30 - 35
Cucumbers										50 - 70
Eggplant										65 - 80
Okra										60 - 70
Peppers										70 - 85
Southern Peas										65 - 125
Squash										55
Sweet Corn										80 - 95
Tomatoes										55 - 105

COOL SEASON VEGETABLES PLANT IN FALL TO HARVEST BEFORE WINTER BREAK										
PLANT VARIETIES	WHEN TO PLANT									DAYS TO MATURITY FROM SEED
	Early August	Mid August	Late August	Early Sept	Mid Sept	Late Sept	Early Oct	Early Nov	Mid Nov	
Beets										50 - 70
Broccoli										65 - 70
Cabbage										60 - 80
Carrots										65 - 75
Cauliflower										60 - 70
Collards										70
Lettuce										55 - 75
Radishes										21 - 28
Spinach										37 - 45
Turnips										50 - 60

Companion Planting Chart

This chart provides guidance on what types of plants grow best together. For example, planting basil next to tomatoes help to protect tomatoes from worms and spider mites. Other combinations are included in this chart.

	Basil	Beans	Broccoli	Carrots	Cauliflower	Chives	Cilantro	Corn	Cucumber	Dill	Garlic	Leeks	Lettuce	Marigold	Melon	Nasturtium	Onion	Oregano	Parsley	Peas	Peppers	Rosemary	Sage	Spinach	Squash	Strawberry	Sunflower	Swiss Chard	Thyme	Tomatoes
Basil																														
Beans																														
Broccoli																														
Carrots																														
Cauliflower																														
Chives																														
Cilantro																														
Corn																														
Cucumber																														
Dill																														
Garlic																														
Leeks																														
Lettuce																														
Marigold																														
Melon																														
Nasturtium																														
Onion																														
Oregano																														
Parsley																														
Peas																														
Peppers																														
Rosemary																														
Sage																														
Spinach																														
Squash																														
Strawberry																														
Sunflower																														
Swiss Chard																														
Thyme																														
Tomatoes																														

Plants grow well together
 Beneficial to garden in general
 Combination helps bug control

Do not plant together!
 Carrots will have good flavor, but stunted roots

Crop Rotation

To maintain rich soil, it is recommended to rotate crops. This technique, known as crop rotation, is a method in which plantings are cycled season after season. The figure below shows a basic pattern to follow.



Please note:

Follow the planting guides for your region to ensure a successful crop.



How to plant your garden is covered in much more detail in the next chapter, but when you are choosing what to plant, it is a good idea to choose what is practical for your garden. Refer to the online resources below to create a realistic garden plan and agricultural production calendar.

ADDITIONAL RESOURCES

General Vegetable Gardening Resources

growveg.com

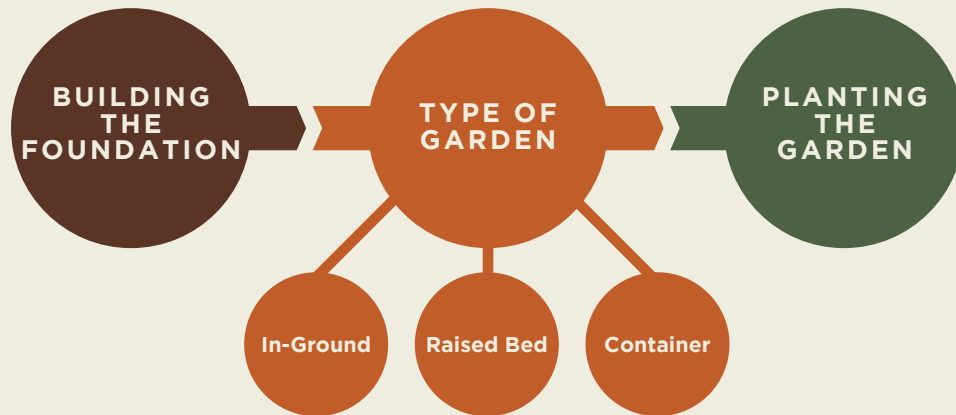
Produce Planning Resources

clemson.edu/extension/htgic/plants/vegetables/gardening/hgic1256.html

lifelab.org/2012/02/planning-annual-vegetable-crops

Executing the Garden Plan

Before digging, a basic understanding of a few key aspects of gardening will give you the necessary knowledge for executing the garden. This chapter offers basic gardening information for building a garden. Follow the three steps below when starting your garden:



BUILDING THE FOUNDATION

High quality soil is essential for growing high producing, quality crops. There are two types of soil nutrients that plants need to grow, macro- and micronutrients. Macronutrients are widely known as NPK, which is short for nitrogen, phosphorus, and potassium. Plants also use many micronutrients to grow, such as calcium, magnesium, and iron.

To maintain and improve soil health, use proper soil preparation techniques, follow a well-planned crop rotation, and add compost or other beneficial amendments to the soil such as egg shells, lime, and charcoal powder.

Soil types differ across South Carolina. There are regional consistencies and deficiencies in soil across the state. This can be better understood once the soil where the garden will be located has been tested by Clemson University. To find out how to submit a soil sample, visit Clemson's Soil Testing website.

Tip

Adding compost to the soil will improve the soil's structure and increase its fertility.

Composting provides hands-on learning activities for children. For more information on how to compost, see the DHEC Composting: A Guide for South Carolina Schools at [scdhec.gov/sites/default/files/Library/OR-1520.pdf](https://www.scdhec.gov/sites/default/files/Library/OR-1520.pdf)

TYPE OF GARDEN

The amount of time and work needed to create the beds and build the soil will depend on the size of the garden, the location, and type of garden you choose.

For outdoor gardens, there are three main types of growing spaces to choose from: in-ground, raised garden beds, and container gardens. This section will guide your efforts in building the type of garden your committee chose.



In-Ground Beds

For in-ground garden beds, the first step is to loosen the soil. This process, known as tilling, allows for more water, nutrients, and air to easily enter the soil and reach the root of the plants. Tilling is most often done by using a tilling machine that rotates the soil.

If you do not have access to a tiller, there are other methods that can be done by hand. Double-digging is a widely used soil preparation method that is beneficial if your soil is compacted. It is a sustainable practice to build and maintain rich soil. The method involves removing 12 inches of the topsoil, loosening and amending 12 inches of the subsoil, and replacing and amending the previously removed topsoil. This process includes:

1. Marking the garden bed dimensions using flour, lime, or string.
2. Watering this space thoroughly in advance to soften the soil and make digging easier.
3. Spreading a layer of compost on top of the garden bed area.
4. Removing one wide strip of topsoil 12 inches deep and placing this at the end.
5. Loosening and amending 12 inches of subsoil with one shovel full of compost.
6. Moving the next strip of topsoil onto the first strip of loosened subsoil.
7. Loosening and amending the second strip of subsoil with one shovel full of compost.
8. Repeating this process until the entire bed has been double dug.
9. Replacing the last strip subsoil with the topsoil you removed at the beginning of the process.
10. Leveling and watering the bed thoroughly.

The goal of double-digging is to create a rich soil structure, increase soil fertility over time to lessen work in the future, and to make gardening more sustainable. With a rich soil structure, you will only have to cultivate the upper 2 inches of the soil by amending it with compost. Remember to include the garden committee members and children in this process to spread the workload.

Tip

Avoid excessive tilling as this may ruin the soil structure.



Raised Beds

Raised beds are typically made of rot-resistant wood or other materials like plastic boards and bricks. This will vary depending on the desired type of frame. Raised beds look organized and tidy, while supporting plant growth. Loose soil encourages the roots to grow strong and deep while moisture can easily soak in.

Here are steps on how to build a wooden raised garden bed:

1. Gather the necessary materials. For wood frames, this includes lumber and lots of screws. Do not use lumber treated with toxic chemicals.
2. Cut the lumber to the desired lengths for each of the raised beds. If you do not want to cut the lumber yourself, ask the store to cut them for you.
3. Optional: Cut and install corner stabilizers. Use 5 screws on each corner to provide extra stability.
4. Assemble the frame by screwing the corners together.
5. Position the bed frames where you want them.
6. Dig the ground underneath to loosen the soil. If desired, place old boxes or newspapers down or consider installing landscape fabric to suppress weeds or wire to deter burrowing animals.
7. Fill the bed with a mix of good garden soil, compost, and other soil amendments.



Tip

There are multiple ways to build a raised garden bed. For example, the square-foot gardening method requires inexpensive materials and only 6 inches of soil. Refer to Mel Bartholomew's *All New Square Foot Gardening* book for more information or Clemson Extension's guide for raised beds.



Container Gardens

There are two primary considerations when planting a container garden: the type of container and the soil.

Growing containers come in many shapes and sizes. Common growing containers include clay pots, wooden barrels, and plastic or metal buckets. Regardless of the type of container selected, it is important to ensure the materials are suitable for growing, there is adequate drainage with holes in the bottom, and it is frost-proof for exposed sites.

The type of soil used is equally as important as choosing the right container. Due to the limited growing space for root systems, a highly absorbent, light-weight potting soil should be used in order to retain a high amount of nutrients. Ask about the best soil for potted plants, both indoor and outdoor, at a local hardware or gardening store.

All plants can be grown in containers, but those that require less soil, water, and sunlight are better suited for smaller spaces. Remember to select a container that is the best fit for the type of plant to be grown. Reference the chart to the right for some ideas for container gardening.

CROPS	CONTAINERS
Lettuce	Clay Pots
Green Onions	Milk Cartons
Ginger	Plastic Soda Bottle Bottoms
Basil	Egg Cartons
Parsley	Market Packs
Cilantro	Plastic Bags
Flowers	Fiber Pots

Tip

For better drainage, add gravel to the bottom of the pots.

PLANTING THE GARDEN

Planting the garden is an activity for everyone. Based on their abilities, children can help with different planting tasks. Some activities that they can participate in are digging holes for seeds and using rulers to measure how far apart to space plants and how deep to dig holes. Check out *How Children Can Help in the Garden* in the Additional Resources at the end of this section for more ways to get children involved in the garden.

The two main methods for planting are direct seeding and transplanting. Direct seeding is a one-step planting method that requires placing a seed at a certain depth in or on top of the soil. Transplanting is a process that requires starting direct seeding indoors, allowing the seed to germinate. Gradually transition the seedling outdoors for a hardening off period to allow the seedling to adapt to the new growing environment before being planted directly into the soil.

When planting your garden, consider the following:

- **Plant Seeds Indoors and/or Outdoors:** Many seeds can be planted either inside or outside. Seeds that do not transplant well should be directly sown into their outdoor garden space.
- **Planting Depth:** Reference the seed packet for specifics on how deep to plant seeds. For seedlings, reference the plant instruction tag.
- **Plant Spacing:** All plants need certain amounts of space to avoid competition for nutrients. Follow recommended spacing requirements on seed packages. Spacing varies for different crops.
- **Days to Germination:** This is the number of days it typically takes for seeds to sprout.
- **Days to Harvest:** Depending on the crop, there will be a certain number of days before the produce is ready for harvesting.

Tip

Planting trees can create a buffer by protecting against many natural elements like soil erosion, sound and wind. The shade created can be an escape from the sun.

Replanting and replenishing the soil is a necessary part of the planting process. If a plant dies, remove the plant, add compost, water thoroughly, and then replant in that space. To replenish the soil of an entire bed after the harvest, till and amend the soil if necessary, plant a cover crop, and/or follow a crop rotation plan.

Cover Cropping

Cover cropping is an agricultural technique used to improve soil fertility. Cover crops add organic material to the soil and fix nitrogen through the roots of specific plants. Cover cropping will improve the overall productivity of the garden, prevent erosion and help suppress weeds.

ADDITIONAL RESOURCES

Soil Testing

clermson.edu/public/regulatory/ag-srvic-lab/soil-testing/index.html

Composting

scdhec.gov/sites/default/files/Library/OR-1520.pdf

clermson.edu/extension/hgic/plants/pdf/hgic1600.pdf

Raised Garden Beds

vcgn.org/wp-content/uploads/2013/08/How-to-Build-a-Raised-Bed-2013.pdf

georgiaorganics.org/for-gardeners/getting-started

Cover Crops

hgic.clemson.edu/factsheet/cover-crops

Trees

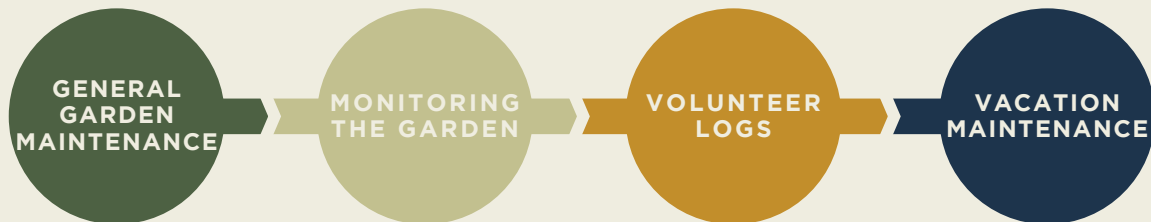
hgic.clemson.edu/factsheet/planting-trees-correctly

How Children Can Help in the Garden

Handout available at scfarmtoschool.com

Maintaining and Monitoring the Garden

Ongoing maintenance and monitoring is important for a plentiful, long-lasting garden. Regular maintenance can also aid in preventing pests. Maintenance during the growing season typically includes watering, weeding, and fertilizing. Keeping logs of what is grown, volunteer participation, and completed tasks will help with monitoring the regular activities in the garden. Long-term maintenance will include having a plan in place during vacation breaks. There are four main sections in this chapter:



GENERAL GARDEN MAINTENANCE

Watering



Depending on the weather and type of garden, watering will most likely be a daily activity once the plants are planted into the garden. During hot weather, plants may need to be watered more than once a day. Plants generally require about an inch of water every week and seedlings need more than plants. To reduce evaporation, water the soil directly, not the leaves.

Plants are often watered until the soil looks moist on the surface, but that might not be enough. After watering, test the moisture of the soil by poking a finger about an inch into the soil. If the soil around the roots of the plant is still dry, make sure to water more. There are a number of tools available for watering the garden. Watering cans and garden hoses are the least expensive options, but they are more labor intensive and require close monitoring. Other options include drip irrigation and sprinkler systems. These options ease the chore of watering, but are more expensive.

To maintain a healthier garden and lower water bill, consider the tips below to make every drop count:

- Build good soil with soil amendments like compost
- Group plants together according to their watering needs
- Select the appropriate watering system for the garden and budget

Tip

Do not use surface water from ponds, rivers, or streams to irrigate gardens.





Thinning Plants



In order for plants to grow, they need a spacious environment. If plants are too crowded, their growth may be stunted. The process of thinning consists of the removal of plants in their early stages of growth. Thinning helps to reduce the competition among plants for the water and nutrients that are found in the soil. This is especially true for vine crops (e.g., cucumbers, melons and crookneck squash) because they can shade themselves and block sun exposure.

If transplanting seedlings, follow the directions for adequate spacing to prevent the need to thin plants later. If planting from seed, thin the plants to remove any extras when they are small and beginning to grow. Refer to the seed packet for more specific information.



Pruning & Staking



Pruning regularly helps support your crops because it takes away the excess growth. Follow the directions for each plant on how to properly prune branches and suckers.

Some plants, especially crawling plants, require additional physical support for proper growth. Use stakes or trellises to help support plants during growth. These can be made out of string and sticks to save money on purchasing garden supplies.



Weeding



It is not just the look of weeds that is a problem; they can actually harm the health of your plants. Weeds compete for the same resources, sunlight, water, and nutrients from the soil that plants need for growth and production. If a weed is visible, pull it! To avoid a more difficult task in the future, remove weeds regularly while they are small to prevent them from developing deep roots. This is a great task that children can be a part of.

To minimize weeds growing in the garden, place cardboard or old newspaper around or between plants to provide a barrier for weeds. Be sure to place mulch, grass clippings, or other organic materials on top of the cardboard or newspaper.

Mulching

More

Less

Putting mulch on top of the soil will help keep the moisture in and weeds out. Add untreated and chemical-free materials such as grass clippings, leaves, or straw to the garden. This introduces more organic matter to the soil, helps maintain the moisture content of the soil and keeps the plants more hydrated between waterings.

Controlling Pests

More

Less

Insects and bugs are a natural part of a garden. Most perform jobs like pollinating plants, recycling nutrients, and eating other pests. On a regular basis, examine plants to make sure they are pest free. Use the following tips to help control unwanted pests in the garden:

- Plant the garden with enough room for airflow around plants to avoid fungal diseases
- Place a fence or other protective barrier (weed cloth or row covers) around the plants during the beginning stages of the garden to keep pests away
- Remove pests and any dead or diseased plants
- Grow plants suited for the location of the garden
- Grow plants that will attract beneficial insects and worms, including:
 - › Cornflower
 - › Sweet alyssum
 - › Borage
 - › Fennel
 - › Pussy willows
 - › Mountain mints
 - › Corn
 - › Ornamental grasses
 - › Golden marguerite
- To identify specific pests, refer to the Additional Resources at the end of the chapter

If pests are still a part of the garden after using these preventive steps, chemical-free household remedies like Weatherly's Bad Bug Soap Recipe may be an option for eliminating pest problems.

Observing the garden ecosystem is important to the learning process for children. You can incorporate lessons about insects and the environment.



Weatherly's Bad Bug Soap Recipe

- 1 Tbsp pure soap
(Dr. Bronner's Pure Castile)
- 1 quart water
- 1 tsp vegetable oil
- ½ tsp cider vinegar
- 1 tsp garlic powder
- 1 tsp red pepper flakes

Fertilizing

More

Less

Before adding fertilizer to encourage growth, a soil test should be completed. Use the results from this soil test and the directions on the label of the fertilizer to apply it properly in your garden. If you have a compost system, add it to the garden at the start of the season and work it into the soil.



MONITORING THE GARDEN

Garden and Harvest Logs

It is important to keep a log of when produce is planted, how often it is watered, and harvest dates. This will be helpful when planting in future seasons by being able to look back and see what worked or what did not work. A log is useful if there are many people involved in caring for the garden. It will take the guess work out of whether or not it needs to be fertilized again, for example. The garden log does not need to be complex. Keep it simple!

Tip

Be sure to leave the log in a convenient area near the garden. A plastic sleeve or protective binder will prevent loss of information.

The logs on the next two pages are examples for tracking this information.



Maintaining and
Monitoring the Garden

Garden Planting Log

[illegible]

Maintaining and Monitoring the Garden

SCFARMTOSCHOOL.COM / 29



Additional Ideas for Monitoring the Garden

- Scrapbooking and journaling
- Taking pictures that can be shared in newsletters or social media
- Asking children, parents and staff for feedback about the garden
- Monitoring children's performance and involvement (tests, projects, assignments, essays)
- Creating and maintaining a garden blog
- Distributing surveys to those involved in the development and maintenance of the garden
- Tracking donations and financial support
- Documenting awards and recognition
- Administering awards or other forms of recognition related to garden involvement

No matter which option you choose, regular monitoring of the progress ensures the long-term sustainability and success of the garden. Remember, maintenance and monitoring is a job for **everyone, not just the garden committee!**

VOLUNTEER LOGS

An interest form is a tool for recruiting volunteers for the garden. This form can be shared via the early care and education center or school website, social media, newsletter, and/or flyers. Garden committee members can share the interest forms with other organizations they are a part of. This form is also an easy way to keep track of the contact information for your garden volunteers.

Once you have recruited volunteers, keep a log of when volunteers are working in the garden. Leave the log with plenty of copies in a visible spot and always remind volunteers to sign in and out. This aids in monitoring work in the garden, and if you have questions about a specific task, you will know who to contact. Volunteers will also feel accountable when they fill out these logs.

Templates for these forms are provided on the next pages.

Tip

Assigning the role of volunteer coordinator to someone participating in the garden committee is a great way to manage the volunteers.

Garden Volunteer Interest Form

Thanks for your interest in helping our garden grow! We are looking for volunteers for a variety of tasks. If you are interested, please fill out this form and someone will be in touch.

Name _____

Email _____ Phone _____

Preferred form of communication: ☐ Email ☐ Phone

Best time(s) to reach you:

☐ Morning ☐ Afternoon ☐ Evening ☐ Weekdays ☐ Saturday ☐ Sunday

Your volunteer interest(s) in the garden:

☐ Construction ☐ Irrigation systems ☐ Watering ☐ Weeding ☐ Harvesting ☐ Fundraising

☐ Graphic Design ☐ Communication ☐ Arts & Crafts ☐ Resale/ Donation of Produce

☐ Other _____

If we take your photo, can we share it on newsletters and/or social media? ☐ Yes ☐ No

Other notes about yourself (interest or experience, for example)

Signature _____ Date _____

Please return form to: _____

Garden Volunteer Sign-In

Date _____

Tasks and other notes

PRINTED NAME	COMPLETED TASK <i>Ex: weeding, watering, etc.</i>	TIME IN	TIME OUT

VACATION MAINTENANCE

During vacations, breaks, changes in the season, and summer closings, a lot of time can be spent away from the garden. These breaks, especially during the fall or winter, are a great time to plant a cover crop to replenish the soil. Some common crops include crimson clover, oats, and cereal rye.

For short breaks, talk to the maintenance staff, children, and parents to develop a short-term plan for taking care of the garden. This could be done by one person or split among a small group. It would mostly include small tasks like watering, pruning, and possibly harvesting.

During a long break, i.e. summer vacation, having a plan and volunteer schedule will help keep the garden growing. Close to the end of the year, spend some time to create and share a summer plan and let all of the volunteers know where all of the tools are stored. An incentive for those who volunteer in the garden would be allowing them to keep all of the produce or sell it at a farmers market. Be flexible and listen to your volunteers since they are the ones tending to the garden!

Suggestions for planning for a summer break:

- **Integrate the garden into a summer program on-site**
 - › Work with teachers and/or administrators to ensure classroom instruction will frequently take place at the garden site
 - › Allow the teachers to keep produce or donate the produce to families or a local food bank
- **Have an “adopt a bed” program**
 - › Assign one garden bed to a different teacher, staff, or parent/guardian
 - › If you have a large garden, assign a crop, row, or section rather than the whole garden
- **Coordinate a schedule for weekly or monthly volunteers**
 - › Create a planning log similar to the short-term log to recruit volunteers
 - › Make sure all participants know how to get a hold of other volunteers
- **Host two or three garden maintenance events during the summer**
 - › This is ideal for big projects, such as landscaping or replanting, and it is a great way to ensure everyone stays involved and the garden is not forgotten

Properly maintaining and monitoring the garden will help you sustain the garden over the years. Here are some tips:

- **Make the garden a team effort!** Do not let the garden be dependent on one person
- Host events or plan lessons near the garden site to keep up the space
- Highlight the garden on the website or newsletter
- Send out a letter of request for volunteers or donations to parents at the beginning of the year
- Connect with master gardeners and other community members to ensure regular involvement with the garden

Having a system in place to keep track of volunteers will ensure the garden is being taken care of. Below is an example of a table to keep track of weekly volunteers. Be sure to include volunteers' contact information to help with communication. This mock table has morning, afternoon, and evening availability as examples for times to volunteer, but it is up to the volunteer coordinator as to whether or not someone needs to be scheduled for each time slot. In the example below, the volunteer coordinator opted not to schedule volunteers during the afternoon.

GARDEN MAINTENANCE PLAN FOR SPRING BREAK AT SUNNY DAY CHILD CARE CENTER <i>Volunteer Coordinator Name and Phone Number: Joe Gardener (555) 123-4567</i>						
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	WEEKEND
TASKS*	WATER	WATER & PRUNE	WATER	WATER & PRUNE	WATER	WATER
MORNING						
AFTERNOON						
EVENING						

*Note: Harvest when/if produce is ready and if it is raining, do not water the garden.

Volunteer 1 Name & Phone Number: _____

Volunteer 2 Name & Phone Number: _____

Volunteer 3 Name & Phone Number: _____

ADDITIONAL RESOURCES

Free software for planning your garden/fields

farmlogs.com

Information on insects and diseases of fruits and vegetables

hgic.clemson.edu/category/problems+fruits-vegetables

Information on planting cover crops

hgic.clemson.edu/plant-a-cover-crop

CHAPTER 6

Harvesting from the Garden

Now that the garden has produced fresh fruits and vegetables, it is time to harvest! This is a fun, educational, and rewarding experience for everyone. Including children in the harvesting activities will make them proud of what they have grown and will encourage them to try new foods they normally would not try. Use the South Carolina Produce Availability Chart below as a guide to know when your produce should be ready.

SOUTH CAROLINA PRODUCE AVAILABILITY												
Apples									SEP	OCT	NOV	DEC
Asparagus			MAR	APR	MAY							
Beans (Snap/Pole/Variety)					MAY	JUN	JUL	AUG	SEP	OCT		
Beets	JAN	FEB	MAR	APR	MAY					OCT	NOV	DEC
Blackberries						JUN	JUL					
Blueberries				APR	MAY	JUN	JUL					
Broccoli				APR	MAY	JUN				OCT	NOV	DEC
Butter Beans							JUL	AUG	SEP	OCT		
Cabbage	JAN	FEB	MAR	APR	MAY	JUN					NOV	
Cantaloupes						JUN	JUL	AUG				
Cilantro	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Collards	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Cucumbers					MAY	JUN	JUL		SEP	OCT	NOV	
Green Onions		FEB	MAR									
Kale	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Leeks		FEB	MAR	APR	MAY					OCT	NOV	DEC
Microgreens	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Muscadine Grapes								AUG	SEP	OCT	NOV	
Okra						JUN	JUL	AUG	SEP	OCT		
Parsley		FEB	MAR	APR	MAY	JUN	JUL		SEP	OCT	NOV	DEC
Peaches					MAY	JUN	JUL	AUG	SEP			
Peanuts (Green)								AUG	SEP	OCT		
Peas (Snap/Sugar)				APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	
Pecans										OCT	NOV	DEC
Peppers (Variety)						JUN	JUL	AUG	SEP	OCT	NOV	
Radishes		FEB	MAR	APR	MAY	JUN			SEP	OCT	NOV	DEC
Strawberries			MAR	APR	MAY	JUN						
Squash (Summer/Yellow/Variety)					MAY	JUN	JUL	AUG	SEP	OCT	NOV	
Sweet Corn					MAY	JUN	JUL	AUG				
Sweet Potatoes								AUG	SEP	OCT	NOV	DEC
Swiss Chard			MAR	APR	MAY	JUN			SEP	OCT		
Tomatoes						JUN	JUL		SEP	OCT		
Watermelons						JUN	JUL	AUG	SEP	OCT		
Zucchini					MAY	JUN	JUL	AUG	SEP	OCT		

HOW TO HARVEST

Most garden produce can be harvested with a shovel and a pair of scissors. The shovel will help loosen soil and dig up root crops like carrots and potatoes. Scissors are helpful when harvesting leafy greens and herbs. Remember, much of the produce can be picked by hand. If these tools do not get the job done, consider using more heavy duty tools. Adults should only use these types of tools when children are not nearby. Remember to always use caution!

The harvesting method depends on the crop being grown. Most produce can be categorized into three groups: plants that can be cut or pinched, plants that require digging up, and plants that can be picked by hand. Below is a table that shows harvesting methods for common crops in each category.

CUT	DIG	HAND PICK
Basil	Beets	Beans
Cabbage	Carrots	Berries
Chard	Garlic	Cucumbers
Collards	Leeks	Melons
Kale	Onions	Okra
Lettuce	Peanuts	Peppers
Mint	Potatoes	Squash
Parsley	Radishes	Sweet Corn
Spinach	Sweet Potatoes	Tomatoes

For more information regarding how to harvest specific crops, consult the additional resources section at the end of this chapter.

FOOD SAFETY (SCHOOLS)

Contamination of produce may occur during growth, harvest, transportation, preparation and/or food service which can result in foodborne illness. Potential risks to garden produce can easily be avoided by applying some food safety protocols included in Good Agricultural Practices (GAP) and Good Handling Practices (GHP). Understanding and implementing these practices will enhance the protection of fruits and vegetables from foodborne illness. You may serve the garden produce in the classroom, but it is best to follow the school district's and local health department's food safety guidelines regarding serving food grown in gardens. Creating a food safety plan and implementing it early will set good behaviors before bad habits can develop.





POST-HARVEST

To incorporate the produce in the classroom curriculum, plan nutrition and cooking lessons, hold taste tests, or have a market day to sell the produce. In the planning stage, the garden committee should have decided how to use the produce. Use that guide for choosing activities and ensure all food safety procedures are followed. If there is excess from your harvest that you will not be able to use, donate it to local organizations, shelters, or food pantries. Donating food can strengthen relationships within the community. Check with the local department of health to follow any food safety guidelines.

ADDITIONAL RESOURCES

Clemson's Guide to Harvesting Vegetables

clemson.edu/extension/hgic/plants/vegetables/gardening/hgic1262.html

South Carolina Crop Improvement Association's Heirloom Collection

clemson.edu/public/seed/heirloom.html

Food Safety

fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/safe-food-handling/basics-for-handling-food-safely/ct_index

agriculture.sc.gov/divisions/consumer-protection/food-safety-compliance

Integrating Curriculum

The garden does not have to be in full bloom before it can be used as a tool for learning. Providing some early learning experiences will help stimulate children's thinking about gardening, and it is a great way for teachers to assess children's current knowledge and interest. By understanding what children already know about a topic, experiences can be planned that not only extend current knowledge, but generate excitement! You are not limited to only doing garden activities outside. By bringing the garden indoors, it can be a resource for curriculum and daily activities.

The garden is not meant to take away from time learning, it is meant to be incorporated into everyday learning activities and lessons!

INTEGRATING THE GARDEN INTO EARLY CARE AND EDUCATION CENTER SETTINGS

The garden is a great learning tool for children and tying it into daily activities can help address many of *South Carolina's Early Learning Standards*. Encourage children to help with all phases of the garden, whether it is the development, planning, harvesting or maintenance. Below are some examples of activities and tasks that meet *South Carolina's Early Learning Standards*:

- When planting in the garden, children can assist with measurement of how far apart and how deep to plant seeds and seedlings (*M-K-5*)
- Working as a team within your center to help maintain your garden allows children to learn how to interact with others and express their feelings appropriately (*SE-K-4*)
- Designating roles and responsibilities for each child to have in the garden will help them develop and appreciate their own abilities and accomplishments (*SE-K-1*)



Each of the experiences described address several standards outlined in the document titled *Good Start Grow Smart Standards: South Carolina's Early Learning Standards for 3, 4, & 5 Year-Old Children*. For additional examples, refer to the complete standards document, which can be viewed in *Additional Resources*.



Read books about gardening/planting

Ask questions about the content of the story (e.g., “What do you think will happen next?” “What would happen if...”). Some book suggestions:

- *Growing Vegetable Soup* by Lois Ehlert
- *Planting a Rainbow* by Lois Ehlert
- *Eating the Alphabet* by Lois Ehlert
- *How a Seed Grows* by Helene J. Jordan
- *The Tiny Seed* by Eric Carle
- *The Vegetables We Eat* by Gail Gibbons
- *I Heard It from Alice Zucchini* by Juanita Havill
- *The Curious Garden* by Peter Brown
- *The Carrot Seed* by Ruth Krauss

Examples of Good Start Grow Smart Standards addressed:

ELA-3K-1.11: Explore books with an adult or another child.

ELA-4K-3.14: Beginning to understand that letters can represent speech sounds.

ELA-K.1.11: Read independently for pleasure.

Include non-fiction and informational books about fruits, vegetables, flowers, and gardening in the classroom library, dramatic play experiences, and writing center

Choose books with colorful photographs; they do not have to be specifically written for children. Discuss the photos and text with the children, encouraging them to draw, write, and talk about the information in the book.

Examples of Good Start Grow Smart Standards addressed:

ELA-3K-1.1: Explore realistic books and materials in classroom centers.

ELA-4K-2.4: Incorporate information from informational texts into play activities.

ELA-K-6.2: Recognize that information can be found in print sources (e.g., books and pictures)



Set up a dramatic play experience, either indoors or outdoors, that encourages play related to gardening

This could include:

- Artificial fruits, vegetables, and flowers
- Flower pots, gardening spades, and watering cans
- Gardening gloves, aprons and sun hats
- Potting Soil (optional)
- Empty seed packets
- Paper and pencils so children can make lists, labels, signs, etc.

Examples of Good Start Grow Smart Standards addressed:

AL-3K-4.2: Organize actions and materials needed for play in the learning environment.

AL-4K-1.1: Show creativity and imagination when using materials in representational play.

AL-K-3.2: Demonstrate initiative in planning, creating, and carrying out activities.

M-K-1.6: Use a variety of forms of mathematical communication.

To include families, send home a short survey to learn more about families' gardening experiences or the kinds of fruits and vegetables eaten at home

Include questions like, "Do you have a garden? If yes, what kind; in-ground garden, raised-bed garden, or container garden", "What grows in your garden?", "What kinds of vegetables do you like to eat at home?" and "How do you prepare them?". The children could also be invited to help develop the survey, including questions they would like to ask their family members. When surveys are returned, discuss the results with the children. Make charts and/or graphs to share the results. (e.g., How many children have gardens at home? How many families eat carrots at home? How many families have flowers growing in their yard?). Post these charts for families to see and discuss with their child.

Examples of Good Start Grow Smart Standards addressed:

ELA-3K-4.8: Participate in small group reflections on a recent event.

ELA-4K-4.1: Describe events of personal significance.

AL-K-2.2: Demonstrate eagerness and interest as a learner by questioning and adding ideas.

Go on a “plant hunt”

Take a walk outside and talk about all the different kinds of plants that the children see. Identify the leaves, stalks, trunks, blooms, etc. When finished, provide children with blank paper and crayons and tell them to draw something they saw on the plant hunt. Ask the children to describe their drawings, writing their words on their drawing.

Examples of Good Start Grow Smart Standards Addressed:

ELA-3K-4.8: Participate in small group reflections on a recent event.

ELA-4K-4.3: Creates a picture and labels it orally.

PD-K-2.3: Use drawing and writing tools with some control and purpose.



When engaging in various experiences related to your garden, be sure to ask children a lot of questions and give them the opportunity to talk about what they see, know, and wonder about

Use children’s discussions and answers to questions to help select books and materials about gardening. This information will be helpful in planning meaningful experiences to extend their knowledge and to support conversations with them while working in the garden. Listening to children will not only help the caregiver decide what experiences will be most meaningful to them, but will help the caregiver know what the children love to do! Examples of questions that could be asked include:

- What kinds of vegetables do you like to eat?
- What kinds of fruits do you like to eat?
- Where do fruits and vegetables come from?
- Why are plants important?
- What can you do with plants?
- How do you plant a seed?
- What do you think plants need to grow?
- What do you think you need to do to take care of a garden?

Examples of Good Start Grow Smart Standards addressed:

AL-3K-5.1: Talk about prior events and personal experiences.

AL-4K-5.4: Demonstrate growing ability to predict possible outcomes based on prior experiences and knowledge.

ELA-K-4.2: Generate complete sentences orally.

Exploring new fruits and vegetables

When presenting new items for children to try, it is important to focus on the sensory experience before expecting them to eat a new food. The exploration of the produce can help spark interest and curiosity, in turn increasing the chances of children trying a new food.

1. Starting off with a mystery bag/box, place a produce item inside. Have children use their sense of touch to explore if the item is smooth, rough, hard, soft, etc. and if possible, have an option with the item cut so children can also feel the interior. Ask them to describe it.
2. Remove the item from the box and ask the class if they have ever seen the item before. Talk about the exterior of the item and if possible, the interior. If it is something that comes in a variety of colors, talk about the different options. Ask them if they have ever eaten that item and if so, how was it prepared?
3. Ask the children to draw the item using various drawing tools.
4. Ask the children what the first letter of the item is and to think of other fruits and vegetables that start with that letter. Have children write down their words or do it on a white board as a group. Write down the adjectives that are used to describe the item as well.
5. Wrap up by reminding the children that eating fruits and vegetables makes us healthy and strong because they have lots of vitamins that help us grow!

Examples of Good Start Grow Smart Standards addressed:

ELA-5: The child will begin to write for a variety of purposes and audiences.

ELA-6.3: The child will begin to access and use information from a variety of sources – classifying information

PD2: Fine Motor Control: Children use their fingers and hands in ways that develop hand to eye coordination, strength, control, and small object manipulation.



Conduct a taste test of the crops that were planted in the garden

Plan a taste test of the vegetables that will be planted in your garden. A taste test is an activity that introduces children to foods and beverages they may not have tried before. A taste test can be conducted during snack time or mealtime or as a stand-alone activity in the classroom. See Suggestions for a Successful Taste Test below.

Let families know in advance there will be a taste test so the center can be made aware of any allergies or sensitivities their child may have. After the taste test, help each child complete an “Eat Smart...It’s a Matter of Taste I Tried It” Card. Send this card home to let families know the foods they tried at the center. This card can be found at the end of this section.

Conduct a poll about which vegetables children liked most and liked the least. Create a picture graph with the children to share the results. For example, on a piece of poster board, create columns with photos of the crops the children tasted across the top. Have children draw a check mark under what they liked. Total the check marks in each column to reveal their favorites!



Suggestions for Successful Taste Tests

1. **Prepare To Grow.** Involve the children and all their senses in exploring the fruit or vegetable. Children are more likely to try a food that they have explored.
2. **Sow Seeds of Success.** Children will be more willing to try a food if they know it is okay to remove something they do not like rather than swallow. Never force a child to eat a food. Model how to politely decline to taste a food or use a napkin to remove the food from the mouth.
3. **Seed and Re-seed.** Plan to offer the food many different times. Studies show some children need to be offered a food up to five times before they will taste it. In addition, the food may need to be offered more than a dozen times before a child will choose to eat it at a meal. Do not give up - some seeds take longer to grow than others.
4. **Start in Fertile Ground.** Offer new foods first to children willing to try new things. Watching a peer eat a food can help the most reluctant eater bud into a food taster.
5. **Be Still, Little Seed.** For safety’s sake, have the children eat while seated, not walking around. Moving while eating can increase the risk of choking.

6. **Offer Bites, Not Bushels.** Offer small tastes of a food at first. A child can be overwhelmed by a large portion and may even refuse to try a food, fearing it must be finished. Portions need to be small enough for small mouths and large enough so a child has to chew the food. It is safer to have a piece that cannot be swallowed whole. Be prepared to offer more if a child desires to taste again.
7. **Know the Growing Season.** Fresh fruits and vegetables in season usually taste best and are less expensive. Use your harvest finder, SC Produce Availability Chart or Palmetto Picks to choose from what is in season. In South Carolina, produce is available year round!

Tip

Remember, produce usually tastes best during the growing season, which is also when it is usually the best value. Frozen or canned foods offer an option for fruits and vegetables out of season. These options are also great choices for comparing to fresh.

(Source: *Eat Smart Move More Grow Healthy Toolkit*, Department of Health and Environmental Control, 2012. Adapted from "Growing Great Tasters: Strategies for Food Tasting", *Grow It, Try It, Like It! Preschool Fun with Fruits and Vegetables*; US Department of Agriculture's Team Nutrition)

Examples of Good Start Grow Smart Standards addressed:

M-3K-2.3: Compare quantities using general terms.

PD-4K-3.2: Follows basic health rules most of the time (trying nutritious foods)

M-K-6.1: Organize data in graphic displays in the form of drawing and pictures.



INTEGRATING THE GARDEN INTO SCHOOL SETTINGS

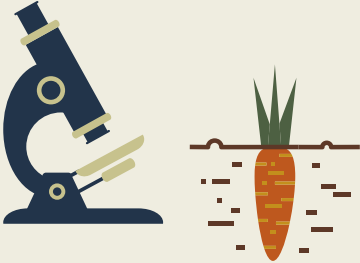

Academic Student Involvement

The school garden is a fun addition that is not meant to take away time from learning, but rather to be used as a tool in the learning process. As mentioned in Chapter 1, one of the benefits of the garden is academic growth among students. When the garden is incorporated into the classroom, students are given a new set of learning opportunities. There are many demands placed on teachers and students for meeting academic standards; address these standards in a setting naturally fit for exploration and discovery. This section of chapter 7 provides examples for incorporating the garden into main academic disciplines of grades kindergarten through twelfth.

Science

The easiest fit most teachers see for incorporating the garden into a classroom subject is with science. The scientific method is a perfect fit for all grade levels, whether it is making observations, forming a hypothesis, or designing an experiment. Below are some more suggestions for activities from different science disciplines that are a great fit with the garden:



EARTH SCIENCE	LIFE SCIENCE	PHYSICAL SCIENCE
Create a garden weather station to record daily measurements and compare conditions with plant growth	Observe the life cycles of plants using fast-growing plants in your classroom	Use litmus paper or a test kit to test the pH of different soils
Compare and contrast the properties of different types of soils (e.g., density, air space, presence of living organisms, composition, texture, smell, appearance)	Investigate food chains and webs	Investigate how plants respond to soils with different pH levels
Observe the difference in soil loss when water is splashed on a tilted planted pot and on a tilted unplanted pot	Demonstrate how plants are the primary source of energy for all food chains	Simulate the water cycle in the indoor garden by covering it with a dome of clear plastic.
Study local geology and put together a display of the soil and rock types found in your area	Dissect flowers and seeds and create experiments to investigate how light, heat, and moisture affect germination	Study and observe the transpiration, evaporation, and condensation of water
	Discuss how plants adapt for survival	Cover pots with cellophane of different colors to screen out all but one wavelength of light from plants and observe plant growth
	Demonstrate how plants are the primary source of energy for all food chains	

Mathematics

All levels of math skills can be used in the garden! Math can be part of the garden from the beginning when planning the size of the garden to the end when measuring and weighing the produce that is harvested. Below are some more suggestions for incorporating math skills:

Measure the growth rates of plants, display results on different types of graphs, and make predictions regarding future growth

Tally cricket chirps to estimate temperature

Use graph paper to make a map to scale of your garden

Calculate amounts of fertilizer to use per quart and per liter of water

Chart temperatures of the air and soil in your garden in Fahrenheit and Celsius

Determine the weight and volume of soil mix when wet and dry

Determine the volume of soil in a rectangular window box

Measure the height of a group of plants and determine the mean, median and mode

Make a recipe that uses fruits and vegetables from the garden and requires various measuring techniques



History/Social Studies

Concepts from history and social studies can be built into gardening activities. There is a rich and diverse history of farming and agriculture across many cultures and this is an opportunity to link gardening activities with history lessons. Working in the garden is also a natural way to develop social skills for the students to learn how to work together. See the suggestions below for more ideas about incorporating social studies in the garden:

Study the contribution of Native American foods and other cultures' foods to our history and diet; grow samples in the school garden

Trace the steps of a fruit or vegetable from the field to the table

Research and report on cultural or ethnic differences in food and gardening practices

Research agricultural history and create a timeline of important events

Visit some local farms and interview farmers about choice of crops, growing practices, marketing, and farm history

Contact, report on, or volunteer services at a local food bank, gleaning project, or food cooperative

As a class, develop garden rules and vote on them

Interview experienced community members, local farmers, or senior citizens about their gardening/farming experiences

Research and report on how other cultures use and control insects



English/Language Arts

Reading and writing are important skills to have in our everyday lives. Writing journal entries about experiences in the garden is a great way for children of all ages to strengthen their writing skills. Comprehension skills can be enhanced when reading information related to the planning, harvesting, and maintenance of the garden. There are many books available, ranging from children's picture books to extension guides, that are a great way to practice reading skills. Below are some more suggestions:



Keep daily garden journals documenting observations, weather conditions and classroom activities

Study and learn how to use seed catalogs

Write and compile a class gardening book with gardening skills and advice

Read the daily newspaper and bring in any articles related to gardening, food, farming, nutrition, hunger, etc.

Research the growing habits of the school garden plants using the Internet and reference material

Write letters to local merchants explaining the school gardening program and asking for donations

Write thank you notes to volunteers and garden sponsors

Brainstorm different adjectives to describe each plant in your garden

Study new vocabulary that relates to plants and gardens

Publish a class newsletter with student articles about the garden and distribute it to other classrooms and parents

Write step-by-step instructions for common garden activities

Read books and stories about plants and gardens

Prepare and deliver a presentation about the garden for other students, teachers, and parents



Arts and Crafts

The garden is a great site for arts and crafts. Many aspects of the garden, whether it is a garden bed, pots, or garden markers, can be decorated as part of an art lesson. Do not forget you can even use parts of the garden and harvest for craft activities as well. Here are some more ideas:

Design labels to mark plants

Paint rocks to use as garden borders

Create paintings and drawings of garden plants



Paint a class garden mural to hang in the hallway for parents' night

Make a seed mosaic

Create a color wheel collage using pictures from old seed catalogs

Make prints using paint and stamps made from various plant parts

Draw your dream garden



Paint a classroom mural using samples of different soils as the medium

Design labels for plants to mark plantings

Design T-shirts for your garden

Design a logo for your garden

Put together a photo essay of the garden



Music/Drama

Whether it is singing garden songs or making musical instruments from the garden, there are a number of ways to bring music and drama class to the garden:

Make musical instruments from gourds

Create and perform a garden-inspired dance expressing the growth of a seed or the opening of a flower bud

Pantomime various gardening tasks (e. g., transplanting, fertilizing, sowing seeds, pollinating)

Learn a collection of songs that relate to food, gardens and the environment

Create a skit about food safety

Use a movie camera with single-frame capability to make a time-lapse film of a plant growing



Write parodies of well-known songs, turning them into gardening song

Hold a harvest festival square dance

Take a garden-themed piece of children's literature and do reader's theater with it



Health/Nutrition

Aside from all of the delicious produce that can be sampled from the garden, the garden is a great tool for health and nutrition lessons. When sampling produce from the garden, incorporate it into a classroom taste test or do a cooking demonstration. Here are some more ideas for combining the garden with health and nutrition lessons:

Ask cafeteria managers to share safe food handling information and provide tours of school kitchens

Conduct a blindfolded taste test using classroom-grown vegetables and supermarket vegetables

Experiment with food preservation techniques (e.g., drying, freezing, and canning)



Visit a local farm



Keep food journals that highlight how many fruits and vegetables are eaten and describe any new produce tried

Invite chefs from the community to do cooking demonstrations for students and parents with garden produce if available

Coordinate a cooking lesson in your school's kitchen using the produce your class has grown

Create a classroom or school recipe book that features produce grown in the garden

Compare the nutritional content of different colors of a specific variety of vegetables grown

Visit a local farmers' market or start a school farmers' market



Grow and use fresh herbs to flavor your dishes with natural ingredients and decrease the use of salt in recipes

Create a school announcement promoting fruits and vegetables in season each month



ADDITIONAL RESOURCES

Curriculum

The Clemson Advisory Council for the SC Farm to School Program created a curriculum for students grades K-12.

scfarmtoschool.com/classroom/curriculum

Good Start Grow Smart Standards: South Carolina's Early Learning Standards for 3, 4, & 5 Year-Old Children

ed.sc.gov/agency/programs-services/64/documents/EarlyLearningGoodStart.pdf

Children's Books Related to Gardening

delightfulchildrensbooks.wordpress.com/2011/05/30/gardening

scholastic.com/parents/books-and-reading/book-lists-and-recommendations/science-nature/childrens-books-about-flowers-gardening.html

Farm to Early Care and Education Taste Test Guide

scfarmtoschool.com/wp-content/uploads/2019/09/F2ECETasteTestGuide2018.pdf

Farm to School Taste Test Guide

scfarmtoschool.com/wp-content/uploads/2019/09/F2STasteTestGuide2018.pdf

Palmetto Picks

scfarmtoschool.com/initiatives/palmetto-pick-of-the-month

Adapted with permission from the Clemson Master Gardeners' School Gardens Handbook and the California School Garden Network's Gardens for Learning

Eat Smart...I Tried It Card

scfarmtoschool.com/wp-content/uploads/2019/09/Eat-Smart.pdf

EAT SMART...IT'S A MATTER OF TASTE
I Tried It Card

Today I tried: _____

I (circle one):

☐ ☐ ☐ • Really liked it

☐ ☐ ☐ • Liked it

☐ ☐ ☐ • It's not my favorite, but I will try it again

Eat Smart! Move More! Grow Healthy! Toolkit, Department of Health and Environmental Control, 2012.

Cultivating Resources

Now that the garden is growing and you are harvesting regularly, it is important to think about ways to sustain these efforts. One major responsibility of the garden committee is to find funding opportunities and secure resources to keep the garden thriving.

It is important to get buy-in for support and participation from community members and organizations. Gardens can bring together many community entities and provide opportunities for involvement to anyone who has an interest. The garden committee should consider these questions when preparing to reach out to the community:

- Which organizations in the community are potential partners?
- Do other gardens or gardening organizations exist within your community?
- Which organizations and community members share a passion for gardening?

Asking for monetary and in-kind donations might seem challenging, but it is a simple and necessary task to keep the garden growing. Be willing to step outside of your comfort zone and ask for support. Finding help in the form of volunteers and financial support reduces the challenges of high out-of-pocket costs for committee members, and many businesses and organizations are willing to help! Developing relationships with organizations and members of the community will encourage the support of the garden and this chapter will focus on how to secure donations. There are three main types of donations, which are below, that will help sustain your garden and each will require different approaches.

Tip

Local public libraries have the ability to help in a variety of ways with the garden. They have books and access to resources to further education opportunities, space to host committee meetings and well-developed roots and networks in other community entities.



TIME

When seeking volunteers to provide their time to help with the garden, success will come from searching for people who are knowledgeable and passionate about gardening. There are a number of ways to recruit volunteers, such as posting a notice in a newsletter or to a social media site. If you are having a garden work day and would like to recruit a large group of volunteers, consider submitting a press release. This is a great way to let the community know a work day has been scheduled and volunteers are needed. On the next page is a sample press release letter which is one method to help recruit volunteers for an event.

Sample Media Advisory

DATE

CONTACT: Jane Smith

(803) 123-4567

FOR IMMEDIATE RELEASE May 28, 2010

WHAT: Townville Elementary School Garden Harvest Event

WHEN: Wednesday, June 9, 2010 - 2 - 4 pm

WHERE: Corner of Main and Oak Streets, Townville, SC

WHO: Everyone is invited!!

Public invited to the School Garden Harvest Event

TOWNVILLE, S.C. - Principal John Doe and the City Council invite everyone to attend the Harvest Dinner of the Townville Elementary School Garden at the corner of Main and Oak Streets in Townville, S.C. Hugh Weathers, Commissioner of Agriculture, will be on hand to greet everyone at 2:00 p.m.

Children and teachers from Townville Elementary have been nurturing and growing fresh tomatoes, peppers, sweet corn and a variety of other fresh vegetables all spring and now they want to share the fruits of their labor with the community!

What better way to celebrate summer than with a meal from the fresh produce grown in the school garden and fresh flowers grown by the students and teachers at Townville Elementary. Parking will be available in the school parking lot out front.

To participate in this wonderful event or for more information about the Townville Elementary School Garden Harvest, call Jane Smith, garden coordinator, at (803) 123-4567.

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In addition to the press release, there are other options to consider when recruiting and securing volunteers.

RECRUITING VOLUNTEERS

Recruit volunteers through horticulture clubs, local businesses, Clemson Extension, Boy/Girl Scouts, YMCA, Master Gardeners, 4-H, FFA Chapters, volunteer fire departments, and other service organizations.

Find organizations within your community that require members to complete service hours.

Reach out to parents to volunteer through newsletters, PTO/PTA meetings, open houses, and social media.

Market this volunteer opportunity as a hands-on, exciting, and rewarding experience.

WORKING WITH VOLUNTEERS

Schedule a time to meet with the volunteers to tour the garden and discuss how they will be helping in the garden.

Establish clear roles and responsibilities for volunteers to provide them with a greater sense of ownership and regularly provide feedback about their performance.

Invite volunteers to committee meetings so they can share prior experiences.

Contact your volunteers often, whether this is through e-mails, newsletters, or web site postings.

Show appreciation by thanking volunteers for all of their hard work. Send personalized thank you notes from the garden committee or children.

RESOURCES OR IN-KIND DONATIONS

When seeking donations from local community organizations and businesses target those with services that match your needs; be specific, transparent, and professional with your requests. Carefully create a donation letter unique to each organization and business. Develop a reasonable “wish list” as a garden committee to include with the letter. Dropping it off in person with a store manager/owner will help make a personal connection, increasing the likelihood he or she will want to donate to the garden. If donations are received, acknowledge and thank donors by sending them a thank you letter. Donors can also be recognized on garden signs, websites, social media, or any other events related to the garden.

Sample donation letters are provided on the next two pages.

Tip

Many seed companies will donate seeds for free to gardens. The following is a list of some seed companies in the US and South Carolina:

- Burpee
- Southern Exposure Seed Exchange
- High Mowing Organic Seeds
- Renee’s Garden Seeds
- Fedco
- Seeds of Change
- (SC) Park Seed Company
- (SC) Heavenly Seed
- (SC) Seeds for the South
- (SC) Twilley Seeds

Sample Donation Request Letter #1

Date

Name of Business

Address of Business

City, State, Zip Code

Dear [*potential funder*],

The [*enter appropriate grade(s)*] grade children at [*insert early care and education center/school name*] have planned a early care and education center/school vegetable garden that will include a birdhouse and journaling benches. They are hoping to plant the garden in the spring and they are asking for your help.

Please consider donating some of the tools we will need for this new garden. We need hand trowels, rakes, and hoes for our [*insert #*] children. Whatever you are able to provide us would help out. Our children would love to use wheelbarrows and wear garden gloves!

We will have a groundbreaking ceremony this spring in the garden in front of the school. You and your staff are invited to help break ground for the first plants that will be grown. We will provide more details closer to the date, but we hope you will be able to join us!

Thank you very much for your help.

[*Insert your early care and education center/school name*] and the children of [*insert early care and education center/school name*]

[*Insert early care and education center/school contact information*]

Students can even sign their names at the bottom to personalize the letter even more.

Sample Donation Request Letter #2

Date

Name of Business

Address of Business

City, State, Zip Code

Dear *[potential funder name]*,

[Insert early care and education center/school name] is interested in beginning a garden for our classrooms. With limited funds in our budget for special projects, we are unable to cover the cost of this activity. We are therefore requesting that community partners join us in implementing this worthwhile program for our children.

Gardens are a special kind of learning center for children. A garden:

- Encourages fruit and vegetable consumption.
- Promotes physical activity.
- Provides an opportunity for children/students to connect with nature.
- Helps students better understand the origin of food.

The gardening project proposed for *[insert early care and education center/school name]* will begin with lessons about how plants grow. Each child will participate in the planting, harvesting and maintenance of the garden. Children will be able to care for and watch the progress of their growing plants as they connect to where their food comes from.

This request is being submitted to *[potential funder name]* to fund the materials and supplies needed for the proposed plan is to plant the garden in *[Month]*. If funding is approved, please resubmit to:

[Insert your early care and education center/school name]

[Garden Committee Contact]

[Address]

Thank you for your consideration of this proposal. If you have any questions or would like more detailed information about this project, please feel free to contact me. I look forward to hearing from you soon.

Sincerely, *[your name here]*

FUNDING REQUEST INCLUDES:			
ITEM	QUANTITY	UNIT COST	TOTAL COST
Seed starter tray with 25 pea pods	3 Trays	\$6.50	\$19.50
Seeds (beans and corn)	2 Bags	\$4.00	\$8.00
Total			\$27.50



MONETARY

Fundraising is a tool for gaining community support and resources for the garden.

It can be an on-going project or a one-time event. Below are some fundraising suggestions:

- Harvest produce or small bunches of flowers from the garden to sell at a regularly occurring market
- Sell seedlings at an annual plant/flower sale event
- Create a recipe book based on the produce grown
- Sell handmade items such as garden art

Grants are a monetary award to help fund projects which can help sustain the garden. Grants are awarded from all levels of government, private foundations and corporations. The grant process requires submitting an application that should be thoroughly developed and reviewed. Follow the instructions for the grant you are applying for and provide a persuasive argument for why the garden is worth funding. The funding cycles vary across grant opportunities; be aware of the submission requirements and deadlines when applying. The following list of grants provides a snapshot of organizations that typically fund gardens.

Tip

Community members and organizations may have experience writing successful grant applications. It is a skill that requires practice; seeking out volunteers to help with the grant writing will increase your chances of receiving the grant.

ORGANIZATION	GRANT WEBSITE
America In Bloom Grant List	americainbloom.org/programs/cn-grant
American Honda Foundation	honda.com/community/applying-for-a-grant
Annie's Homegrown Inc	annies.com/giving-back/grants-for-gardens
Bonnie Plants	bonniecabbageprogram.com/teachers
Captain Planet Foundation	captainplanetfoundation.org/grants
Chefs Move to School Grant	acfchefs.org/ACF/Partnerships/Chef_and_Child/ACF/Partnerships/CCF
Community Food Projects Competitive Grants Program (CFPCGP)	nifa.usda.gov/funding-opportunity/community-food-projects-cfp-competitive-grants-program
EPA - Environmental Education Grant	epa.gov/education/environmental-education-ee-grants
Fiskars Project Orange Thumb	fiskars.com/Community/Project-Orange-Thumb
Green Education Foundation	greeneducationfoundation.org/green-thumb-challenge.html
Intel	intel.com/content/www/us/en/education/competitions.html
Katie's Krop Grant	katieskrops.com/apply-for-a-grant
Kid's Gardening	kidsgardening.org/grants-and-programs
Kitchen Gardens International	seedmoney.org/apply
Lorrie Otto Seeds for Education Grant	wildones.org/seeds-for-education
Nature's Path Gardens for Good Grant	naturespath.com/en-us/our-path/nourishing-communities/gardens-for-good
Project Learning Tree	plt.org/resources/greenworks-grants
Samsung	samsung.com/us/solvefortomorrow/index.html
Scholastic - America's Greenest School	scholastic.com/americasgreenestschool
Scott's Miracle Gro Gro More Good	scottsmiraclegro.com/responsibility/foundation/enhancement
State Farm	statefarm.com/about-us/community-involvement/community-grants
Target - Field Trip Grants	corporate.target.com/corporate-responsibility/grants/field-trip-grants
The Donald Samull Classroom Herb Garden Grant	herbsociety.org/explore/grants-scholarships
The Herb Society of America	herbsociety.org/explore/grants-scholarships
The Home Depot and National Gardening Association - Youth Garden Grant	gardenclub.homedepot.com/tag/youth-garden-grant
The Home Depot Foundation	corporate.homedepot.com/community/home-depot-foundation-grants
The Melinda Gray Ardia Environmental Foundation	mgaef.org/grants.htm
The NEA Foundation	neafoundation.org/for-educators/other-grant-fellowship-opportunities
Toshiba	toshiba.com/taf/k5.jsp
Whole Kids Foundation	wholekidsfoundation.org/programs
Youth Service America - Sodexo	ysa.org/grant/sodexoyouth

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.





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