# roots in the ground

a project of rooted

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# Introduction

Welcome to Roots in the Ground! This training curriculum is designed to help early childhood educators feel inspired and confident in gardening and cooking with young children.

These materials were developed as part of the Wisconsin Farm to Early Care and Education movement, which strives to teach children where their food comes from and build their confidence to grow, select, and prepare their own fresh food. Farm to ECE is about celebrating our connections through food to nature, our cultures and identities, and to each other. It can bring together children, teachers and staff, families, and local farmers and food producers in a wide network of support. Joined by a concern for the mental, emotional, and physical health of our children, this network is working toward a more equitable food system that values every child and provides them with quality educational experiences and quality food for their growing bodies.

We know that children who grow and prepare their own food are more willing to try new things, helping them form a positive relationship with food. Children who are able to garden and cook also feel more socially, emotionally, and physically connected to nature, their culture, and adults in the community who produce their food. Outdoor learning invites children to use all senses and emotions as they encounter the wonder of the world around them.

We know, too, that staff and teachers benefit from being connected to nature and their food, and may need some guidance in gardening and cooking activities. These activities may be new to them, including the willingness to try new foods themselves! We want them to have confidence in sharing these experiences with the children in their care and to know they are connected to a larger community of support through this work. (See Training 4 for more information about this support.)

# Program Philosophy

We would like to share the spirit in which this training curriculum was written and the philosophy behind our work.

## Joy and Liberatory Practices

Gardening, cooking, and edible education activities are ideally joyful experiences for both children and educators. What is most fun or enjoyable for teachers will also be so for children and vice versa. If it's not fun, then more support, time, or energy is needed to help make it so. Start small! A few short activities done joyfully will always be more beneficial to all than to feel overwhelmed or stretched for time and energy. We know time and energy for early childhood educators is extremely valuable and must be used wisely.

Here is a joyful perspective from the School Garden Support Organization Network's resource compilation on Equity and Inclusion in Garden Education.

".... education as celebration starts from abundance. This can be strengthened by recognizing students, regardless of age, as co-conspirators in learning and fun, and by securing space for children and young people to bring their own wisdom, inherited from the wisdom of their communities. Knowledge like this is not scarce, it's prosperous like the Earth and the sunlight.

To encourage environments that celebrate such knowledge, educators can attend to these four areas: teacher training, pedagogies, curricula, and spaces (socio-emotional-physical communities). These four topics overlap and inform one another deeply—and when combined, these four elements uplift students, garden education becomes liberation work, inviting young people into their own power."

We hope that the information in this training curriculum will be helpful in creating liberatory spaces for every young child and early childhood educator!

## Language Around Food and Health

The creation of liberatory spaces for all around the topics of food and health involves using thoughtful language. Many children live in households where there is little choice in the types of foods they can access. This can complicate discussions around “healthy” foods and “good” and “bad” foods which can easily slip into judgment or unintended shaming about a person’s circumstances.

Body image issues are also rampant in our society, and some of this has originated from a well-meaning but damaging focus on health from a standpoint of an “ideal” Body Mass Index (BMI) or “appropriate” weight without taking into account the full range of variation in the human body. We recognize the role that BMI has played in perpetuating white supremacy, as well as in creating barriers to health care, and do not recommend its use for young children (for more background on this issue please see this article https://www.goodhousekeeping.com/health/diet-nutrition/a35047103/bmi-racist-history/). For similar reasons, we also try to avoid using overly specific language around calories, saturated fats, etc.

Nutrition and exercise are indeed important for human health. When teaching about food and exercise habits, we encourage a focus on additions of nutrient dense or colorful fresh food and joyful movement rather than a focus on body size or “junk food.” We also discourage the use of using food as a reward or the use of rewards for trying foods. It is important to celebrate a child’s courage in expressing their readiness or lack thereof to try something new. Shaming can lead to negative experiences around food which can have lifelong consequences.

There are plenty of reasons for gardening, cooking, and edible education activities to be joyful and liberating. The language we use is important, and we are all learning the best way to do this. Please have grace for yourself and others as we learn the best way to teach and model these important messages about health.

## For Trainers of this Curriculum

Whether you are a center director, garden educator, or an early childhood support organization staff person, if you are using this curriculum to train others we would like to offer guidance on language to use when teaching others these ideas. Especially if you are well-versed in gardening or cooking, please refrain from saying that any of the

activities are “easy”. What is easy for one person may seem huge and daunting to another, especially if they have never done anything like it.

In addition, we have attempted throughout this curriculum to use the language that teachers/providers “can” do or could consider doing any of these activities rather than “should”. We know that there are already plenty of “shoulds” or requirements in early childhood care and education. In order for these activities to be joyful, educators must come to them by choice and interest. Any time that you are able to model the activity in person, confidence and interest will increase!

## Racial and Social Equity

One of the reasons Wisconsin Farm to Early Care and Education is so important is that it can address social and racial equity. It provides an opportunity to learn about the culture of others as well as our own. Stories of seeds, ways of growing, harvesting, and cooking food, what we eat, how and when we eat, and who we eat with are all intertwined with our heritage, history, and social dynamics.

In addition, the history of agriculture in the United States is both rich and wrought with the tragedy of the enslavement of African people, displacement and genocide of Indigenous peoples, unfair and dangerous working conditions for immigrant workers, and more. We know that low-income families and Black, Indigenous, and Children of Color do not all have the same access to or same quantities of fresh, local, and culturally appropriate foods. We also know that in teaching about food and horticulture, there are many wonderful opportunities to explore cultural knowledge and community joy that celebrates the connections and innovations made by BIPOC individuals and diverse cultures.

Wisconsin Farm to ECE can help to make sure children, some of whom spend a majority of their waking, young lives in child care, get the quality nutrients they need. It can help them know that their food comes from somewhere and is grown for them with love, respect for their culture and food preferences, and with joy for celebrating exactly who they are. If children can have an on-site garden or visit a garden or farm, they can feel connected to the earth and know they belong to this world and their community. Wisconsin Farm to ECE can play an important role in “inviting young people into their own power” and help them become aware at an early age that they are not only seen and heard but also worthy of good food and investment from their community.

We want to acknowledge that as of this writing (Spring 2023), Rooted is a diverse but primarily white-led organization. We are committed to racial and social justice, and are still learning the best way to do this work as we change our internal and external organizational dynamics. We welcome any and all feedback on our efforts, our resources - including this curriculum- and our ways of being. We are working to do better and our children need us to do so now.

## Connections with the Wisconsin Model Early Learning Standards, YoungStar and GoNAPSACC

Gardening and cooking activities can provide an incredibly rich learning experience for children. **For example, in just five minutes of digging potatoes, young children touch on all five developmental domains and 24 different performance standards of the Wisconsin Model Early Learning Standards!** When children use their bodies to dig and pull potatoes from the ground they use coordination and strength. They express a wide range of emotions - from excitement at finding the potatoes to anything from wonder or disgust at encountering a worm. They react to how their friends are experiencing the garden too.

Children take a risk by engaging in what is likely a new activity for them, and they are rewarded with a tangible accomplishment. Filling a basket with potatoes they dug themselves fills a child with pride and a sense of contribution, especially if the potatoes are used to help make a snack or meal. Children learn to follow directions, figure out how to share tools, and learn the safety rules and social expectations in the garden. When a potato doesn't come out of the ground easily or their basket fills up, they must solve the problem. All of a child's senses are used in the garden to take in information and to notice the differences in the size, color, and texture of the potatoes.

For more detailed information on how specific gardening and cooking/taste test activities connect to the WMELS see the following resources from Rooted:

- Sunflower Garden for Young Children - Connections to WMELS
- Herb Container Garden for Young Children - Connections to WMELS
- Apple Taste Test for Young Children: Connections to the Wisconsin Model Early Learning Standards

**Programs participating in YoungStar** (Wisconsin's Child Care Quality Rating and Improvement System) can find many ways to improve the quality of care and education for children and engage with families by using farm to ECE activities. Rooted's resource "Wisconsin Farm to Early Care and Education: Considerations for Programs in YoungStar" highlights specific ways to integrate farm to ECE into your program that are relevant to YoungStar Evaluation Criteria. For example, farm to ECE offers many applications for developmentally appropriate practices in natural and authentic contexts. A culturally sensitive environment can be created by singing songs, reading books, and cooking recipes from different cultures, and specific suggestions for each are offered in the resource linked above. In addition, there are many ways to incorporate farm to ECE through interest areas/centers in the classroom and outdoors.

Farm to ECE can even be incorporated into staff and teacher professional development time and can be used to encourage staff wellness through gardening and modeling healthy habits for children. And finally, farm to ECE offers many opportunities for family engagement, from inviting caregivers to share their food stories and recipes or gardening techniques to offering families taste tests or extra vegetables at pick-up time to communicating with them about local farmers' markets and food programs.

**Programs using Go NAPSACC** evaluations will find that farm to ECE programming has opportunities to improve many, if not all of the self-assessment areas. Go NAPSACC has a dedicated farm to ECE area, as well as Child Nutrition, Physical Activity, and Outdoor Play & Learning. Farm to ECE and gardening activities can give your site plentiful options for increasing free play, structured learning, seasonal activities, as well as walking or field trips to local farms and markets! Garden improvement lends itself to other Go NAPSACC ratings in shade, play structures, family engagement, and sensory play.

Through garden education and outdoor learning, providers can also improve their ratings in the Screen Time area by having alternate activities available in the garden. Local food purchasing and preparation can also provide opportunities for the Breastfeeding & Infant Feeding as well as Oral Health areas through homemade baby food without added sugars and the reduction of sugary drinks offered in favor of fresh or local juices.

# Acknowledgements

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**If you have any feedback, questions, or suggestions feel free to email us at wifarmtoece@rootedwi.org!**

The Rooted team operates on the traditional homelands of the Ho Chunk people and recognizes the continued sovereignty of the Ho Chunk nation. We serve child care providers throughout Wisconsin and acknowledge the continued struggle of all tribal nations to reclaim their land and food traditions from centuries of settler colonialism.

# Training 1
# Site Evaluation & Garden Planning

## Outline

1. Site Evaluation
2. Garden Planning
3. Classroom Integration
4. Sourcing Materials
5. Overview of the Growing Season

## Site Evaluation

### Space

Early care gardens can be any size. **Even if your center begins with a few containers with flowers or snacking veggies, that's great!** If you're interested in a slightly larger garden, consider the following attributes to determine where the best placement for your garden beds would be. Raised beds can be more accessible for little ones or those with mobility issues, and they are a great solution if your site's soil is poor or you are worried about contamination from urban development.

### Soil

The best way to determine your soil's viability for growing is to dig in yourself! Take a small shovel or trowel and excavate a small amount of soil from multiple places in your potential growing site. Consider both soil texture and color. Softer, loamy soil is ideal for gardening, but there are options for sandy and heavy clay areas as well. Darker soil means higher organic matter content, which provides nutrients for your plants. You can also do a Mason jar soil test and include children in the experiment!

## Sun

This is one of the most vital considerations when starting your garden. While there are a few food plants that will grow in partial shade, most veggies need full sunlight. Avoid starting your garden on the northern side of a building or under large trees. If you don't have a spot that is consistently sunny, consider a mobile garden using pots in a wagon that you can move to follow the sunlight. If your site has a large concrete or asphalt area, plant your garden 20-30 ft away from that surface so that your plants will not be scorched in the summer heat.

## Water

Before you dig in, make sure there is an outdoor spigot close enough to your garden site! Bucket brigades can be fun once in a while, but will become tiresome during dry summers. If you must use hoses to reach your plants, make sure they have a storage spool or are collapsable to avoid little feet tripping over them when not in use. If you have no outdoor water sources, keep your garden small enough to manage with buckets, or set up a rain barrel to catch some free water (check your local ordinances, some municipalities have specifications for rain barrel size and placement). **Observe water movement in your growing area after snow melt or a heavy rain. Avoid planting in areas where water stands for long periods.**

## Site Selection

Consider the placements of buildings, doors, and water access to choose an ideal area for your plants. If your garden will share space with outdoor play equipment, make sure you have clear pathways or barriers to prevent accidental stomping. **Gardens do best when they are tended regularly, so placing your plants where they will be seen daily is ideal.** It's easy to neglect a garden in the underused side yard, but if your veggies are growing near your play or pickup area, you will encourage children and their families to visit and harvest more often. A good site selection can make maintenance easier on staff members and encourage classroom participation.

# Garden Planning

## Plant Selection

Your food service and classroom goals will inform what kind of plants you include in your gardens. Veggies are always fabulous in the early care garden, but your learners may also enjoy perennial herbs (for sensory play, cooking, and pollinator support), perennial food plants like berries or asparagus, and annual flowers such as cosmos and sunflowers.

Invite your students to help in your garden planning by looking through catalogs together, and take a vote with the class to pick out the top choices. **It is also important to consider the cultural backgrounds and food traditions of your staff and students.** Sending a short survey out to families can be a great way to **make sure you're including culturally relevant foods and herbs**, as well as to discover new and unique varieties to grow and taste. You can also find out if you have any experienced gardeners or cooks in your community who might be willing to volunteer some time to help with garden care, sharing recipes, or telling stories about their food traditions.

Consider your staff time and energy as well. It can be really tempting to try and supply all of the veggies used in your meals, but be wary of biting off more than you can chew with such a large project. **If you're new to gardening, it's best to start out with 4 or 5 kinds of vegetables** (flowers and herbs may be a bit easier to care for, especially perennials). Even starting with one species per year as your classroom project can be very rewarding, as you'll be able to learn the plants' needs in depth and give them lots of attention and care.

**Some safe early care favorites are:**

- Ever-bearing strawberries
- Sugar snap peas
- Baby carrots (Danvers or Nantes are great short varieties that grow well in many soils)
- Radishes (Watermelon and Sparkler are especially nice varieties)
- Beets (Red and Golden varieties give more interest to taste tests and meals)
- Chives

- Cherry tomatoes
- Rainbow chard
- Microgreens or salad mix
- Sunflowers (miniature or full height varieties, or even big-seeded snacking ones)
- Edible flowers like violet, nasturtium, and borage
- Fruit trees and bushes, such as apple, pear, and plum
- Mints and lemon balm
- Lavender, thyme, oregano, and other aromatics
- Pumpkins (check out cute miniatures like Baby Boo so every child can have a little jack-o-lantern at harvest time)
- Potatoes (there are many unique varieties to try! Harvest early for baby spuds)
- Melons (Wisconsin Pride cantaloupe is a reliable one, and yellow or speckled watermelons can be a great surprise)
- Popcorn (there are great miniature varieties that are decorative too)
- Beans (green beans are a favorite, but check out the colorful varieties of dry beans as well. Threshing and sorting them is great for sensory exploration. Scarlet Runners and Dragon Tongue are fun and colorful throughout the season.)
- Raspberry (thornless varieties) or blueberry plants come back year after year and are great for snacking in the garden.

**When considering your plant selections, make sure to double check their growing needs and mature size**. Mints and chives are best planted in containers, as they will easily take over a garden bed. Plants like tomatoes, okra, pumpkins, and beans can grow quite large and overwhelm a garden, so make sure to give them lots of space!

Planting a **Three Sisters garden** is a way to maximize space and include Indigenous farming techniques in your lessons. See this great collection of videos from Ukwakhwa (Oneida Nation citizens farming on the Oneida Reservation in Wisconsin) for more information about this technique and cultural traditions. Squash, corn, and beans support each other's growth, and the Fourth Sister sunflower can add even more height and interest to your garden.

You can also select plants according to a theme food, like a pizza garden, salsa garden, bibimbap garden, or tea garden. See the resource list below for more garden theme ideas.

## Seed Starting vs Transplants

While many of the above plants can be sown directly into the garden after frost (corn, beans, root veggies, squash, and greens), some crops have a longer growing time and need to be started early indoors in Wisconsin. These include tomatoes, peppers, eggplant, okra, and some squash. Seed starting indoors can be a fun classroom activity, but it also adds a few months of extra work and requires some extra equipment. Seeds are also cheaper than buying transplants, but after labor, soil, and supplies they can come out about even. **If you're interested in starting plants from seed with your class, consider only doing one species per year until you have your process streamlined.** Even if you do buy transplants, your kids can learn about seed growth by sprouting beans in a small jar or baggie to observe. If you have any gardeners in your center's families, they may be willing to grow a few extra plants to share with your center!

Transplants can shorten the amount of time before you harvest, and help your garden get off to a healthy start. While they can be pricey when purchased from retailers, there are a few options for more affordable plant sourcing. **Local farmers, high school agriculture classes, or community gardens may be willing to share their extra transplants with your center.** Contact them as early as you can to inquire about their capacity or plant availability. Growers usually start their seeds in February and March. You can also join in on plant purchases with other early care centers or schools for a bulk discount as well.

## What seeds need to grow

Whether you're starting your seeds for transplant or sowing directly into the garden, they all have a few basic needs in order to get a healthy start.

- Soil nutrients
    - Amending your outdoor beds with compost is a great way to add nutrients to a new garden and is recommended about every 3 years when growing in the same space. **Free compost may be found from your municipal compost site or local farmers**, but you will need to find transport for large loads. For best food safety, avoid using manure-based compost. Composted leaves, lawn clippings, food scraps, or purchased mushroom compost are great options. When starting seeds indoors, make sure you find a soil mix made specifically for seed starting. Organic mixes will have

fewer artificial nutrients and additives. Look for soil mixes that are safe for children and do not include a “keep out of reach of children” label.

- Water
    - Seedlings need consistent moisture levels, without being too wet. Keep an eye on your soil moisture by doing a finger test daily. Seedlings may need daily or twice daily watering. For indoor plants, consider a spray bottle to mist the top of the soil and help maintain even hydration. If they become too wet, increase airflow with a small fan to avoid mold or disease.

- Sun/Warmth
    - This is more of a concern when starting indoors. Seeds planted directly into the garden will have plenty of warmth from the soil and sun. Indoors, make sure you have a grow lamp placed 6-12” above your seed trays. A warming mat will help more finicky seeds sprout evenly, but isn’t always necessary. Placing your seed starting trays near a heat register or other warm spot can do just as well.

- Air/Space
    - Be mindful of your seed spacing, especially when planting directly into the garden. Little ones (and excited grown ups) tend to want to scatter as many seeds as possible into a space, but that will result in stressed and crowded plants, which are more prone to disease. Follow spacing and transplant guidelines on your seed packets or plant labels. When starting indoors, make sure your seedlings have adequate airflow via a gentle fan (not directed straight at the seed trays).

See the Plants Want to Grow resource for more information on seed starting and transplanting.

## Classroom Integration

Changing up your classroom routine can be one of the most intimidating parts of starting a garden, but it can be a very rewarding change! Having even 10 minutes a day in your outdoor space can make a big difference. Depending on the size of your garden, you

may need to block out a few hours a week during planting and harvest seasons, but maintenance can be pretty quick if you are consistent. **Once your students know how to tackle their garden tasks, you'd be surprised how quickly a few little hands can take care of weeding and watering.**

There are many science, math, reading, and social studies lessons that can take place in the garden and coincide with regular maintenance activities. Measuring and estimating are especially common in the garden, as well as observation of bugs, animals, and birds throughout the season.

Even if you are not actively working in your garden, there are many ways you can enjoy the space for normal class activities. Having circle time, story time, good morning stretches, or pickup time activities in the garden helps children build a relationship with your growing space and encourage garden engagement during free time. You will probably discover a few avid young gardeners who are happy to volunteer their time to help with maintenance before and after class.

**We have included a number of activities throughout this publication to try with your class to integrate the garden.** For example, after any rainfall, be sure to check the rain gauge and record the findings. Have an outdoor table or picnic table on the play yard to provide space to do comparison, measuring, sorting and recording activities.

Consider integrating benches, logs, and trellises to create visual interest and inviting spaces for children and staff to relax, have storytime, and explore. Log rounds make great seating for circle time, and can be cheaply obtained from local arborists or your city's tree care team. Trellising beans on tall poles can create great tents or lean-tos that support your growing plants and provide a shady hiding spot for kids. Integrating herbs or wildflowers in your play spaces can also liven up the yard and provide sensory exploration opportunities.

**Kid-sized tools are important for safety and avoiding accidental plant harm.** Large shovels or long-handled tools are best reserved for adult use. Most children will only need small hand trowels or cultivators to complete their garden work, and many might even prefer to just get their hands dirty! Make sure to have small cups available for watering, as big water buckets can result in soggy plants.

**Offering aprons, boots, and gloves is always a good idea for those who might be averse to getting dirty or are sensitive to gritty textures.** Raised beds are more

accessible for children using mobility aids, but make sure your pathways are smooth and even to allow for easy movement. Consider integrating a quiet area where overstimulated little ones can take a break from the excitement of garden time.

## Sourcing Materials

As mentioned above, there are many ways to reduce or eliminate the cost of garden materials.

- Programs using CACFP funding can use their reimbursable funds to purchase seeds and gardening supplies. See the CACFP Local Foods Memo for details.
- Reduced or free compost or mulch may be available from farmers and municipal sites.
- Wood chips can often be found for free from local arborists or city crews. Check out https://getchipdrop.com/
- Untreated lumber for raised beds may be found at scrap yards, or local hardware stores may donate their odd pieces.
- Labor for excavating or building beds may be provided by family members, Master Gardeners, or AmeriCorps members in “garden blitz” events.
- Planters, seed trays, rain barrels, and so much more can be found for free or cheaply on Craigslist or Facebook Marketplace and local buy/sell/trade groups.
- Bakeries and cafes often have spare 5 gallon food service buckets, which are great for storing and transporting water and soil.
- Food pantries and local nonprofits may supply seeds and plants for a share of your harvest.
- Microgrants for school and early care gardens can be found to help purchase kid sized supplies and garden materials. Check your local big box or hardware stores, neighborhood organizations, and early care support community for grant opportunities.

### Sources for free seeds or plants:

- Some public libraries have free seed libraries or host seed exchanges wherein people from the community bring their extra seeds to share or donate
- Local botanical gardens and teaching farms
- Collaborate with a local farmer for free or reduced seedlings
- Seed companies often give away some seeds for educators or nonprofits

- Garden centers often throw away plants at the end of the season. See if your local store would donate them instead!
- Community seed exchanges are a great way to find unique varieties.
- Sites in Dane County can apply for free pollinator plants through Plant Dane, a native plant program: www.ripple-effects.com/Plant-Dane

By hosting a few garden work days throughout your season, **you can engage family members in the garden space** and have some extra volunteer labor to help with big projects. This is especially handy during planting, harvesting, or when the weeds have gotten a bit out of control. Share an abundant harvest by having a kid-run market stand at pickup where families can choose some fresh produce to take home. Invite interested family members to share their talents by serving as guest teachers in the garden or kitchen.

## Overview of the Growing Season

Winter (December-February)

- Clean up
- Mulching
- Garden planning
- Seed or plant purchases
- Seed starting indoors (Feb-Mar)

Spring (March-May)

- Seed starting or transplant purchases
- Garden prep (raking, weeding, compost, bed repair)
- Nature observation (phenology)
- Direct planting & transplanting (timing varies based on your last frost date)
- Seeding and harvesting of quick, cool season crops (greens, radishes, etc)

Summer (June-August)

- Weeding
- Watering
- Trellising as needed
- Harvesting summer crops
- Planting short season crops for fall

Fall (September-November)

- Harvesting cool and long season crops
- Processing and storage of extra produce
- Mulching
- Garden clean-up

## Resources

UW Extension Vegetable Guides – Growing guides for most common garden veggies. Give a call or email to your local Master Gardeners with questions!

Early Childhood Learn, Grow, Eat & Go! – Junior Master Gardeners - Garden curriculum for young learners

Great Garden Detective Curriculum - Growing Resources (Appendix C) - USDA – Great step by step growing guide for common garden plants (leaf lettuce, spinach, carrots, beets, Swiss chard, raspberry/blackberry, and strawberries)

Got Dirt? – Garden planning and growing guide for beginning gardeners starting school gardens in Wisconsin (also available in Spanish)

Plants Want to Grow - Rooted's Gardening 101 for ECE

Stomp, Sniff, Snack: Indestructible Plants for Early Care and Sensory Gardens - Rooted

Fearless Beginning Gardening at Your Program - Rooted - provides confidence to give gardening a try, even if you have never done it before, and gives advice for handling any gardening "failure".

Sunflower Garden for Young Children - Connections to WMELS - Rooted - provides all supply and growing information for starting a sunflower garden and suggested activities with connections to WMELS for each early care age group (infants/toddlers, 2-year olds, 3-5 year olds, and school age)

Herb Container Garden for Young Children - Connections to WMELS - Rooted - provides all supply and growing information for starting an herb container garden and suggested activities with connections to WMELS for each early care age group (infants/toddlers, 2-year olds, 3-5 year olds, and school age)

Tree Exploration: A Farm to ECE Activity - Rooted (this may be helpful if there isn't great space for a garden but if there is at least hopefully some kind of tree nearby!)

Safety in the Little Gardeners' Garden (shopify.com) - UW-Extension - Important info for garden planning considerations for licensing, etc.

Diggers' Hotline – call 811 or use the portal at https://www.diggershotline.com/ to avoid buried cables when cultivating your garden site.

# Training 2
# Teaching & Garden Maintenance

## Outline

1. Teaching in the Garden
2. Integrating Gardens into Class Schedules
3. Garden Maintenance
4. Record Keeping

## Teaching in the Garden

**Think of the garden as part of your classroom and not a separate space.** Consider the activities you already do everyday and whether they could take place outside in the garden. Bring **circle time and story time** to the garden at least once a week, but even better if it is almost daily! Make classroom garden traditions with the children. Have them help make decisions about every aspect of the garden. The more time they can spend in the garden and the more ownership they feel over it, the more excited they will be to learn in the garden.

Note that **some children (and adults)** who have not grown up around green spaces and in gardens **may not feel comfortable in the space right away** and may be understandably nervous about bugs, worms, and what seems to be a foreign environment. In this case, empathy and understanding, and allowing a slow warming to the garden will be helpful. **Allow students to do another activity if they are not ready to work in the garden, and do not use working the garden as a punishment, nor exclude children from outdoor time as punishment.** Sometimes bringing blankets or towels to sit on is handy for people who do not like the feel of grass or dirt, or for those who are concerned that insects may crawl on them. It's always a good idea to have extra gloves, aprons, and shoe covers available to help dirt averse or sensory-sensitive learners fully participate in outdoor lessons. **Know that every student will approach outdoor learning**

**differently, so make space for a variety of expressions of hesitance, curiosity, and joy rather than quiet, rote learning.**

Consider pushing your boundaries on what weather to go outside in as well. **There are many wonderful activities to be done in gentle rain, snow, or hot summer days.** When planning to bring the learning outdoors, be sure to follow your state and site's inclement weather policies. It's great to acclimate children to different types of weather, but safety should be the first consideration in extreme temperatures. If you can, keep spare snow and rain gear on hand for those who may not have access to them, and consider how you'll handle outdoor-to-indoor transition with wet clothes and shoes. While there are some extra logistics involved, the fresh air helps everyone's minds and bodies!

## Integrating Gardens into Class Schedules

The more time your children and staff spend in the garden, the better their connection to the space will be. Even just five minutes of observation in the morning, or a few little hands helping you to weed at pickup time will mean more engagement in garden lessons and better maintenance for your space. There are many ways to creatively incorporate your outdoor space into your daily routines – find out what works best for your program!

Below are some ideas on how to incorporate the garden or garden-related activities into morning circle time, sensory activities, art projects, and outdoor investigations along with some ideas for outdoor garden games. Also **see Appendix A for garden-related songs**, **poems, and fingerplays,** and **Appendix B for farm to ECE book titles** for use during story time in the garden or classroom.

**Morning Circle Time**:

- **Garden Safety Rules and Agreements** - During circle time, work with the children to come up with a list of agreements for your garden space. This may be something they need to work on for a few days. Then when all of the rules are listed, make a sign and have the children decorate it and make reminder cards, if necessary. Post the rules by the classroom door or in the circle time area. Review rules before going outside each day.
- Start off with a **welcome song** that incorporates the garden and planting. If you already have an established song which you would like to keep, include singing to and with the plants. If you do a welcome for each child, **welcome the tomatoes,**

**beans or spinach to your group as well**. See Appendix A for song and poem ideas.

- **Bring the children's name cards to the garden** and hide them by different plants. Then the children need to find their card and stand by that plant. If they know it, they can tell the class what plant they are by.

- How long does it take to grow? **Bring seed packets to circle time** and talk about how long it will take for different seeds to grow and then to harvest. Mark expected dates on a classroom calendar. Then track the progress. Remember these are approximate times; some plants will be ready for harvest in shorter amounts of time and others will take longer to mature depending on the weather..

- **Garden Colors** - talk about the different colors that vegetables come in. Have children name vegetables that are green, red, purple, etc. Introduce how there are beans that are purple or carrots that are yellow or cauliflower that is green.

**Sensory Activities**

- Add plants and plant parts from the garden such as crunchy fall leaves, bark, dried flower stalks, or gourds to the sensory table.
- Young children can paint with mud from the garden on the sidewalk.
- Provide a small tub of water to wash produce from the garden.
- Compare soil from the garden with sand from the sandbox. Compare how both soils feel when they are wet and when they are dry.

**Music Gardens**

Adding a music garden to your garden or play space is a great way to give children more sensory experience and allow them to create their own music. **A music wall can use materials you already have or items donated or from a thrift store.** Items such as old pots and pans or muffin tins and drying racks are great additions. Or if you have a child xylophone that has cracked and can no longer be used in the classroom, you can take the keys off of it and attach them to nails on your music wall for outdoor play. Music gardens are also great to explore when it rains, observing how each container sounds when raindrops strike it.

Buckets, water bottles filled with different amounts of water, empty food cans (be sure these have been cleaned and that the edges are not sharp), metal spoons, small pipes, mesh sieves, PVC pipes of different sizes, dryer hose, or old gift tins make great additions. Check out this site for more ideas and inspiration: https://meganzeni.com/how-to-build-a-music-wall-in-your-outdoor-classroom/

**Outdoor Hand Washing**

Proper hand washing when handling food is very important. Also, many children don't like the feeling of dirt on their hands and want to wash it off as soon as possible. To avoid countless trips inside to wash hands in the bathroom, **consider building an outdoor hand washing station near your garden.** One example is a Tippy Tap: essentially a jug with water that can be tilted to pour water without having to touch the jug. A bottle of hand soap or powdered hand soap provides a great way to have children wash while outside. Check with your licensing specialist to find out if you are allowed to have one for hand washing**.** Even if they are not counted as a true hand washing option, they are great for allowing kids to wash off the dirt! For more information visit this site: https://meganzeni.com/how-to-build-a-tippy-tap/

**Art Projects**

The garden and outdoor classroom are filled with materials to use for art projects. Allow children time to take in the colors and shapes in nature and encourage them to use this as inspiration in art projects. **Have each child keep a garden and nature journal** as you incorporate the garden and other outdoor activities into your classroom routines. If your center does not have small journals, they can be made by stapling together some paper and having each child decorate a cover.

Have dedicated times to go out to the garden and encourage children to draw a picture of what they see or hear. **Invite children to observe the different colors, shapes, shadows, and patterns that they are seeing.**

Try these garden and nature inspired art projects:

- Children can collect natural materials from the outdoors to use in art collages and mobiles, to weave into an outdoor loom, or to make a fairy garden.
- Collages can also be made from seed catalog photos and empty seed packets.
- Make flower and vine crowns and bracelets.

- Incorporate natural materials into drawings by gluing leaves, flowers, or twigs onto paper as parts of the image.
- Make leaf rubbings by laying paper over a leaf and coloring over the top with crayon or pencil to get the leaf impression to show through.
- Have children create signs for the plants you're growing, and incorporate their art throughout the outdoor spaces.

**History/Social Studies/Reading**

Gardens provide a great starting point for many discussions of history, cultural practices, and family stories. There are a plethora of amazing children's books out now about recipes, gardening, and food traditions of many peoples. Make sure your books and materials allow all students to see people like themselves thriving. **Look for ways to integrate culturally relevant lessons for your students by celebrating agricultural and culinary genius from people of many genders and cultural backgrounds.** Consider bringing in guest speakers and teachers from the surrounding community, including family members or partner farmers.

Be aware that some students may avoid agricultural education due to cultural and generational trauma. Do not force students to participate in garden education, and look for ways to engage these students based on their own interests and joys around plants, food, and outdoor spaces. Garden education can be healing and liberatory when we make space for difficult discussions and learn about the historical and ongoing struggles of people of color.

**Gardens are an excellent place to talk about diversity and interdependence.** Different plants need different things, and grow in a variety of shapes and sizes, but they all provide us with blessings of food or beauty. Our gardens are more healthy when we grow a variety of crops (versus a monocropped field with erosion and disease), and a diverse garden welcomes other neighbors like butterflies, birds, and bees! Plants rely on each other and their pollinator friends to be their very best. A bountiful garden is a wonderful way to welcome your local community into your space as well!

**Science/Math/Outdoor Investigations**

The garden is a great place to practice math and to do more science investigations. Have children predict when they think plants (like pole beans or sunflowers) will get to a

certain height or how long it will take to get produce. Comparing lengths of carrots, weights of zucchini, and circumference of pumpkins are great math lessons. Checking on the rainfall in a rain gauge helps children understand measuring volume. Help children come up with their own experiments and investigations.

**You don't have to be an expert in gardening to lead the children in learning in the garden! You only have to be willing to ask questions.**

- Lead children in inquiry with these kinds of statements and see what their thoughts are:
    - **"I notice..."** that this leaf has holes in it...
    - **"I wonder"** how these holes got here...
- Encourage peer-to-peer interactions – "Tell Alex what you found under the leaf"
- **Write down their questions** just as they phrase them to answer later and post their questions on paper throughout the classroom.
    - **If you do not know the answer to a question, it's a great opportunity to model curiosity and research!** Let students' inquiries lead classroom discussions, and encourage students to teach you and each other.
- Children can **look for shapes** in the garden or compare the height of growing sunflowers to their own height.
- Provide **magnifying glasses** to examine details of plants or insects.
- **Compare lengths and weights.** For example, harvest a few zucchini of different sizes. Have children compare the differences. How much do they think each one weighs? How big around is each one? Sort from smallest to largest. Predict which has more seeds inside.

Another exciting opportunity for learning that can happen in the garden is to participate in **citizen science (now commonly called community science)**. This is where people all around the world collect data that scientists use to understand local biodiversity. Many projects are designed for children of all ages to participate in. Children can know that the data they collect is used and shared by people around the world!

Here are some community science opportunities to participate in:

- Journey North - help to track the movement of **Monarch butterflies** and also the arrival and departure of **American robins, hummingbirds, and more**

- The Great Sunflower Project - The Great Sunflower Project asks that you plant Lemon Queen sunflowers that will be looking fabulous when schools reopen in the fall. Kids will count **pollinators** on the sunflowers
- WiBee: The Wisconsin Wild Bee App – Wisconsin Pollinators – UW–Madison - record **bees** visiting garden plants to help us understand Wisconsin's bee populations
- Celebrate Urban Birds from the Cornell Lab of Ornithology and the Great Backyard Bird Count provide opportunities for learning and tracking **bird species**
- Budburst - tracks **plant life cycles**
- For even more opportunities see: CitizenScience.gov

**Outdoor Garden Games:**

- **Fruit and Vegetable Tag** - One child is "it" (the tagger) and tries to tag each child to get them out. To avoid getting out, the child needs to call out the name of a fruit or vegetable. If they don't say the name before they are tagged, they have to sit down. If they say a name, the tagger must let them be and go after someone else. When everyone is sitting, the last person tagged becomes it.

- **Bee Dance** - Have the class stand in a circle and talk about how bees create "dances" to tell other bees where flowers are located. Start the dance off with a dance move, then go around the circle with each child showing their dance move. Try to put all of the movements together so when the last child does their move, the dance is complete. (Good activity to do with the book "Are You a Bee? by Judy Allen and Tudor Humphries.)

See the **Resources** at the end of this chapter for more ideas. Most lesson activities can be completed in 10-15 minutes. If possible, plan for at least one bigger garden activity weekly, interspersed with short daily weeding or circle time in the garden. A few activities are long term and are completed over the course of a few days or weeks. These activities integrate a number of different learning areas and involve the children in more critical thinking processes.

# Garden Maintenance

## Garden Tasks and Tips for Involving Young Children

Keep in mind that when gardening with young children there will need to be **a balance between learning and productivity**. While you want to have a garden that successfully produces fruit and vegetables, things just won't be done perfectly when young children are involved. Just like an art project may not look the way you envisioned it looking, a garden doesn't always provide all the produce you want it to or remain neat and tidy!

Sometimes plants will get over-watered, a seedling's stem will break when being roughly handled, or children may put too many seeds in one small spot. **The tips below will help you avoid some common mistakes**, but some will be just plain unavoidable. The resource "Fearless Beginning Gardening at Your Program" can also help with knowing how to handle things that may go awry in the early childhood garden. **Remember, perfection is not the aim, but introducing children to the joy of gardening and allowing them to explore and thrive outside is the goal!**

Another way to help the early childhood garden be more successful is to (said in a whisper….) fix what you can after the children are gone…. Too much correction in their presence can take away the fun from gardening, but after they have left, if you have the chance, you can quickly re-plant a transplant, water a plant that was ignored, or spread the seeds out a bit more, etc. to increase the odds of success!

A list of gardening activity recommendations by age group (infants to school-age) is available on pages 18-19 of Got Veggies? ECE Edition.

## Seeding/Transplanting

For technical advice on planting seeds or transplants in your garden (like information on using seeds vs. transplants, frost dates, hardening off transplants, etc.) please see the short resource Plants Want to Grow or pages 18-19 in Got Dirt?.

Tips for seeding with young children:

- Only give children a small portion of the seeds in case they get dropped or misplaced.

- Keep in mind that some larger seeds like nasturtiums, peas, and beans, can be choking hazards for small children.
- For tiny seeds like carrots or lettuce - the seed can be mixed with a small amount of sand from the sandbox and put into a shaker container (like an old parmesan cheese or hot pepper flakes container). Then the children can shake the seed on the soil and it will be more spread out.
    - **If too many seeds get planted in one spot**, use it as a teachable moment. Ask the children what they think will happen. Have them predict and then watch for the seeds to sprout. When the crowded area emerges, gently pull or clip the stems of the extra plants at the base to leave enough space for the remaining seedlings to grow to full size.
- Use a pinch of flour to indicate the spots where large seeds can be planted.
- Children like to dig deep holes for seeds but try to encourage them to make shallow holes. Seeds normally like to be planted about 2 or 3x deeper than their own thickness. If planted too deep, they won't be able to break through the surface of the soil as they grow. Seed packets will indicate the depth the seeds should ideally be planted.

Tips for transplanting with young children:

- Lay out the plants in the garden where they will be planted to avoid overcrowding or having too much space between plants.
- Have a stick or ruler that is the length of space needed between your plants to have the children space plants appropriately.
- Put a stick in the ground at both ends of a row and tie a string between the sticks to provide a guide for the children so the rows stay straight.
- Have the children place the plant in the hole and "tuck it in" with soil.
- Be sure to water each plant thoroughly after transplanting is completed.

**Please see the resource Plants Want to Grow if you would like more detailed information about transplanting.**

## Watering

Children love to water their garden. Sometimes they like to water too much! If you are using container gardens, have a child carefully stick one finger about one to two inches down into the soil. Test close to plants but not where you will disturb their roots. If you have an in-ground garden, do this same finger test but in a few places around the garden. **If all the soil is still moist, do not water the garden**, if it is dry, then it is good to water. Another option for the in-ground garden is to take a small handful of soil and try to squeeze it into a ball in your hand. If it sticks together, the dirt is moist enough, if it crumbles, it is time to water.

The soil should remain moist but not soggy. In general, a garden needs about 1 inch of water per week. This does not mean that if you get 1 inch of rain on one night that you do not need to check on your plants for the rest of the week. Plants do best if they are watered such that the water soaks deep into the soil and reaches their roots. It is best to do this 3 times a week, instead of only watering a little bit each day or watering a lot on just one day.

Tips for watering with young children:

- **Have children use individual cups that they can scoop out of a bigger bucket**, small watering cans, or ½ gallon milk jugs with cap on and holes poked in top to sprinkle water.
- **Remind children to water close to the soil by the base of the plant**. Watering plant leaves does not allow plants to get the water they need, and can increase a chance of disease. **Ask, if you poured their cup of water over their head, would they be able to drink it?** Think of the plant's roots as their mouths and this is how they get water into the plant where they need it.
- Make sure each plant gets 3-5 individual cups minimum each watering.
- Allow water to soak into the ground before pouring a second cup of water.
- For small seeds, which can be easily dislodged, children can spritz the soil using spray bottles.
- If the children are excited to keep watering beyond what is needed for the plants, guide them to water the lawn, pour water in the sandbox, or in an outdoor sensory table.

## Weeding

Weeding can be a satisfying activity, especially if you are able to be consistent and do it every week, it is not as big of a task. **It is important for children to understand the reason we need to pull weeds out of the garden.** This is a good time to review what plants need to grow and how the weeds impact the plants we want. Have the kids list the basics that plants need: soil, sun, water, nutrients. If there are weeds surrounding the plants, the plant has to compete for all of these essentials and has a harder time growing and thriving.

Be sure to hold circle time outside by the garden and **try the following "weeding" activity during circle time.** Select one child to be the plant and have them sit down on the ground in front of the group. Then tell the other children they are weeds and one by one have the other children stand around the plant. Ask a couple of the children to hold hands or connect arms above the plant's head. As the weeds all surround the plant tell everyone to squeeze in (if they are not already).

Ask the plant how they feel? Can they see the sun overhead? Tell them, their legs are their roots and try to stretch them out. Is it easy or difficult? Then try to grow. Tell the weeds not to move out of the way. Do you feel you can grow and be happy in this situation? Have the children all come back to the circle and talk about how crowded it was for the plant and the weeds. Explain that it is our responsibility to make the garden good for the plants so they in turn can bring us food.

Tips for weeding with young children:

- If it is not clear to the children which plant is a weed and which is your garden plant, **sprinkle flour** on either the plants you want to keep or the weeds you want removed (whichever is lesser in number) and the children can be directed to pull the appropriate ones.
- Sometimes it is difficult to determine what is a weed and what is your garden plant. There will be times **when a plant accidentally gets pulled out**. Remember, this is a time for learning, and it is expected that this may happen. Use this time to look at the differences between plants and weeds and see if the class can learn to spot these differences. Try replanting the plant, give it some water and see if it will take root again. If it does, great, if not, this is part of gardening.

- **Do not be afraid to tell the children if you are not sure** if it is a weed or a plant. When in doubt, leave it and soon you will be able to tell the difference. Or you can also look for photos of the plants you are growing on-line, in seed magazines, or in garden books to compare leaf types to the plant in question.
- If you have a large garden, **play some weeding games**. Divide the children into two to four groups depending on the size of your garden and class and have each group work in a different area of the garden. Set a timer for 5 minutes and have each group work together to weed their section of the garden. Each group makes their own pile of weeds and sees who has the largest pile at the end of the 5 minutes. Then that group can collect all of the weeds and put them in a compost bin or the trash.

## Record Keeping

Gardens provide great opportunities for learning about calendars, counting, measuring length and weights, making predictions and more.

Consider making record-keeping charts for the whole garden, or smaller charts for different plants. Children can then check on the plants and report back to the class on how each plant in the garden is doing. Assign each child or a group of children to monitor different types of plants for the whole season. This will get them very invested in that plant and want to check on it and make sure it is doing well throughout the growing season. You can make a bulletin board similar to the one used in The Great Garden Detective Adventure (azureedge.net) as a visual for the class to look at daily. Also, see the **sample record keeping charts** in the Appendix C of this resource.

A **daily garden checklist** can be helpful to remember tasks and/or for assigning them to children. These can include checking on watering, weeding, whether any seedlings need to be thinned, noting if there are any insects on the plant or if they look sickly in any way, and checking to see if anything is ready to be harvested.

## Resources

Strengthening Equity and Inclusion in Garden Education - School Garden Support Organization Network

Antiracism and Abolitionist Teaching in Garden-Based Learning Part 1 and Part 2 –

Teaching in Nature's Classroom - Book and online class on principles of outdoor learning for K-12 and ECE settings

Plants Want to Grow - Rooted's Gardening 101 for ECE gardens

Fearless Beginning Gardening at Your Program - Rooted

Gardening and Cooking Songs, Books, and Tips for Families - Rooted - basic gardening info, book suggestions, and fun activity ideas for families

Farm to ECE Interest Areas for Young Children - Rooted - example farm to ECE activities and ideas for dramatic play, sensory tables, storytime, and more - includes songs and fingerplays

WI Farm to ECE Training Video - Gardens - Rooted - a one hour video on how to garden with young children at your ECE program. Registry credit available

Food Safety From Farm and Garden to Preschool - UMass Amherst - free online training for early childhood educators and food service staff

Got Dirt? – Garden planning and growing guide for beginning gardeners starting ECE and school gardens in Wisconsin (also available in Spanish)

Growing Minds Farm to School Teaching Resources

IATP Farm to Childcare Curriculum Package

# Training 3
# Harvesting, Food Purchasing, and Cooking

## Outline

1. Harvesting and Storage
2. Garden Fresh Snacks and Meals
3. Food Safety and Tool Safety
4. Sensory Exploration and Taste Tests
5. Cooking Activities with Kids
6. Nutrition Education
7. Sourcing Food from Local Farmers

## Harvesting and Storage

Harvesting can be one of the most exciting parts of gardening, when you finally get to see and taste the fruits of your labor! For guidance on when to harvest a wide variety of crops, see pages 24-27 in Got Dirt?. For crop storage guidance see "Storing Fruits and Vegetables from the Home Garden" from UW-Extension.

Show the children pictures of what mature plants look like before harvesting. This will give them a visual of what to look for when they are in the garden. The Great Garden Detective Adventure has photographs of mature plants or consult seed catalog photos.

**Tips for Harvesting Produce with Children:**

- **Toddlers** will be able to hand-harvest cherry tomatoes and strawberries and also dig up potatoes, carrots, and other root crops in soil that has been previously loosened with a pitchfork or spade.
- **3 to 4-year olds** can pluck mint or basil leaves from plants and also harvest many vegetables (bell peppers, cucumbers, zucchini, summer squash, beans, pea pods,

etc) by using one hand on the vegetable and one on the plant to remove by twisting the mature vegetable to remove it from the vine. This age group can also cut spinach or lettuce leaves by pinching at the base of the leaf or using child-safe knives. Shelling peas by removing peas from opened pods is also fun for this age group.

- **4K and school-age children** can harvest all produce or flowers using scissors or garden clippers with proper supervision.
- All children should **wash hands** before and after harvesting and place items into **food-safe buckets or containers**. Any harvesting tools used should also be clean and food-safe.
- Many children may want to use garden gloves when harvesting, since some of the leaves feel prickly to the skin.
- All produce should ideally be **washed before eating**.

## Overabundance - How to Preserve Extra Produce

If your garden is bountiful and produces more vegetables than you can use, there are a number of options for you to consider.

- Set up a table or "**farmers market booth**" by your entrance door for when parents come to pick up their children. Allow families to take produce home to use in their own meals. Be sure to send information home with children about this and tell all families when they pick up their children to take home some free produce.
- **Preserve vegetables** through freezing or drying (dehydrating). Check out these online resource for information on:
    - Freezing Food - a short summary from University of Georgia Extension
    - Freezing Fruits and Vegetables - detailed instructions from UW-Extension
    - 12 Easy Dehydrating Projects for Kids - from The Purposeful Pantry
    - Drying Vegetables - from Colorado State University
- Check with your **local food pantry** to see if they accept donations of fresh produce.
- Share with neighbors by setting up a free pantry outside.

## Garden Fresh Snacks and Meals

Including children in the preparation of food they harvested is necessary for them to **understand the full circle of growing food and where food comes from**. Seeing that the tomatoes that were on the plant outside are used to make their spaghetti sauce, helps them to understand that even food that is bought in cans at the grocery store comes from plants and doesn't just appear in the form they are eating. **Include children as much as possible in cooking activities.**

After washing, some items like sugar snap peas, cherry tomatoes, and strawberries can be eaten right after harvest. Remember if serving children under 3, some smaller fruits and vegetables are choking hazards and will need to be cut in half before serving. Other veggies, like carrots, cucumbers, and bell peppers, need minimal slicing or processing before being able to use them for a snack. **Below are some resources for preparation/cooking activities that can be done with children using produce from the garden or another local source.**

Celebrating Seasonality is a collection of twelve child-friendly recipes for the ECE setting that feature seasonal fruits and vegetables. These fun breakfast, lunch, and snack recipes promote the use of Wisconsin-grown produce in all ECE settings. Recipes are scaled for 8 and 25 servings and include serving sizes for different ages groups and CACFP crediting information. Celebrating Seasonality also includes information to help you find more local foods, a seasonality chart of Wisconsin crops, interviews with Wisconsin farmers, and stories from Wisconsin ECE sites serving local foods.

For more ideas on bringing new vegetables into your program, try one of the recipes from The Child Nutrition Recipe Box that is designed to meet CACFP requirements and is scalable for the size of your program. https://theicn.org/cnrb/2022-cacfp-recipes/

If you want more ideas for snacks and meals that incorporate fresh fruits and vegetables into your menu, SnapEd has 200 recipes to try with children with accompanying videos for many of the recipes demonstrating how to prepare them. https://jsyfruitveggies.org/recipes/

If you have a **limited kitchen with only a microwave and/or toaster oven** or would just like a quicker way to cook foods, see this resource for a variety of recipes to make with

young children such as steamed veggies, baked potato, apple crumble and more! Fresh Produce Recipes for Microwave and Toaster Oven Recipes

If you have infants in your care, consider **making your own baby food** to serve. It is relatively quick, healthy, and affordable using produce from your garden! Rooted has a resource that gives you all the basics and simple recipe ideas. Making Your Own Local Baby Food

## Food Safety and Tool Safety

When children help prepare recipes, it gives them an opportunity to work on fine motor skills while measuring, stirring, and chopping. They can also practice patience while waiting to take turns, and they can learn to follow step-by-step instructions. Children enjoy learning proper use of cooking tools and will share this information with their families at home. They take pride in their work and feel a sense of accomplishment and increased self-confidence when they complete their own snack. **Children are usually more willing and eager to taste a new food when they have a hand in creating it.** Children will be proud to share their experience cooking with parents at pick up time, extending the learning to their parents and siblings.

It is also important to talk to children about how they need to wait for instructions and assistance when learning how to use kitchen tools and equipment. Wavy choppers and child knives are safer than a traditional knife, but when used improperly, they can still cause injury. **Demonstrate how to use tools before allowing children to have access to the tools.** See the “Tips for Cooking Activities with Children” below for specific cooking tool safety tips.

Doing cooking activities with children also provides a great opportunity to introduce **food safety** with children. Remind them that proper handwashing is critical when working with food. Explain the idea of contamination of food if they have germs or dirt on their hands or cooking tools and how these germs can be transferred to themselves and other people who will be eating the food they prepared.

## Sensory Exploration and Taste Tests

**Gardening and cooking food involves all of our senses.** Children can look at and touch a whole food before cutting it up, helping them see the whole picture of where food comes from and how it is processed or changed before it is eaten. Children can also explore foods, herbs, and spices with their sense of smell. Grinding your own herbs and spices in a mortar and pestle is a great way to engage the senses and give many children an opportunity to participate in food preparation.

One way to introduce new foods to children is through a **taste test**. Children often need to be exposed to the same food several times before they will try it or like it. Children should never be forced to eat or even try foods, but allow them to know they can always try it another time if they are not ready. **Keeping the pressure low and having it be a positive experience** is crucial to children's willingness to try things at that moment, and especially in the future.

Remind children that it is OK to not like a particular food, as everyone has different taste preferences. However, it is **important to be respectful to everyone else** by not saying negative things about the food. Offer alternative language such as "I don't like it" or "not for me." Allow children to spit out food into a napkin if they do not like it.

**It's ideal to participate in the tasting challenges alongside your children**. Share if you have not tried certain foods but you are excited to see if you will find a new food that you enjoy.

Once every child has a sample, ask children to **notice its color, scent, and texture**. Introduce new vocabulary words to describe it. Then, you could have all the children try it on the count of 3, or they can taste it when they are ready. **Know that for some children, just touching an unfamiliar food or even just touching their tongue to it can be a courageous act.** If the children bit into it, did it make a sound? Then encourage the use of as many words as possible to describe what it tastes like.

If a child tries a new food (or even touches it or puts their tongue to it), you could give them an **"I tried it" sticker or a hand stamp** to celebrate their courage in trying a new food. This can also spark conversation at home when their caregivers see the sticker or stamp. Families and caregivers are often surprised to learn what they were willing to try!

## Cooking Activities with Children

Children usually get excited to participate in cooking activities. Often, it is seen as a grown-up activity that they are being allowed to participate in. Children are capable of doing many cooking activities and the more they do them, the more they are able to do independently. It is a great life skill to begin teaching children at a young age. Cooking projects also meet many different learning standards with just one activity! Use picture recipes when possible to help children visualize what they are doing and see the words along with the pictures. See the “Garden Snacks and Meals” section above for recipes.

**Tips for Cooking Activities with Children:**

- Make sure there are enough ingredients or steps in your recipe so that each child can be involved.
- When stirring, allow multiple children the opportunity to stir or mix ingredients together.
- If using something like cinnamon, consider allowing each child to add one “shake” of the cinnamon bottle.
- If the recipe calls for a small amount of something, or if the ingredient list would only allow one child to add an additional ingredient, it can be tossed in quickly at the end by the teacher.
- Remind children they need to be sure their fingers are out of the cutting area, holding vegetables at the opposite end they are cutting so their fingers are not in the cut line.
- When using wavy choppers or nylon knives - make sure to cut any produce with a curved surface (like apples, carrots, cucumbers) in half so the flat surface can be put on the cutting board and it won’t roll away. Instruct the children to keep both hands on top of the chopper.
- Use cutting boards with rubber grips on the sides to keep them from slipping away - OR - use a wet washcloth under a cutting board to help it stay in place.
- While you want what you are making to be edible, **also allow this to be a time for some flexibility and learning too**. There is usually less flexibility when baking than cooking, but some experimentation can be done. For example,  if the children

want to add more cinnamon than the recipe calls for, consider letting them do this and see what the result is!

**Examples of Cooking Activities Young Children Can do by Age Group:**

- **Infants** - At the sensory table or outdoors, provide cooking tools such as measuring cups and spoons, whisks, funnels, ladles, or sieves to explore with sand and water.
- **Toddlers** - can help tear lettuce for salads, shake a baby food jar with cream to make butter, mash and stir cooked potatoes, dip vegetables (remember to cook hard vegetables such as carrots, and cut vegetables which are choking hazards before serving) in hummus or other spreads, and turn a hand-cranked blender to make a smoothie.
- **3 to 4 year-olds** can pour liquid ingredients into a bowl, scrub carrots with a brush, slice soft/cooked vegetables with blunt-tipped knives, spread hummus on crackers, or slice vegetables with wavy choppers (with supervision to make sure both hands are on top), or use cookie cutters to shape sandwiches or baked goods.
- **4K and school-age children** can measure ingredients, whisk a sauce or dressing, roll dough for personal pizzas, grate cheese or veggies, shake Parmesan or herbs as a topping, peel and slice hard-boiled eggs, peel carrot strips for use on salads, and shuck corn.

## Botany in the Kitchen: Plant Parts

The edible portion of a plant is different for different vegetables. Sometimes, parts of the plant which one culture eats is different from the part a different culture enjoys. For instance, some people eat the stalk part of broccoli and others eat the floret part; the greens on beets are eaten by some people and discarded by others. All parts of plants are eaten, depending on which plant it is. Not all parts of every plant are edible, though.

Here are examples of common plant parts that we eat:

**Roots:** Carrots, Beets, Radishes

**Stems:** Asparagus, Celery, Leeks, Green Onion

**Leaves:** Lettuce, Spinach, Kale, Collards

**Flowers:** Broccoli, Cauliflower, Nasturtium

**Fruits:** Tomatoes, Cucumbers, Bananas

**Seeds:** Sunflower Seeds, Pomegranate, Peas

Help children explore this more through reading “Tops and Bottoms” by Janet Stevens. During circle time, ask the class to name different vegetables and sort them by which part of the plant they are eating. If there are different parts that are consumed, include it on both lists. **Try this recipe for a Plant Parts Salad from KidsGardening that uses a food from each category: roots, stems, leaves, seeds, and flower.**

## Nutrition Education

**When talking about nutrition and healthy food, work to include foods that are part of the cultures of the children in your class and educate children on foods of different cultures**. Explain that the foods we eat are informed by our climate, culture, and family traditions, and that there are many different types of food we can make from each plant. Collaborate with the families that you serve, asking them what foods they serve at home.

We can encourage children to not jump to conclusions about foods we are not familiar with, but as with the taste tests, we want to be respectful of other people and what they choose to eat. It is also important to keep in mind that families who are experiencing food insecurity may not have the monetary resources to create meals and snacks with fresh or varied produce. Know that families are doing the best they can with the resources that they have.

**Be sure to have information posted at the center about using SNAP and WIC benefits to purchase fruits and vegetables,** as well as information for breastfeeding support programs. Additionally, send the information about using SNAP and WIC for fresh foods home with every family. It is good practice to not make assumptions about which families might qualify for benefits.

**The Color Harvest** lesson plan available in Got Veggies? ECE Edition provides an activity to explore the wide variety of colors found in fruits and vegetables. Eating across the rainbow helps our bodies have the wide range of nutrients, vitamins, and minerals that we need to grow and to boost our immune system to fight off germs. Include different

benefits of each color of foods and a matching game based on the body parts benefitted by different foods.

For more nutrition education ideas see Grow It, Try It, Like It! - a garden-themed nutrition education guide for early childhood featuring MyPlate.

## Sourcing Food from Local Farmers

If you are looking to connect with a farmer there are multiple ways to go about it including ways to connect in-person, by phone, or on the internet.

Before you purchase, know that **If you use the Child and Adult Care Food Program (CACFP), know that local food purchases are both encouraged and reimbursable.** According to the CACFP "Handwritten receipts for items purchased are acceptable documentation as long as the receipt includes the date of purchase, name of vendor/farmer, item cost, amount, and total cost." See the Local Foods in the CACFP Memo for details.

If there is a **farmers' market** near you, this provides a great opportunity to see what a grower has to offer and to make a personal connection. To find a farmers' market, call your local County Extension office, or see wifarmersmarkets.org.

See the resources from Rooted Let's Go to the Farmers' Market and Farmers' Market Activity Ideas for Young Children for information on what to expect at a farmers' market and ideas for a possible field trip and related activities with the children in your care.

Your local **County Extension agents** will also likely know of local farmers who sell produce/food products in your area. Some counties have their own farm directory guides. To find your local agent in Wisconsin see this office directory by county: https://counties.extension.wisc.edu/

**Ask your friends, family members, and the families** of the children in your care if they know of local farmers or gardeners who might be able to provide your program with fresh produce or local foods.

Several **databases** are available for finding farmers on-line or in print publications.

- **Farm Fresh Atlas** - farmfreshatlas.org - (608) 310-7836 - The Farm Fresh Atlas website and print publications feature Wisconsin farms, farmers' markets, restaurants, stores, and other businesses that sell local food and use sustainable production and business practices.

- **Wisconsin Local Foods Database** - https://sites.google.com/dpi.wi.gov/wilfd/home - this database connects schools and communities to their local farmers. Use the map to locate farm businesses near you

- **Fairshare CSA Coalition** - www.csacoalition.org - 608-226-0300 - A “CSA” stands for Community Supported Agriculture, wherein customers can become members of a farm and receive seasonally available produce “shares” throughout the growing season. Fairshare CSA Coalition helps people find a local, organic CSA farm in Wisconsin, and can also provide financial assistance for memberships for low-income households.

  See the Rooted resource Community Supported Agriculture (CSA) and Your Early Care and Education Program to see if a CSA share would be a good match for your program.

- **U.S. Department of Agriculture Local Food Directories** (https://www.ams.usda.gov/services/local-regional/food-directories) - national lists that can help you locate farmers’ markets, on-farm markets, CSAs, and food hubs.

**Because none of these directories are exhaustive**, be sure to do an internet search by typing in your county, town, city, and/or region along with "farm", "local produce", "CSA", "cheese", or whatever product you are looking for.

## Resources

Harvest of the Month - UW-Extension (ECE Version coming soon!) - Educational activities and promotional materials

Harvest of the Moon - UW-Extension - Menominee Harvest of the Moon posters and activities for each month

Healthy Bites Resource and On-line Training - The Healthy Bites on-line tutorial covers five primary priorities for improving child nutrition in your program.

Got Veggies? ECE Edition - Rooted - This resource offers edible education activities aligned with the Wisconsin Model Early Learning Standards.

Making Homemade Butter in a Jar - from the Spruce Eats

Apple Taste Test for Young Children: Connections to the Wisconsin Model Early Learning Standards - Rooted - apple explorations and taste test suggestions for each ECE age group

Gardening and Cooking Songs, Books, and Tips for Families - Rooted - ideas for families to do at home

Wisconsin Foods A to Z Poster (English version) - Rooted - A colorful poster of a food grown or produced in Wisconsin for each letter along with ideas for using the poster in the classroom.

Comida de Wisconsin de la A a la A - (Spanish version) - Rooted - A colorful poster of foods grown or produced in Wisconsin for each letter - including culturally relevant foods to Mexican/Latin American cuisine. Also includes Spanish-language book suggestions and ideas for using the poster in the classroom.

Farm to ECE Curriculum from Tri Valley Opportunity Council of Minnesota – Monthly focus on different foods, with recipes and activities.

Harvest for Healthy Kids Activities and Recipes

## Training 4

# Winter Gardening & Building a Successful Garden Program

## Outline

1. Fall Harvest
2. Putting the Garden to Bed
3. Winter Garden Activities
4. Building a Successful Garden Program

## Fall Harvest

Traditionally the fall harvest is a time when people come together to celebrate a successful growing season. There are so many wonderful recipes and stories to share during fall, as well as opportunities for class visits to local apple orchards and pumpkin patches. It's also a great time to learn about food preservation techniques, many of which are simple and low-tech. **Preservation can extend the life of your garden bounty and provide delicious and colorful veggies through the winter.**

Here are some ways to celebrate the fall harvest:

- Invite families to help you harvest any late summer/ fall crops- tomatoes, pumpkins, sweet potatoes, herbs, and tender greens- before the frost (greens like kale and spinach can continue to produce well into the late fall).
- Have a harvest party with snacks grown in the garden or from a farmers' market
- Take a field trip to a local farm or market
- **Read books and tell stories about how people from around the world celebrate the fall harvest, preserve food, and prepare for winter.**

- This is also the time of year to plant garlic and spring flower bulbs like tulips, snowdrops, and crocuses. Children can make a wish for the bulbs and tell them they will see them in the spring!

## Putting the Garden to Bed

An end-of-season garden party is a great way to thank your families, volunteers, and growing space for all of their hard work through the season. Sharing a potluck of local dishes and inviting special guests can make your cleanup day fun and lighten the workload.

**“Putting your garden to bed” for the winter is a great way to help kids connect to the end-of-season activities.** Like us, the garden has to get cleaned up and tucked in for its long winter nap! You can sing a goodnight song and read stories about hibernation as well.

For a good start on your spring season:

- Rake up old plant material to prevent disease, remove stems from annuals and veggies.
- **Leave stems on native and perennial plants!** Insects use them for winter homes.
- **Leave the leaves!** They provide insulation, nutrients, and a home for critters over the winter. Raking and jumping in leaf piles can be fun, but make sure you leave some shelter or re-scatter leaves when you’re done.
- **Mulch, mulch, mulch!** Give your garden a nice blanket for its long winter nap and sing a goodnight song as you put the garden to bed.
    - Choose appropriate mulches for your needs. Straw and leaves on the beds, wood chips for pathways, etc.
    - Find free or cheap mulch at the city or county compost lot, or from arborists looking to share chips.
- Drain and put away water hoses to avoid freezing.
- Clean and store tools.
- Take inventory of your leftover seeds, pots, and supplies.

## Winter Garden Activities

Especially in Wisconsin and neighboring states, **it's important to look for ways to stay active and get outside even when it's cold!** After your garden has been put to bed, there are still many fun and engaging outdoor activities that young children can enjoy. And when the weather gets too harsh for even the bravest little explorers, you can bring the garden inside!

There are a few crops you can start in the late fall, such as garlic or spring bulbs (tulips, hyacinth, crocus, etc). These are all planted in the fall once soil temperature begins to cool, but hopefully a month before your first hard frost. In Wisconsin, this is often September or October. **When selecting planting sites, make sure your beds will not be disturbed over the winter and spring.** Spring bulbs will bloom once the ground thaws in March or April. For a fun surprise, plant your flower bulbs in a heart, smiley face, or other unique arrangement. Garlic will stay in the ground until July or August, so choose a bed that can stay in place for the entire year!

Check out this resource for more details on planting garlic and using it in your classroom: https://bit.ly/GarlicGrowingActivities. Spanish version available as well: https://bit.ly/AprendiendoDelAjo

**Some other winter gardening activities include:**

- Plant and animal observation
    - Winter plant ID is a bit more challenging than when leaves and flowers are out. Try your hand at identifying trees by buds and bark, or observing what stems and leaves are left behind. Check out Training 2 for information on bird tracking and community science activities you can do year round.
- Snowshoeing or snow hikes
    - Head outside for a hike! Before your hike read Over and Under the Snow by Kate Messner and discuss how animals make their winter homes under the snow. During your hike be on the lookout for animals and animal tracks.
- Art activities
    - Ice art

        - Make ice “muffins:” Use old muffin tins to collect loose parts from the garden (leaves, stems, berries, etc.) Once you have a variety of colors and textures in each compartment, fill the tins with water and leave them out to freeze overnight. The next day, examine and appreciate the muffins as art, use them for story telling or group them together for a math activity.
        - Make colorful ice sculptures: Collect a variety of reusable plastic containers (yogurt, etc.) or use old muffin tins and fill the containers with water. Add a few drops of food coloring to each container and freeze outside overnight. The next day, unmold the ice and use the pieces to create sculptures for the garden!
- Indoor growing
    - This can be anything from sprouting seeds for microgreens (https://kidsgardening.org/resources/growing-guide-microgreens/) to a full mini greenhouse setup with a grow lamp! If you have a sunny window ledge, you can try growing lettuce or low-light herbs. You can also use kitchen scraps like celery or onion roots to re-grow plants for snacking!
- Outdoor growing with cold frames
    - A simple plastic or glass cold frame can allow you to grow spinach, kale, cabbage, and more late into winter or very early in spring! In bigger gardens, hoop houses or tunnels can be used to extend the season for many crops.
- Seed saving and sorting
    - Mix up a bunch of extra (or expired) seeds, including a variety of shapes and sizes. Have your students sort them by size and color and explore the different shapes and textures of seeds.
    - Learn about seed saving from your own garden! Hulling beans or scooping squash seeds is a great sensory activity that can go along with cooking. **Make sure to research what each plant species seeds need in order to be viable next year.**
- Guess the seed game
    - Create a simple game board with clear plastic bags of common vegetable seeds, with a picture of the adult plant affixed to the back so that the image is not visible until the bag is flipped over. Have children explore the seeds and try to guess what plant they belong to, flipping the baggies over to see

if they're correct! Squash, beans, sunflowers, and corn are favorites. Things like chard, beets, and carrots are an interesting challenge.

- Food preservation
    - **Drying, freezing, and fermentation are ideal for young learners, without the high heat of pressure canning.**
    - Potatoes, winter squash, and seed corn are great veggies to cook with and learn about this time of year. They are also staple foods for Indigenous communities, an excellent opportunity to explore culturally relevant lessons and books.
- Cooking and baking
    - WI Chili Lunch (February)
    - Harvest of the Month
    - Seasonal winter recipes from Celebrating Seasonality
- Make seed catalog collages
    - Collect a variety of seed catalogs and let the children cut out pictures (or use pre-cut pictures) of vegetables, fruits, and flowers to create collages.
        - Children can also sort the pictures into categories for their collages (for example, fruits or vegetables, purple or pink flowers, perennials or annuals, etc.)
        - The pictures could also be placed on a map of the garden to do some garden planning before spring.
- Make bird feeder cones.
- And of course, books, imaginative play, and guest speakers (local farmers, family and community members who want to lead activities like maple tree tapping, snowshoeing, cooking, finger knitting, etc.)
    - Winter is the perfect time for stories about hibernation, cultural practices, food preservation, and comforting recipes.
    - For a list of good read alouds, see Ready Set Grow's multicultural collection of Farm to ECE books: http://www.pareadysetgrow.org/book-list/

**See Rooted's Winter Gardening resource for more information on indoor and outdoor winter activities.**

## Building a Successful Garden Program

The success of early childhood garden programs is directly related to building trusting relationships and partnerships with a variety of supporters including family members, staff, students, community members, businesses, and government entities. **Building lasting relationships is the key to success!**

- **Ask your families and community members to get involved!** You never know who is a carpenter or who has an aunt who is a farmer. By asking your community you may find great connections.
- **Add your program to the Wisconsin School Garden Map** which shows all of the youth gardens, including ones at ECE sites, across the state; use the map to find other programs in your area so you can share resources and build your garden network.
- **Participate in the Wisconsin Farm to ECE workgroup.** This statewide call includes providers and support organizations from all over the state. It's a place for folks to share their questions, challenges, and success stories and to learn about new developments in Farm to ECE. Email wifarmtoece@rootedwi.org to be added to the invite list!
- Partner with local colleges, tech schools, or high schools to find volunteers for your garden program.
- Master Gardeners are often looking for places to volunteer. Contact your local UW Extension office to find Master Gardeners or Master Composters in your area.
- **Sign up for Growing Together,** Wisconsin's Farm to School/ ECE monthly newsletter, to learn more about grants, workshops, professional development and networking opportunities.
- To **build confidence and get inspiration** for your own garden program, invite staff and family members to participate in garden-focused professional development opportunities (including Teaching in Nature's Classroom which has an ECE-focused session of the course coming soon!) and workshops.
- Join online communities dedicated to gardening with children. Kids Gardening has a great one: https://community.kidsgardening.org/home
- Start building a mailing list or e-mail list of business people, parents, teachers, administrators, garden volunteers, community leaders, local nonprofit

organizations, city and town officials, and legislators who support arts, education, and environmental programs for kids. Keep the members of this list informed about the gardening program, and ask them for help when needed.

## Build a culture of garden support

In addition to funding and supplies, it's arguably even more important to integrate the garden and local foods into your site's programming. **Making the outdoor learning spaces part of your regular class time will help students and staff feel a sense of connection and responsibility to the garden space.** Adjusting to outdoor learning can be difficult for some instructors, but having regular circle time or opening and closing activities outdoors may ease the transition. You don't need to do a garden lesson to use your outdoor space! Any subject can be taught in the garden, and reading a favorite book out in the summer weather will be a treasured memory for your students.

**Encourage staff to use the garden space creatively, or even to take their breaks outside**. Consider integrating a quiet corner where students and staff alike can decompress when feeling overwhelmed or upset. Allow students and staff to guide the vision of your garden and to implement projects they're passionate about! One student's question about bumblebees could lead to an entire pollinator garden with bee hotels. The possibilities for student engagement are endless!

**Make sure that the garden maintenance work does not fall to just one or two staff members**. It's easy to let an enthusiastic teacher or volunteer take the lead on gardening, but when they find themselves extra busy or even move on from your site, the garden can fall into disrepair. By breaking up garden work into smaller shifts that are shared by all staff members, you'll make maintenance less stressful and give everyone an opportunity to share in the fulfilling work you do in your outdoor spaces. Encourage experienced gardeners on staff (or family volunteers) to spend time with those who aren't as comfortable in the garden to help expand their skill set and make them more confident.

**Look for ways to make meal prep easier on kitchen staff**, as well. Cooking from scratch with local foods can require more work and time for prep and storage, and keeping track of what veggies you have in stock and their expiration dates can be tricky. Consider purchasing produce in bulk and chopping and freezing them for later use, or finding a local cooperative that sells pre-prepped produce from small farmers.

Finally, involving family members and community partners in your garden space through regular work days, seasonal celebrations, and shared harvest is a wonderful way to spread the joy and abundance of your garden. The more connections you make in the community, the more sources of volunteer help or resources you will find!

## Funding sources

Successful gardens also have **consistent sources of supplies or funding**. Finding community partners who can provide resources year after year can give more stability than one-time grants. By publicizing your partnerships, you can attract more supporters for your garden as well as giving local businesses or organizations some good press.

Contact individuals and organizations who might donate materials or funds to support your garden program. One place to start is with the families of the children you serve. Ask them if they or their extended families or neighbors have extra tools, watering cans, hoses, seeds, etc. that they would be willing to share or donate to your program.

## Other funding ideas:

- Share photos of the children (with caregiver permission) with seed catalogs or in the proposed garden space, or share pictures the children have drawn of their garden dreams. This will help personalize the project for potential partners. If they donate, a thank you with photos of the children in the garden or with produce will help to solidify the connection and impact.
    - Neighborhood associations and community foundations
    - Local businesses
    - Local gardening organizations
- Consider a crowdfunding campaign such as GoFundMe. Share the link for the fundraiser with families to have them help spread the word and share on your social media if you use it.
- **Use of government funds**
    - If you have a 4K program in a public school that receives Title 1 funding, that funding can be used for gardens and cooking activities with students
    - If you participate in the Child and Adult Care Food Program (CACFP), the Local Foods in the CACFP Memo states that "**Costs associated with**

**growing food that will be used in the CACFP**, either as part of the meal services or for activities related to nutrition education to food service staff, as allowable. These costs may include seeds, fertilizer, labor, plot rental, etc." Consider using these funds to start or maintain your garden.

- Apply for grants
    - Garden Grant Program by the Whole Kids Foundation - Grants are open to K-12 Schools and non-profit organizations. Applications are typically due in March with $3,000 awarded in the early fall.
    - https://kidsgardening.org/grant-opportunities/ - has a good thorough list of grants and also provides some tips: https://kidsgardening.org/grant-writing-tips/
    - **Check out Growing Together, Wisconsin's Farm to School/ ECE newsletter, for timely information on relevant grants.**

- Host fundraisers:
    - Hold a spring garden sale with plants started by the students or donated by local gardeners and nurseries.
    - Try a harvest market event with produce, cut flowers, and garden crafts.

## Create buzz about your garden!

The more that your families and your community know about what you are doing, the more likely they will be to want to be part of it by volunteering time, materials, or funds:

- Send home **garden-themed newsletters**
- **Share photos** of your garden on social media
- Dedicate a bulletin board in a central location to the school garden and update it with photos and news from the garden
- Participate in events like Wisconsin School Garden Day, the Great Apple Crunch and WI Chili Lunch and invite community leaders to join you.
- **Contact the local press about events** or special accomplishments in your garden. Even just sharing your Farm to ECE story is a wonderful local feature and will attract more community support
- Grow a cut flower garden and invite the children at your site to create bouquets for families, special events, or even a fundraiser

- **Host an annual garden tea party** and invite family members and key garden supporters to experience the garden and learn about future garden plans
- Include signs and art (including murals!) in the garden to create interest in your garden space
- Create a brochure or project folder that describes your project and provides interested supporters with information on how they can contribute

## Resources

Funding a School Garden Program (kidsgardening.org)

Winter Gardening Activities for ECE - Rooted

WI Farm to ECE: Consideration for Programs in YoungStar - Rooted - Learn about specific ways to integrate farm to ECE into your program as relevant sections of the YoungStar Evaluation Criteria are considered

Webinar: School Garden Program Sustainability and Finances- SGSO Network

School Garden Sustainability- Mississippi Farm to School Network

# Appendix A - Garden Songs and Poems

This appendix includes video links to songs in English and other languages, poems, fingerplays, and lyrics to many garden-related songs for young children.

## Songs in English - Video Links

- "Gardening Song" - Cocomelon - https://youtu.be/hR0V37t8sfc
- "The Farmer Plants the Seeds" - https://youtu.be/ui6fbGwpMhE
- "The Needs of a Plant" - https://youtu.be/eWodhBfnRto
- "Dirt Made My Lunch" by the Banana Slug String Band
    - Video: https://youtu.be/MwgP2gCzSC4
    - Lesson plan and lyrics: www.edibleschoolyardnyc.org/resources/dirt-made-my-lunch/
- There are many more videos available on the internet - search for "garden song videos for preschool or early childhood"

## Songs in Other Languages - Video Links

**American Sign Language**

- "*Old McDonald Had a Farm*" - https://www.youtube.com/watch?v=nUoipFFCEm0

**Anishinaabemowin**

- *Giizis Binoojiyag (The Sun Children)* - - http://ojibwe.net/songs/childrens-songs/giizis-binoojiyag/ - see more songs at ojibwe.net

**French**

- "*J'aime les Fruit*" - http://www.frenchlearner.com/songs/fruits-song/

**Hmong/Hmoob**

- farm animal names in Hmong - https://www.youtube.com/watch?v=hy-kitzecG0

- a season-themed counting song in Hmong - https://www.youtube.com/watch?v=gtgdVhDnoMI
- “Old McDonald Had a Farm” in Hmong - https://www.youtube.com/watch?v=ptFXhZ6FMs0hannel
- See many more videos on the Hmong Kids Channel on YouTube

**Spanish**

- *“The Fruit Chant”* - http://www.spanishplayground.net/me-gusta-cantar-songs-practice-gustar/
- “*Come Vegetales*” - https://www.youtube.com/watch?v=7RsjJionIGI

## Poems

**Kindness Poem by Henry Wadsworth Longfellow**

Kind hearts are the gardens,
Kind words are the roots,
Kind thoughts are the flowers,
Kind deeds are the fruits.

Take care of your garden,
And keep out the weeds;
Fill it with sunshine,
Kind words and kind deeds.

**The Little Plant**

In the heart of a seed,
Buried deep so deep,
A tiny plant
Lay fast asleep.
“Wake,” said the sunshine,
“And creep to the light,”
“Wake,” said the voice
Of the raindrops bright.

The little plant heard
And it rose to see,
What the wonderful,
Outside world might be.

(See this poem and activity at
https://theeducatorsspinonit.com/are-you-willing-to-wake-seeds-of-change/)

**A Little Seed**

A little seed to for me to sow
A little soil to make it grow
A little hole, a little pat,
A little wish, and that is that.
A little sun, a little shower,
A little while, and then a flower!

**Mud by Polly Chase Boyden**

Mud is very nice to feel,
all squishy-squash between the toes!
I'd rather wade in wiggly mud, than smell a yellow rose.

Nobody else but the rosebush knows,
How nice mud feels, between the toes.

**Our Bones and Muscles are Growing Strong** *(from Information and Communication Technologies in the College of Agricultural Sciences at The Penn State University, 2006*

Your bones and muscles are growing strong.
Eat good food and you can't go wrong!
Now move your body, count 1, 2, 3...
Come along and *hop* with me.
*(continued on next page)*

Your bones and muscles are growing strong.
Eat good food and you can't go wrong!
Now move your body, count 1, 2, 3...
Come along and *twist* with me.

Your bones and muscles are growing strong.
Eat good food and you can't go wrong!
Now move your body, count 1, 2, 3...
Come along and *bend* with me.

## More Songs and Fingerplays:

For many more songs and fingerplays, see the "**Food Songs and Rhymes**" section (pages 153-171) of the Farm to Childcare Curriculum Package published by the Institute for Agriculture and Trade Policy. A sample of these vegetable and gardening songs and others are below.

**Apples Everywhere**

Apples in the orchard.
Apples on the ground.
Apples in my basket.
Apples all around.
Apples in my cider.
Apples in my pie.
Apples, apples everywhere,
My, oh my, oh my.

**Apple Up High** Tune: "Twinkle Twinkle Little Star"

Apple, apple, way up high,
I can reach you if I try.
Climb a ladder, hold on tight.
Pick you quickly, take a bite.
Apple, apple, way up high,
I can reach you if I try.

**The Beet Song** (to the tune of “If you’re happy and you know it”)

If you’re hungry and you know it, eat a beet!
If you’re hungry and you know it, eat a beet!
Beets are red, orange and striped; open wide and take a bite!
If you’re hungry and you know it, eat a beet!

**Carrot Fingerplay**

See the carrots in the ground
(point hands and arms in a point to form a carrot and point to the ground)
I pull them hard without a sound (pull them out)
I wash and clean them up and down (scrub up and down with your palms of your hands)
I love to eat them all year round. (Pretend to eat carrots with mouth)

**Carrots, Peas, and Broccoli** (to the tune of Twinkle, Twinkle, Little Star)

Carrots, Peas, and Broccoli,
Vegetables are good for me.
For my snack and in my lunch,
Veggie sticks are great to munch.
Carrots, Peas, and Broccoli,
Vegetables are good for me.

**Climbing Up the Apple Tree**
Climbing up the apple tree, (climb in place)
Swinging on a limb! (raise arms above head, away left and right)
If I hear a robin (cup hand near ear),
I may sing along with him! (sing tra la la)
And Robin, if you fly away, (put hands over eyes)
Here’s what I think I’ll do (point to self with index finger)
I’ll wish for a pair of sparrow wings (gently flap arms at side and move around)
And fly away with you!

**The Green Beans Grew All Around** Tune: “The Green Grass Grew All Around”

There was a hole (repeat)
In the middle of the ground. (repeat)
The prettiest hole (repeat)
That you ever did see. (repeat)
And the green beans grew all around and around
And the green beans grew all around!

Well, in this hole (repeat)
There was a seed. (repeat)
The prettiest seed (repeat)
That you ever did see. (repeat)
There’s a seed in the hole, and a hole in the ground
And the green beans grew all around and around
And the green beans grew all around!

Well, from this seed (repeat)
There came a plant. (repeat)
The prettiest plant (repeat)
That you ever did see. (repeat)
Well, there’s a plant from the seed, and a seed in the hole, and a hole in the ground
And the green beans grew all around and around
And the green beans grew all around!

(You could continue with a flower from the plant, then a fruit from the flower, etc.)

**Have You Ever Had An Apple?** Tune: “Have You Ever Seen A Lassie”

Have you ever had an apple, an apple, an apple?
Have you ever had an apple and heard it go ‘crunch’?
Have you ever had an orange, an orange, an orange?
Have you ever had an orange and heard it go ‘slurp’?
Have you ever had a banana, a banana, a banana?
Have you ever had a banana and heard it go ‘mush’?

**Healthy Vegetables: A color rhyme**
(Cut a tomato shape out of red felt, a zucchini shape out of green felt, and a corn cob shape out of yellow felt. Place the shapes on a flannel board as you read the following rhyme.)

I ate a red tomato, the biggest I have seen.
I ate a long zucchini it was the color green .
I ate some yellow corn, that was sweet as sweet could be.
When I eat my colors, I know that I'm healthy!

**A Little Apple Seed** Tune: "Itsy, Bitsy Spider"

Once a little apple seed was planted in the ground
Down came the raindrops, falling all around.
Out came the big sun, bright as bright could be
And that little apple seed grew to be an apple tree!

**Making Stone Soup**
Tune: "The Farmer In the Dell" Have the children act out the song, pretending to toss the ingredients into a big pot as they sing.

Let us make stone soup,
Let us make stone soup,
Put some water in a pot.
Stir, it's getting hot.

First we add a stone.
Then we add a bone,
Stir the soup in the pot,
The soup is getting hot.

Then we add some broth,
Then we add some corn.
Stir the soup in the pot.
The soup is getting hot.

Next, we add some carrots,
Then we add some peas.
Stir the soup in the pot.
The soup is getting hot.

Last, we add potatoes,
celery and zucchini.
Stir the soup, oh what fun.
The soup is now done!

**Oh, Do You Eat Your Vegetables?** Tune: “Muffin Man”

Oh do you eat your vegetables, vegetables, vegetables?
Oh, do you eat your vegetables each and every day?
Oh, yes we eat our vegetables, vegetables, vegetables,
Oh yes we eat our vegetables-each and every day!

To continue the song, ask each child in turn to name a vegetable. Substitute the child’s name and his/her vegetable choice, and have everyone sing the new words . For example: Oh Janet eats green beans, green beans, green beans, Oh Janet eats green beans each and every day!

**Out In the Garden** Tune: “Down By The Station”

Out in the garden,
In the month of May.
See the busy farmers
Planting seeds all day.
Soon there will be flowers
And red ripe tomatoes.
Maybe some squash
And little brown potatoes.

**Take Me Out to the Farm** Tune: “Take Me Out To The Ball Game”

Take me out to the farm.
Take me out to the cows,
Show me some pigs and bunnies, too.
Give me a ride on a pony or two.
Oh, it’s so much fun at the farm.
There are so many things I can do.
And I love to listen and hear
All the neighs, quacks, and moos!

**The Tractor on the Farm** Tune: “The Wheels On The Bus”

Oh, the tractor on the farm goes round and round,
Round and round, round and round .
Oh, the tractor on the farm goes round and round,
All around the farm .

Oh, the cow on the farm goes, moo, moo, moo,
Moo, moo, moo, moo, moo, moo .
Oh, the cow on the farm goes, moo, moo, moo,
All around the farm .

Continue with other farm animals and farm objects.

**The Vegetable Song** Tune: “Old MacDonald Had A Farm”

Vegetables are good for me, EE I EE I O
And so I eat them happily, EE I EE I O
(Children take turns naming vegetables that they like)
With a carrot, carrot here, and a carrot, carrot there
Here a carrot, there a carrot
Everywhere a carrot, carrot.
Vegetables are good for me, EE I EE I O.

Use your own creativity to add other vegetables.

# Appendix B - Farm to ECE Books

In the Madison area, check in with the Madison Reading Project | Free Books and Literacy Enrichment Programs to get free books for your classroom! And of course always check with the library. Librarians are often looking for suggestions for books to order if you don't find what you need.

**For additional titles of Farm to ECE Books see the following lists:**

- Multicultural Collection of Farm to ECE Books
- Go NAPSACC Farm to ECE Book List
- Growing Minds Book List
- Big Green's List of garden-based books celebrating Black History

| Title | Author | Age Group | Description |
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| All Around Us | Xelena Gonzalez* | 4-8 yrs | A young girl and her grandfather talk about the circles and cycles of life that we see all around us |
| Apple Farmer Annie / Ana cultiva manzanas | Monica Wellington | 3-7 yrs | Follow apple farmer Annie as she picks, counts, sorts, bakes, and sells her apples. Also available in Spanish. Board book. |
| Are You a Bee? | Judy Allen | 3-7 yrs | Told from the perspective of a honey bee, facts about bees are packed into an engaging narrative. |
| At the Farmers' Market/En el mercado | Anna Bardaus | 0-3 yrs | Discover which fruits and vegetables you can find in winter, spring, summer, and fall. A Scholastic board book. |
| Barnyard Banter | Denise Fleming | 2-5 yrs | Explore farm animal sounds! Board book. |
| Bee-Bim Bop! | Linda Sue Park* | 4-7 yrs | A hungry child tells of helping their mother make this Korean dish - includes recipe |

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| The Beeman | Laurie Krebs | 4-6 yrs | Through rhyming text and warm, expressive paintings, a child describes the work her Grandpa does to take care of honeybees and harvest the honey they make. |
| Before We Eat: From Farm to Table | Pat Brisson | 4-7 yrs | Before we eat, many people work very hard to get food to our tables. This book helps grow appreciation for all who help feed us! |
| Call Me Tree/Llamame arbol | Maya Christina Gonzalez* | 2-4 yrs | What does it mean to be a tree? A gentle and imaginative story about becoming your fullest self. |
| The Carrot Seed | Ruth Krauss | 1-4 yrs | A patient and persistent little boy tends to his carrot seed. |
| The Cazuela That The Farm Maiden Stirred | Samantha R. Vamos* | 3-6 yrs | This is the story of how the farm maiden and all the farm animals worked together to make the rice pudding served at the fiesta. |
| Community Soup | Alma Fullerton | 4-8 yrs | Mischievous goats try to eat the vegetables children harvested for soup in this Kenyan village. Creative solutions help them save the soup! |
| Dim Sum for Everyone | Grace Lin* | 2-4 yrs | A Chinese American family sits down to eat a traditional Dim Sum meal. |
| Eating the Alphabet | Louis Elhert | 0-3 yrs | Learn about fruits and vegetables from around the world while teaching upper- and lowercase letters. |
| The First Strawberries: A Cherokee Story | Bruchac, Joseph* | 3-5 yrs | A Cherokee story which explains how strawberries came to be. |
| Flower Garden | Eve Bunting | 4-7 yrs | A city girl and her father buy plants, potting soil, and a window box at the supermarket, ride the bus to their apartment, and put together a colorful gift for the child's mother. |

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| Full, Full, Full of Love | Trish Cooke* | 3-6 yrs | For Jay Jay, Sunday dinner at Grannie's house is full of hugs and kisses, full of tasty dishes... full, full, full of love. |
| Fruit/Frutas | Sarah Anderson | 0-3 yrs | A colorful rhythmic board book available in English and bilingual/Spanish. |
| Goodnight, Veggies | Diana Murray | 2-4 yrs | Board book. As the sun begins to set, the tomatoes are tuckered out, the cucumbers are calm, and the beets are simply beat. But what's got them all so exhausted? |
| Green is a Chile Pepper: A Book of Colors | Roseanne Thong | 3-5 yrs | "A cheerful color-concept book that presents a slice of Latino culture through food and fun," Children discover a world of colors all around them: red is spices and swirling skirts, yellow is masa, tortillas, and sweet corn cake. |
| Growing Vegetable Soup /A sembrar sopa de verduras | Lois Ehlert | 2-4 yrs | From planting seeds to eating soup - includes a recipe for soup. Also available in bilingual/Spanish. |
| Harlem Grown | Tony Hillery* | 4-8 yrs | True story of an empty lot in Harlem, NY. converted into a community farm. |
| Jayden's Impossible Garden | Mélina Mangal | 4-9 yrs | Jayden and a new friend bring nature to the city in this timeless story about a community garden. |
| Lenny Has Lunch | Ken Wilson-Max* | 0-3 yrs | Lenny and Daddy make lunch together. |
| Lola Plants a Garden | Anna McQuinn | 2-4 yrs | Lola is inspired by garden poems to grow her own flower garden. She gets gardening books from the library, plants seeds, makes her own book, and hosts a garden party. |
| Nibi's Water Song | Sunshine Tenasco* | 3-6 yrs | When Nibi, an Indigenous girl, |

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| | | | turns the tap in her house, only mucky brown water comes out. That starts her on a search for clean water to drink. Nibi's joyful energy becomes a catalyst for change and action as her community rallies around her to make clean drinking water available for all. |
| Our Community Garden | Barbara Pollack | 3-5 yrs | Audrey Aubergine and her friends play hide-and-seek, tend giant sunflowers, and discover nature's possibilities in their neighborhood's community garden. |
| Rah, Rah, Radishes! A Vegetable Chant | April Pulley Sayre | 2-4 yrs | Celebrates fresh vegetables, nature's bright colors, and the joy of healthy eating. |
| Rainbow Stew | Cathryn Falwell | 5-8 yrs | The sweet story of three children who spend a rainy day with their grandfather, picking fresh vegetables in his garden, and then cook and share a meal of healthy vegetable stew. |
| Round is a Mooncake: A Book of Shapes | Roseanne Thong and Grace Lin* | 2-4 yrs | A little girl's neighborhood becomes a discovery ground of things round, square and rectangular. Many of the objects are Asian in origin, other universal. |
| Sip, Slurp, Soup, Soup, Caldo, Caldo, Caldo | Diane Gonzales Bertrand* | 5-6 yrs | A rhythmic text with repetitive phrases relates how the children watch Mamâa make soup (recipe included) and go with Papâa to get tortillas before enjoying the results of her labor. |
| The Tiny Seed/La Semillita | Eric Carle | 2-6 yrs | The story of the life cycle of a flower as told through the adventures of a tiny seed. |
| The Thing About Bees: A Love Letter | Shabazz Larkin* | 3-6 yrs | A love poem from a father to his sons, and a tribute to the bees that pollinate the foods we love to eat. |

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| | | | Includes a guide to bees and bee safety etiquette. |
| Tops and Bottoms | Janet Stevens | 4-8 yrs | A wily Hare solves his family's problems by tricking rich and lazy Bear into giving up half his crops while teaching children about vegetables that grow above ground and below ground. |
| Two Old Potatoes and Me | John Coy | 5-8 yrs | A young girl and her Dad grow new potatoes from old ones. The story includes all the basic steps for growing potatoes while subtly dealing with the parents' recent divorce as they navigate a new life. |
| The Ugly Vegetables | Grace Lin* | 3-6 yrs | The story of how some unusual looking Chinese vegetables become the most tasty soup. Complete with a Chinese pronunciation guide of the vegetables and recipe. |
| Up, Down, and Around | Katherine Ayres | 2-5 yrs | From seeds dropping into soil to corn bursting from its stalks, from children chasing butterflies to ants burrowing underground, everything in this vibrant picture book pulses with life. |
| Up in the Garden and Down in the Dirt | Kate Messner | 2-5 yrs | A sweet exploration of the hidden world and many lives of a garden through the course of a year. |
| We're Going to the Farmers' Market | Stefan Page | 0-2 yrs | Visit the market, fill baskets with fruits and veggies, and go home to cook a feast. Board book. |
| When the Shadbush Blooms | Carla Messinger* | 5-8 yrs | Shows Delaware Lenape Native American cultural traditions throughout the seasons, comparing past and present day activities. |

*BIPOC (Black, Indigenous, Person of Color) author

# Appendix C: Sample Garden Recordkeeping Forms

| Children Assigned | Plant | Days to germination on packet | Days until harvest on packet | Date seed planted | Date sprouted/ germinated | Date transplanted (if applicable) | First Date of Harvest | Last Date of Harvest |
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| Children Assigned | Plant | Week 1 Observations | Week 2 Observations | Week 3 Observations | Week 4 Observations |
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