



**KEEP GROWING  
DETROIT**  
kids

# **GARDEN BASED LEARNING FOR EARLY CHILDHOOD SETTINGS**

A Guide For Educators & Caregivers

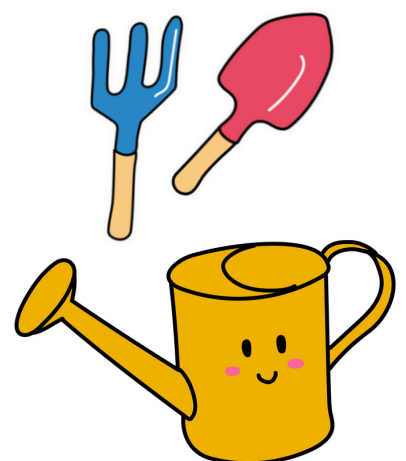


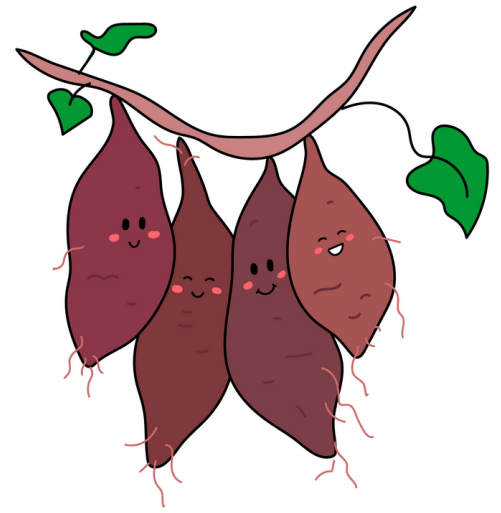




# TABLE OF CONTENTS

- 4** Benefits of Garden Based Learning
- 6** Establishing Outdoor Learning Environments
- 11** Maintaining Outdoor Learning Environments
- 13** Engaging Parents & Caregivers
- 15** Grow With Me Lessons
- 23** Integrating Healthy Meals & Snacks





# FRESH AIR & SUNSHINE

Welcome!

We're so glad you are here and ready to grow. We know you want the very best for the little ones you care for at your childcare center. We do too! This guide will support your efforts to grow healthy little minds, nourish strong and resilient bodies, and surround your children with the wonder and joy that comes with connecting to nature.

Before we get into the details of how, we want you to try this experiment with us...

Go outside with a child. Find a rock that is on top of some soil, lift it up and observe the reactions of the children you are with. They will inevitably begin with an exclamation, such as "ewwww...it's a worm" followed by an observation "it's so wiggly" and a request "can I hold it?". Then they'll ask "can we do this again tomorrow"?? Children are innately wired to be in awe and curious about nature and the world that surrounds them and these experiences in nature offer tremendous opportunities for children to explore, observe and grow.

If a simple rock with a worm underneath can incite that much curiosity, imagine now what a beautiful and bountiful vegetable garden could do! There is so much for children to learn from gardening! Outdoor learning environments with vegetable gardens can increase the range of opportunities for both teacher-initiated and child-led play that can be utilized to meet numerous age-appropriate developmental benchmarks necessary for kindergarten readiness, including crucial social, emotional, cognitive, and physical skills. Furthermore, exposing children to fruits and vegetables at a young age, through experiences, play, and engaging them in the process of growing their own food, has the ability to increase acceptance of new fruits and vegetables in their diet and may increase habitual consumption throughout life.

If you are saying to yourself, "but I don't have a green thumb, I kill all my houseplants", trust us when we say, you can do this! We are here to support you and your staff to build the skills and confidence needed to successfully establish, maintain and engage your children with these garden-based activities. We encourage you to begin small and embrace the opportunity to try something new as you build a new skill that will serve you and the children you serve for a lifetime!

You've got this!

*Keep Growing Detroit*



# WHAT IS GARDEN-BASED LEARNING?

A garden is an amazing teaching tool with limitless opportunities to support children to progress across key areas of learning and early childhood development. Gardens help to introduce children to concepts of farms and growing food and increasing their familiarity with fruits and vegetables. Furthermore, garden-based learning doesn't have to be limited to the garden or your outdoor learning environment. Garden-themed items can be easily integrated across daily routines, including meals and snacks, as well as into existing learning areas.



## GROWING A VEGETABLE GARDEN

When children put their hands in the soil to garden, they make real life contact with living things and develop a greater understanding of where food comes from.



## BUILDING FAMILIARITY WITH FRUITS AND VEGETABLES

Expose children to fruits and vegetables by incorporating garden-themed items, books and concepts across learning.



## INTRODUCING NEW FOODS THROUGH MEALS AND SNACKS

At just a year and a half, children begin forming food preferences that will influence lifelong eating habits, making it an important time to introduce new fruits and vegetables.



## ENCOURAGING CONNECTIONS WITH NATURE

Introducing children to the natural world builds their skills of observation and engages their senses. These activities can also be calming and provide opportunities to unwind and reduce stress, which is important for children and adults!

# IMPROVING QUALITY OF CARE WITH GARDEN BASED LEARNING

A simple and engaging outdoor learning environment paired with garden-based activities offers numerous opportunities to improve the quality of care at early childhood centers. Below are examples of how garden-based activities correlate to Great Start to Quality Program Quality Indicators.

## SCREENING & ASSESSMENT

Garden-based activities are aligned with High Scope and based on developmentally appropriate best practices for early childhood. Training certified through Michigan Registry that are aligned with COR competency areas. Opportunities to document notes for screening and assessment tools and influence ASQ scores.

## PROFESSIONAL DEVELOPMENT

Training can be clocked for required professional development hours and will support your staff to confidently engage children in garden-based activities. Grow with Me Trainings are certified through Michigan Registry.

## STRENGTHEN FAMILY

Garden-based activities provide a range of active and passive ways to meaningful engage and train parents.

## HEALTH ENVIRONMENT

Opportunity to document activities, including tasting activities and procurement of produce for meals and snacks from the garden or local farms in written Health Plan. Train staff and document efforts to incorporate nutrition education during mealtime, snacks and during with both indoor and outdoor educational activities. Engaging outdoor learning environment to support 30 min of every 3 hours dedicated to active outdoor time.

## COMMUNITY PARTNERSHIPS

Connect families to community resources to support access to healthy foods (maximizing food benefits, connection to emergency food, support to grow their own garden). Centers can also demonstrate their participation in and with these community associations.

## PHYSICAL ENVIRONMENT

Before establishing gardens, soil should be tested to ensure area is free of environmental risks (e.g. lead)

## CURRICULUM & INSTRUCTION

Garden-based activities are aligned with High Scope curriculum and based on developmentally appropriate best practices for early childhood. Numerous opportunities to meet children's developmental goals, including literacy. Utilize and document activities to achieve cultural competency measures, incorporate cultural aspects related to family food preferences and traditions. Support staff to incorporate required outdoor time and activities into routines.





## READY, SET, GROW! TIPS FOR GETTING GROWING

### FORM A GARDENING SQUAD

The possibilities for incorporating garden-based learning at your center are limitless, but it's important to start at a place that's right for you and your team. Take the time to identify and engage a core group of staff, parents and students. Listening to their interests and finding out what skills they bring will help you get started with a project that your team has the capacity to maintain. With success, you'll have lots of time to grow!

### GET TO KNOW YOUR SITE

Think about your outdoor space and assess the best place for garden infrastructure. For a vegetable garden, you want to find a space with lots of sun that is also close to a water source. We also recommend a soil test (one that includes testing for lead) in the area where you plan to grow. Draw a map of your site with measurements of the area. Include what exists (entrances, play areas, water source, etc.) and any additions you want to build. It's a great activity to do with the children! This will be very useful as you start to work on your design and plan for the size and amount of materials you will need.

### DREAM BIG!

Have fun brainstorming all the features that could be involved in your garden! Have children cut pictures out of magazines or your team can search the internet for garden features that appeal to them. Have the group select their favorite things that they would like to see included. These visual images can help your team get excited about moving forward. This will also help you figure out what resources you will need to build or add each of the features.

### MAXIMIZE AVAILABLE RESOURCES

Just getting started and feeling overwhelmed? Don't worry! The staff at Keep Growing Detroit (KGD) provide support and will connect you to resources through the [Garden Resource Program](#) (GRP). When you join the program you will receive seeds, transplants and opportunities for other garden resources like compost and soil testing. KGD's staff also provides support with garden development including assistance with getting organized, making a plan with your team, and supporting you to design and incorporate garden infrastructure in your outdoor learning environment. Visit [keepgrowingdetroit.org](http://keepgrowingdetroit.org) for information.



# BUILD YOUR OUTDOOR LEARNING ENVIRONMENT

IN WAYS THAT ARE SIMPLE, AFFORDABLE AND LOW MAINTENANCE



## BASIC GARDEN INFRASTRUCTURE: RAISED BEDS

Raised Beds, constructed from wood, are a great option for early childhood centers. They are affordable, easy to build, and can be tailored to your spaces. They also provide a clear definition of space for children to help them avoid stepping on beds and making it easy for children to gather around a garden space for a lesson.

## SMALL SPACE? TRY CONTAINERS!

Many crops can be grown in containers. Ideally, utilize large containers (at least 5 gallons or 18" wide) to give plants required space for growing. You may be able to add smaller varieties like lettuce or herbs around the larger plant. Select a container that has holes in the bottom and fill with soil mix of 50% potting soil and 50% compost to ensure good drainage and enough nutrients for plants. Containers tend to dry out quicker, so you may need to check more frequently to keep them watered. Containers should be kept outside in a sunny location (not indoors).



## TIPS TO PREPARE FOR YOUR BUILD DAY!

**SET A DATE AND TIME:** A basic garden build usually takes a half-day with 3-5 people. Consider selecting a date and time that will allow some staff and/or parents to be involved.

**FIND A ROLE FOR EVERYONE:** You may not need a lot of people for the actual construction of the garden, but it's valuable for everyone, especially the children, to be involved and excited by participating in this important step. Ideas for engaging everyone in build day:

- Bring children out before and after to talk about what's being built.
- Once beds are built, let the children help fill the beds with soil and do the planting.
- Take build day photos, including before and after shots, to share the news with families.

**HAVE KEY SUPPLIES AND TOOLS READY:** Having supplies on site and ready for the build will help it go smoothly. Visit [keepgrowingdetroit.org](http://keepgrowingdetroit.org) for detailed [guides](#) on garden building.

- Raised Bed Supplies- Wood, water sealant, screws, nails, hammer & drills. Cardboard to place at the bottom before you put soil in.
- Soil & Compost- Can be purchased in bulk and delivered. Make sure you specify the time you want it delivered.
- Garden Tools- Shovels, rakes, and a wheelbarrow are basic tools needed for building. You can borrow these from one of the GRP community toolbanks.



# BUILD YOUR OUTDOOR LEARNING ENVIRONMENT

IN WAYS THAT ARE SIMPLE, AFFORDABLE AND LOW MAINTENANCE



Outdoor chalkboard for small group activities/connection to literacy

Tunnel for large motor skills

Add color for visual interest



Mud kitchen for imaginary play



Stumps for outdoor classroom



Designated "Digging Box"



Sensory garden for growing connections to nature



Peak curiosity and build observation skills with a bird or bee house



# SELECT PLANTS

There are hundreds of varieties of garden vegetables to choose from. Here are a few easy-to-grow picks that typically do well in Detroit's climate. Consider choosing varieties that can be planted and harvested in alignment with your school year calendar.



## COLLARDS (OR KALE)

Best as transplant.

Plant 18 inches apart in early spring or early fall.

50 days to harvest.

To harvest, break off lower outer leaves. The plant will continue to grow for ongoing harvest.



## BROCCOLI

Best as transplant.

Plant 18 inches apart in early spring or early fall.

58 days to harvest.

Harvest broccoli when a tight head forms. Many varieties will then continue to produce small side shoots you can continually harvest!

## COOL WEATHER GARDEN PLAN EAT YOUR GREENS!

In a 4 by 8 foot garden bed, plant 6 plants each of kale, collard and broccoli. These healthy greens are easy to grow in cool weather and great crop choices for the school year calendar. They can be planted early spring for harvest before summer break or late summer for harvest in the fall.



## RADISHES

Best from seed.

Plant 3 inches apart in early spring or early fall.

30 days to harvest.

Just 30 days after seeding these crunchy, somewhat spicy, colorful treats they can be plucked from the ground like treasure!



## LETTUCE

Seed or transplant.

Seed 2-3 seeds per inch.

Plant 8 inches apart.

Plant early spring or early fall.  
28 days to harvest.

Once lettuce forms leaves, you can begin harvesting. Cut it with scissors and it will regrow.



## SPINACH

Best from seed.

Seed 1 inch apart in early spring or early fall.

30 days to harvest.

Harvest outer leaves. After 2-3 harvests or when stalks start to grow from the center point, harvest the whole plant and start again!



## TOMATO

Best as transplant.

Plant 24 inches apart in late spring.

75 days to harvest.

Tomatoes should be staked for best results. Harvest often when fruit is ripe for continuous production.



## SUMMER SQUASH

Seed or transplant.

Seed or plant 18 inches apart in late spring.

58 days to harvest.

Make sure to leave enough room for this plant to grow! Harvest often to avoid huge squash!!

## THE MORE YOU PICK, THE MORE THEY GROW!

Hot weather crops that produce fruit, such as tomatoes, peppers or cucumbers will continue to produce new fruit, so harvest away! When you leave fruit on the plant too long, they might become tough, watery, start to crack or lose their peak flavor.



# 5 THINGS YOUR PLANTS NEED TO THRIVE

These tips will help you get started, but it will take practice to become a confident grower. Take this opportunity as you learn to engage children to develop critical thinking skills, asking them what they think plants need to be healthy. It is also a great way to encourage children to think about, practice, and ask for what they need to be healthy as well!

## #1 TIME: LEARN WHEN TO PLANT & HOW LONG THINGS TAKE TO MATURE

Cool weather crops can be planted in April and September and harvested during the school year. Hot crops are typically planted in May and ripen over the summer and fall.

Some crops, like radishes only take 30 days to grow from seed to harvest. Others take 4 times as long!

## #2 SUN & HEAT: VEGETABLES NEED AT LEAST 6 HOURS OF FULL SUN DAILY

Full sun means 6 hours or more of direct sunlight. After the trees have leafed out in the spring, go outside with the children at 10am, 12pm, 2pm, and 4pm to observe/draw which parts of the garden are sunny and which parts are shady. Hot weather crops such as tomatoes like it hot so make sure to plant them in the sunniest locations.

Vegetables also like warm soil. When you dig in the soil notice how warm (or cold) it is in your hands. Purchase an inexpensive soil thermometer to take your soil's temperature. Is it getting warmer or colder?

## #3 SUPPORT: MAKE SURE PLANTS THAT NEED SUPPORT GET IT EARLY

Trellises, cages, and hoops help save space in the garden and are a great way to add color and interest. When you're planning your garden

find out what plants benefit from staking, trellising, cages, or hoops and install them early to avoid damaging your plants.



## #4 SPACE & AIR: SEEDS & PLANTS NEED ENOUGH SPACE TO GROW

A beginner mistake is planting crops too close together, making harvest difficult when plants mature. Use a measuring tape or hand trowel to help gauge spacing (hand trowels are usually about a foot long). Cardboard can also be measured, cut, and laid out to help with spacing.

When spacing is done correctly, it can help conserve water and prevent weeds!

When spacing is too close, it hinders air flow between and around plants, which makes them more susceptible to pests & diseases.



## #5 FOOD & WATER: VEGETABLES NEED AT LEAST AN INCH OF WATER EACH WEEK

Buy or make a rain gauge. Turn reading the rain gauge and determining how much water the garden needs into a fun math exercise.

Be prepared to water the garden when nature doesn't do it for you! Water early or late in the day to avoid evaporation. Use soaker hose or drip tape to get water directly to the roots when possible. Let children help! Upcycle food-safe plastic bottles with tops and handles into watering cans.

Before you plant, add a little compost to "feed" your plants. How does the compost look, feel, and smell different than the soil?

# TENDING THE GARDEN IN THE FALL & WINTER

Even though it can be a little chilly outside, the beginning of a new school year is a great time to get children excited about gardening. There is lots to do both inside the classroom and outside in the garden to keep little hands and minds engaged during the fall and winter.



## FALL: PUTTING YOUR GARDEN TO BED

After a long growing season, you may be ready to put your shovel down, but before you do, put the garden to bed! Pull out your plants and mulch with a thick layer of leaves, straw and/or cardboard. In the spring, this will keep the weeds from coming up and there will be a dark, rich, moist soil ready to plant. Remove and store tomato cages, trellises, row cover, containers, hoses, rain barrels, and garden tools to prevent damage in the winter.

## NOT READY TO SAY GOODNIGHT...THERE'S LOTS OF FALL ACTIVITIES

If you aren't ready to say goodnight to your garden, you can continue into the fall with gardening activities. Here are some tips to extend the season and take your garden to the next level:

**EXTEND THE SEASON:** There are crops that can be planted in the fall, such as quick growing lettuce or basil. You can also plant garlic and spinach as late as mid-October! Both crops will be dormant over the winter but can be harvested the following year!

**TRY COMPOSTING:** Start a small compost bin to introduce children to the amazing world of soil. You can add plant matter from your garden beds and food scraps from meals and snacks.

**TAKE GOOD NOTES IN YOUR GARDEN JOURNAL:** Make a list or draw a picture of what you grew in the garden this year. Talk about what grew well, what didn't grow well, what you want more or less of next year and what new plants you'd like to try.

## WINTER: STARTING SEEDS INDOORS

As you eagerly await the arrival of spring, consider setting up a simple seed starting station indoors to introduce children to the wonder of seeds germinating and get excited for spring!

A note about seed starting indoors: When germinating seeds, if they do not have adequate light and/or are too crowded, they will quickly become "leggy" as they reach for the little sun available. If this happens, these seedlings may not be the best candidates for transplanting to your garden. Remember, each seedling becomes a plant and so you only need a few to transplant out to the garden. Let the children experiment with germination, but then give one or two of each kind the space and light they need to thrive so they are ready to transplant to the garden.

Visit KGD's website for to see our one-page garden guides on these topics and many others!





# TENDING THE GARDEN IN THE SPRING & SUMMER

There's a lot growing on in the garden in spring and summer, including maintenance. Make a routine of visiting the garden with the children daily to observe, water and pull a few weeds to stay on top of it!

## SPRING: GARDEN BED PREPARATION

In the spring, get ready to plant by pulling any weeds that have grown, especially along the edges of beds. Loosen the bed with a shovel and remove any additional weeds or roots you encounter. Do this a few times to make sure you get them all! Rake the bed smooth, add a 5-gallon bucket of compost, and plant away!



## SUMMER: WEEDING

Weeds aren't inherently bad, they're just plants that are in the wrong place that may have travelled to your garden by wind or carried by birds, squirrels, and other animals. Weeds are bad for gardens because they compete for resources like water and sunlight with the plants that we want.

To manage weeds, your best bet is to prevent them by keeping your soil undisturbed and covered with a mulch, like straw. When that doesn't work perfectly, your next best line of defense is to prevent them from reproducing by removing them from the root when they're young plants and before they've flowered and produced seeds.

If you aren't sure what's a weed and what's a plant, begin by observing the leaves and see if there is a pattern of those leaves throughout your garden. This might help you see that the leaf that you are looking at is actually the kale you planted in a straight row! Begin by removing the things you know are weeds and go from there.

If weeds get overgrown, use the right tool for the job! Hand-held circle hoes work great for small hands in tight spaces. Another tip is to find the base of the plant when you are weeding. Often weeds are sprawling and if you can locate where they are coming from and pull there, you'll likely get to the root of the problem!

## DON'T FORGET TO HARVEST AND EAT WHAT YOU GROW!

Yes, the lettuce is beautiful, and yes it's amazing to see the broccoli grow from the center of the plant, but don't admire it for too long! It's time to eat! Learning when and how to harvest each plant before it "bolts" or goes to seed will ensure you are harvesting and eating crops at their peak time!

## BUG HUNT!

As your beautiful crops begin coming in, you may start to see pest damage. It's an inevitable part of gardening and so it's important to begin observing and learning about garden pests. We encourage you to grab some magnifying glasses for the kids, look on the underside of the leaves and find those pesky friends who may have plans to eat your crops! Many pests can be physically removed and smushed and that will help a lot with the damage being caused.

# "I DON'T HAVE A GREEN THUMB" YOU CAN DO IT!

## **TRAINING AND SUPPORT FOR STAFF & PARENTS TO BUILD SKILLS & CONFIDENCE**

Do children learn how to tie their shoes the first time you introduce the lesson? Consider gardening as a new essential life skill that you can learn to do alongside the children. It's safe to say that you will never know everything about gardening, but each season will present you with a new opportunity to try, learn, and grow something new. And yes, you will fail along the way, but isn't that one of life's most important lessons??

Supporting adults to confidently establish a thriving outdoor learning environment and engage children through garden-based learning is key to success! KGD offers coaching, informal training sessions for early childhood staff and/or parents as well as certified training through Michigan Registry for professional development hours. Training and support are free to providers enrolled in the Garden Resource Program (GRP). Contact KGD to schedule a training or inquire about fee-based training if not eligible through the GRP.

## **GROWING POSITIVE FOOD ATTITUDES IN YOUR CLASSROOM**

This workshop trains participants to initiate wellness activities to promote health. Participants will be introduced to simple garden-based activities and tools that will help them create a healthy eating environment in their classroom.

## **GARDEN-BASED LEARNING WITH YOUNG CHILDREN**

This workshop trains participants to utilize an outdoor garden space to initiate wellness activities to promote good health. Participants will be introduced to simple garden-based activities that engage children in active learning and sensory experiences and support building their connection with the natural world.

## **ENGAGING FAMILIES WITH GARDEN BASED LEARNING**

This workshop introduces garden-based learning as a tool to meaningfully engage parents and caregivers, connecting what children are learning at school with opportunities to continue to grow healthy habits at home. This session was developed in partnership with Great Start to Quality.

## **LOOK WHAT WE GREW! BASIC GARDENING FOR EDUCATORS & CAREGIVERS**

If you aren't a gardener, starting a garden with children may feel intimidating. This basic gardening workshop will help you build the skills you need to confidently start and maintain a garden.

## **LEARN WITH DETROIT'S NETWORK OF URBAN GARDENS & FARMS**

**DETROIT URBAN GARDEN EDUCATION SERIES:** Community-based classes on topics ranging from pest and weed management to cooking, canning, and season extension!

**KGD YOUTUBE CHANNEL:** Watch recordings of Education Series classes and video shorts of a wide range of garden topics.

**KGD GARDENING GUIDES:** Visit KGD's website for growing guides on basic topics like building a raised bed, growing garlic, container gardening and more!

**KGD E-NEWSLETTER:** Subscribe to receive bi-weekly updates from KGD and the extensive network growers.



# PARENT ENGAGEMENT

Give parents a peek at all the healthy habits their children are growing at school with fun activities that will encourage further connections at home. You'll be surprised at how many parents also may have experience and skills to share to strengthen your garden team!



## I WATER, YOU WATER, WE WATER!

Invite parents/caregivers to sign up for a one-time visit to the garden to do a simple garden task. The signup process can be similar to asking parents to volunteer for reading to the class. Start with an easy 5 minute task like watering or harvesting that can be done at drop off or pick up.



## TASTE TEST AT PICK UP

Invite parents and children to taste one or two items that were grown in the garden (or store bought is fine too) when picking up kids. Ask parents and kids to give verbal feedback or set up an easy "which one did you like best" visual chart to tally results.



## FAMILY HARVEST PARTY

Host a Harvest Party for families. Children can harvest some veggies ahead of time and make simple snacks for parents to taste. Have a station for children and parents to take a selfie in front of the garden. String decorations, balloons or lights and play music to set the atmosphere!



## NEWS FROM THE SOIL

Create a bulletin board that's visible during pickup and drop-off. It will keep families interested in what's new in the garden. Highlight a veggie of the month and add pictures of the kids planting, harvesting or eating the featured veggie. The poster can include fun facts and stories from the kids.



## GROW WITH ME LESSONS

Get started with garden-based learning using KGD's Grow with Me lessons. These learning units are aligned with the High Scope curriculum and developmentally appropriate best practices in order to maximize use by providers to reach key developmental indicators. Each lesson includes the following information for lesson planning and alignment:

**ORIGINATING IDEA:** The concept, local event, material, and/or what observed children say or do that led to the idea.

**MATERIALS:** The materials needed, including what and how many.

**COMPETENCIES AND CONTENT:** The main key developmental indicators the activity focuses on and any others that might occur. A full alignment with key development indicators is included in the appendix.

### ACTIVITY:

**Beginning-** How the activity is introduced to the children, including your opening statement and/or action.

**Middle-** What children might do during the activity and how they will be supported?

**End-** How the activity will be ended.

**Follow Up-**The materials and activities that can be provided on subsequent days to build on the children's experience with this activity.

**VARIATIONS FOR PHYSICAL AND COGNITIVE SPECIAL NEEDS:** Modifications that can be made to support all children to engage in the activity.





# GARDEN INTRODUCTION




**Originating Idea:** Children are more likely to be successful if they understand how they can contribute to building a supportive environment and learning spaces. Creating rules, and responsibilities will help children establish expectations, self-regulate and create a visual routine that they understand how to follow.

## Materials Needed:

Markers & chart paper  
Garden focused book  
Natural garden materials: rocks, straw, leaves, etc.

**Competency and Content:** Approaches to Learning, Social and Emotional Development, Physical Development and Health, Language Literacy and Communication, Social Studies.



**Activity:** Introduce expectations for garden safety and rules by reading a garden-based book such as: "Seed to Plant" by Gail Gibbons or "Growing Vegetable Soup" by Louis Ehler. Ask the students questions that will encourage thinking about how they have behaved in a garden previously. Ask questions such as:

- Have you walked through a garden before?
- What kind of things can be grown in a garden?
- What can we do to be kind to the plants and bugs in the garden?
- How can we keep our bodies safe in the garden?
- How can we keep the plants healthy in the garden?
- What does it mean to have slow, safe feet in a garden?

During large group time invite students to share their ideas about safety and how they behave while inside a garden. Focus on keeping the "rules" positive ("Feet move slowly." instead of "No Running") and simple so that they are easily understood by the children. If weather allows, create rules while in or near the garden. Post near the garden as a visual reminder.

To create additional visual cues that help children recall the agreed upon rules, take photos of the children "acting out" each rule and add them to the garden safety chart. This can be done during a garden walk with the large group. Display these photos alongside their corresponding rules.

**Tips & Variations:** Have students collect natural materials (pine needles, plant leaves straw, etc.) on their way in from the garden to use to create process art that allows the children to express their experience creatively. During small group time provide materials and open-ended prompts for children to visually create a garden. Be sure to provide ample natural real-life materials for them to experience.

**Communication:** Accompany each rule/safety tip with a hand motion to reinforce the behavioral expectation. For example: Every time you reference "feet move slowly", slowly walk your fingers across the palm of your other hand.





# WATCH ME GROW




**Originating Idea:** Children are interested in exploring the school or local garden. Children will have the opportunity to connect to the natural and physical world.

**Materials Needed:**

Gardening bed or container garden  
Watering can or hose  
Life cycle plant cards (with real photos of plants)

**Competency and Content:** Observing and classifying, Experimenting and predicting, Natural and physical world, Movement, Music, Problem Solving with materials, Gross Motor.



**Activity:** Begin song to engage transition by singing I'm a Little Seed (tune of I'm a little teapot) seed paired with body motions as a group. Repeat song for literacy-focused repetition while walking outside.

**I'm a Little Seed - song movement instructions**

I'm a little seed, small and round (crouch down and grab knees)  
Poke your finger, plant me in the ground (point finger down at the ground)  
Water me and weed me, I'll grow my roots (pretend water with hand and hand and hand pulling)  
Watch me grow. You can eat my fruit! (Hands above the head and pretend eating motion)

Once they are in the garden, the class will observe the garden and identify what they notice. With permission, they can openly explore the soil with their hands and take turns watering with a hose or can. Over time, they will be able to identify and harvest fruit and learn about the life cycle of a seed. Here are some open-ended questions:

- What do you notice about the garden? How does it look different from the last time we saw it?
- What do you think a plant needs to grow?
- How does the soil feel?
- How does the soil look different after you've watered it?
- How do you think seeds drink the water?

Provide plant life cycle cards with a visual representation of each stage (seed, sprout, flower, fruit) and ask children to put them in the correct sequence.

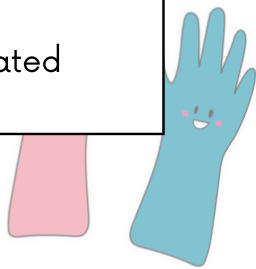
**Tips & Variations:** Read "The Tiny Seed" by Eric Carle or "The Empty Pot" by Demi and talk about the time at the garden, using reflective questioning.

**Large Motor:** Allow children to use hose if watering can is too heavy.

**Fine motor:** Allow children to grasp small seeds to hold, feel and pick up.

**Social-Emotional:** Discuss how all living things grow and need care.

**Communication:** Respond to and initiate conversation with children with repeated back and forth turns on the same topic.





# FOLLOW THAT NOSE




**Originating Idea:** Children who are provided multiple sensory experiences obtain stronger connections to and recollection of the concepts they are being introduced to.

**Materials Needed:**

3 strong-smelling plants, such as herbs or onions  
Safety Scissors  
Bag for harvesting

**Competency and Content:** Observing and classifying. Experiment Approaches to Learning Language, Literacy and Communication, Mathematics, Science and Technology.



**Activity:** Hold group time outdoors, near the garden area. Have the class close their eyes and think about the favorite foods their families eat at home. Have children take turns sharing what those foods are. Ask open-ended questions that encourage the class to explore food ingredients further using "I wonder" statements such as:

- "I wonder what ingredients are in (food mentioned) that make them smell so yummy?"
- "I wonder if any plants or vegetables are a part of (food)?"

Now explore the plants that are growing in the garden. Introduce each plant by describing with scaffolding questions that will build on the children's potential prior knowledge of the plant (before smelling). Questions such as:

- "What do you notice about this plant?"
- "What do you think it will feel like when you touch it?"


Have each student use their safety scissors to cut a small portion of the plant off and smell it! Follow with questions that allow them to have multiple sensory experiences with the plant (how it looks, feels, smells even tastes!). Add "I wonder" questions that help them recall the conversation about their foods at home such as "I wonder, if (plant) is in the foods our families make at home." Repeat the activity with each plant/ herb having the children place the stem/leaf in their bag before moving on to the next plant.

Once back in the classroom have the children lay out each of the parts of the plants. Ask questions that encourage them to recall their experience and compare the plants that they learned about. Have the children hold up which plant they think smells the best, the strongest, the softest, or the brightest in color! They can also hold which they think they have tried at home or with their families.

**Tips & Variations:** Have the children "prep" the herbs to be used as part of lunch or snack as part of what we eat! Have the children, wash, dry, chop and add the herb/ plant to the food themselves- cilantro in a salsa, basil in a tomato sauce or mint to their fruit! Discuss and enjoy!

**Fine Motor:** For children who need more exposure to cutting with scissors, have those children "chop" the herbs using safety scissors during follow-up activity.

**Communication:** For children who show delay or are non-verbal, provide the responses to the open-ended prompts using a wide variety of detailed words for increased exposure such as bold, delicate or enormous!





# MY FAVORITE THINGS




**Originating Idea:** Children who are provided multiple sensory experiences that build on a connection to home environments will obtain stronger connections to and recollection of what they are being introduced to. It also supports a strong self-identity.

## Materials Needed:

Garden or edible plants from store  
Safety scissors  
Bag for harvesting  
Napkin or paper with 4 quadrants

**Competency and Content:** Social and Emotional Development, Language, Literacy and Communication, Mathematics, Science and Technology.



**Activity:** Take the students on a walk through the garden area and talk about what they notice about the plants growing. Let the students harvest different types of edible plant parts (ex. basil leaf, tomato fruit, carrot root) and have them place them in the bag. During the walk ask thought-provoking questions such as:

- What colors do you see when you look at the garden? What do you think this will look like if we cut it. What do you think it will taste like?
- "I wonder how these two plants are different from each other/similar? Do you see any plants with curly leaves or long stems?"

Back indoors, ask the children to place their findings on the table in front of them. In addition to what you find in the garden, you may provide examples of foods that showcase the different parts of the plant that we eat. Give each child a paper folded into 4 quadrants and ask them to create a picture of 4 different plant parts. Offer that they can use the crayons to show how it felt, how it tastes or how it looked..

Use appropriate plant vocabulary like "stem, leaf, bud and fruit" to help children use active learning and context to develop vocabulary. Write out the name of each plant on large paper using an easy-to-read font to help children draw connections to alphabetic sounds and shapes. Invite them to add the word for the plant to each corner or asking for help from an adult.

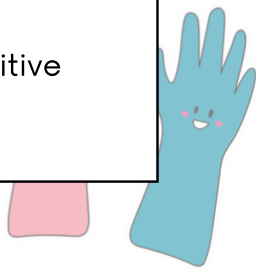
If you choose vegetables that you can eat raw (such as tomatoes, zucchini, carrots or spinach), you can then work with your child to wash, dry and cut the vegetables and have a taste test. Encourage your child to try a bite of each of the vegetables and model the behavior by doing so yourself. Steer away from passing judgment on children who are not ready to do so and ask questions to those who do. This increases the level of exposure to the class while being mindful of each child's needs. Have them put a check mark on their picture next to the ones they tried and a smiley face next to the ones they liked!

Reintroduce the same vegetables as part of lunch or snack throughout the week. Recall the activity and remind them that this is the vegetable that they picked!

## Tips & Variations:

**Fine Motor:** For children who are unable to use scissors, allow them to delicately pick a leaf or two from the plant using a pincer grasp (two fingers)

**Communication:** Laminate and add labels to items within the garden for repetitive recognition of the words you are using. (Ex: Write "hose" over the hose holder, "tomatoes" on the tomato area, etc.)







# RAINBOW SCAVENGER




**Originating Idea:** Children are beginning to internalize finding differences and similarities in items and objects around them. This activity draws connections between objects, colors and food we eat in a welcoming, exploratory way.

## Materials Needed:

Wide variety of free color samples from hardware/paint store  
One bucket  
A bag and safety scissors for harvesting

**Competency and Content:** Social and Emotional Development, Language Literacy and Communication, Mathematics, Science and Technology, Creative Arts.



**Activity:** If available read "Under the Sky" by Rozanne Lanczak, a story about observing what's around us. If story is not available, select garden items, materials and small tools for children to observe, touch and experience, discussing what they see, and feel. Ask questions such as:

- What colors do you see when you look at the garden?
- Why do you think the garden grows so many different colors?

Spread out all of the color samples and have the children each select a color. Once they have selected their sample, have the children find something in the garden growing that is the same color as their color sample. Prompt the children that you will know they have found their item when they are (choose any fun way for them to indicate they have found it such as making a silly face, patting their heads or doing a dance). Work with children to help them "harvest" their item, allowing them to carefully collect the material and add it to their bag.

Once harvested, have the children sit in a circle with their item placed in front of them. Take turns talking about each item that was selected, using specific garden vocabulary, student's names and colors selected. Use this opportunity to discuss nutritional elements of eating a wide variety of colors in our foods. Ask open ended questions such as:

- What kind of foods do you think we can make with the colors we have selected (categorizing).
- What kind of foods can be made at home with these types of ingredients?
- Why do you think it's important to eat all the colors the garden provides for us?

**Tips & Variations:** Revisit the color samples and guide the children in recalling the garden items they selected that day encouraging them to provide new examples of foods and plants that are also those colors! Keep color samples in reading area to encourage continued use with reading time. Write the word for the color on sample to support alphabetic awareness.

Provide additional "grouping" of objects that are the same color but different shades (a leaf and a pea pod). This can support children's ability to internalize the abstract concept of colors by exposing them to where the colors occur in the natural world. Throughout the week, continue to point out items that are part of the shared colors that were grouped and discussed to help them explore and make connections.




# RECIPE WRITING



**Lesson Focus and Goals:** Providing real-life materials within the classroom setting creates an active learning environment which promotes a deeper understanding of the content and increased higher-level skills in critical thinking.

**Materials Needed:** A wide variety of food labels or simple food pictures that include items grown in a garden. Recipe cards. Half sheet card stock. Writing instruments.

**Learning Objectives:** Observing and classifying. Experimenting and predicting. Natural and physical world. Problem solving with materials. Fine motor. Literacy. Health and nutrition.



**Activity:** Share pictures of familiar foods or food labels. Ask questions about the foods highlighted and read the ingredient list out loud. Encourage the children to identify those that are familiar and where they have seen them before. Introduce the idea that recipes guide us to know how to make our favorite foods and are often passed down in families and that makes them special! Explain that today we will be creating our own recipes using the ingredients from the garden!

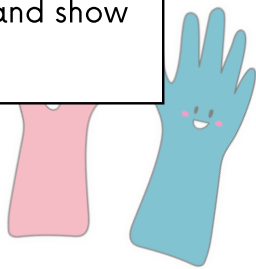
Provide the cards for the children to write their own recipes using the items from the garden. Let the children be as creative as they like! Have each child write or draw their recipe for the food that they would like to make from those items. During the activity ask questions that encourage further creativity such as: What kind of recipes can we make using the food we grow in the garden? What meals have we have eaten at home that have these foods in them?

Let the children know that all the items that you utilized to create your recipes, including the empty bagged box and canned items will be kept in the play area. This way children can revisit the concept and continue to use the materials to learn.

**Tips & Variations:** Reintroduce the concept of recipes by having the children select one recipe to make as a class. Include them in the process of preparing the snack and be sure to use the cards they created.

For children who are not able to write words, allow them to add photos or draw pictures to their cards as a visual representation of the ingredient. For children who struggle to hold writing instruments provide variations of sized tools such as bingo dabbers, markers or thick crayons.

Build connections to children's home and culture, inviting families to write down their family's favorite recipe and submit it. The recipe can include pictures and stories that highlight why the recipe is special. Bind the recipes into a book to celebrate and show respect for cultural differences.



# KEY DEVELOPMENT INDICATORS

## GROW WITH ME LESSONS

### GARDEN INTRODUCTION

Approaches to Learning-Planning Problem Solving, Reflection, Engagement  
 Social and Emotional Development- Empathy, Community, Cooperative Play, Moral Development  
 Physical Development- Body Awareness, Healthy Behavior  
 Language, Literacy and Communication- Comprehension, Speaking, Vocabulary, Phonological Awareness, Concepts about Print, Reading  
 Science and Technology- Observing, Classifying, Experimenting, Predicting Natural and Physical World, Tools and Technology  
 Social Studies- Diversity, Community Roles, Decision Making, Ecology

### WATCH ME GROW

Approaches to Learning-Planning Problem Solving, Reflection  
 Social and Emotional Development-Empathy, Cooperative Play  
 Physical Development- Gross Motor, Fine-motor, Body Awareness, Healthy Behavior  
 Mathematics-Patterns, Data Analysis, Measuring, Unit  
 Creative Arts- Art Music, Movement  
 Science and Technology- Observing, Classifying, Experimenting, Predicting Natural and Physical World, Tools and Technology  
 English Language Learning- Vocabulary, Speaking, Reading

### FOLLOW THAT NOSE

Approaches to Learning-Planning Problem Solving, Reflection, Engagement  
 Social and Emotional Development- Self-identity, Empathy, Community  
 Physical Development- Fine-motor, Body Awareness, Healthy Behavior  
 Language, Literacy and Communication- Comprehension, Speaking, Vocabulary Mathematics- Number Words and Symbols, Patterns, Data Analysis, Measuring, Units Science and Technology- Observing, Classifying, Experimenting, Predicting Natural and physical world, tools and technology  
 Social Studies- Diversity

### MY FAVORITE THINGS

Approaches to Learning-Planning Problem Solving, Reflection, Engagement  
 Social and Emotional Development- Self-identity, Empathy, Community  
 Physical Development- Fine-motor, Body Awareness, Healthy Behavior  
 Language, Literacy, and Communication- Comprehension, Speaking, Vocabulary, Phonological Awareness, Alphabetic Knowledge, Reading  
 Mathematics- Number Words and Symbols, Patterns, Data Analysis, Measuring, Unit  
 Science and Technology- Observing, Classifying, Experimenting, Predicting Natural and Physical World, Tools and Technology  
 Social Studies- Diversity

### RAINBOW SCAVENGER HUNT

Approaches to Learning-Planning Problem Solving, Reflection, Engagement, Use of Resources  
 Social and Emotional Development- Self-identity, Community  
 Physical Development- Fine-motor, Body Awareness, Healthy Behavior  
 Language, Literacy, and Communication- Comprehension, Speaking, Vocabulary, Phonological Awareness, Reading, Writing  
 Mathematics- Number words and Symbols, Counting, Part-Whole Relationship, Patterns, Data Analysis, Measuring, Unit  
 Creative Arts- Art Science and Technology- Observing, Classifying, Experimenting, Predicting Natural and Physical world, Tools and Technology  
 Social Studies- Diversity

### RECIPE WRITING

Approaches to Learning-Planning Problem Solving, Reflection, Engagement Social and Emotional Development- Self-identity, Empathy, Community  
 Physical Development- Fine-motor, Body Awareness, Healthy Behavior  
 Language, Literacy and Communication- Comprehension, Speaking, Vocabulary, Alphabetical Awareness, Reading, Concepts about Print, Writing  
 Mathematics- Number words and symbols, Patterns, Data Analysis, Measuring, Units  
 Science and Technology- Observing, Classifying, Experimenting, Predicting Natural and Physical World, Tools and Technology  
 Social Studies- Diversity, Community Role



# READY, SET, TASTE! PROCUREMENT TIPS & TASTING ACTIVITIES

## INTRODUCE FRUITS AND VEGGIES EARLY, OFTEN, & IN LOTS OF WAYS

For children, each day is a sensory experience! Color, texture, sound and especially taste are the center of their world. Children's taste buds are active and change every few weeks, so as you introduce new foods, try preparing them in different ways and introduce them a few times before you give up. As you work to introduce new foods, do so in tandem with cooking activities or engaging activities like class taste tests, drawing or books about gardening, or cultural food traditions to give time for children to build familiarity and willingness to try.

**CHARTING PREFERENCES WITH A CLASS TASTE TEST:** Choose a vegetable that you can prepare and offer in two different ways (ex. raw broccoli and steamed broccoli). Use classroom counting blocks or stickers to make a chart of the class preferences and discuss results. Remember to include yourself in the taste test too! Children are highly influenced by the adults that care for them.

**DIP IT!** Serve with your children's favorite dressing or try making a simple healthy dip. Make a healthy honey mustard dipping sauce by combining  $\frac{3}{4}$  cup honey with  $\frac{1}{4}$  cup mustard or try a yogurt dipping sauce by combining 1 cup plain yogurt, 1 tablespoon mayonnaise, 2 teaspoons lemon, fresh or dried herbs (dill works great!), and salt to taste.

**FRUIT OR VEGETABLE OF THE MONTH:** Teach children (and families) about what's fresh, seasonal, and locally available by celebrating a fruit and/or vegetable grown in Michigan each month. Try integrating the chosen fruit or vegetable into at least one meal, snack, and hands-on activity that month.



# SNACK ATTACK

Fresh Ideas for eating in season.

## JUNE

Peas with healthy dipping sauce

## JULY

Fresh broccoli vs. cooked broccoli taste test

## AUGUST

Stoplight salad (cherry tomatoes, yellow squash and cucumber slices)

## SEPTEMBER

Cabbage slaw with apples

## OCTOBER

Crunchy radishes with healthy dipping sauce

## NOVEMBER

Squash or potato soup

## SEASONAL AVAILABILITY OF GROWN IN DETROIT VEGETABLES FOR SNACK & MEAL PLANNING

CROP	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER
Arugula	Available	Available	Available	Available	Available	Available
Basil	Available	Available	Available	Available	Available	Available
Beets	Available	Available	Available	Available	Available	Available
Carrots	Available	Available	Available	Available	Available	Available
Chard	Available	Available	Available	Available	Available	Available
Cilantro	Available	Available	Available	Available	Available	Available
Collards	Available	Available	Available	Available	Available	Available
Cucumbers	Available	Available	Available	Available	Available	Available
Eggplant	Available	Available	Available	Available	Available	Available
Fennel	Available	Available	Available	Available	Available	Available
Garlic	Available	Available	Available	Available	Available	Available
Culinary Herbs	Available	Available	Available	Available	Available	Available
Kale	Available	Available	Available	Available	Available	Available
Leeks	Available	Available	Available	Available	Available	Available
Lettuce	Available	Available	Available	Available	Available	Available
Mustard Greens	Available	Available	Available	Available	Available	Available
Parsley	Available	Available	Available	Available	Available	Available
Peppers, Hot	Available	Available	Available	Available	Available	Available
Peppers, Sweet	Available	Available	Available	Available	Available	Available
Radishes	Available	Available	Available	Available	Available	Available
Salad Mix	Available	Available	Available	Available	Available	Available
Scallions	Available	Available	Available	Available	Available	Available
Spinach	Available	Available	Available	Available	Available	Available
Summer Squash	Available	Available	Available	Available	Available	Available
Strawberries	Available	Available	Available	Available	Available	Available
Sweet Potatoes	Available	Available	Available	Available	Available	Available
Tomatoes	Available	Available	Available	Available	Available	Available
Turnips	Available	Available	Available	Available	Available	Available
Winter Squash	Available	Available	Available	Available	Available	Available



# PROCUREMENT

When you buy fresh, seasonal, locally-produced fruits and vegetables directly from farmers you're not only supporting healthy people and communities, you're supporting a healthy local economy and food system.



## BUY DIRECTLY FROM A FARMER

With nearly 2,000 networked urban gardens and farms, Detroit has one of the most robust urban agriculture communities in the world. One way to buy directly from these growers is Grown in Detroit (GID). GID is a collective of more than 40 gardeners and farmers that sell produce via the [Online Farm Store](#) and farm stand in Shed 2 at Eastern Market on Saturdays.



## JOIN A CSA

In Community Supported Agriculture (CSA) programs, farmers benefit from receiving payment in advance, helping them with cash flow and reducing the time spent on marketing during the busy season. Customers benefit from having a relationship with their farmer, access to healthy food, and exposure to new foods. Detroit has many CSA programs to choose from including the GID CSA.



## SHOP AT THE FARMERS MARKET

Detroit is home to more than a dozen neighborhood farmers markets. Farmers markets are great places from early childcare centers and the families they serve to source fresh, affordable, in-season produce directly from local farmers.



## PLAN A SEASONAL MENU

Use the Grown in Detroit seasonal guide to plan your menu, maximizing use of what's fresh and readily available from local farms.

# COMMUNITY RESOURCES FOR CAREGIVERS

## CONNECTIONS TO FOOD, HEALTH & WELLNESS FOR DETROIT FAMILIES

### THE GARDEN RESOURCE PROGRAM

Detroit's Garden Resource Program is a resource for backyard family gardens too! Consider connecting the families you serve with the program. With an option to waive or reduce the fee for low-income households and extensive education opportunities online or in person, families will have the support they need to begin a small garden at home!

### NUTRITION ASSISTANCE PROGRAMS

Promote opportunities for parents and caregivers to shop at seasonal farmers' markets and grocery stores with SNAP/EBT and WIC's Project Fresh benefits. In addition, many locations accept Double Up Food Bucks (DUFB). DUFB matches your fruit and vegetable purchases dollar for dollar, up to \$20 a day. That means families get twice the fresh fruits and veggies!

### STATE & NATIONAL FARM TO SCHOOL NETWORKS

The terms "Farm to School" or "Farm to Preschool" encompass efforts that bring local or regionally produced foods into schools and early childcare centers along with hands-on learning activities into the regular, standards-based classroom curriculum. The National Farm to School Network is a great resource for educators and serves as a national clearinghouse for best practices and curriculum.

The Michigan Farm to School Network is an excellent resource for resources and connections that are specific to Michigan.

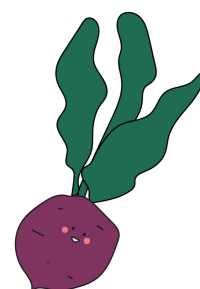
### DETROIT COMMUNITY MARKETS NETWORK

Detroit Community Markets supports a network of more than a dozen farmers markets, farm stands, mobile trucks, and food box programs across Detroit in order to increase access to healthy foods, improve neighborhoods, support local food entrepreneurs, and create public spaces where residents can come together.

Their website is a great place to find a local food outlet near you and wonderful resource for those seeking information about how to access nutrition assistance programs.

### CULTIVATE COMMUNITY PARTNERSHIPS THROUGH FOOD

We all eat! Engaging families through garden-based activities at your center can help you understand their needs and connect them to the network of organizations striving to improve health and wellness for Detroit families!





Keep Growing Detroit (KGD) is cultivating a food sovereign city where the majority of fruits and vegetables consumed by Detroiters are grown by residents within the city's limits. Our strategic approach to achieving our mission facilitates beginner gardeners becoming engaged community leaders and food entrepreneurs, addressing the immediate needs of the community while promoting sustainable change in our food system.

Each year a significant portion of our outreach efforts and garden development support is aimed at educators, organizations, and families invested in the health, wellness and development of children birth to 5. Whether at home, at school or in the community where these children interact and play, KGD works to create spaces and teachable moments for young Detroiters to develop healthy habits that will last a lifetime.

