Food Families

GARDENING

ELECTIVE MODULE

Child & Youth Network

GARDENING

Module Component	Details
Topic:	Gardening
Time Required:	120 minutes
Objective:	The objective of this module is to provide foundational information for participants to be able to begin the process of growing their own food. Participants will learn about different types of gardening and have the opportunity to start their own container garden.
Learning Outcomes:	By the end of this session, participants will be able to: • Explain the benefit of growing one's own food • Identify different styles/methods of gardening • Plan, prepare, and plant their own small garden • Maintain their own container garden • Access a number of community gardening resources
Materials Required:	• Cards for the ice-breaker game • Gardening gloves • Trowels • Watering can • Soil • Various containers for planting (e.g. traditional pots, hanging baskets, window boxes, coffee cans, pop bottles, etc.) • Seeds for various types of vegetables
Preparation Required:	• The facilitator will want to have knowledge related to the various seeds that will be provided to participants (e.g. how does lettuce grow best?) • Prepare the cards for the ice-breaker game (see module curriculum for more)
Budget Considerations:	• Containers – 12 x $15 each = $180.00 • Gardening tool set – 12 x $15 each = $180.00 • Seeds – 12 x $30 each = $360.00
Handouts:	• Popular Types Of Vegetable Gardening • Planning, Preparing, Planting, And Maintaining Your Garden • Container Gardening Basics
Sources:	• Gardening Know How • London Community Resource Centre

Module Component	Details
Summary Instructions: **A** = Activity **P** = Presentation **Q** = Question(s)	**P** Welcome (5 minutes) **A** Ice Breaker Activity (10 minutes) **P** Benefits Of Growing Your Own Food (10 minutes) **P** Types Of Gardening (10 minutes) **P** Planning, Preparing, Planting, & Maintaining (20 minutes) **P** Container Gardening 101 (10 minutes) **A** Planting Your Own Container Garden (45 minutes) **P** Community Resources (5 minutes) **A** Evaluation & Wrap-Up (5 minutes)

MODULE CONTENT

Part 1 – Presentation: Welcome And Agenda (5 minutes)

Instruction: Welcome the group to the Gardening elective module.

- **PP Slide 3** – Ask the group questions about their most recent module and whether they have been able to implement what they learned. Let a few share their examples and stories of success.
- **PP Slide 4** – Share the agenda for today's session
    - Benefits Of Growing Your Own Food
    - Different Types Of Gardening
    - Planning, Preparing, Planting, And Maintaining Your Garden
    - Container Gardening 101
    - Planting Your Own Container Garden
    - Community Gardening Resources

Part 2 – Activity – Vegetable Garden (10 minutes)

Instruction: PP Slide 5 – This is a fun and easy game to play with smaller groups.

Objective: Do not show your teeth or smile (or get everybody else to smile)! Be the "sun" and stay away from the "compost."

Set-up:

- Set up enough chairs for everyone within a tight circle. Have people as close together as possible.
- Have one additional chair in the circle that no one will sit in (i.e. if you have 12 people, have 13 chairs).
- Whoever sits to the right of the empty chair will become the "sun."
- The empty chair is the "compost."
- Before the game begins, assign each participant a vegetable and hand him or her a card with either a picture of the vegetable or the name of the vegetable written across it. The card should be big enough that others in the circle can see it once the game begins. Use real vegetable names, and make them as common or unusual as you like. Funny names can help the game (e.g. "rutabaga" seems like it might make someone laugh).
- Even the person who is the "sun" should have a vegetable name.

Playing the game:

- The player in the "sun" spot starts by saying their vegetable name twice and the name of one other vegetable once (e.g. "Zucchini, zucchini, mushroom").
- If the sun (in the example above, the sun is also the zucchini) shows their teeth or smiles, they move to the chair to the left of the compost (the empty compost chair always remains empty and always stays as the same chair) and everybody else in the circle moves one chair to the left.
- The person who had been beside the sun (on their right) would move into that spot.
- If the mushroom also shows their teeth or smiles, they would also move to the chair beside the compost and everybody would move over a chair to the left.
- If the sun doesn't show their teeth or smile, they stay in their spot.
- If the mushroom doesn't show their teeth or smile, they stay in their chair and they start the next round (e.g. "Mushroom, mushroom, rutabaga").

Potential options each round:

- Both vegetables smile and move to the chairs closest to the compost and everyone else moves closer to the "sun."
    - In this case, the new "sun" starts the next round.
- One vegetable smiles and they move to the compost pile while everyone to the right of that vegetable moves one spot closer to the "sun."
    - In this case, the one who doesn't smile starts the next round.
- Neither vegetable smiles and no one moves.
    - In this case, the second vegetable called starts the next round.

Winning the game:

- It's more about the laughs, but the winner is the vegetable who is in the "sun" spot when you decide time is up.

Part 3 – Presentation – Benefits Of Growing Your Own Food (10 minutes)

Instruction: PP Slides 6-8 – Ask a few questions and have some group conversation about why people would decide to grow their own food.

ASK the group to describe any experience they have with gardening.

- What did they grow? Vegetables? Fruits?
- What kind of gardening did they do? Community garden? Container garden?
- Were they successful?
- What did they learn about gardening?

ASK the group, what do you think are the benefits of growing your own food?

- Saving money by lowering your grocery bill.
- Higher quality produce – you are able to eat in a healthier way (i.e. food is rich in nutrients and vitamins).
- You will likely eat more fresh vegetables if you have them readily accessible.
- Helps to save the planet – cuts down on "food miles" (i.e. the distance from the ground to the grocery store).
- Can provide some exercise depending on the type of gardening.
- It can be a fun hobby that is good for one's mental health.
- Brings a sense of pride and accomplishment.
- You learn about many things! You might learn about the weather, soil, gardening tools, and bugs.
- If you have children, this can teach them about gardening and healthy choices.

Instruction:

When teaching the module generally, and when discussing the benefits of gardening specifically, try and make sure participants understand that they must have very realistic expectations about the outcomes of their gardening. It is not an easy hobby or task and it can take some time to develop one's skills and expertise. Most learn about gardening by doing it first hand and experiencing various scenarios, so time is definitely a good teacher. There are many factors that can influence and impact the success of a garden. Some of the potential factors that can significantly impact your ability to grow your own food include animals (e.g. deer) eating seeds or plants, weather related issues (e.g. drought), and not having enough time to dedicate to the maintenance of your garden (e.g. weeding and watering).

Although we want to leave a positive impression about gardening and the benefits it can have, it is important not to over-promise. It takes a veteran and savvy gardener to begin to save a lot of money and have access to a plentiful crop of fresh fruits and vegetables.

This module is meant to be an overview and a starting place for those who may want to pursue gardening more seriously.

Part 4 – Presentation – Types Of Vegetable Gardens (10 minutes)

Instruction: PP Slide 9 – Gardening can be a very complex hobby. There are many different types of vegetable gardens and methods for growing your own food. This section of the module will name a few of the many types of gardening methods used throughout the world, and then focus on the three basic types that most beginners and those gardening as a hobby will use.

Here are a few types you may have heard of (or maybe not):

- Mittlieder Method
    - Developed by Dr. Jacob Mittleider, who aimed for a gardening method that would be high yielding and used in a variety of countries and conditions.
    - The main idea of this method is to combine the best of soil gardens and hydroponic gardens.
- Square Foot Gardening
    - This is the practice of dividing the growing area in small square sections, typically 12" on a side.
    - The aim is to assist the planning and creating of small, but intensively planted, vegetable gardens.
    - It's a simple and orderly gardening style.
- Keyhole Gardening
    - First made popular in Africa, the keyhole garden is catching on in hot, dry places around the world.
    - A keyhole garden holds moisture and nutrients due to an active compost pile placed in the centre of a round bed.
- Aquaponics
    - Aquaponics is gardening without soil.
    - It is a system that grows fish in simple water tanks and uses the water that contains bio-nutrients to feed plants organically.
- Window Farms
    - A window farm is a hydroponic urban gardening system that allows for an indoor garden and year-round growing in almost any window.
    - It lets the plants use natural light, the climate control of your living space, and organic "liquid soil."
- Straw Bale Gardening
    - Straw bale gardening is a different type of container gardening. The main difference is that the container is the straw itself, held together with two or three strings.
    - Once the straw inside the bale begins to decompose, the straw becomes "conditioned" and ready to plant.
    - The straw gives an extraordinarily productive, warm, moist, and nutrient rich rooting environment.
- Straight-From-The-Soil-Bag Gardening
    - This is a no dig planting method, and probably the fastest way to start a vegetable garden.
    - The seeds are planted directly into a bag of topsoil and the bag acts as the container.

- Lasagna Gardening
    - This is not about growing lasagna, but refers to the method of building the garden.
    - In this method, the gardener adds layers of organic materials that will "cook down" over time, resulting in rich, fluffy soil.
    - It is a no-dig, no-till organic method.
- Ruth Stout No-Work Garden
    - Named after Ruth, who was nicknamed the "Mulch Queen."
    - She realized that all traditional methods of working the soil (i.e. digging, weeding, watering, plowing, hoeing) could be replaced by adding a layer of hay on the ground.
    - She believed in the "law of least effort."

Script: As you can see, there are many different methods or styles of gardening and definitely a lot to know when it comes to growing your own food. Let's briefly discuss three of the most well known gardening methods.

Provide the Popular Types Of Vegetable Gardening handout. The handout highlights three basic types of vegetable gardening.

PP Slide 10

1. **Traditional Gardening –** A traditional vegetable garden is a planned space, usually set outdoors, and set aside for the cultivation of food crops. Traditional vegetable gardens are also known as residential gardens. Food-producing gardens are distinguished from farms by their smaller scale, more labour intensive methods, and their purpose (i.e. enjoyment of a hobby, rather than produce for sale).

2. **Raised-Bed Gardening –** Raised-bed gardening is a form of gardening in which the soil is formed in three to four foot wide beds, which can be of any length or shape. The soil is raised above the surrounding soil. Raised-bed gardening is beneficial because they extend the planting season, they often reduce the threat of weeds, and they barely touch each other, creating a microclimate in which weed growth is suppressed and moisture is conserved. Soil is also not compacted in raised-bed gardening because the gardener does not typically walk on the raised beds.

3. **Container Gardening –** Container gardening, or pot gardening, is the practice of growing plants, including edible plants, exclusively in containers instead of planting them in the ground. Containers can range from simple plastic pots or teacups to complex automatic watering irrigation systems. The flexibility of design is another reason it is gaining popularity with growers. They can be found on front porches, back patios, and steps, and on rooftops and balconies.

Part 5 – Presentation: Planning, Preparing, Planting, And Maintaining Your Garden (20 minutes)

Instruction: PP Slide 11 – This section of the module will be used to highlight some of the basic elements one would need to consider when looking to move through the more traditional gardening process.

Provide the handout to participants and walk through the various high level components of Gardening 101.

Planning Your Vegetable Garden

- Consider what space you have available. Some fruits and vegetables can be grown in a fairly small space.
- What do you want to grow? Make a plan related to what types of vegetables you will want grow and what you will want to eat.
- Draw a plan of your garden, to scale if possible (graph paper can help), and begin to plot various sections of your garden on the plan. Use a measuring tape to get approximate measurements.
- Calculate the hours of sun and shade your garden area gets as this will be important to know and to understand which seeds will best grow in your space. Typically, the more sun, the better, but 6 hours a day is typically the minimum.
- As you make your plan, try to find an area for your garden that is protected from the wind as that can dry out the soil quickly.
- What questions do you have? As you think of questions, write them down so you can ask an expert or go online for answers.
- Do some research on soil types and what kind is best for what you want to grow. You might think dirt is dirt, but it's not. Your garden will only be as good as the soil you use.
- Research "companion planting." It is helpful to understand that some plants are "friends," while others are "enemies." There are some plants that compliment each other well and thrive when planted close together and other plants that may not have a strong overall chemistry. Some circumstances exist where one type of plant may attract a certain kind of bug or insect that is known to destroy another type of plant that is planted nearby. That would make for a poor combination. Understanding "companion planting" in the early stages of your planning will help ensure a sturdy crop.
- "Succession planting," following one crop immediately with another, is another important consideration that a gardener needs to make when making plans for their garden. Some plants may only take 35 to 40 days to yield, and "succession planting" will allow one to keep their garden full throughout the season, maximizing the full potential of the garden.

Preparation For Planting Your Vegetable Garden

- Once you have a plan in place, you will want to make sure you have the tools you need for the type of gardening you wish to do.
    - Gloves, garden rake, hoe, or shovel will be important items to have available.
    - You may also need string and wooden stakes, depending on what you decide to plant.
- Next you will want to loosen the soil to 12-18 inches deep (if you are doing traditional gardening).
- Depending on the condition of the soil, you may have to add some water and let it soak before continuing with digging. Work with the soil when it is dry enough to crumble easily. Don't saturate the soil with water.
- Eliminate weeds and remove any rocks and roots from the area.
- More seasoned or serious gardeners will test the soil to determine its condition. Too much sand may make it dry and too much clay may make it wet. Your soil needs to be a combination of earth, sand, and clay. Some local garden centres will analyze it for you.
- Add any organic material to fertilize the soil. Composted manure works really well.

Planting Your Vegetable Garden

- Different plants require different depths in the soil, but generally, plant seeds at a depth that is twice their diameter. The smallest seeds will be planted just beneath the surface.
- Take into consideration the depth and space. Generally speaking, seeds should be planted in a row 2-3 inches deep and 4-5 inches apart.
- A row of seeds should be planted 2-4 feet from the next to avoid overcrowding.
- You can extend your harvest further into the summer by planting seeds every 2-3 weeks. Seeds such as lettuce, peas, beans, carrots, and radishes can be planted in a rotation.

Suggested Plants For A Vegetable Garden

Different plants may grow more productively in different geographic areas, but the following plants generally grow well in backyard or community gardens. If you had enough room for 11 rows, at 10 feet long each (may be bigger than most will have available), you could plant the following:

- Tomatoes – 5 plants staked
- Zucchini squash – 4 plants
- Peppers – 6 plants
- Cabbage
- Bush beans
- Lettuce, leaf and/or Bibb
- Beets
- Carrots
- Radishes

- Marigolds to discourage rabbits

Maintaining Your Vegetable Garden

- **Watering** is key to strong results in your garden, although it can be tricky. Be consistent in your watering. If the plants are wilting, they don't seem to be growing, or the leaves are brown or dead, the garden is likely too dry. If the soil around the plant stem is soaked, or if you notice mold or moss growing on top of your soil, these are signs the garden has been getting too much water.
- **Mulch** is a helpful maintenance product that has several helpful purposes.
    - Improves soil retention of moisture
    - Regulates soil temperature
    - Prevents soil from eroding
    - Reduces diseases
    - Reduces weed growth
- **Control the weeds –** Weeds, while competing with the plants for food and water, can also bring insects and disease. If you weed regularly, particularly at the beginning of the growing season, it can be easier to keep the weeds at bay.
- **Clean your garden tools –** By doing this, a gardener keeps diseases from spreading to other plants.
- **Prevent overheating –** If a heat wave persists, a gardener may need to provide more shade for the plants. A cheesecloth can provide great shade cover during intense heat.
- **Feed your plants –** Vegetables are big eaters. If you have enriched your soil at the beginning of the growing season, you may not need to feed them much during the season. Organic fertilizer, applied once or twice in the season may help keep the plants healthy.

Part 6 – Presentation: Container Gardening Basics (15 minutes)

Instruction: PP Slides 12 – Let the group know that as part of the module today, they will be planting some seeds using the container method.

ASK if anyone from the group has grown anything using the container method.

- What type of container did you use?
- What did you grow?
- Where did you keep your container(s)? Balcony? Porch?
- Were you successful?
- What did you learn about container gardening through that process?

Provide the group with the Container Gardening Basics handout.

Work through the handout with the group to highlight the following elements of container gardening:

What Is Container Gardening? This was mentioned earlier in the module, but take the opportunity to remind the group what it is.

Container gardening, or pot gardening, is the practice of growing plants, including edible plants, exclusively in containers instead of planting them in the ground. Containers can range from simple plastic pots or teacups to complex automatic watering irrigation systems. The flexibility of design is another reason it is gaining popularity with growers. They can be found on front porches, back patios and steps, and on rooftops and balconies.

The Pros And Cons Of Container Gardening

Benefits

- **Containers require very little space –** You can start growing vegetables with as little as 1 square foot of space. It's an ideal choice for people living in small spaces such as apartments, townhomes, or condos.
- **Containers are movable –** Growing vegetables in containers allows you to move your garden as needed. If your plants require more sun, you can adjust their placement as the sun moves throughout the day. You can also easily protect your plants if adverse weather moves through the area.
- **Fewer weeds to pull –** Containers require far less maintenance than a full vegetable garden. When your plants are isolated, they do not have the level of weed growth you have with a traditional garden.
- **Less physical effort needed –** If you have any kind of back problems or other physical disability, growing in containers will limit the amount of tilling, weed pulling, and shoveling needed.
- **Creative options –** With containers, you can easily change the arrangements and design of your garden. You can experiment with different plants, arrangements, and even grow flowers among your vegetables. Changing this in a traditional garden requires significantly more effort.
- **Gardening becomes more accessible –** Container gardening makes gardening more accessible to people with limited mobility, including children and the elderly.
- **Keeps costs at a minimum –** You won't have to purchase much in the way of garden tools and equipment and smaller containers will keep the cost of seeds low.
- **Fewer issues with insects –** Insects are less likely to find plants on your balcony than in your garden, but if they do, it is easier to detect and destroy any infected areas.
- **Containers can be recycled –** Gardeners can look to recycle or up-cycle containers such as coffee cans, kiddie pools, plastic milk jugs, and wooden wine crates.

Disadvantages

- **Constant water required –** Containers do not retain water for long periods of time. Unlike a backyard garden, vegetable roots in containers cannot tap into water present in the soil. You can expect to water every day, and sometimes twice per day in the spring and summer.
- **Containers can be expensive –** If you have some specific ideas about what you want your containers to look like, you may need to pay a little more for those. The cost will often depend on the size of the container and can run from $50 to $200, depending on the size and material.
- **Growing space is limited –** Even the largest containers can limit and inhibit the growth of certain seeds. When roots can't grow freely, plants may end up being smaller and less vigorous.
- **Soil needs to be replenished –** The soil in containers needs to be replenished every year. Fertilizing the existing soil is not sufficient to maintain optimum growing conditions in containers. For large containers, this process can be time-consuming and tedious.
- **Roots are vulnerable –** Some containers, especially metals, clay, and dark plastic ones, conduct heat, exposing various roots to wide temperature variations.

Some Helpful Online Sources For Container Gardening

http://yougrowgirl.com/resources/container-gardening-guide/

http://www.bhg.com/gardening/vegetable/vegetables/growing-vegetables-in-containers/

http://www.tastefulgarden.com/Growing-Tomatoes-in-Containers-d9.htm

Part 7 – Activity: Starting Your Own Container Garden (45 minutes)

Instruction: PP Slide 13 – Take this time to work with the participants to have them begin to plant their first few seeds in various containers. Some participants may have decided to bring their own containers and others will need to have containers available.

Give the participants their container gardening tools (gloves, small watering can, trowel, etc.) and have them pick multiple containers, if possible, and a variety of seeds. The access to containers and seeds may depend on what your budget will allow and how many containers are available.

Walk through the process of working with the soil, choosing seeds, and planting and watering their new container gardens.

Remind them of some of the maintenance tips discussed earlier in the module.

NOTE: It will be helpful to take a few moments to review the back of the seed packages to help the group understand the information that should be followed to optimize the productivity of the plants. Read through a few different packages, as that will provide participants with a good understanding for the type of information provided as well as how different vegetables may need to be planted and cared for.

The following vegetable seeds are options for growing in container gardens:

- Beans
- Cabbage
- Carrots
- Peas
- Cucumber
- Eggplant
- Lettuce
- Melons
- Onions
- Peppers
- Radish
- Squash
- Zucchini
- Tomato
- Strawberry

Part 8 – Presentation: Community Resources (5 minutes)

Instruction: PP Slide 14 – This section of the module is intended to provide participants with information that will allow them to, on their own, access resources within the community related to gardening and growing their own food.

Script: Many experienced gardeners will encourage new gardeners to start growing food with others, rather than on their own. Gardening can be a significant commitment of time and energy and can be a difficult and, at times, frustrating new hobby. There is so much to learn as you get started. You may decide to pursue gardening further with someone from the group or with others from within the community.

London is currently home to 15 community gardens located on municipally owned land. Over 500 gardeners are active within the gardens, which are located on green space in neighbourhoods across the city.

Plots are rented on a geared-to-income basis. The rental fees can range from $15 to $40 for a plot of approximately 15-square feet for the season.

To learn more about where the gardens are located, or if you are interested in starting a community garden in your neighbourhood, visit:

https://www.london.ca/communitygardens

The website provides a map that will help identify community garden locations as well as provide guidelines that outline a gardener's responsibilities.

Part 9 – Activity: Evaluation And Wrap-Up (5 minutes)

Instruction: PP Slide 15 – Ask the group what they think their next step in gardening will be in the coming days.

Answer any questions the participants might have and hand out the weekly evaluation for them to complete.

Remind the group of announcements related to upcoming modules.

Have the group complete the module evaluation before leaving.