

Nutrition Matters!

Hands-on garden experience engages your child and teaches patience, responsibility and the pleasure of work. Understanding how food is grown inspires curiosity and expands a child's willingness to try new foods.

From the Garden to the Classroom



Introduction

From the Garden to the Table reinforces nutrition education using the garden as a laboratory for learning. The garden provides opportunities for children to discover fresh fruits and vegetables, make healthier food choices, and become better nourished¹. The garden is an innovative teaching tool that incorporates hands-on activities that allow children to learn by doing.

From the Garden to the Table is an excellent way to teach children about food origins, nutrition, and healthy eating behaviors. The curriculum uses a combination of indoor-outdoor gardening experiences, to engage children in exploration and inquiry. Children are actively involved in planting, maintaining and harvesting edible plants and witness their life-cycle from seed to harvest.

From the Garden to the Table activities are organized sequentially. Indoor classroom activities reinforce concepts learned in the outdoor garden. The indoor and outdoor sessions should be implemented at the same time.

From the Garden to the Table reinforces the experiential learning process through activities that are initiated indoors and then moved outdoors or the reverse. Both the indoor and outdoor classroom environments are dynamic extensions of one another. They are wonderful settings for ***nutrition-gardening*** learning to take place.



From the Garden to the Table

A combination of indoor and outdoor gardening builds understanding and reinforces concepts. Children learn while making discoveries, experimenting, and connecting their indoor and outdoor experiences.

The outdoor garden provides many opportunities for young children to direct their own learning by sharing their experiences, processing their ideas and connecting those ideas to the real world.

Gardening is an appropriate experiential learning tool to teach math, reading, appropriate food choice and exercise.



Making a Commitment to Have a Garden

From the Garden to the Table requires teachers to commit to having an outdoor garden. A variety of plants can be grown in a small plot of land with some support from parents.

A large container can become the classroom garden when a small plot of land is not available. Donated wine barrels or an overturned bookshelf with holes drilled into the bottom can become ideal container gardens.



*** Note:**

Refer to your *NETA Workshop Training Manual: Basics of Edible Gardens* for detailed information about container gardening and/or how to develop an outdoor garden or contact the Master Gardener

Throughout this module, we will refer to the outdoor garden as the **Surprise Garden** and the indoor as the **Picture Garden**.

From the Garden to the Table is divided into six sessions:

1. The Magical World of Fruits & Vegetables
2. Strong Healthy Seeds
3. Planting a Surprise Edible Garden
4. Feeding the Soil
5. Who Else Lives in the Garden?
6. A Harvest Celebration

Gardening can be used to teach multiple subject areas, teachers are encouraged to implement all six lessons over the course of the school year.

For many children in urban areas, gardening is one of the few opportunities available where they can actively connect with the environment and the natural world.

Teachers may use other available resources connecting gardening and nutrition when preparing the lessons. Pictures, photographs, storybooks, arts and crafts, field trips, and guest speakers can make a powerful impact on preschoolers' health and nutrition practices now and in the future.

For Teachers Only

Provides tips on how to organize indoor and outdoor classroom activities. Best practices used by other teachers are included for your information.

General Classroom Activity Tips

Teachers:



- ♥ Reinforce the relationship between eating healthy and growing strong by describing how plants that are fed and maintained well grow up to be healthy and strong. A well-planned garden produces healthy plants that are high in nutrients.
- ♥ Help children make the connection between the indoor **Picture Garden** and the *outdoor Surprise Garden* to make the child's experience concrete.
- ♥ Encourage children to be creative, explore, and experiment with ways to grow an outdoor garden in their **Picture Garden**.
- ♥ Support children's natural curiosity about the relationship between the land (gardening) and nutritious food. Ask open-ended questions frequently to ignite discovery. Remind children it is all right to guess! This is part of the learning process.
- ♥ Set up rules about using tools and working in the garden.

Children:



- ♥ Explore! Practice growing and eating fresh fruits and vegetables.
- ♥ Play, learn, and discover how seeds become edible plants.
- ♥ Touch, taste, smell, look and observe how plants grow over time while appreciating their different colors and wonderful smells.
- ♥ Plant, care for and protect the plants.
- ♥ Practice positive hygiene skills, by washing hands after working in the garden.

Tips for Sustaining the Garden

Create a Garden Logo. This is a way to identify the garden program and a great opportunity for the rest of the school to support the garden. Also, it is an opportunity to solicit funds and support from the local community.

Make a Sign. Children will have an opportunity to talk to others about their garden every time someone sees the sign in the school. Often vandalism can be prevented when neighbors read "Children's Garden".

Write a Garden Corner in the School Newsletter. Have a garden corner in the newsletter and use it to report successes, recruit volunteers, and seek donations. Be sure to include the time and place for volunteers meet.

On-going Recruitment for Volunteers. Recruit parent volunteers at every event at the school. Post signs and offer orientation classes throughout the year.

Establish Roles for Volunteers. Most people are really busy, but might have some free time to volunteer in the garden if they know what they are committing to. Define the roles for the volunteers. Create a list of specific jobs.

Request Donations. Solicit donations from businesses, parents, and relatives. Use the garden logo and personal messages from the children.

Look for Funding Opportunities. Always be alert for small grants and apply. An internet search is a good place to start.



Nutrition Matters!**Lesson 1: The Magical World of Fruits & Vegetables****Session Overview****Main Objective**

Demonstrate awareness about the connections between plants and food

Desired Outcomes

Preschooler will:

- ♥ Show an interest in growing fruits and vegetables
- ♥ Visualize growing a garden with fruits and vegetables
- ♥ Match 1-2 plants growing in the garden with the foods they produce

**Desired Results Connections****Activity 1-1: The Magical World of Fruits and Vegetables**

Desired Result included in this activity CDR 1, 2, 3, and 4

Children learn new math concepts, compare and contrast, develop language comprehension and expression

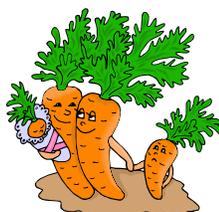
Connection to Module I

Activity 2.1: Fruit & Vegetable Scramble

Activity 2.2: Surprise Box of Color

Activity 2.3: A Taste of Produce

Activity 4.2: Rub, Scrub, Rub with Soap



Family Connections: One Parent Home Study Letter
Snack of the Week: "Berries On the Go"

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For Teachers Only

Indoor Classroom Activities Tips



- ♥ Have a large paper banner in the classroom. This will be the **Picture Garden**. Children will display the different gardening stages; selecting a garden spot, planting seeds, watering, weeding and harvesting the garden.
- ♥ The **Picture Garden** will be completed by the end of Session 6: **Harvest Celebration**.
- ♥ In the **Picture Garden** children will simulate what is happening in the outdoor garden.
- ♥ Reinforce key concepts while children simulate, practice and explore their outdoor gardening experience in their indoor **Picture Garden**.
- ♥ Grow seedlings indoors in small containers (such as plastic cups or recycled milk cartons). Children will observe the differences between plants growing indoors and those growing outdoors.



Teacher’s Note

Children will need a clear set of expectations regarding their behaviors when working with the tools and the soil.

Outdoor Classroom Activities Tips



- ♥ The **Surprise Garden** is the outdoor garden where the children will be growing fruits and vegetables. It is best to find a location close to the schoolyard to prevent vandalism.
- ♥ Design and plan a garden with the children. Ask them to draw maps of an ideal garden. Give them measuring tapes, crayons, and construction paper.
- ♥ Traditionally the garden is planted in the ground of the schoolyard. Your garden should be comfortable for the children to work in. Include paths for the children to walk on. Have a shady place for conducting outdoor lessons. Have a tool shed to store and protect garden tools. Raised beds should be 1-2 foot-tall for children to reach. Container gardens are also appropriate for this age.
- ♥ The **Surprise Garden** should be in a sunny area and have access to water. **With sun, soil and water you are ready to plant!**
- ♥ A full site analysis considers size, soil, sunlight, water sources, water drainage, accessibility, security and safety. Consult with your local UC Master Gardeners.
- ♥ Be sure to select a garden area that is safe for the children to work in. Child-proof the area to prevent injuries.

Nutrition Matters!**Activity 1****Materials****For Indoor Activity**

- ✓ Fruits and vegetables (select at least 5 different, preferably seasonal) and their corresponding seeds
- ✓ Large sheet of butcher paper to do the *Picture Garden*
- ✓ Plastic knives, plates, napkins

For Outdoor Activity

- ✓ Paper
- ✓ Pencils, Crayons or colored markers

Note: Do not expect this **Picture Garden** to be perfect. Younger children may simply draw lines, circles or 'blobs' to represent elements in their "**Picture Garden**".

Produce of the Garden**Berries****The Magical World of Fruits & Vegetables****Instruction****For Indoor Activity**

1. Using the large sheet of butcher paper, place the "*Picture Garden*" in a location where children can work on it together. They should select a name and place their own pictures on the paper. Throughout the experience children should be encouraged to bring in pictures and other items that remind them of the garden.
2. Display various fruits, vegetables and seeds. (*Note: Use seasonal produce for better availability*). Ask students to try to match the fruit or vegetable with the appropriate seed. Review the answers and count the number of fruits and vegetables that were correctly matched.
3. Discuss and compare the different shapes, colors, smells, and textures (i.e. rough, smooth) of each of the fruits, vegetables and seeds.
4. Explain to the children that our land provides us with colorful, tasty fruits and vegetables. Have them imagine how they would grow magical fruits and vegetables. Give them their own piece of paper to design their *Surprise Garden*. Draw the soil, plants, sun and water. Encourage children to use their imaginations when designing their picture gardens.
5. Each child places their own imaginary garden in the *Picture Garden* when they return from the outside garden.

Nutrition Matters!**For Outdoor Activity**

Source: Pictures from
University of Illinois
Extension

1. Explain that many of the foods we eat grow in a garden just like the foods this class will grow. Tell the children that the outdoor garden is the **Surprise Garden**.
2. Ask children to bring their *picture of the garden* they designed. Go to the site where the garden will be established, and compare their garden design with the **Surprise Garden**. Go around and check the location of the garden site, raised beds, or containers. (Read *Informational Flyer 1-1*)
3. Ask children if their garden is in a sunny area. Is there a water faucet close to the garden? Explain why these are important questions.
4. Ask the children to observe whether there is enough soil to start a garden? Do we need more soil? What kind of soil?
5. Explain to them that to have a garden they will need sunshine, good soil, water for irrigation, some seeds or seedlings, some food for the plants and time to take of the plants. Are they ready to grow their own food?
6. Before going inside the classroom, encourage children to check their *Picture Garden* and be sure that it has sun, soil, and water. Now you are ready to select some of the things you will grow to eat.
7. Ask students what are some of the fruits they eat. In module I they learned that some of the fruits and vegetables they eat were roots, stems, flowers on plants. Use Informational Flyer 1-2 and 1-3 in the appendix.

Snack: Children's snack will be from the fruits and vegetables they are growing in the garden. They will eat what they grow: snap peas, beets, berries, figs, and other produce of the season.

Nutrition Matters!

Early Childhood Education Curriculum Module II: From the Garden to the Classroom

Lesson 3: Planting a Surprise Edible Garden**Session Overview****Main Objective**

Practice caring for edible plants that the students will eventually eat

Desired Outcomes

Preschooler will:

- ♥ Identify 1-2 reasons why the body needs food
- ♥ Eat new plant foods (fruits and vegetables)
- ♥ Use gardening tools with increased precision

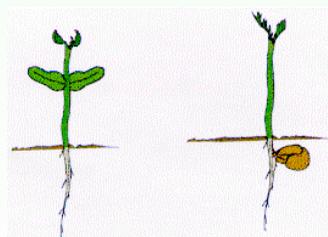
**Desired Results Connections****Activity 3-1: Planting a Surprise Edible Garden**

Desired Result included in this activity CDR 1, 2, 3, and 4

Interactions with adults and peers, self regulation, acceptance of diversity, language expression, cognitive competence, fine motor skills, healthy habits

Connection to Module I

- Activity 2.1: Fruits & Vegetables Scramble
- Activity 2.2: Surprise Box of Color
- Activity 2.3: A Taste of Produce
- Activity 4.2: Rub, Scrub, Rub with Soap



Family Connections: One Parent Home Study Letter
Snack of the Week "Snap Your Finger for a Snap Pea"

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For Teachers Only

Indoor Classroom Activities Tips



- ♥ Children should check their seedlings daily to be sure the paper towel is not dry. They need to spray their individual viewer. Be sure to have one growing seedling available to use as a model.
- ♥ Demonstrate how to use the water bottle to spray the growing seedlings.
- ♥ Explain that plants provide important nutrients to us. Proteins (beans, nuts and all dry seeds such as pumpkin seeds); Calcium (collard greens, soybeans, and dandelion greens); Iron (parsley, spinach, lentils and artichokes); Carbohydrates (potatoes, corn and wheat); Vitamin C (broccoli, red cabbage and bell peppers); Vitamin A (carrots, red chilis, spinach and dandelions).
- ♥ Most of the activities in the garden will be happening in the *Surprise Garden*.
- ♥ Explain how the seedlings are growing. What makes them grow up? What do they eat?

Outdoor Classroom Activities Tips



- ♥ Select which fruits and vegetables to grow using Informational Flyer 3. 1-3.1 (Appendix). Children will be planting edible vegetables in their ***Surprise Garden***.
- ♥ Beds and soil should be prepared ahead of time (Refer to the Teacher Gardening Trainings). Once the beds are ready to plant, demonstrate how to plant seeds and/or seedlings. Ask a series of reflective questions while planting the seeds:
 - Should we put all the seedlings in one hole? Why or why not?
 - Should we plant the seedlings in the shade? Why or why not?
 - Should we plant them very deep in the soil? Why or why not?
- ♥ Children plant the seeds and irrigate. You may want to have small sticks with the name of each fruit and vegetable to label your plants... or they can be a *Surprise!*



Teacher's Note:

Remind children not to play with the tools. Practice good hygiene after gardening.

Nutrition Matters!

Early Childhood Education Curriculum

Module II: From the Garden to the Classroom

Materials**For Indoor Activity**

- ✓ Large **Picture Garden** indoor wall display
- ✓ Sprouted seedlings from previous lesson
- Session 2: Strong Healthy Seeds**
- ✓ Water (in water spray bottle)
- ✓ Large picture of a plant showing various parts (Appendix)
- ✓ Teaching Tool 3.1-3.3
- ✓ MyPyramid for Kids poster

For Outdoor Activity:

- ✓ Seeds for a **Surprise Salad** (e.g. lettuce, carrots, radish, snap peas)
- ✓ Accessibility to the outdoors/small plot of land or container garden area
- ✓ Water (from water bottle with spray nozzle, hose, watering can, etc.)
- ✓ Soil
- ✓ Child-proof gardening tools

Produce of the Garden**Snap Peas****Activity 3****Planting a Surprise Edible Garden****Instructions****Indoor Classroom Activity**

1. Explain that the seeds inside the milk cartons will grow up to be big wonderful fruits and vegetables. They will record how the seed they planted grows to become an edible plant in the **Picture Garden**. Remind children about their responsibility to water their seeds in the milk cartons and the plastic cup. Ask them why water is important for their plants? (Water is food for the plants and like us, plants get thirsty.) Children may take their cartons home. Send instructions home on how to take care of their growing seeds.
2. Go to the **Picture Garden** and review with the children what has been recorded so far (each child has their individual picture and the teacher draws the progress on the large poster paper, or the class works together to record the progress on the poster).
3. Play "I am a Seed": Children pretend to be a seed growing into their favorite fruit or vegetable, mimicking a growing seed.
 - Seeds are small and strong. Pretend to be a small tiny seed by sitting down with knees bent, pulled in as close to their bodies as they can and wrap hands around their legs.
 - Seeds are growing into a sprout. Knees are slightly bent and arms stretched out to the sides.
 - Seeds are growing leaves. Wave arms and wiggle fingers.
 - Every week, children can observe their seedlings growing and mimic their growing seeds by bending and stretching arms upward and out. This is good physical activity.
4. Ask the children to tell you what they need to grow healthy and strong while looking at MyPyramid for Kids. What things does a plant need to grow and be strong? (Answers: water and food)

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Nutrition Matters!

Early Childhood Education Curriculum Module II: From the Garden to the Classroom

For Outdoor Activity



*Follow the
Calendar to start*

1. Designate the perimeter of the garden area with some signs. Involve the children in making the signs and measuring the perimeter of the garden. Ask children if they know what seasons are. Ask if the plants will get enough sun to grow healthy and strong.
2. Ask the children if they have ever grown an edible plant from a seed before. Have them guess if the seeds will need more food, as they grow bigger (e.g. more food /soil, more air/oxygen, more water and more vitamins and minerals – like iron).
3. It is time to plant the **Surprise Garden**. Demonstrate how to plant seeds and/or seedlings. (See Teaching Tool 3.1 to 3.3). You may use wooden rulers to help them space the seedlings. An old spoon is a very inexpensive digging tool.
4. Caring of the **Surprise Garden**: Remind children about their responsibility to care for the plants. Seeds are thirsty and need water regularly while they are growing up. Water and soil are good for the plant and help it to grow fresh and crunchy fruits and vegetables.
5. There are also “weeds” that want to take over the soil. Other little creatures, some that are good for the plants, also live in the soil.

Month	Start Seeds Indoors	Transplant Outdoors
February	Broccoli, Cabbage, Kale, Lettuce	
March	Lettuce, Peppers, Tomatoes, Parsley	Broccoli, Cabbage, Kale, Lettuce
April/May	Cucumbers, Leaf lettuce, Basil	Lettuce, Peppers, Tomatoes
June	Cucumber, Leaf, Lettuce, Basil	Cucumber, Leaf Lettuce, Basil
July		Leaf Lettuce, Basil
August	Lettuce, Marigolds	
Sept/Oct	Broccoli, Cabbage, Kale, Lettuce	Lettuce, Marigolds
November	Lettuce	Broccoli, Cabbage and Lettuce

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