

# Unit Eight: Plants

Interdisciplinary Unit of Study

NYC DOE

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# I. Unit Snapshot

## Unit Topic:

Plants

## Essential Question

How do plants grow and why are they important?

## Focus Questions

- What are plants?
- What do plants need and where do we find them?
- What are some different kinds of plants?
- Why are plants important?

## Student Outcomes

Enduring understandings that the student should have by the end of the unit:

- Plants are living things; every part of a plant has an important function.
- Plants grow from seeds and need water, nutrients and light to live.
- Plants are all around us.
- There are many different types of plants.
- Plants are important for many reasons.

## Connected Academic Vocabulary

This list should be adapted to fit the needs of individual programs and classrooms.

bite	fruit	shelter
blossom	garden	soil
botanist	gardener	sprinkler
botany	grass	sprout
bouquet	greenhouse	stem
branch	ground	succulent
bud	grow	sunlight
bulb	habitat	terrarium
bush	harvest	tree
cactus	herbs	trunk
compost	landscape	trowel
courtyard	lawn	vegetables
crunch	leaves	vegetarian
dew	medicine	vegetation
dirt	nature	vine
eat	nursery	water
edible	nutrients	water lily
environment	park	watering can
evergreen	patio	window box
fabric	petals	weeds
farm	plant	wood
farmer	pollen	yard
field	potting soil	
floral	rain	
arrangement	roots	
florist	seaweed	
flower	seed	
food	seedling	
forester	shade	

## Focus Standards

### From The New York State Prekindergarten Learning Standards: A Resource for School Success

#### Domain 1: Approaches to Learning

PK.AL.5. Demonstrates persistence

#### Domain 2: Physical Development and Health

PK.PDH.5. Demonstrates eye-hand coordination and fine motor skills needed to manipulate objects

#### Domain 3: Social and Emotional Learning

PK.SEL.2. Recognizes self as an individual having unique abilities, characteristics, feelings and interests

#### Domain 4: Communication, Language and Literacy

##### Part A: Approaches to Communication

##### Background Knowledge

PK.AC.2. Demonstrates they are building background knowledge

##### Viewing

PK.AC.3. Demonstrates understanding of what is observed

##### Vocabulary

PK.AC.5. Demonstrates a growing expressive vocabulary

##### Part B: English Language Arts and Literacy

##### Reading

PK.ELAL.7. [PKR.3.] Develops and answers questions about characters, major events, and pieces of information in a text

PK.ELAL.10. [PKR.6] Describes the role of an author and illustrator

##### Writing

PK.ELAL.14. [PKW.2.] Uses a combination of drawing, dictating, oral expression, and/or emergent writing to name a familiar topic and supply information in child-centered, authentic, play-based learning

PK.ELAL.16. [PKW.4.] Creates a response to a text, author, or personal experience (e.g. dramatization, art work, or poem)

##### Speaking and Listening

PK.ELAL.23. [PKSL.5.] Creates a visual display (e.g., drawing, art work, building, writing)

#### Domain 5: Cognition and Knowledge of the World

##### Math

##### *Measurement and Data*

PK.MATH.10. [NY-PK.MD.1.] Identify measurable attributes of objects such as length or weight, and describe them using appropriate vocabulary (e.g., small, big, short, tall, empty, full and light)

##### Science

PK.SCI.4. [P-LS1-1.] Observes familiar plants and animals (including humans) and describes what they need to survive

PK.SCI.5. [P-LS1-2.] Plans and conducts investigations to determine how familiar plants and/or animals use their external parts to help them survive in the environment

PK.SCI.6. [P-LS3-1.] Develops a model to describe that some young plants and animals are similar to, but not exactly like, their parents

##### Social Studies

PK.SOC.2. Demonstrates awareness and appreciation of their own culture and other cultures

PK.SOC.7. Develops a basic understanding of economic concepts within a community

##### The Arts

PK.ARTS.1. [DA:Cr1-3.PK] Creates Dance

PK.ARTS.3. [DA:Re7-9.PK] Responds to Dance

PK.ARTS.18. [VA:Re7-9.PK] Responds to Visual Arts

PK.ARTS.19. [Cn10-11.PK] Connects to Visual Arts

## II. Introduction

Welcome to Unit 8: Plants, Pre-K for All’s eighth Interdisciplinary Unit of Study. In Unit 8: Plants, children move from exploring the properties and uses of water to observing and learning about different kinds of plants. This unit, like all Pre-K for All units, provides opportunities for children to observe objects and phenomena in their environment with increasing complexity, and apply knowledge and skills learned in previous units. Activities throughout the unit prompt children to learn about plants through hands-on explorations and provide opportunities to observe plants in their immediate environment. As you prepare to teach this unit, consider how different kinds of plants are a part of your children’s daily lives. Additionally, use the opportunity of changing seasons to discuss and observe how plants grow and change over time. For example, you may have a tree in your neighborhood that you can observe throughout the unit and into later units as it changes with the seasons.

All Interdisciplinary Units of Study are structured around focus questions. Each focus question is designed to take about one week to explore. In the first week, children consider the question, “What are plants?” and observe and identify the different parts of plants. In the second and third week, children have increased opportunities to observe plants in their environment and learn about different kinds of plants. In these weeks, we encourage you to go outside of the classroom to observe different kinds of plants in your immediate community. Throughout New York City, there are opportunities to explore parks, neighborhood gardens, botanical

gardens, florist shops or gardening stores. These resources help children to tangibly observe and apply what they are learning and builds appreciation for our natural environment. Please see the resources in Section VIII to help get you started in accessing and partnering with community organizations, and tips for how you can be creative in reaching out for additional resources in your neighborhood.

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*As you prepare to teach this unit, consider how different kinds of plants are a part of your children’s daily lives.*

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In the final week of the unit, children will carefully consider and explore the different uses of plants and why different kinds of plants are important. As children discuss the role of water in plant growth and health, help them make connections to Unit 7: Water. Throughout the unit, but especially in this final week, we encourage the children to explore the different kinds of plants that they eat, including fruit, vegetables, herbs, seeds etc. These investigations will build their understanding of the parts of plants and increase their awareness of healthy eating, where food comes from and how plants help us stay healthy and grow. This is also a great way to encourage families to engage in conversation with their child about what they eat and the plants with which they are the most

familiar. You can even invite families and staff who visit or are from different geographical areas, either in New York or throughout the world, to share stories about different kinds of plants, and the impact that climate and/or location has on plants. This is a great way to build your pre-K program community and build a common understanding of different experiences.

Opportunities for growing plants are woven throughout this unit, further developing children’s scientific skills of observation, prediction and drawing conclusions that they have started developing in previous units such as My Five Senses, Light and Water. There are a variety of ways that you can explore growing plants with your pre-K children - for example, you can plant bean seeds in small pots and observe them as they grow, or access a community garden or outside space where you can plant flowers and/or vegetables. You may already have classroom plants or a garden that the children observe on a regular basis. In growing and observing plants, there are many opportunities for children to learn about taking care of themselves and the environment with discussions about eating healthy food and helping to protect, nurture and grow plants. Make sure that children understand that not all plants are safe to touch. You should always be certain that plants are not poisonous, pose no harm to children and are maintained safely. In addition, you should be sure that children are not allergic to any of the plants in the classroom.

Throughout this unit, there are opportunities to develop children’s literacy and language skills. Children will enjoy literature, engage in discussions around stories, and retell and act out stories they have read. Children will build on what they know about plants through informational texts. They will explore new vocabulary words such as “habitat” and “nutrients” to continue to develop their language skills as they engage in scientific explorations and thinking. In Unit 7: Water, there were opportunities to help children learn about the sounds that different letters make. In addition to continuing to build these skills, in this unit there are increased opportunities for children to express themselves through authentic writing experiences and various modes of storytelling. Remember that children will be in different stages of understanding and developing their own narratives. Continue to use your authentic assessment data as you determine how best to support each student in your class.

## III. Unit Framework

### Essential Question

This is a child-friendly question that connects the knowledge and skills that children should develop throughout the unit.

### Focus Questions

These represent the major inquiries of the unit. They build over time and require children to make connections across all content areas. Each focus question is designed to take about one week to explore.

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*These are key components of each Pre-K for All Unit of Study.*

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### Foundational Learning Experiences

These are experiences (e.g., whole group, small group lessons, field trips, observations, center activities) for each subtopic that provide many opportunities to deepen children’s understanding of the Focus Questions.

### Foundational Texts

These are a combination of literary and informational texts that can be read throughout the unit. See Section VI for text-based critical thinking questions to support the read aloud experience.

Engaging, informative and literary texts provide opportunities for exploring content, expressing ideas using one’s imagination and critical thinking that are enhanced through multiple readings of the same book. Reading books multiple times helps all children build a deeper understanding of content, make meaningful connections between content and other concepts or experiences and builds their confidence as learners and as future readers.

### Key Vocabulary

These are academic vocabulary words that help children understand the unit focus questions and access complex texts. These words can be supplemented by vocabulary in read alouds.

### Family and Community Engagement

These are ideas for inviting families to share their experience and knowledge with the class, or for extending learning outside of the classroom. Each activity is aligned to the NYC Department of Education Division of Early Childhood Education [Early Childhood Framework for Quality \(EFQ\)](#).

See Section IX: Supporting Resources for more information about Family Engagement Practices.

### Culminating Celebration

This is an opportunity to reflect on the unit with the children, as well as to note and celebrate the growth and learning that has occurred.

## Unit Eight: Plants

### Essential Question: How do plants grow and why are they important?

	Week One	Week Two	Week Three	Week Four
<b>Focus Questions</b>	<b>What are plants?</b>	<b>What do plants need and where do we find them?</b>	<b>What are some different kinds of plants?</b>	<b>Why are plants important?</b>
<b>Foundational Learning Experiences</b>	<p><b>Large Group</b></p> <p>Foundational Text Read Aloud: See page 40 for lesson plan and Section VI for Inquiry and Critical Thinking Questions.</p> <p><i>PK.AC.1. Demonstrates motivation to communicate</i></p>	<p><b>Walking Trip</b></p> <p>Walking Field Trip: Invite children to join on a walking field trip to look for plants in the program neighborhood.</p> <p><i>PK.ELAL.23. [PKSL.5] Creates a visual display</i></p> <p>See page 45 for lesson plan.</p>	<p><b>Small Group</b></p> <p>Class List Poem: Introduce children to poetry, specifically List Poems, and generate a List Poem about plants together as a class.</p> <p><i>PK.ELAL.9. [PKR.5] Interacts with a variety of genres (e.g., storybooks, poems, songs)</i></p> <p>See page 49 for lesson plan.</p>	<p><b>Small Group</b></p> <p>Plant Taste Test: Talk with children about where food comes from and why it is important for their bodies. Highlight plant based foods and parts of plants that people commonly eat. Supply a variety of plants for children to sample.</p> <p><i>PK.SCI.4. [P-LS1-1.] Observes familiar plants and animals (including humans) and describes what they need to survive</i></p> <p>See page 53 for lesson plan.</p>
<b>Foundational Texts</b>	<i><b>Flower Garden</b></i> by Eve Bunting	<i><b>An Orange in January</b></i> by Dianna Hutts Aston	<i><b>If You Plant a Seed</b></i> by Kadir Nelson	<i><b>Rah, Rah, Radishes: A Vegetable Chant</b></i> by April Pulley Sayre
<b>Key Vocabulary</b>	botany, branch, bud, bulb, dirt, flower, food, fruit, garden, gardener, grow, leaves, nutrients, petals, plant, pollen, potting soil, rain, roots, seedling, soil, sprinkler, sprout,	blossom, botanist, bouquet, courtyard, dew, environment, farm, farmer, field, forester, floral arrangement, florist, greenhouse, ground, landscape, lawn, nature, nursery, park,	bush, cactus, evergreen, grass, herbs, seaweed, seed, succulent, tree, vegetables, weeds, water lily	bite, compost, crunch, eat, edible, fabric, habitat, harvest, medicine, shade, shelter, vegetarian, wood

	Week One	Week Two	Week Three	Week Four
<b>Focus Questions</b>	<b>What are plants?</b>	<b>What do plants need and where do we find them?</b>	<b>What are some different kinds of plants?</b>	<b>Why are plants important?</b>
	stem, sunlight, trunk, trowel, vine, water, watering can, window box	patio, terrarium, vegetation, yard		
<b>Family and Community Engagement</b> <i>EFQ 4: High quality programs promote families' role as primary caregivers, teachers, and advocates</i>	Did you eat any roots/leaves/stems today (for example, potatoes, lettuce or celery)? Encourage children and families to talk about the parts of a plant and discuss what kinds of plants they eat.	Ask families to find and observe a plant together. They can talk about what the plant looks like, how it smells, the way it feels etc. After observing the plant they can write or draw about it and bring their reflections back to the class for a class book or display.	Invite families to go on a plant scavenger hunt together. Provide a list of things for them to look for such as a patch of grass, a tree taller than they are, something with petals, or other plant parts or types that can be found in the program neighborhood.	Use dirt from the sensory table and recycled containers to plant a seed with each child. If families are available, invite them to the classroom to help plant the seeds. If desired, children can take the planted seeds home.
<b>Culminating Celebration</b>	Terrarium. Create a terrarium together as a class or invite children to create their own terrariums. See Section XI: Appendices for directions and examples. <i>PK.SCI.5. [P-LS1-2.] Plans and conducts investigations to determine how familiar plants and/or animals use their external parts to help them survive in the environment</i> OR Class Botanical Garden. Create a botanical garden using the three-dimensional plants children created in the Art Center as well as the plants the class grew throughout the study. Invite families, building staff, and/or other classes to tour the garden. Children can create labels for the plants and signs to place throughout the building advertising the garden and directing visitors to the classroom. During the tour, children can take on jobs such as ticket sales, garden guides etc. <i>PK.ELAL.14. [PKW.2] Uses a combination of drawing, dictating, oral expression, and/or emergent writing to name a familiar topic and supply information in child-centered, authentic, play-based learning</i>			



## IV. Ideas for Learning Centers

Learning Centers should advance the unit’s essential and focus questions, as well as the enduring understandings, reflect the unit of study, and the needs of your children. This time of year can be especially important for teaching teams to help children go deeper in their inquiry, problem solving and concept development during centers. Children’s play will have increased in complexity between the beginning of the year and now and they will likely be ready to make connections between previous learning and the current unit of study. The interactions between adults and children offer an opportunity to model, encourage and facilitate the use of language to ask higher order thinking questions as well as create meaningful entry points into new content. Effective concept development strategies and questions help children obtain a deeper understanding of concepts and develop analytical thinking skills. Children understand concepts when teachers provide opportunities to analyze and problem solve, rather than just memorize and recite facts. One way to build higher order thinking skills is to create connections to the real world and to the prior experiences of children.

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*On each page, critical thinking questions/statements and text suggestions (if applicable) are listed in the left column. Activity suggestions, which will change from unit to unit, are listed in the right two columns.*

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In this unit there are many opportunities to build on students’ prior knowledge and make connections to the world around them as you discuss the needs of

plants. Unit 7: Water wrapped up by studying how water is helpful. In Unit 8: Plants, you have the opportunity to build on this knowledge as you help children understand that plants need water to live. As you play with children and they play with each other in centers, consider how you can deepen this understanding as well as share new content.

The following suggestions supplement standard center materials, such as blocks in the Blocks/Construction Area, assorted dress-up materials in Dramatic Play, paper and a variety of writing utensils in the Writing Center, etc. As you plan your learning centers, also consider how you will provide multiple entry points into the materials for all the children in your classroom. The suggested materials and activities are intended to be relatable and fun! This is not an exhaustive list of materials and can be supplemented by other materials relevant to the unit and your classroom.

While the materials you select for centers are extremely important, learning is enhanced through the interactions adults and children have during Center Time. EFQ Element 3 states, “High quality programs advance play-based learning and responsive instruction” and highlights the importance of play-based learning experiences and opportunities for teaching teams to extend children’s thinking and communication skills through intentional and responsive interactions. When teaching staff interact with children in centers they can model language through initiating, joining and extending conversations, using self and parallel

talk, and asking open-ended questions that deepen engagement and inquiry while developing problem solving and critical thinking skills.

Play is an important vehicle for developing a variety of skills outlined in the NYSPLS and is essential to the EFQ. Rather than detracting from academic learning, purposeful play supports the abilities that underlie such learning. When children have a sufficient amount of time to play and can access learning centers and the materials in them, they have some of the essential supports necessary for their play to continue developing in complexity. The play-based learning that happens in centers addresses NYSPLS Standard PK.AL.1 (Actively engages in play as a means of exploration and learning). This same play helps children develop the background knowledge of NYSPLS Standard PK.AC.2 (Demonstrates they are building background knowledge) which is essential for making connections and deepening understandings. For these reasons, teachers should ensure that children have access to and can choose from a variety of learning center materials for one-third of the pre-K day, and support children’s engagement in play during Center Time, making adjustments to the daily schedule to weave in small and whole group activities without infringing on that time. NYSPLS standards are included for all of the activity suggestions here and opportunities for assessment are included as well. Text suggestions that complement these materials and activities are also included.

## Blocks/Construction

### Critical thinking questions/statements:

Tell me about your work.  
I notice that you \_\_\_\_.  
What are some other things you could add?  
I wonder what would happen if \_\_\_\_.  
How do you know?  
How could you build \_\_\_\_?  
What is your conclusion?

### Suggested Text:

*The Curious Garden* by Peter Brown

After reading about Liam and the garden he grew in his city, invite the children to build cities and create their own gardens in them

*PK.SOC.5* Demonstrates knowledge of the relationship between people, places, and regions

### Plant Pictures:

Add pictures of plants, gardens, green roofs, farms etc. to the walls of the Blocks/Construction Center for children to reference as they work.

*PK.AC.2. Demonstrates they are building background knowledge*

### Rooftop Gardens:

Invite children to use toy trees, bushes, flowers etc. to create gardens or green roofs for their structures.

*PK.PDH.5. Demonstrates eye-hand coordination and fine motor skills needed to manipulate objects*

### Build Plants:

Wrap blocks in green and brown paper (and other colors as desired) and invite children to use them to create stems, tree trunks, soil etc. Supply paper, scissors and tape for children to use to create leaves, flowers etc. to add to their plants. Also consider hanging pictures of a wide variety of plants for children to reference as they build. As children create their plants talk with them about the parts of the plants and types of plants they are creating, highlighting vocabulary words such as *branch, flower, leaves* and *stem*.

*PK.AL.1. Actively engages in play as a means of exploration and learning*

### Container Gardens:

After building a structure, invite children to add a container garden. Provide shoeboxes or other boxes for children to use as a container and invite them to fill the boxes with the plants they created in the Build Plants activity (above). Children can choose the focus of the garden (herbs or succulents, for example) according to their interests. If desired, children can add a name label for their gardens.

*PK.ELAL.27. [PKL.4] Explores and uses new vocabulary in child-centered, authentic, play-based experiences*

### Landscape:

Provide toy trees, bushes, flowers etc. for children to add as landscaping to their structures. Invite them to use these vocabulary words as they play with the materials.

*PK.AC.2. Demonstrates they are building background knowledge*

### ✓ Opportunity for Assessment

How is the child using the new plant-based vocabulary words? Are they able to use them in relation to words and concepts they already know?

### Build a Park:

Invite children to build a park using the blocks and materials in the center. They can build a park for toy people or build on a larger scale and create a park for themselves.

*PK.AL.3. Approaches tasks and problems with creativity, imagination and/or willingness to try new experiences*

### Signs and Labels:

Supply small cards or pieces of paper as well as writing utensils for children to use to create labels for their gardens, plants, parks, etc.

*PK.ELAL.29. [PKL.6.] Uses words and phrases acquired through language rich experiences, conversations, reading and being read to, responding to texts, and child-centered, play-based experiences*

## Dramatic Play

### Critical thinking questions/statements:

Who are you going to be today?  
 I wonder what would happen if \_\_\_\_?  
 What will you do next?  
 What do you think about \_\_\_\_?  
 What does that remind you of?

### Suggested Text:

*Lola Plants a Garden* by Anna McQuinn.

Children can reference how Lola builds a garden as they build their own gardens.

*PK.AC.2. Demonstrates they are building background knowledge*

### **Flower Shop:**

Turn Dramatic Play into a flower shop by adding pretend flowers, containers and pictures of flower arrangements as well as a cash register, notepad, writing utensils, etc. to the center. Children can pretend to make, buy, and sell floral arrangements, and explore the idea of buying and selling goods or services. As you play with the children, use and highlight vocabulary words such as *bouquet, floral arrangement, florist, and flower*.

*PK.SOC.7. Develops a basic understanding of economic concepts within a community*

### ✓ Opportunity for Assessment

What does the child understand about the relationship between buying and selling goods?

### **Garden:**

Turn Dramatic Play into a garden. Add seeds, pretend fruit, vegetables, flowers, trees etc. as well as tools such as gardening gloves, planting pots, trowels, hand hoes, watering cans, etc., to the center. Invite children to create labels for the garden in the Writing Center. Children can care for the garden, and pretend to plant and harvest crops.

*PK.AC.2. Demonstrates they are building background knowledge*

### **Park:**

Turn Dramatic Play into a park. Recreate a local park or build a new one. Consider adding plants, benches (or using chairs to create benches), a pretend lawn, garden, flowers, a fountain, etc., to the center. Children can play in the park or have a picnic. Children can take on roles of the people who maintain parks in New York City such as maintenance workers, recreational staff, gardeners, foresters, scientists, or builders. The children can name the park, create a sign to welcome visitors to the park, and state the park rules.

*PK.SOC.5. Demonstrates knowledge of the relationship between people, places, and regions*

### **Farm:**

Turn Dramatic Play into a farm. Create fields of vegetables or plants for children to harvest or invite children to help with the planting and growing of pretend plants. Consider adding, or working with the children to create a farm stand for them to pretend to buy and sell what they grow.

*PK.SOC.7. Develops a basic understanding of economic concepts within a community*

*PK.SOC.2. Demonstrates awareness and appreciation of their own culture and other cultures*

***Plants at Home:***

Invite families to share how plants are an important part of their family lives. For example, some families may have specific fruits or vegetables they enjoy eating together, other families may garden together in the summer, some families may use plants during cultural celebrations, etc. Families can share a picture or drawing, or send in an artifact to share. Display these items in the dramatic play area (e.g. tape the pictures to the toy fridge). If possible, add additional items to the center that would invite children to bring these family traditions into their dramatic play.

## Art

### Critical thinking questions/statements:

Tell me about your art.

What did you notice about \_\_\_\_?

I notice that you \_\_\_\_\_. How did you do that?

What will you try next? Why?

How does this picture, painting, drawing, etc. make you feel? Why?

### Suggested Text:

*Rah, Rah, Radishes: A Vegetable Chant* by April Pulley Sayre

Invite children to look at the illustrations in this book with you and discuss what you see. Provide assorted vegetables that are relevant to the classroom community (and can be reused in the Cooking and Mixing *Vegetable or Fruit Salad* or *Taste Test* activities) and invite the children to create arrangements with them. Capture images of their arrangements with a camera or device provided by the program.

*PK.ARTS.18. [VA:Re7-9.PK] Responds to Visual Arts*

### Note:

Children have varying levels of sensitivity to sensory experiences. Do not force children to touch materials. Invite children to participate, and observe their behavior carefully. Respond to the cues they give you about their readiness to participate.

### Plant Stamps:

Provide parts of plants such as flowers or leaves and invite children to dip them into a small amount of paint and press them (as they would a stamp) onto a piece of paper.

*PK.AL.3. Approaches tasks and problems with creativity, imagination and/or willingness to try new experiences*

### Paint Flowers:

Hang pictures of paintings of flowers near the easel (such as *Sunflowers* by Claude Monet, *Man Loaded with Lilies* by Diego Rivera, *Poppy* by Georgia O'Keefe, *Flowers* by Andy Warhol, a Kehinde Wiley floral backdrop, *Garland of Flowers* by Auguste Renoir, or other artists that are interesting or relevant to the children). Invite children to reflect on these paintings. Consider providing prompts such as, "What do you notice in this picture?" and "How does this picture make you feel?" After children reflect, they can paint their own pictures of flowers.

*PK.ARTS.18. [VA:Re7-9.PK] Responds to Visual Arts*

### 3-D Plants:

Invite children to use recycled materials such as cardboard boxes or tubes, and empty, clean food containers, to create three-dimensional plants. Supply live plants, plastic or silk plants, or pictures of plants for children to reference as they build their own plants. Encourage children to name the plants and make their own labels for them.

*PK.AL.3. Approaches tasks and problems with creativity, imagination and/or willingness to try new experiences*

### Alma Thomas

Provide prints of an assortment of Alma Thomas' plant related pieces such as *Spring Grass*, *Fall Begins*, and *White Roses Sing and Sing*. Invite the children to look carefully at the art and, if desired, share their thoughts and observations. Supply paint and paper, or canvas, for children to create their own works in a similar style, if desired.

*PK.ARTS.18. [VA:Re7-9.PK] Responds to Visual Arts*

### **Paper Flowers:**

Supply pipe cleaners as well as tissue paper circles (several inches in diameter). Children can pierce the middle of the tissue paper circles with the pipe cleaner, adding as many as they would like, then fold the circles up to create a flower. After creating these flowers, children can use them in the Dramatic Play garden or flower shop, or use them in the Math/Manipulatives area to create flower arrangements.

*PK.PDH.5. Demonstrates eye-hand coordination and fine motor skills needed to manipulate objects*

### **Floral Still Life:**

Provide or create a floral arrangement for children to carefully observe and then paint or draw what they see with various mediums (e.g., charcoal or oil pastels).

*PK.PDH.5. Demonstrates eye-hand coordination and fine motor skills needed to manipulate objects*

### **Leaf Rubbing:**

Supply leaves and crayons for children to use in creating leaf rubbings. Remove the paper casing from the crayons, place the leaves under a piece of paper and invite children to rub the side of the crayon over the paper and watch for the shape of the leaf to emerge. Encourage children to persist until the entire leaf is visible.

*PK.AL.5. Demonstrates persistence*

### **Flower or Leaf Pounding:**

Gather flowers or leaves, trim them so they can lay flat, and place them on a piece of muslin fabric, watercolor or other thick, acid free paper. Place a piece of paper towel over the leaves or flowers and invite children to use a mallet to gently tap over the leaves or flowers. Periodically remove the paper towel and gently lift the edge of a leaf or flower petal until a print of the leaf or flower is visible. Encourage children to work carefully and persistently until the entire flower, leaf or plant print is visible. If the leaf or flower is too wet to remove, allow some time for it to dry before pulling it up from the paper.

*PK.AL.5. Demonstrates persistence*

### **√ Opportunity for Assessment**

Does the child continue to work on the project until a print of the entire flower or leaf is visible? If they encounter a problem while working, how do they attempt to resolve it?

### **Plant Painting:**

Instead of a paintbrush, invite children to paint with parts of plants such as flowers, stems or twigs. Encourage children to consider what type of mark each plant piece will make. As they explore painting with the different plant parts, be sure to highlight the name of each part (e.g., *flower, leaves, stem* and *roots*).

*PK.AC.2. Demonstrates they are building background knowledge*

### **Kehinde Wiley**

Provide an assortment of portraits by Kehinde Wiley that include plants in the background. Invite children to observe the art and create their own art in a similar style. They may want to create a similar background and include their own portrait or the portrait of someone else.

*PK.ARTS.19. [Cn10-11.PK] Connects to Visual Arts*

## Science/Discovery

### Critical thinking questions/statements:

What did you observe here/when \_\_\_\_?

What did your sense of \_\_\_\_ tell you about \_\_\_\_?

What will you try next?

I wonder what would happen if \_\_\_\_?

How do you know? How could we find out?

### Suggested Text:

*Seed to Plant* by Kristin Baird Rattini.

Have this book on hand for children to use as a reference throughout the unit.

*PK.ELAL.7. [PKR.3] Develops and answers questions about characters, major events, and pieces of information in a text*

### Class Plants:

Add plants to the science area or throughout the classroom for children to observe and assist in caretaking.

*PK.SCI.4. [P-LS1-1.] Observes familiar plants and animals (including humans) and describes what they need to survive*

### Plant Life Cycle:

Provide individual pictures of each part of the plant life cycle. Invite children to sequence the pictures. Provide pictures or diagrams for them to reference as they play. Note their observations and understandings, and use this information to talk with them about each stage of the life cycle.

*PK.SCI.6. [P-LS3-1.] Develops a model to describe that some young plants and animals are similar to, but not exactly like, their parents*

### Herb Garden:

Plant an herb garden with the class. Use the word *herb* frequently throughout the activity. Invite children to create labels for the garden. Encourage them to use their senses to observe the herbs and draw or write about what they see, smell, feel, hear and taste. Guide the children through the tasting portion of the observation making sure to follow proper procedures around eating in the classroom. After children have sampled the herbs, they can write about the experience. They can write about how the herbs look, feel, smell, sound and taste.

*PK.PDH.1. Uses senses to assist and guide learning*

### Where Does This Plant Grow?

Supply pictures of a variety of plant types as well as pictures of the landscapes in which each type of plant grows. Invite children to match the plant to its habitat. For example, include a cactus and a desert scene, seaweed and an ocean scene, a palm tree and a beach scene. This can also be played as a memory game.

*PK.AC.5. Demonstrates a growing expressive vocabulary*

### Class Plant:

Pick seeds that grow quickly, such as lima beans, to plant in the classroom. Create a class chart of predictions on how long it will take the seeds to grow. Invite the children to measure the plant growth periodically, and record the results.

*PK.MATH.10. [NY-PK.MD.1.] Identifies measurable attributes of objects, such as length or weight, and describes them using appropriate vocabulary (e.g., small, big, short, tall, empty, full, heavy, light)*

### Plants and Light:

Allow children to use the light table to examine plant parts such as flowers and leaves.

*PK.PDH.1. Uses senses to assist and guide learning*

### **Observe Seeds:**

Provide an assortment of seeds from fruits and vegetables with which the children are familiar. Place them in specimen jars or small, sealable plastic bags, with wet cotton balls, or a small amount of soil. Invite children to observe and write or draw their observations. Talk with the children about the types of seeds and discuss their experiences with these fruits and vegetables throughout the activity. As the plants grow, children can draw and write about the life cycle of the plants.

*PK.SCI.6. [P-LS3-1.]: Develops a model to describe that some young plants and animals are similar to, but not exactly like, their parents*

### **Dissect a Seed:**

Soak a bean or seed (e.g., lima bean, corona bean) in water until it is soft enough to open. Provide a diagram of the parts of a seed (see Section XI: Appendices) and toothpicks for children to use to dissect the bean. Encourage children to refer to the diagram and find each part.

*PK.AC.3. Demonstrates understanding of what is observed*

### **√ Opportunity for Assessment**

Is the child able to use vocabulary relevant to their observations? Do they ask questions, make inferences and draw conclusions based on the diagram and the seed?

### **Compare and Contrast:**

Provide several types of seeds and invite children to compare and contrast them. This can also be done with leaves, flowers or other plant parts.

*PK.AC.2. Demonstrates they are building background knowledge*

### **Regrow Vegetables:**

Some vegetable scraps such as carrot tops, scallions and celery (base) will continue to grow when placed in water. Put each vegetable in a small bowl or container, add a small amount of water and place in a location where the vegetable will get plenty of natural light. Invite children to predict, observe and record what happens through drawing and writing.

*PK.SCI.5. [P-LS1-2.] Plans and conducts investigations to determine how familiar plants and/or animals use their external parts to help them survive in the environment*

### **How Fast Do They Grow?**

Plant multiple seeds in separate containers. Ask children to predict which one will grow fastest. Use a chart to record their predictions. Invite children to monitor and compare the growth daily.

*PK.MATH.9. [NY-PK.MD.1.] Identifies measurable attributes of objects, such as length or weight, and describes them using appropriate vocabulary (e.g., small, big, short, tall, empty, full, heavy, light)*



## Toys and Games / Math Manipulatives

### Critical thinking questions/statements:

I notice that you \_\_\_\_\_. What do you notice?  
 What happened when you \_\_\_\_\_?  
 Why do you think that happened?  
 If I want to \_\_\_\_\_, what should I do? Why?  
 Tell me about \_\_\_\_\_.  
 How do you know?  
 Tell me why \_\_\_\_\_.

### Suggested Text:

*How a Seed Grows* by Helene J. Jordan

Provide an assortment of seeds (if possible, use seeds referenced in the book) and a set of counting cards. Invite the children to use the seeds and cards together. Additionally, consider adding an egg carton and numbering the depressions, 1-12. Children may want to put the appropriate number of seeds in each space.

*PK.MATH.3. [NY-PK.CC.3.] Understands the relationship between numbers and quantities to 10, connects counting to cardinality*

### Food and Plant Memory:

Create a memory game that includes pictures of food as well as where the food grows. For example, a picture of an apple and an apple tree would be a match, grapes and a grape vine would be a match, and a coconut and a palm tree would be a match. Wherever possible, use plants that are relevant to the children. Consider adding the name of each plant to the picture and highlighting the first letter.

*PK.SCI.5. [P-LS1-2.] Plans and conducts investigations to determine how familiar plants and/or animals use their external parts to help them survive in the environment*

### Puzzles:

If available, provide puzzles that include different types of plants, such as puzzles depicting farms, rain forests, gardens, flowers or trees. Invite children to assemble the puzzles and encourage them to work to completion. As children assemble the puzzles, highlight relevant vocabulary words such as *farm, flower, garden, fruit, grow, habitat* or *plant* by using them frequently and pointing out corresponding pictures in the puzzles.

*PK.AL.5. Demonstrates persistence*

### Seed Sort:

Provide an assortment of seeds and beans as well as trays or containers for sorting. Children can sort by seed color, size, design, or by categories of their choosing. If children need assistance in determining categories for sorting, model sorting for them, sharing your thoughts and sorting criteria aloud as you work.

*PK.MATH.10. [NY-PK.MD.2.] Sorts objects and shapes into categories; counts the objects in each category. Note: Limit category counts to be less than or equal to 10*

### Seeds in a Strawberry:

Cut out several paper strawberries. Add a number to each one and ask children to put the appropriate number of seeds on each strawberry. This can also be implemented with another type of fruit or by putting petals on a flower, leaves on a plant etc. Consider using plants that are relevant to the children. Encourage children to write their own numbers as they are ready.

*PK.MATH.3. [NY-PK.CC.3.] Understands the relationship between numbers and quantities to 10, connects counting to cardinality*

### **Seed Patterns:**

Provide an assortment of seeds as well as a large flat surface and invite children to create patterns with the seeds. Explain that a pattern is made of a core unit that repeats (e.g., red, blue, and red, blue, and red, blue). For children who need extra support, consider starting patterns, and asking the children to extend them.

*PK.MATH.8. [NY-PK.OA.2.] Duplicates and extends simple patterns using concrete objects (e.g., what comes next?)*

### **Flower Arrangements:**

Provide a colander and fake flowers. Turn the colander upside down and invite children to stick the stems of the flowers through the holes in the colander to create a flower arrangement. Provide paper or gift tags and writing utensils and invite children to create cards to go with the arrangements.

*PK.PDH.5. Demonstrates eye-hand coordination and fine motor skills needed to manipulate objects*

### **√ Opportunity for Assessment**

Is the child able to fit the flower stems into the colander holes?

### **Compare Heights:**

Cut out a tree that is approximately the same size as many of the children in the class. Hang it on the wall and invite children to see if the tree is taller or shorter than they are. Children can write their names on, or near, the tree to indicate their own height.

*PK.MATH.9. [NY-PK.MD.1.] Identifies measurable attributes of objects such as length, or weight, and describes them using appropriate vocabulary (e.g., small, big, short, tall, empty, fully, heavy, light)*

## Sand and Water / Sensory

### Critical thinking questions/statements:

What happens when \_\_\_? Why?  
 How do you think that works? Why?  
 How could you change that?  
 What does that remind you of? Why?  
 What would happen if \_\_\_? Tell me more.

### Suggested Text:

*The Flower* by Barbara Flores/Elena Castro/Eddie Hernandez

Add materials for planting flowers such as empty pots, flower seeds, silk flowers, watering cans, etc. to the pourable materials in the sensory table and invite the children to explore. \*Note, if using seeds, be mindful of potential growth and leave the table uncovered when not in use.

*PK.AC.2. Demonstrates they are building background knowledge*

### Note:

Children have varying levels of sensitivity to sensory experiences. Do not force children to touch materials. Invite children to participate and observe their behavior carefully. Respond to the cues they give you about their readiness to participate.

There should always be materials available in a sensory table that allow children to dig, scoop, pour, fill containers, and experiment with sand/water.

### Soil and Seeds:

Add potting soil and seeds to the sensory table as well as gardening tools such as gloves, small spades, trowels, rakes, watering cans etc. Invite children to play with the materials and observe the seeds over the course of a few days (make sure that the soil is dry, so that it remains pourable).

*PK.SCI.4. [P-LS1-1.] Observes familiar plants and animals (including humans) and describes what they need to survive*

### Seaweed:

Add water beads, plants or seaweed (plastic or real, if available) to the water in the sensory table along with shells, pieces of coral, pretend fish, toy boats etc. Invite children to explore the ocean scene and discuss the different places where plants live, and how plants might live underwater

*PK.SCI.4. [P-LS1-1.] Observes familiar plants and animals (including humans) and describes what they need to survive*

### √ Opportunity for Assessment

What ideas does the child have about where plants grow as well as how plants grow underwater?

### Frog Pond:

Use green foam pieces to create water lilies, add them to the water in the sensory table along with toy frogs and invite children to play in the pond.

*PK.AL.1. Actively engages in play as a means of exploration and learning*

### Plant Parts:

Place an assortment of plant parts in a sensory table or supplemental tray or bin. Invite children to explore. Consider adding flowers, stems from various plants, a variety of leaves, bark from trees, small twigs as well as roots. Supply paper and writing utensils as well so children can draw or write about their observations.

*PK.SCI.6. [P-LS3-1.] Develops a model to describe that some young plants and animals are similar to, but not exactly like, their parents*

### Build a Greenhouse:

Add empty, clean, clear plastic recycled containers such as berry containers, 2-liter bottles cut in half, take-out containers etc. as well as small cups or planting containers, dirt or soil, and seeds to the sensory table for children to use to create their own greenhouses. Use the word *greenhouse* frequently as children play and create. Consider hanging pictures of greenhouses on the wall near the sensory table and be sure to offer a description of greenhouses and their purpose for children who may be unfamiliar with them. Include paper and writing utensils if children would like to name and create a sign for their greenhouses.

*PK.AL.3. Approaches tasks and problems with creativity, imagination and/or willingness to try new experiences*

## Library

### Critical thinking questions/statements:

Tell me about this book.  
 What do you like about this book?  
 What is your favorite part of this book? Why?  
 What do you notice?  
 What do you think is happening?  
 What will happen next?  
 Does that remind you of anything? What?  
 Would you recommend this book to a friend? Why or why not?

### Plant Library:

Add a selection of both fiction and nonfiction books from the Supporting Text List in Section V for children to access and independently explore related to the study.

*PK.ELAL.11 [PKR.7.] Describes the relationship between illustrations and the text (e.g., what person, place, thing or idea in the text an illustration depicts)*

### Felt Board Story:

Create felt board pictures for a favorite class book on plants. Invite children to use the pictures to retell the story.

*PK.ELAL.6. [PKR.2.] Retells stories or share information from a text*

### √ Opportunity for Assessment

Is the child able to retell a familiar story? What details do they include?

### Plant Growth:

Create felt board pieces that represent the growth of a plant. Invite children to sequence the pieces. Be sure to use the appropriate vocabulary words with children such as *seed, bud, bulb, seedling*, and *sprout* as you scaffold children's learning.

*PK.SCI.5. [P-LS1-2.] Plans and conducts investigations to determine how familiar plants and/or animals use their external parts to help them survive in the environment*

### Gardening Magazines:

Add an assortment of gardening magazines or other print materials that have pictures of plants and invite children to read the materials. Talk with the children about the magazines.

*PK.ELAL.7. [PKR.3] Develops and answers questions about characters, major events, and pieces of information in a text*

## Cooking and Mixing

*(As needed)*

### Critical thinking questions/statements:

Why do you think we are adding \_\_\_\_?  
 What would happen if \_\_\_\_?  
 What do you notice as we do this?  
 How does it smell/feel/look/sound/taste?  
 What does this remind you of?

### Suggested Text:

*Eating the Alphabet: Fruits and Vegetables from A to Z* by Lois Ehlert.

As children use this Center, invite them to consider the first letter of the foods they eat.

*PK.ELAL.3. [PKRF.3.] Demonstrates emergent phonics and word analysis skills*

### Note:

Be mindful of children’s food intolerances and allergies by connecting with families before you do cooking activities and explicitly teaching children how being aware of allergies keeps us safe.

Children must always wash hands before and after cooking experiences.

Snacks and meals must be of adequate nutritional value. When providing snacks and meals, supplement with other components of a healthy meal/snack according to appropriate meal guidelines in order to make sure children’s nutritional needs are met.

*PK.PDH.7. Demonstrates personal care and hygiene skills*

### Vegetable or Fruit Salad:

Invite children to create a list of vegetables or fruits that people eat (this list can be made up of words, drawings, or both). Use this list to provide vegetables or fruit for a salad. Provide and read aloud to the children a child-friendly recipe with step-by-step directions (see **Unit 2: My Five Senses** for a sample child-friendly recipe format) for them to follow as they make the salad.

*PK.ELAL.1. [PKRF.1.] Demonstrates understanding of the organization and basic features of print*

### Eating Seeds:

Invite children to observe as you carefully cut open a squash (or another fruit or vegetable, as applicable), and then help remove the seeds for roasting. After the seeds are roasted, children can eat them.

*PK.AL.4. Exhibits curiosity, interest, and willingness to learn new things and have new experiences*

### Taste Test:

Invite children to sample a variety of fruits and vegetables. Create a chart for them to record their favorites. Use the word *edible* frequently throughout this activity to help children learn this vocabulary word.

*PK.SEL.2. Recognizes self as an individual having unique abilities, characteristics, feelings and interests*

### √ Opportunity for Assessment

Is the child able to identify and share preferences about fruits and vegetables they sampled? What are their preferences?

### Playdough Prints:

Invite the children to help create a batch of playdough. As you prepare the playdough talk with the children about how the ingredients came from plants such as how the flour was grown, harvested, and ground. After the dough is complete, allow children to use parts of plants such as leaves, stems, flowers etc. to create prints in the dough.

*PK.AC.1. Demonstrates motivation to communicate*

## Computer/Technology

### Critical thinking questions/statements:

I notice that you \_\_\_\_.  
 How did you figure that out?  
 What will you do next? What if you try \_\_\_\_?  
 How could you \_\_\_\_?

Content should be free of product placement/advertising. Children are not to use computers or other devices with screens more than 15 minutes per day, with a maximum of 30 minutes per week. Exceptions to this limit may be made for children with disabilities who require assistive computer technology as outlines in their Individualized Education Program. Prescreen images and videos to make sure they are appropriate for children and not frightening or explicit. Do not use personal devices and ensure that you have signed permission before taking photographs of children.

### Suggested Text:

***Rah, Rah, Radishes: A Vegetable Chant*** by April Pulley Sayre

Upload the children's vegetable pictures from the ***Rah, Rah, Radishes: A Vegetable Chant*** by April Pulley Sayre activity in the Art Center and invite the children to view. If possible, print the pictures and display them in the classroom.

*PK.ARTS.5. [MA:Cr1-3.PK] Creates Media Arts*

### ***Plants Around the World:***

Pull up pictures of plants that grow in different parts of the world or may be novel to the children. For example, succulents, palm trees, and cattails may be plants that children in New York City do not see on a regular basis (be mindful of the experiences and cultures of the children in your class as you consider novelty). Invite children to take notes while they look at different types of plants. For example, they can draw pictures of what they see or write letters they hear or see in the names of plants. Provide various types of paper commonly used for notetaking such as lined paper, post-it notes etc. Children can draw or write what they find and use these pictures and notes to influence their work in other centers such as when they build gardens in Dramatic Play or make 3-D plants in the Art Center.

*PK.ELAL.14. [PKW.2.] Uses a combination of drawing, dictating, oral expression, and/or emergent writing to name a familiar topic and supply information in child-centered, authentic, play-based learning*

### ***Recipe Search:***

Work with children to use the internet to find recipes they can use to cook various fruits or vegetables. Help them compare and contrast the recipes and determine which to prepare. After selecting a recipe, try making it as a class. Consider recipes that reflect the daily lives and cultures of the children in your class.

*PK.ELAL.12. [PKR.9.] Makes connections between self, text, and the world (e.g., what is familiar, what does an event/picture/character make them think of, what do they remember)*

### ***Waltz of the Flowers:***

Use a search engine to show children Tchaikovsky's *Waltz of the Flowers* from the *Nutcracker Ballet*. Invite them to share their impressions of the dancing, and if space permits, try to imitate some of the moves they observed in the ballet. Encourage the children to connect the ballet with their knowledge of plants. Also, consider implementing this activity with another dance, which connects to plants, and may be more relevant to the children in the class.

*PK.ARTS.3. [DA:Re7-9.PK] Responds to Dance*

### √ Opportunity for Assessment

*What does the child notice about the movements in the dance? What thoughts and/or feelings are they able to share?*

## Outdoors / Playground

### Critical thinking questions/statements:

I saw you \_\_\_\_.

What will you do next?

If you try \_\_\_\_, what do you notice?

How did you do \_\_\_\_?

How does it feel outside today?

What do you see?

### Suggested Text:

*Me, Toma and the Concrete Garden* by Andrew Larsen

Invite children to use chalk to create their own garden in the playground or outdoor space.

*PK.ELAL.14. [PKW.2] Uses a combination of drawing, dictating, oral expression, and/or emergent writing to name a familiar topic and supply information in child-centered, authentic, play-based learning*

### Plant Study:

Choose a nearby tree or plant for the class to observe. Provide paper and writing utensils for children to record their observations through drawing and/or writing. Encourage children to observe the plant/tree carefully and notice differences from observation to observation. In spring, focus on when trees begin to form buds, and when the buds open to produce leaves.

*PK.AC.3. Demonstrates understanding of what is observed*

### Community Walk:

Go on a community walk. Encourage children to note what plants they see on the walk. Highlight any plants you see that are also on the vocabulary list such as *evergreen, bush, flower* and *grass*. Consider inviting children to bring a clipboard, paper and writing utensil on the walk to record their observations independently. When you return to the classroom, encourage children to refer to their notes and write or draw about the walk and the plants they saw.

*PK.ELAL.23. [PKSL.5.] Creates a visual display (e.g. drawing, art work, building, writing)*

### √ Opportunity for Assessment

*What does the child draw or write? What details do they include?*

### Class Garden:

If possible, create a class garden outdoors. If necessary, begin the garden inside and move the plants outside when the weather permits. Invite children to help plan the garden by considering what to plant and what you will need to do to begin planting. Help them consider what to grow, how to prepare, and how to maintain the garden over time.

*PK.SCI.4. [P-LS1-1.] Observes familiar plants and animals (including humans) and describes what they need to survive*

### Plant Count:

Invite children to count the plants they can find in the playground or outdoor space. For each plant they find, note that they found one more and highlight the plus one pattern in counting (i.e. "You had three, you found ONE more, now you have four"). If children would like, they can also draw pictures or write the names of the plants.

*PK.MATH.7. [NY-PK.OA.1.] Explores addition and subtraction by using objects, fingers, and responding to real world situations (e.g., if we have 3 apples and add two more, how many apples do we have all together?)*

### Landscape Painting:

Bring painting materials outside and invite children to paint what they see. If desired, pick a specific area of the space that includes the highest concentration of plants or ask them to pay special attention to the plants around them. Use the word *landscape*, and encourage children to use this word as they paint and reflect on their paintings.

*PK.AC.3. Demonstrates understanding of what is observed*



## Writing

### Critical thinking questions/statements:

I notice that you \_\_\_\_\_.  
That reminds me of \_\_\_\_\_.  
What if you try \_\_\_\_\_?  
How could we find out \_\_\_\_\_?

### Suggested Text:

*Layla's Happiness* by Mariahadessa Ekere Tallie

Many things make Layla happy. For example, climbing a tree, planting a tomato seed and watching it grow, giving trees names, and picking vegetables. Invite the children to think about the things that make them happy. They can share their thoughts and draw, write, or dictate them to an adult.

*PK.SEL.2. Recognizes self as an individual having unique abilities, characteristics, feelings and interests*

### Stop and Smell the Flowers:

Provide several types of flowers and invite children to smell them. Children can also write or draw what they noticed about the smells, or the smell they like best and why. Be mindful of allergies when selecting flowers for this activity.

*PK.SEL.2. Recognizes self as an individual having unique abilities, characteristics, feelings and interests*

### Plant Encyclopedia:

Create a plant encyclopedia with pictures and names of an assortment of plants that may be familiar as well as those that may be novel to the students (be mindful of the experiences and cultures of the children in your class as you consider familiarity and novelty). Children can draw and label pictures of plants that are near the places they live or on their way to school, or they can focus on other plants they find interesting.

*PK.ELAL.14 [PKW.2.] Uses a combination of drawing, dictating, oral expression, and/or emergent writing to name a familiar topic and supply information in child-centered, authentic, play-based learning*

### Gardening Magazine:

After exploring gardening magazines in the library, invite children to create their own gardening magazines. As they create, they can write articles, draw or add pictures, and talk about the roles of author and illustrator.

*PK.ELAL.10. [PKR.6.] Describes the role of an author and illustrator*

### √ Opportunity for Assessment

*What does the child know about the role of an author and an illustrator?*

### Garden Labels:

Invite children to create labels for the plants in the Dramatic Play garden or other plants the class decides to grow throughout the unit.

*PK.ELAL.14. [PKW.2.] Uses a combination of drawing, dictating, oral expression, and/or emergent writing to name a familiar topic and supply information in child-centered, authentic, play-based learning*

### Seed Letters:

Write letters on index cards. Provide seeds for children to place on the letters. Talk with the children about the letters they chose to create and some of the words that start with those letters. Children can glue the seeds on to the letters or do this activity without glue, then empty and reuse the cards after each use.

*PK.ELAL.3 [PKRF.3.] Demonstrates emergent phonics and word analysis skills*

### List Poems:

After creating a class list poem, invite children to create their own poems in the Writing Center. Children can create a poem about plants and refer to the various books on plants or the Plant Encyclopedia when creating their poems, or create a poem in response to an experience.

*PK.ELAL.16. [PKW.4.] Creates a response to a text, author, or personal experience (e.g. dramatization, art work, or poem)*



## Music and Movement

### Critical thinking questions/statements:

I see you moving like this.  
I heard you \_\_\_\_.  
I saw you \_\_\_\_.  
Tell me about that.  
Let's try playing the music loud (or soft, fast, slow).  
Can you try this?  
How does this music make you feel?  
Have you heard music like this before? Where?

### Suggested Text:

*Little Tree* by Loren Long

Invite children to use their bodies to show how they think Little Tree felt when:

- He grew his first leaves
- He held onto his leaves and the other trees dropped theirs
- His leaves were brown and the other trees grew new green leaves
- He was still a little tree and the other trees were much taller than he was
- He let go of his leaves
- He was as big as the other trees

*PK.SEL.1. Regulates responses to needs, feelings and events*

### Felt Songs:

Cut out felt pieces that coordinate with a few of the children's favorite plant songs (see Section VIII: Supporting Resources) and provide them for independent or small group play.

*PK.ELAL.9. [PKR.5} Interacts with a variety of genres*

### Dance Sentence:

Pick three words that connect to plant growth such as *open*, *grow* and *bend*. Create pictures of each of these words. Introduce the words, pictures and ways children can move their bodies to represent these words in relation to plants and then hang the pictures in the Music and Movement area to inspire children's independent dance.

*PK.ARTS.1. [DA:Cr1-3.PK] Creates Dance*

### √ Opportunity for Assessment

*How does the child engage with the dance pictures?*

### Movement Dice:

Use a large die or a box or cube large enough to include pictures of various plant types or stages of the plant life cycle and put the pictures on the sides of the die. Invite children to toss the die then use their bodies to represent what they see.

*PK.ARTS.1. [DA:Cr1-3.PK] Creates Dance*

## V. Foundational and Supporting Texts

Books are essential to a well-planned unit and ground the learning experiences for children. Engage children with books throughout the day. Read alouds can occur in large group and small group as well as in centers. Books can be incorporated throughout the room and enhance children's learning through play. Some books are read repeatedly throughout the unit; these are foundational texts. Some books will be read only once or twice throughout the unit; these are supporting texts. Supporting texts compliment focus questions and areas of interest or may be related to the essential question or enduring understandings of the unit. Select the books that seem most relevant to your classroom community. Additionally, the following list is not exhaustive and can be supplemented by similar books. Not only can these books be read aloud both formally and informally, but children should also be able to access and read these books on their own. Allowing children access to classroom books encourages children to display emergent reading behaviors and address *PK.ELAL.4 Displays emergent reading behaviors with purpose and understanding.*

*\*Books with an asterisk are also available in languages other than English*

### Foundational Texts

**\**Flower Garden*** by Eve Bunting: With the help of her father, a young girl prepares a flower garden as a birthday surprise for her mother.

***An Orange in January*** by Dianna Hutts Aston: A celebratory picture of how oranges find their way to the grocery store.

***If You Plant a Seed*** by Kadir Nelson: Small acts can have great power.

***Rah, Rah, Radishes: A Vegetable Chant*** by April Pulley Sayre: Veggies take the stage in a rollicking ode to healthy eating

### How to Use Foundational Texts

When you have a text that draws the interest of the children in your class, consider one or more of the following techniques for reading the book multiple times to extend children's thinking:

- Take a "picture walk" through the book the first time you read it by just showing the pictures and asking the children what they see and what they think the book is about.
- Consider reading the book once without pausing so that children hear the cadence of the words and hear the story in its entirety.
- Model skills readers use to gain greater understanding of content by thinking aloud about the meaning of a word in context or drawing a conclusion based on prior knowledge.
- Write down and post children's responses to questions that may have more than one possible answer.
- Ask children to make predictions based on what they know so far and encourage them to explain their thinking.
- Pause throughout the book and ask children to share a new word or idea they heard and explain it using familiar words or contexts.
- Invite children to make connections between the book and their own life experiences.
- Brainstorm potential solutions to a problem a character might be facing.
- Ask children what the character could do differently or ask them what they might do if they were in the place of the main character.
- As the book becomes familiar to the children, ask for volunteers to "read" it to you or small groups of children, letting them describe the pictures and the story in their own words.
- Compare and contrast books with similar content, themes, or structures.
- Preview or review texts or parts of texts (particularly vocabulary) for children who need additional language or learning support.
- As children become more familiar with the story or information, use this as the beginning of extension activities like acting out a story, painting or drawing something inspired by the text, or creating puppet shows.

## Supporting Texts

***Bee-Bim Bop!*** by Linda Sue Park: A hungry Korean-American child tells about helping her mother make a traditional Korean dish.

***Eating the Alphabet: Fruits and Vegetables from A to Z*** by Lois Ehlert: An alphabetic introduction to fruits and vegetables from around the world.

***Flowers are Calling*** by Rita Gray: Flowers are calling to the animals of the forest.

**\**Food from Farms*** by Nancy Dickmann: There are many different farms which produce many different types of food. .

***From Wheat to Bread*** by Stacy Taus-Bolstad: An introduction to the process of making bread from wheat.

***Juicy Peach*** by Mary Dixon Lake: Three boys look for the best juicy peach.

***Layla's Happiness*** by Mariahadessa Ekere Tallie: Layla loves life and keeps a happiness book. What is happiness for her? For you?

***Lola Plants a Garden*** by Anna McQuinn: After Lola reads a book about garden poems she wants to plant some flowers.

**\**Little Tree*** by Loren Long: Little Tree hugs his leaves as tightly as he can, year after year he remains unchanged.

***Me, Toma and the Concrete Garden*** by Andrew Larsen: When Mimi asks Vincent to get rid of her “dirt balls,” the boys have fun throwing them into a nearby empty lot. Then one day, they notice new shoots are sprouting all over the lot. Maybe those balls weren’t just made of dirt after all!

***Patience, Miyuki*** by Roxane Marie Galliez: When, on the first day of spring, her flower still hasn't bloomed, Miyuki begins a frantic search for water to wake it up.

***Rainbow Stew*** by Cathryn Falwell: It's a rainy summer day and the vegetables in grandpa's garden are just waiting to be picked.

**\**Seed to Plant*** by Kristin Baird Rattini: See how plants grow.

***The Breaking News*** by Sarah Lynne Reul: When devastating news rattles a young girl's community, her normally attentive parents and neighbors are suddenly exhausted and distracted.

**\**The Curious Garden*** by Peter Brown: While out exploring one day, a little boy named Liam discovers a struggling garden and decides to take care of it. As time passes, the garden spreads throughout the dark, gray city, transforming it into a lush, green world.

**\**The Empty Pot*** by Demi: A story about a boy who loves flowers but is unable to grow one in the emperor's contest

**\**The Flower*** by Barbara Flores, Elena Castro, Eddie Hernandez: Learn to plant a seed and grow a pretty flower.

***The Thing About Bees: A Love Letter*** by Shabazz Larkin: A love poem from a father to his two sons, and a tribute to the bees that pollinate the foods we love to eat.

## VI. Inquiry and Critical Thinking Questions for Foundational Texts

Critical thinking skills are foundational to learning and educational success.

These questions are based around Webb’s Depth of Knowledge Wheel<sup>1</sup>, which provides a vocabulary and critical thinking frame of reference when thinking about our children and how they engage with unit content.

Re-read foundational texts throughout the unit, starting with Level 1 questions, and adding more complex questions each time you read them.

### **\*Flower Garden by Eve Bunting**

*PK.AC.3 Demonstrates understanding of what is observed*

#### **Level 1: Recall**

What did the girl plant in her garden?

Where did the girl plant her garden?

Why did the girl plant a garden?

#### **Level 2: Skill/Concept**

Where did the girl get the flowers for her garden?  
How do you know?

Why do you think people smiled at the girl when she was on the bus?

Where does the girl live? How do you know?

#### **Level 3: Strategic Thinking**

How do you think the girl’s mom felt about her birthday gift? Why?

How do you think the girl felt about making a garden for her mom’s birthday? Why?

#### **Level 4: Extended Thinking**

Let’s look closely at the garden and see what we notice. What do you notice about the plants in the garden? How are they similar? How are they different? Which one do you like best? Why?

It was a lot of work for the girl to make a garden for her mom. Let’s see if we can remember all the things the girl did and put the steps in order.

### **An Orange in January by Diana Hutts Aston**

*PK.ELAL.10. [PKR.6.] Describes the role of an author and illustrator*

#### **Level 1: Recall**

Where was the orange at the beginning of the book?

Where was the orange at the end of the book?

How did the orange get from the tree to the grocery store?

#### **Level 2: Skill/Concept**

The book says, “The petals fell away and the orange began to grow into what it was meant to be.” What was the orange meant to be?

How did the boy get the orange?

#### **Level 3: Strategic Thinking**

The boy shared the orange. Why do you think he did that?

How do you think the other children felt when he shared the orange with them?

#### **Level 4: Extended Thinking**

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<sup>1</sup> <http://schools.nyc.gov/NR/rdonlyres/522E69CC-02E3-4871-BC48-BB575AA49E27/o/WebbsDOK.pdf>

The illustrator of this book, Julie Maren, used curly lines to show the wind. Why do you think she did that? How would you show wind in a picture?

How did Julie Maren illustrate the sun? Why do you think she did that? How would you show the sun in a picture?

How did Julie Maren illustrate the rain? Why do you think she did that? How would you show the rain in a picture?

This book talks about how an orange grows and travels. How do you think other fruits grow and travel?

### ***If You Plant a Seed* by Kadir Nelson**

*PK.ELAL.12.[PKR.9} Makes connections between self, text, and the world (e.g. what is familiar, what does an event/picture/character make them think of, what do they remember)*

#### **Level 1: Recall**

What types of seeds did the animals in this book plant?

What vegetables did the animals grow in the garden?

#### **Level 2: Skill/Concept**

What is a seed of selfishness?

How does a seed of selfishness grow?

What happens when a seed of selfishness grows?

#### **Level 3: Strategic Thinking**

What are seeds of kindness? What seeds of kindness could we plant?

If we grew seeds of kindness, how could we care for them?

#### **Level 4: Extended Thinking**

What is the difference between vegetable seeds and seeds of selfishness and kindness?

Can you be a gardener? Why or why not?

If you were going to grow a vegetable garden, what would you need? What would you do?

If you were going to grow a kindness garden, what would you need? What would you do?

### ***Rah, Rah, Radishes: A Vegetable Chant* by April Pulley Sayre**

*PK.AC.4. Demonstrates a growing receptive vocabulary*

#### **Level 1: Recall**

What are some of the vegetables in this book?

Who gets a “thank you” in this book?

#### **Level 2: Skill/Concept**

There is a page in this book about sweet corn. It says to “shuck an ear.” What does it mean to “shuck an ear” when you are talking about sweet corn?

This book suggests many different things we could do while we read. Let’s look and see if we can find and try some. Examples include:

Carrots are calling, take a bite!

Broccoli, cauliflower, shout it out!

Pile up peppers

Celebrate celery, give a cheer!

Root for rutabagas.

Bounce for beets!

Potatoes. Tomatoes. Yum a yam! Slice `em. Mash `em. Wham! Wham! Wham!

#### **Level 3: Strategic Thinking**

Have you ever had any of the vegetables in this book? What did you think? If you haven’t had any of

these vegetables, which ones do you think you might want to try? Why?

What do you notice about the vegetables in this book? Why is it important to observe, or look carefully at something?

#### **Level 4: Extended Thinking**

This book is all about vegetables. Why do you think the author, April Pulley Sayre, might have wanted to write a book about vegetables?

Vegetables can be different colors. We saw many of them in this book. Why do you think vegetables are different colors?

## VII. Sample Weekly Plan

On the following pages you will find a sample weekly lesson plan. Use the additional information included in the unit to create detailed weekly plans for each focus question in the unit. Plans will reflect individual schedules, students’ and families’ needs, school context, etc.

### Quick Tips for Small Group:

1. Use exciting language and affect to describe the small group activity.
2. Use hands-on materials that children are encouraged to explore.
3. Preview small group activities in whole group.
4. Link the activity to children’s previous experiences

If children decline to participate...

Have a private conversation with the child as they play to understand why they did not want to join. Take that into consideration and adjust the small group materials to reflect the needs of the child.

Modify the small group activity so that you can do it with the materials that the child is using in the center of their choice.

Facilitate a conversation between the child and a friend who enjoyed the small group activity to generate excitement about the activity.

### WEEK ONE

#### Essential Question: How do plants grow and why are they important?

**Focus Question:** What are plants?

**Focus Vocabulary:** *botany, bud, bulb, branch, dirt, flower, food, fruit, garden, gardener, grow, leaves, nutrients, petals, plant, pollen, potting soil, rain, roots, seed, seedling, soil, sprinkler, sprout, stem, sunlight, trowel, trunk, vine, water, watering can, window box*

Week 1	Monday	Tuesday	Wednesday	Thursday	Friday
Greeting Routine	Continue to supply a table with child-sized pencils, crayons or other writing tools, half sheets of paper or large chart paper, and a basket of name/picture cards for each child (laminated cards with each child’s picture and first name, with the first letter in red). Remind children to sign in if necessary and continue to <b>encourage any mark</b> children make according to their individual needs, but be prepared to help children who are ready for additional challenges. For children who are ready for additional challenges, consider adding the first letter of their last name, their entire last name, encouraging them to look closely at the model letters on their name card to improve accuracy, or allowing them to sign in without using their name/picture card. Observe children’s writing and refer to the stages of prewriting (in unit three, “All About Us”) to determine what to expect next and how to best support the continued development of the				

	<p>child. This activity can be done as children arrive or later in the day. If children seem uninterested in signing in this way, consider encouraging them to write their names throughout their Center Time play. For example, children can add their own names to their artwork or create their own name cards to save their structures in the Block/Construction Area.</p>				
<p><b>Large Group Meeting</b></p> <p><i>In order to reduce the amount of time that children spend in large group and ensure that children have enough time to engage in meaningful play, teachers should think strategically about other large group activities and whether they are essential to the day.</i></p>	<p>What do you know about plants? Ask children to share what they know about plants. Chart their responses. Help children make connections to Unit 7: Water (i.e. plants need water).</p> <p>Note any words that may be new to the class as you build on the vocabulary they already know. You can note these words by highlighting them or by jotting them down separately.</p> <p><i>PK.ELAL.18. [PKW.7] Engages in a discussion using gathered information from experiences or provided resources</i></p>	<p>Plant Song: Share the song below with the class. Sing or chant it multiple times inviting children to join in as they feel comfortable. Consider adding gestures to the song as well.</p> <p><i>Plants need soil, Plants need light. Water plants so they grow right. If you want your plants to grow, This is what you need to know. Plants need soil, Plants need light. Water plants so they grow right.</i></p> <p><i>PK.SCI.4. [P-LS1-1.] Observes familiar plants and animals (including humans) and describes what they need to survive.</i></p>	<p>Parts of a Plant Diagram: Show children a real plant. Tell them you are going to draw the plant. Ask the children what they notice about the plant, and on a large piece of paper, using only one color, draw a basic diagram of the parts of the plant the children notice. Use the appropriate vocabulary words as children share them and/or as you add them to the diagram. There may be parts of the plant children do not mention. Highlight these parts for them and add them to the diagram. Tell children they will have an opportunity to look at the plant closer during small group.</p> <p>If you do not have a plant available, use a picture of a plant instead.</p>	<p>Foundational Text Read Aloud: Read <b>Flower Garden</b> by Eve Bunting aloud to the class. See page 40 for lesson plan and Section VI for Inquiry and Critical Thinking Questions.</p>	<p>Sing: <i>And the Green Grass Grew All Around, All Around</i>. See section IX: Supporting Resources for lyrics. Write the lyrics out for the children on large chart paper. Sing the song for the children, repeating as necessary and invite them to join as they feel comfortable.</p> <p>PK.ARTS.g. [MU:Pr4-6.PK] <i>Performs Music</i>.</p>



			See Section XI: Appendices for a diagram of basic plant parts. <i>PK.SCI.4. [P-LS1-1.] Observes familiar plants and animals (including humans) and describes what they need to survive.</i>		
<b>Foundational Text</b>	<i>*Flower Garden</i> by Eve Bunting				
<b>Supporting Text</b>	<i>How a Seed Grows</i> by Helene J. Jordan	<i>Rainbow Stew</i> by Cathryn Falwell	<i>Juicy Peach</i> by Mary Dixon Lake	<i>Patience, Miyuki</i> by Roxane Marie Galliez	<i>Lola Plants a Garden</i> by Anna McQuinn
<b>Small Groups</b> Implement at least two of the three small group activities per week.  <i>Small groups can be implemented during center time or at another time during the day. Invite 2-4 children to participate at a time. Although children are typically excited about the opportunity to work closely with a teacher, children may decline the opportunity to participate. Each small group should not exceed</i>	LITERACY SMALL GROUP Write out/draw a recipe for a salad that includes many different plant parts such as leaves (lettuce or spinach), roots (carrots), stems (celery) and fruit (apple). See Unit 2: My Five Senses for a sample child-friendly recipe. Invite children to read through the recipe with you and follow the recipe directions to create their own salad. <i>PK.ELAL.1. [PKRF.1.] Demonstrates</i>	MATH SMALL GROUP Measuring Plants. Supply several small plants or pictures of small plants as well as a container of small cubes (All of the cubes should be the same size). Invite children to use the cubes to measure the plants and share how many cubes tall each plant is.  <i>PK.MATH.9. [NY-PK.MD.1.] Identifies measurable attributes of objects, such as length or weight, and describes them using appropriate vocabulary (e.g., small,</i>	SMALL GROUP #3 Invite children to further explore the plant you diagrammed in Whole Group. Engage children in discussions about the parts of the plant and why each piece is important. Additionally, children can draw or write about their experiences.  <i>PK.AC.5. Demonstrates a growing expressive vocabulary.</i>  Write children’s initials below: Group 1:  Group 2:  Group 3:	Between Monday and Thursday, implement two to three small group activities.  Write children’s initials below: Group 1:  Group 2:  Group 3:	CATCH-UP DAY  Use this as an opportunity to complete small groups with children you may have missed throughout the week.  Children to work with today (initials):

<p>10 minutes in length. Work with a couple of groups per day and spend the remainder of the time engaging with children in the interest areas.</p>	<p>understanding of the organization and basic features of print.</p> <p>Write children's initials below:</p> <p>Group 1:</p> <p>Group 2:</p> <p>Group 3:</p> <p>Group 4:</p> <p>Group 5:</p>	<p>big, short, tall, empty, full, heavy, light)</p> <p>Write children's initials below:</p> <p>Group 1:</p> <p>Group 2:</p> <p>Group 3:</p> <p>Group 4:</p> <p>Group 5:</p>	<p>Group 2:</p> <p>Group 3:</p> <p>Group 4:</p> <p>Group 5:</p>	<p>Group 4:</p> <p>Group 5:</p>	
<p><b>Outdoors</b></p>	<p>See Section IV, Ideas for Learning Centers.</p>				
<p><b>Lunch</b></p>	<p>Are you eating any plants? Discuss the plants the children are eating. If children are eating multiple plants, compare them. If children are eating food that was made from plants, discuss the plants and the process of preparing the food.</p>				
<p><b>Centers</b></p>	<p>See Section IV, Ideas for Learning Centers.</p>				

<p>Opportunities for differentiation and integration of goals for children with IEPs</p>	<p>To be completed as needed by teachers.</p>
<p>Differentiation for children whose home language is a language other than English.</p>	<p>To be completed as needed by teachers.</p>

## VIII. Student Work Samples

Below are examples of student work from activities in this unit. Note the alignment to standards and the relationship to the focus question and NYSPLS standard. Some examples may fit under more than one standard and/or focus question.

### Example I: Class Plants

Activity Type: Center Time

NYSPLS Standard: PK.SCI.4 [P-LS1-1] Observes familiar plants and animals (including humans) and describes what they need to survive.



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*"I'm observing our plants. It only needs a little water. I'm going to draw it so I'm looking at it carefully."*

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## Example 2: 3-D Plants

Activity Type: Center Time

NYSPLS Standard: PK.AL.3. Approaches tasks and problems with creativity, imagination and/or willingness to try new experiences.



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*"I'm making a cactus. The spines are sharp. They are the parts sticking out. I am painting it green because my cactus at home is green."*

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## IX. Supporting Resources

### Teacher Texts

*Hollyhocks and Honeybees: Garden Projects for Young Children* by Sara Starbuck, Marla Olthof and Karen Midden

*Involving Families and Community Through Gardening* by Sara Starbuck and Marla R. Olthof

*Science Education Through Gardening and Nature Based Play* by Alyse C. Hachey and Deanna L. Butler

### Teacher Websites

Brooklyn Botanic Garden: <http://www.bbg.org/>

Central Park Conservancy:  
<http://www.centralparknyc.org/>

GreenThumb Community Gardening:  
<http://www.greenthumbnyc.org/>

Kidsgardening.org - A resource of the national gardening association:  
<http://www.kidsgardening.org/>

New York Botanical Garden: <http://www.nybg.org/>

New York Restoration Project:  
<https://www.nyrp.org/>

Prospect Park Alliance:  
<https://www.prospectpark.org/>

Prospect Park Audubon Center:  
<https://www.prospectpark.org/visit-the-park/places-to-go/audubon-center/>

Queens Botanical Garden:  
<http://www.queensbotanical.org/>

Urban Park Rangers:  
<http://www.nycgovparks.org/programs/rangers>

Wave Hill Public Garden and Cultural Center:  
<https://www.wavehill.org/>

Zucker Natural Exploration Area:  
<https://www.prospectpark.org/visit-the-park/places-to-go/playgrounds/zucker-natural-exploration-area/>

### Music: Songs with Lyrics

These are common preschool songs sung by teachers throughout New York City and the world. Where possible, tunes and lyrics are included. If you don't know the tune, you can make one up that works for you or chant the words to a beat. Disclaimer: the lyrics provided are only for use by classroom teachers and are provided for the specific, non-profit educational purpose of supporting interdisciplinary learning in your classroom.

#### And the Green Grass Grows All Around

There was a tree,  
In the middle of the ground,  
The prettiest tree,  
That you ever did see.  
A tree in a hole,  
A hole in the ground,  
And the green grass grows all around, all around,  
And the green grass grows all around.

And on that tree,  
There was a branch,  
The prettiest branch,  
That you ever did see.  
A branch on the tree,  
The tree in the hole,  
A hole in the ground,  
And the green grass grows all around, all around,  
And the green grass grows all around.

And on the branch,  
There was a nest,  
The prettiest nest,  
That you ever did see.  
A nest of the branch,  
The branch on the tree,  
The tree in the hole,  
The hole in the ground,  
And the green grass grows all around, all around,  
And the green grass grows all around.

And in that nest there was an egg...

## Additional Song Titles

*The Farmer in the Dell*

*Mary, Mary Quite Contrary*

*John the Rabbit*

*Tree Song* by Lorraine Hammond

*My Roots Go Down* by Sarah Pirtle

## X. Foundational Learning Experiences: Lesson Plans

**Documentation:** Based on the Focus Question, Objective, and Focus Standard as well as the Authentic Assessment items, teachers will determine what they hope to see children do in an activity. They should take notes as children are working to record the skills and growth children demonstrate. For the lesson plans included in this unit, a note-taking form is included. Please note the NYSPLS standards and assessment items listed in each lesson plan. Keep in mind that you may be addressing additional assessment items and standards.

### Lesson: *Flower Garden* by Eve Bunting

#### Type: Read Aloud

<b>Unit of Study:</b> Plants	<b>Focus Question:</b> What are plants?
<b>Objective:</b> Children will have opportunities to share their understandings of a text.	
<p><b>NYSPLS Focus Standard:</b> <i>PK.AC.3 Demonstrates understanding of what is observed</i></p> <p><b>Additional NYSPLS Standards:</b> <i>PK.ELAL.5. [PKR.1.] Participates in discussions about a text (e.g., during whole or small group interactive read-aloud discussions, during peer sharing, within play scenarios)</i></p>	<p><b>Link to Authentic Assessment Systems</b></p> <p>WSS:II.C.4: Recounts some key ideas and details from text TSG:18: Comprehends and responds to books and other texts COR:M: Listening and comprehension</p>
<b>Materials:</b> <i>Flower Garden</i> by Eve Bunting	<b>Vocabulary:</b> garden, gardener, plant, potting soil, trowel, window box
<p><b>Procedure:</b></p> <p><b>Hook:</b> Show children the cover of the book.</p> <p><b>Beginning:</b> Share the title of the book. Share the author’s name as well as the illustrator’s name.</p>	



Ask the children what they think this book is about.

**Middle:**

Read the book to the children.

Pause throughout the book to ask a few of the questions suggested in Section VI.

**End:**

Briefly summarize the story for the children.

Ask any additional questions from Section VI as applicable.

**Assessment:** What does the child share about the text?

**Differentiation:** Consider multiple entry points for all children to be successful. How do I/we plan to meet individual student needs? For example, repeat directions, extend time, adapt materials, preview questions, and provide 1:1 support.

**For children who need additional support:** Read a few pages in the story rather than reading the entire book. Also consider inviting these children to sit next to a teacher.

**For children who are ready for a challenge:** Invite these children to think of other things that can happen up in the garden or down in the dirt.

**Children with IEPs:** How will I incorporate individual children’s IEP goals into this lesson? What specific accommodations or modifications will I make? How will I collaborate with SEIT and/or related service providers?

**Emergent Multilingual Learners:** What language is needed to understand the lesson and activity instructions and to participate in the activity and discussion?

Preview new vocabulary words with pictures. Use both English and children’s home language(s) if possible.

Point to the pictures as you read this book with the children.

**Teacher Tip:** As the children become familiar with the book, invite them to join you as you read the repetitive lines, “Up in the garden” and, “Down in the dirt.”

**Teacher Reflection:** What went well? Why? What will I do differently given what I have learned from observing children during this activity? Which children needed differentiation during this activity and how will I meet their needs moving forward?

### Assessment Opportunity

Read Aloud Experience: *Flower Garden* by Eve Bunting

NYSPLS Focus Standard:  
*PK.AC.3 Demonstrates understanding of what is observed*

Authentic Assessment Alignment:  
 WSS:II.C.4: Recounts some key ideas and details from text  
 TSG:18: Comprehends and responds to books and other texts  
 COR:M: Listening and comprehension

Child's name	What does the child share about the text?	Notes

Child's name	What does the child share about the text?	Notes

## Lesson: Local Plants

Type: Walking Trip

<b>Unit of Study:</b> Plants	<b>Focus Question:</b> What do plants need and where do we find them?
<b>Objective:</b> Children will create drawings to add detail to their descriptions of a walking trip.	
<b>NYSPLS Focus Standard:</b> <i>PK.ELAL.23 (PKSL.5): Creates a visual display.</i>  <b>Additional NYSPLS Standards:</b> <i>PK.AC.2: Demonstrates they are building background knowledge.</i>	<b>Link to Authentic Assessment Systems:</b> WSS:II.D.1: Represents ideas and stories through pictures, dictation and play TSG 14: Uses symbols and images to represent something not present COR:X. Art
<b>Materials:</b> Pictures of plants that are common in the neighborhood or the city of New York  Park, garden, gardening store or greenspace within walking distance of site	<b>Vocabulary:</b> courtyard, field, garden, greenhouse, ground, landscape, lawn, nature, nursery, park, patio, yard
<b>Procedure:</b>  <b>Hook:</b> Share pictures of plants that are common in the program neighborhood or the city of New York. This may include pictures of trees on the streets, flowers at a store, a plant growing on a classroom ledge etc. Ask children where they think they might find these plants or where they have seen similar plants.  <b>Beginning:</b> Introduce that today you will go on a walk to look for plants. Share with the children where you are going. Invite children to look for plants on this trip. List some of the different types of plants they may see. Remind children of the rules for staying safe on a classroom walk.  <b>Middle:</b> Transition to outside, making sure that you have enough adults and reminding children of safety rules, as needed.	

<p>Point out some of the plants you see on the walk and ask children to point out some of the plants they see as well.</p> <p>When you arrive at your destination, ask children to look carefully at the plants around them. If possible, invite children to touch and smell the plants. Model looking, touching and smelling the plants for the children. Highlight interesting details about the plants as well as where they are growing.</p> <p><b>End:</b></p> <p>When you return to the classroom, invite children to describe the plants they saw as well as where they saw them. Record the children’s thoughts on chart paper. Provide children with paper and writing utensils and ask them to draw pictures of the trip and the responses you charted.</p>
<p><b>Assessment:</b> What was the child able to recall about the trip? Is the child able to use drawing to enhance descriptions?</p>
<p><b>Differentiation:</b> Consider multiple entry points for all children to be successful. How do I/we plan to meet individual student needs? For example, repeat directions, extend time, adapt materials, preview questions, and provide 1:1 support.</p> <p><b>For children who need additional support:</b> Take pictures on the walk to provide visual cues for children who may need help recalling what they saw.</p> <p><b>For children who are ready for a challenge:</b> Invite these children to add their own text to their drawings.</p>
<p><b>Children with IEPs:</b> How will I incorporate individual children’s IEP goals into this lesson? What specific accommodations or modifications will I make? How will I collaborate with SEIT and/or related service providers?</p>
<p><b>Emergent Multilingual Learners:</b> What language is needed to understand the lesson and activity instructions and to participate in the activity and discussion?</p> <p>On the walk, take pictures of some of the plants the children find especially interesting. Have the pictures available for these children to reference as they talk and draw about the trip. Invite a family or staff member who speaks children’s home language(s) to join the walking trip.</p>
<p><b>Teacher Tip:</b> If a walking field trip is not possible for this activity, consider inviting someone who works with plants to visit the classroom. See Section VII: Supporting Resources for community resource suggestions.</p>
<p><b>Teacher Reflection:</b> What went well? Why? What will I do differently, given what I have learned from observing children during this activity? Which children needed differentiation during this activity and how will I meet their needs moving forward?</p>

## Assessment Opportunity

Walking Trip: Local Plants

### NYSPLS Focus Standard

*PK.ELAL.23 (PKSL.5): Creates a visual display.*

### Authentic Assessment Alignment

WSS: II.D.1: Represents ideas and stories through pictures, dictation and play

TSG 14: Uses symbols and images to represent something not present

COR: X: Art

Child's name	Details recalled	Enhances detail through drawing	Notes

Child's name	Details recalled	Enhances detail through drawing	Notes



## Lesson: List Poem

**Type: Large Group Activity**

<b>Unit of Study: Plants</b>	<b>Focus Question: What are some different kinds of plants?</b>
<b>Objective:</b> Children will be introduced to the concept of poetry and work together to create a list poem.	
<b>NYSPLS Focus Standard:</b> <i>PK.ELAL.9 [PKR.5.] Interacts with a variety of genres (e.g., storybooks, poems, songs)</i>  <b>Additional NYSPLS Standard:</b> <i>PK.AC.5. Demonstrates a growing expressive vocabulary</i>	<b>Link to Authentic Assessment Systems:</b> WSS:II.D.1: Represents ideas and stories through pictures, dictation and play TSG:18: Comprehends and responds to books and other texts COR: N/A
<b>Materials:</b> Sample list poem Chart paper Marker Index cards	<b>Vocabulary:</b> bush, cactus, evergreen, flower, fruit, grass, herbs, seaweed, succulent, tree, vegetables, water lily, weeds
<b>Procedure:</b>  <b>Hook:</b> Read a list poem to the children. See Section XI: Appendices for a sample list poem.  <b>Beginning:</b> Ask children if they know what a poem is. Allow them to share their responses. If necessary, share that a poem is a group of words that expresses a person's feelings or ideas. Poems sometimes include words that rhyme or they may have a special rhythm.  Share with children that you are going to create a poem together as a class. The type of poem you are going to create is called a list poem. A list poem has a beginning, a list (middle) and an end.  <b>Middle:</b> Refer back to the list poem you read with the children in the hook portion of this activity. Point out the beginning, the list (middle) and the end.  Ask children to help you create a list poem about plants. To do this you will need to create a list of plants.	

Invite children to create a list of plants. Ask them to share different types of plants with you. Write the children’s responses on an index card (one per card).

After the list is complete, ask children to help you write a beginning and an end for the poem.

Add the beginning and the end to the poem.

**End:**

Read the poem aloud to the class.

Share with children that they will have the opportunity to create their own list poems in the Writing Center during Center Time.

**Assessment:** How does the child participate in the writing process? E.g., suggests plant(s), creates a beginning, listens carefully etc.

**Differentiation:** Consider multiple entry points for all children to be successful. How do I/we plan to meet individual student needs? For example, repeat directions, extend time, adapt materials, preview questions, and provide 1:1 support.

**For children who need additional support:** In advance, read a couple of list poems with these children to familiarize them with the type of poetry.

**For children who are ready for a challenge:** Invite these children to draw pictures of the types of plants the class includes in the poem.

**Children with IEPs:** How will I incorporate individual children’s IEP goals into this lesson? What specific accommodations or modifications will I make? How will I collaborate with SEIT and/or related service providers?

**Emergent Multilingual Learners:** What language is needed to understand the lesson and activity instructions and to participate in the activity and discussion?

Add a visual for each type of plant the children suggest.

**Teacher Tip:** This activity is designed to introduce children to the concept of poetry—list poetry in particular—and provides background knowledge for them to create and present their own poems as suggested in the PKFCC focus standard. Depending on the needs of your class you may begin the list poem during this lesson and add to it throughout the day or in a subsequent lesson/day.

As an extension, children can create illustrations for the poem during small group or Center Time.

**Teacher Reflection:** What went well? Why? What will I do differently, given what I have learned from observing children during this activity? Which children needed differentiation during this activity and how will I meet their needs moving forward?

## Assessment Opportunity

Large Group Experience: List Poem

NYSPLS Focus Standard

*PK.ELAL.9. [PKR.5.] Interacts with a variety of genres (e.g., storybooks, poems, songs)*

Authentic Assessment Alignment

WSS:II.D.1: Represents ideas and stories through pictures, dictation and play

TSG:18: Comprehends and responds to books and other texts

COR: N/A

Child's name	Contribution to the poem	Notes

Child's name	Contribution to the poem	Notes

## Lesson: Plant Taste Test

### Type: Small Group Activity

<b>Unit of Study:</b> Plants	<b>Focus Question:</b> Why are plants important?
<b>Objective:</b> Children will understand that some plants can be a source of food.	
<b>NYSPLS Focus Standard</b> <i>PK.SCI.4. [P-LS1-1.] Observes familiar plants and animals (including humans) and describes what they need to survive</i> <b>Additional NYSPLS Standard:</b> <i>PK.SED.2. Recognizes self as an individual having unique abilities, characteristics, feelings and interests.</i>	<b>Link to Authentic Assessment Systems:</b> WSS:IV.B.1: Explores the properties of objects and materials and how they change TSG:27: Demonstrates knowledge of the Earth’s environment COR:DD: Natural and physical world
<b>Materials:</b> Variety of plant-based foods for children to sample Paper and writing utensils for children to record taste test preferences	<b>Vocabulary:</b> bite, crunch, eat, edible, fruit, harvest, herbs, leaves, nutrients, plant, roots, seed, stem, vegetable, vegetarian
<b>Procedure:</b> <b>Hook:</b> Show children a variety of real fruits or vegetables or labeled pictures. <b>Beginning:</b> Share that all living things (including plants and people) need food in order to live and grow. Ask children if they know where these fruits and vegetables come from. If necessary, share where each item grows and reinforce that these fruits and vegetables are plants or parts of plants. Ask children if they have tried these fruits and vegetables before. Share that they will be able to try them today. <b>Middle:</b> Place pieces of each fruit or vegetable on a plate.	

Place a piece of paper next to each plate.

Invite children to taste each piece of fruit or vegetable.

After children try a fruit or vegetable, ask them to record their thoughts on the corresponding paper. Consider the best system for recording thoughts based on the class' strengths and needs. Children may make tallies under "like" and "dislike" headings, add tallies under smiling or frowning faces, write an L for "like" or a D for "dislike," or use a green marker to indicate that they enjoy the food and a red to indicate that they do not enjoy the food.

**End:**

Talk with children about their preferences and what they recorded when they have finished trying the items.

Ask children which item they liked best and see if they can recall where this item grows.

**Assessment:** What evidence is there that this child understands that some plants can be a source of food?

**Differentiation:** Consider multiple entry points for all children to be successful. How do I/we plan to meet individual student needs? For example, repeat directions, extend time, adapt materials, preview questions, and provide 1:1 support

**For children who need additional support:** Some children may be uncomfortable trying different types of food. Allow children to opt out of trying foods if desired.

**For children who are ready for a challenge:** Provide pictures of where each item grows. Invite children to match these pictures to the food items.

**Children with IEPs:** How will I incorporate individual children's IEP goals into this lesson? What specific accommodations or modifications will I make? How will I collaborate with SEIT and/or related service providers?

**Emergent Multilingual Learners:** What language is needed to understand the lesson and activity instructions, and to participate in the activity and discussion?

Prior to the activity, try to learn the names of the fruits and vegetables that you will use in the children's home language(s). Use these names throughout the activity.

**Teacher Tip:** Be intentional about the fruits and vegetables you select for this activity. Consider items that are interesting and novel for the class.

Be mindful of student allergies when selecting the fruits and vegetables for this activity.

**Teacher Reflection:** What went well? Why? What will I do differently given what I have learned from observing children during this activity? Which children needed differentiation during this activity and how will I meet their needs moving forward?

## Assessment Opportunity

Small Group Experience: Plant Taste Test

### NYSPLS Focus Standard

*PK.SCI.4. [P-LS1-1.] Observes familiar plants and animals (including humans) and describes what they need to survive*

### Authentic Assessment Alignment

WSS:IV.B.1: Explores the properties of objects and materials and how they change

TSG:27: Demonstrates knowledge of the Earth's environment

COR:DD: Natural and physical world

Child's name	Evidence of knowledge that plants can be food	Notes

Child's name	Evidence of knowledge that plants can be food	Notes



## XI. Appendices

### Appendix A: Vocabulary

Botanist: A scientist who specializes in the field of botany.

Botany: The science of plant life.

Forester: A person who practices forestry, the science, art and profession of managing forests.

Terrarium: Clear containers, either sealable or open to the atmosphere, in which plants can be grown. They are typically decorative. Closed terrariums create a unique environment for plant growth as a water cycle develops within.

[www.wikipedia.org](http://www.wikipedia.org)

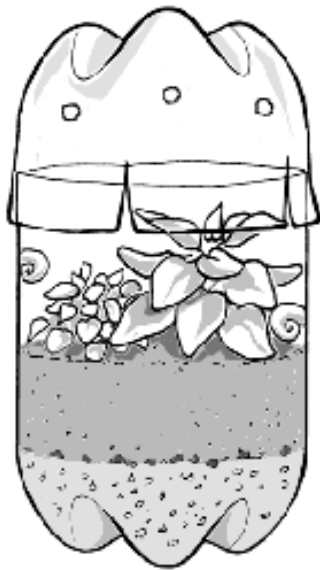
## Appendix B: Terrarium

A terrarium is a small garden grown in an enclosed or partially enclosed container. They are typically made of clear plastic or glass. Succulents are often grown in terrariums but ferns and ground covers also work well. Plants that thrive in high humidity should be grown in closed terrariums. Terrariums can also house decorative rocks, sticks or small figurines.

To build a terrarium start with a layer of gravel (1-2 inches deep) in the bottom of the container. Add a layer of soil on top of the gravel and then add the plants. After the plants are planted, add decorative items as desired.

Containers that work well for terrariums:

- Glass bowls
- Jars
- Fish tanks
- Empty two-liter or other plastic bottles
- Recycled clear plastic food containers.

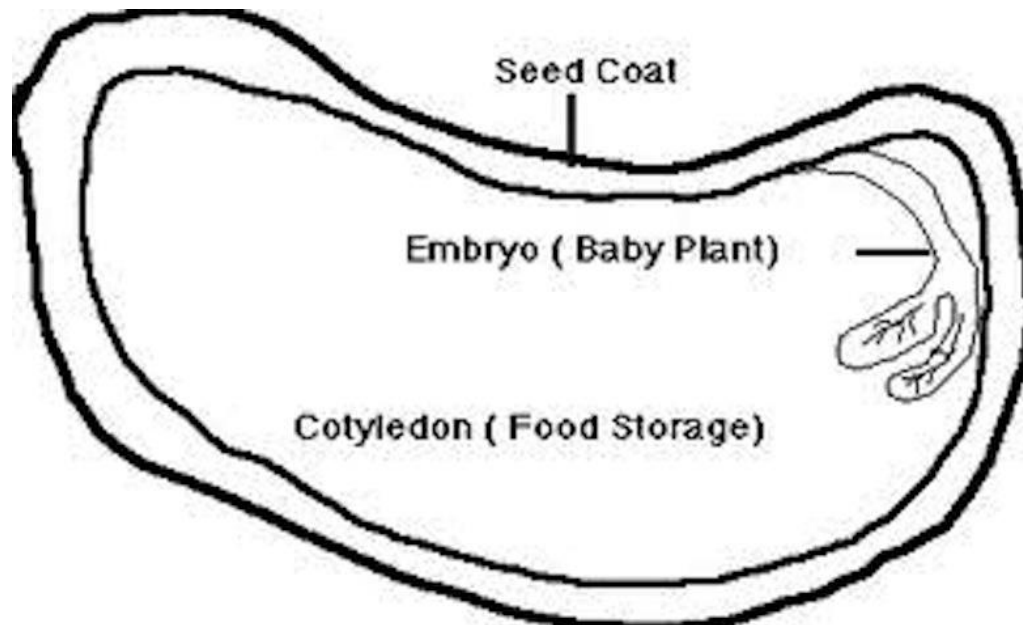


[www.kidsgardening.org](http://www.kidsgardening.org)



[www.climatekids.nasa.gov](http://www.climatekids.nasa.gov)

## Appendix C: Seed Parts



<http://www.ciscomethodist.org/parts-of-a-seed-diagram-for-kids/labeled-parts-of-a-seed-diagram-3c9c98f9e7dd9441.html>

## Appendix D: List Poetry

A list poem is a type of poem that consists of a beginning, a list and an end. The items in the list are typically carefully arranged but do not have to rhyme and the closing line of the poem is generally declarative, humorous or explanative.

### *Vegetables*

Mom says

Carrots

Celery

Peas

Broccoli

Spinach

And peppers

Eat your vegetables.

### *Outside*

I like

Running

Jumping

Stomping

Shouting

Sliding

Riding

Bikes

Trikes

It is fun!

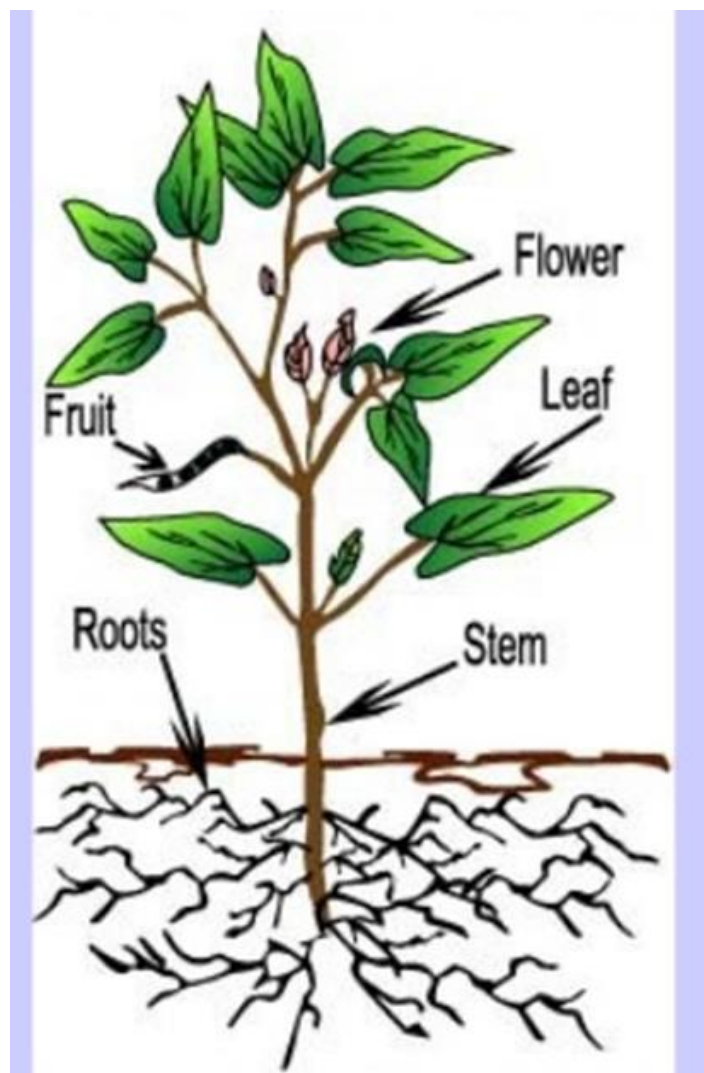
Other list poems include:

*Examination* by Shel Silverstein

*Sick* by Shel Silverstein

*Bleezer's Ice Cream* by Jack Prelutsky

## Appendix E: Plant Diagram



<http://www.webinstituteformteachers.org/>