THE NEW YORK STATE PREKINDERGARTEN LEARNING STANDARDS:

A RESOURCE FOR SCHOOL SUCCESS

NEW YORK STATE EDUCATION DEPARTMENT 2019

Table of Contents

Introduction 3
Purpose of this Document 3
Guiding Principles 4
Students with Disabilities 5
Emergent Multilingual Learners 5
Key Terms and Concepts 6
The New York State Prekindergarten Learning Standards 7
Organizational Structure 7
Domain 1: Approaches to Learning 9
Domain 2: Physical Development and Health 10
Domain 3: Social and Emotional Learning 12
Domain 4A: Communication, Language and Literacy 14
Part A: Approaches to Communication 14
Domain 4B: Communication, Language and Literacy 16
Part B: English Language Arts and Literacy 16
Domain 5a: Cognition and Knowledge of the World: Mathematics 19
Domain 5b: Cognition and Knowledge of the World: Science 21
Domain 5c: Cognition and Knowledge of the World: Social Studies 23
Domain 5d: Cognition and Knowledge of the World: The Arts 25
Domain 5e: Cognition and Knowledge of the World: Technology, Computer Science, and Digital Literacy 28
Planning Curriculum and Instruction 29
References and Resources 80

Introduction

The New York State Prekindergarten Learning Standards: A Resource for School Success consolidates all learning standards for four-year-old students into one document. This is the updated version of the New York State Prekindergarten Foundation for the Common Core Learning Standards, published in 2012.

Purpose of this Document

This resource was developed by the New York State Education Department's offices of Early Learning and Curriculum and Instruction. It is intended to be used as a reference tool by teachers, specialists, and administrators responsible for designing programs for four-year-old prekindergarten students. This resource provides a uniform format for learning standards in all content areas to make it easier for users to read and understand. However, users are encouraged to review the full articulations of the New York State Learning Standards where links are provided since they provide a higher level of detail, additional introductory statements and illustrate learning progressions to upper grades.

From a planning perspective, this document highlights the importance of addressing young children's development and learning across all developmental domains. However, the New York State Prekindergarten Learning Standards (NYSPLS) is not a curriculum, assessment or set of teaching strategies.

> *Rather than prescribe a lockstep progression of lessons or curricula for all children in all settings, the standards serve to articulate the expectations of what children can learn and do as a result of instruction that is not standardized, but personalized, differentiated, adapted, culturally and linguistically relevant, and context-based. While we may have the same learning objectives for all children, our means for meeting these objectives are highly responsive to the individual child.*[1]

It is with these end-of-year expectations that local programs and schools can design, deliver, modify and adapt curricula and instruction that meets the needs of children based on where they are developmentally, linguistically, culturally and experientially. The NYSPLS Resource provides:

- a framework for all four-year-old prekindergarten children regardless of abilities, language, background or diverse needs;
- a resource for planning professional learning opportunities; and
- a tool for focusing discussions on early learning by educators, policy makers, families and community members.

[1] NYS Early Learning Standards Introduction

Guiding Principles for the NYSPLS Resource

The learning standards provided in this document serve as a resource for planning interdisciplinary curriculum and are guided by the following principles:

1. All children are capable of learning, achieving and making developmental progress. The Standards are intended for all children regardless of economic, linguistic, and cultural differences or physical, learning, and emotional challenges.
2. Children develop at different rates and each child is unique in their own development, growth, and acquisition of skills. Appropriate and reasonable supports and accommodations, including home language, trauma, and behavioral and instructional supports must be provided to empower all children to succeed.
3. Children are active learners. A primary approach to learning is through purposeful play. Intentional planning promotes rich learning experiences that encourage participation, involve multiple contexts, and engage the senses that help children explore their environment.
4. Early development and learning are multi-dimensional. Children's learning is integrated and occurs simultaneously across all domains, which are interrelated and interactive with one another.
5. Children learn in the context of interactions and relationships with family members, caregivers, teachers, and other children in their immediate environment and in their community.
6. The family is a significant contributor to children's lifelong development and learning. Actively engaging caregivers in the early education of their children is essential to children's success in the elementary classroom and later learning.
7. These learning standards may be used as tools to empower parents, teachers, and caregivers to better support and enhance young children's development and learning.
8. These learning standards acknowledge, respect, and embrace children's diverse backgrounds, their heritage, cultures, and linguistic experiences.
9. These learning standards are guided by research, stakeholder feedback, and effective practice to strengthen instruction and educational experiences across all settings. They are systemically aligned with all of the New York State P-12 Learning Standards, performance indicators for bilingual and preschool special education, Head Start Early Learning Outcomes, and the National Association for the Education of Young Children guidelines.

The NYSPLS Resource is **not**:

- Intended to be used as a curriculum
- Intended to mandate specific teaching practices or materials
- Meant to stifle the creativity of children, teachers, early educators or parents
- Intended to be used as a checklist, but can inform the development or selection of screening and progress monitoring tools
- Intended to be used as an assessment tool
- Meant to bar children from kindergarten entry
- Meant to replace preschool students with disabilities' individualized education program (IEP) goals and objectives

Students with Disabilities

Preschool children with disabilities and their typically developing peers are all capable of learning, achieving, and making developmental progress. Prekindergarten children with disabilities may need specially designed instruction and/or related services designed to address their disability and support their participation in appropriate activities with typically-developing peers. Each prekindergarten child with a disability has an IEP which documents their individual goals, supports, and services as determined by needs and strengths. For all domain areas and standards preschool students with disabilities may have alternate goals outlined in their IEP. For more information about special education support services for young children, see NYSED's A Resource to Special Education Support Services.

Emergent Multilingual Learners

A command of the English language is not a precondition to meeting every standard. Children can demonstrate mastery of many of the skills outlined in the standards bilingually or using their home languages. Children can demonstrate they are building background knowledge (PK.AC.2), in their home language. Rather than hinder progress towards the standards, the home language is an invaluable resource to advance learning. Intentional, strategic use of children's home languages in the prekindergarten classroom can, for example, enhance student engagement, scaffold comprehension, support authentic assessment, and promote family involvement[2]. "Research highlights many lifelong advantages associated with bilingualism. The ultimate purpose of the learning standards would be to develop children's potential, so they garner and sustain every possible advantage into adulthood. Promoting bilingualism and multilingualism as children develop proficiency in the English language is in keeping with that purpose." For more information, see NYSED's Emergent Multilingual Learners in Prekindergarten Programs.

[2] Adapted from the New York State Education Department's New York State Next Generation Standards Early Learning Introduction.

Key Terms and Concepts

Below is a list of key terms and concepts with definitions. These terms and general concepts are discussed below to call attention to the concepts and ensure that readers have a common understanding.

Prekindergarten	Prekindergarten is used generically in this document to include any program serving children the year prior to kindergarten entry. For the purposes of this document this refers to children who are 4 years old.
Communicate, Communication and Language	Throughout the standards and indicator statements, the terms communicate, communication and language mean that children can express meaning and understanding by using any language or mode of expression, including use of home language, sign language or adaptive equipment.
Continuum and Progression	The NYSPLS should be understood as a set of learning progressions that exist on a continuum. The NYSPLS described in this document represent reasonable expectations for the end of a full year of quality instruction. All children learn at different rates; therefore, children's learning is not uniform. Teachers might need to look at related standards below or above the prekindergarten level to guide instructional approaches.
Emergent Reader, Early Reader	An emergent reader, including an emergent multilingual reader, is on the path to fluent literacy, before conventional reading and writing skills are developed. One who begins to recognize letter sounds, learned sight words, or symbolic representations of words. An early reader has moved beyond the emergent reader stage and is able to apply some reading strategies to interact with texts. An early reader begins to monitor their own reading and self-correct.
Domain	Domain refers to specific aspects of growth and change. When looking at child development, several domains or developmental areas are considered. These include approaches to learning; physical development and health; social and emotional learning; communication, language and literacy; and cognition and knowledge of the world.
Learning Standards	Learning standards are goals for New York State students. The NYSPLS are organized by developmental domains and connected to K-12 academic content areas. Standards should be considered the destination; learning ideally intended to be accomplished by the end of an instructional year.
Indicators	Indicators are observable and demonstrative and can be accomplished through play and active engagement. They are examples of how students might demonstrate they are moving towards or achieving the respective standard. The lists of indicators are not exhaustive; they are samples of observable behaviors children may exhibit. Some standards do not provide indicators while others have several. The indicators are not in a specific order, nor should they be used as a check-off list. Not all children will demonstrate how they are moving toward the standard the same way.
Curriculum	Curriculum is an outline or scope and sequence of the content, concepts, and skills students will learn. Curriculum addresses all domains of learning and all types of learners.
Instruction	Instruction includes the ways (approaches, strategies, environments, materials, interactions) Educators choose to teach the curriculum, based on the needs of their students.
Assessment	Assessment includes the processes used to learn more about student learning and progress. Assessment guides and informs teaching.

Organizational Structure of the NYSPLS Resource

The New York State Prekindergarten Learning Standards: A Resource for School Success is organized by the following key domains of learning:

DOMAIN 1: Approaches to Learning

How children become involved in learning and acquiring knowledge.

DOMAIN 2: Physical Development and Health

Children's physical health and ability to engage in daily activities, both outdoors and inside.

DOMAIN 3: Social and Emotional Learning

The emotional competence and ability to form positive relationships that give meaning to children's experiences in the home, school, and larger community.

DOMAIN 4: Communication, Language, and Literacy Part A and Part B

How children understand, create, and communicate meaning.

DOMAIN 5: Cognition and Knowledge of the World (Mathematics, Science, Social Studies, Arts)

What children need to know and understand about their world and how they apply what they know.

In this document, each of the above key domains of learning is introduced with a brief context statement or set of considerations to help with planning curriculum, instruction and assessment. Following the brief context, links and notes to the original standards documents are provided. These domains are further categorized into topics. Following each topic are learning standards, and in some cases, a set of indicators for the learning standard. Each prekindergarten learning standard in this document uses a numbering system that includes PK, an abbreviation of the prekindergarten domain name and an assigned number. For example, PK.MATH.1. In some cases, an additional reference code is provided in brackets. This reference code is the number code used in the full articulation of the standards. For example, PK.MATH.1 [PKCC.1]. This allows users to quickly refer to fully articulated standards documents and see how they exist within a continuum across age-ranges and grades.

The illustration on the following page provides an explanation of the structure.

Figure 1: Explanation of the Structure of the Standards Resource

DOMAIN: COMMUNICATION, LANGUAGE AND LITERACY
PART B: ENGLISH LANGUAGE ARTS AND LITERACY

Students in prekindergarten are at the early emergent reader level and have not yet developed the foundational word reading skills necessary to read texts independently. Prekindergarten children should experience a balance of literature and informational texts in the context of instruction designed to create opportunities to engage with a variety of topics, texts, and discussions that support language development and knowledge building. Creating this learning environment for emergent readers can take a variety of formats, including read-alouds, shared readings, pretend readings, learning activities and play that incorporates literacy materials, talking, experimenting with written materials, and other literacy activities. We refer to these instructional events as "reading or literacy experiences" because the focus is on using texts, printed and visual, to develop emergent readers' concepts of how meaning is conveyed through reading and writing while building their language and background knowledge within responsive units of study.

For more information on New York State's Next Generation ELA Standards, including introductory statements, visit http://www.nysed.gov/curriculum-instruction/english-language-arts-ela-literacy/. To further support the implementation of the ELA Standards, additional guidance is provided through a series of topic briefs here http://www.nysed.gov/bilingual-ed/linguistically-diverse-learners-and-nys-next-generation-p-12-learning-standards

READING FOUNDATIONS

Print Concepts

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

PK.ELAL.1. Indicators:

a. Recognizes that words are read from left to right, top to bottom, and page to page
b. Recognizes that spoken words are represented in written language
c. Understands that words are separated by spaces in print
d. Recognizes and names some upper/lowercase letters of the alphabet, especially those in own name
e. Recognizes that letters are grouped to form words
f. Differentiates letters from numerals
g. Identifies front cover and back cover

Prekindergarten domain of learning

Learning domain context and considerations

Links and notes to full articulation of standards, if applicable

Prekindergarten code includes PK for grade level, letters to indicate the learning domain, and a chronological number

Reference code from full articulation of standards document, if applicable

Learning Standard

Indicator(s)

Domain 1: Approaches to Learning

DOMAIN: APPROACHES TO LEARNING (AL)

Approaches to Learning contains key skill areas for 21st Century learners to be integrated throughout the daily curriculum and embedded within instructional practices. This domain provides specific learning expectations that support the changing demands of the workforce from rote functions to an emphasis on working with new information and on solving unstructured problems. The skills outlined by these learning standards emphasize metacognitive thinking and are the result of the overall learning environment and culture, interactions, language and instructional practices within classrooms. For example, teachers can support these skill areas by ensuring a classroom environment that fosters risk-taking, imaginative thinking, language production, idea generation, collaboration, etc. Teachers can plan responsive activities and projects that create opportunities for children to practice and be supported by adults on these skills, regardless of the content being taught.

PLAY AND ENGAGEMENT IN LEARNING

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

PK.AL.1 Indicators:

a. Interacts with a variety of materials and peers through play
b. Participates in multiple play activities with same material
c. Engages in pretend and imaginative play – testing theories, acting out imagination
d. Self-selects play activity and demonstrates spontaneity
e. Uses "trial and error" method to figure out a task, problem, etc.
f. Demonstrates awareness of connections between prior and new knowledge

PK.AL.2 Actively engages in problem solving

PK.AL.2 Indicators:

a. Identifies a problem and tries to solve it independently
b. Attempts multiple ways to solve a problem
c. Communicates more than one solution to a problem
d. Engages with peers and adults to solve problems

CREATIVITY AND IMAGINATION

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

PK.AL.3 Indicators:

a. Uses materials/props in novel ways to represent ideas, characters and objects
b. Identifies new or additional materials to complete a task
c. Experiments to further knowledge
d. Seeks additional clarity to further understanding
e. Demonstrates innovative thinking

The Practices

Throughout the New York State P-12 Learning Standards, our practices represent the overarching approaches to learning expected of our students throughout their educational career and beyond. These include:

Lifelong Practices of Readers and Writers: http://www.nysed.gov/common/nysed/files/programs/curriculum-instruction/nys-next-generation-ela-standards.pdf#page=8

Science and Engineering Practices: http://www.nysed.gov/common/nysed/files/programs/curriculum-instruction/nysscienceintro.pdf#page=4

Social Studies Practices: http://www.nysed.gov/common/nysed/files/programs/curriculum-instruction/ss-framework-k-12-intro.pdf#page=10

Standards for Mathematical Practice: http://www.nysed.gov/common/nysed/files/programs/curriculum-instruction/nys-next-generation-mathematics-p-12-standards.pdf#page=7

CURIOSITY AND INITIATIVE

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

a. Asks questions using who, what, how, why, when, where, what if
b. Expresses an interest in learning about and discussing a growing range of ideas
c. Actively explores how things in the world work
d. Investigates areas of interest
e. Takes objects and materials apart and attempts to reassemble them (e.g., puzzles, models, nuts and bolts)
f. Willingly engages in new experiences and activities

PERSISTENCE

PK.AL.5. Demonstrates persistence.
PK.AL.5. Indicators:

a. Maintains focus on a task
b. Seeks assistance when the next step seems unclear or appears too difficult
c. Modifies strategies used to complete a task

Domain 2: Physical Development and Health

DOMAIN: PHYSICAL DEVELOPMENT AND HEALTH (PDH)

Many teachers are concerned about ensuring adequate physical development and health opportunities without sacrificing cognitive and academic learning time. The good news is that research has shown strong links between healthy eating, physical activity, and improved academic achievement. Multiple opportunities are to be built into the daily curriculum and routines to foster physical development and health. In addition to a daily schedule that provides ample time for planned physical activities and outings, teachers can integrate physical development and health with other domains of learning. For example, they can incorporate opportunities for large and small muscle movement through games, music, dance, art; promote healthy habits in authentic ways through learning centers and socio-dramatic play; and, build a sense of well-being through routines, integrated curriculum design, and instructional strategies.

To view the most recent NYS Learning Standards for Physical Education, visit http://www.nysed.gov/curriculum-instruction/physical-education/

PHYSICAL DEVELOPMENT

PK.PDH.1. Uses senses to assist and guide learning.
PK.PDH.1. Indicators:

a. Identifies sights, smells, sounds, tastes and textures
b. Compares and contrasts different sights, smells, sounds, tastes, and textures
c. Communicates to discuss sights, smells, sounds, tastes, and textures

PK.PDH.2. Uses sensory information to plan and carry out movements
PK.PDH.2. Indicators:
a. Demonstrates appropriate body awareness when moving in different spaces (i.e., aware of their own body)
b. Exhibits appropriate body movements when carrying out a task
c. Demonstrates awareness of spatial boundaries and the ability to work within them (i.e., aware of the things around them)

PK.PDH.3. Demonstrates coordination and control of large muscles
PK.PDH.3. Indicators:
a. Displays an upright posture when standing or seated
b. Maintains balance during sitting, standing, and movement activities
c. Runs, jumps, walks in a straight line, and hops on one foot
d. Navigates stairs using alternating feet
e. Puts on age appropriate clothing items, such as shirts, jackets, pants, shoes, etc.

PK.PDH.4. Combines a sequence of large motor skills with and without the use of equipment
PK.PDH.4. Indicators:
a. Navigates age appropriate playground equipment
b. Explores, practices, and performs skill sets (e.g., throwing, pushing, pulling, catching, balancing, etc.)
c. Participates in a series of large motor movements or activities (e.g., dancing, pedaling, following the leader, participating in games/sports)

PK.PDH.5. Demonstrates eye-hand coordination and fine motor skills
PK.PDH.5. Indicators:
a. Demonstrates ability to use fine motor skills (e.g., engages in finger plays, uses materials such as pencils, paint brushes, eating utensils and blunt scissors effectively)
b. Manipulates small objects with ease (e.g., fits objects into holes, strings wooden beads, stacks mini blocks, uses geo boards, etc.)
c. Uses buttons, zippers, snaps, hooks, and tape successfully

PHYSICAL FITNESS

PK.PDH.6. Engages in a variety of physical fitness activities
PK.PDH.6. Indicators:
a. Engages in rigorous large motor activities (e.g., marching, hopping, running, jumping, dancing) in increasingly longer periods of time as skill and endurance develops
b. Participates in activities designed to strengthen major muscle groups
c. Participates in activities to promote balance and flexibility

PHYSICAL HEALTH AND WELL-BEING

PK.PDH.7. Demonstrates personal care and hygiene skills
PK.PDH.7. Indicators:
a. Demonstrates growing independence in using personal hygiene skills (e.g., washing hands, brushing teeth, toileting, etc.)
b. Exhibits self-help skills when dressing, cleaning up, participating in meals, etc.
c. Recognizes and communicates the need to use the restroom or when experiencing symptoms of hunger or illness

PK.PDH.8. Demonstrates awareness and understanding of healthy habits.
PK.PDH.8. Indicators:

a. Recognizes the importance of good nutrition, water, rest and sleep to be healthy
b. Demonstrates ways to self-soothe during times of stress
c. Talks about food choices in relationship to personal allergies and overall health
d. Relates healthy behaviors to good personal health (e.g., eating a balanced diet, exercising)

PHYSICAL SAFETY

PK.PDH.9. Demonstrates awareness and understanding of safety rules
PK.PDH.9. Indicators:

a. Verbalizes and demonstrates safety rules (e.g., bus safety, holding an adult's hand when walking on sidewalks or near a street)
b. Understands and communicates that some practices could be unsafe (e.g., playing with matches, playing near a busy street, not wearing a bike helmet)
c. Participates in fire evacuation drills, understands what the alarm bell is and the need to go to a safe location, etc.
d. Explains how to get help in emergency situations (e.g., communicates their guardian's name and phone number)

Domain 3: Social and Emotional Learning

DOMAIN: SOCIAL AND EMOTIONAL LEARNING (SEL)

All children learn within social contexts and relationships. Learning through social context and relationships is especially important for young children, making the social and emotional domain a key lever to support children's learning across all domains. Extensive research indicates that effective mastery of social emotional competencies is associated with greater well-being and better school performance. It also supports the brain's ability to hold onto and work with information, concentrate, filter distractions, and adapt. This domain area has become increasingly important across all age and grade spans, not only to support academic achievement, but also for overall wellbeing through adulthood. Children require ample opportunities to develop and practice social and emotional skills, observe and experience positive behavior models, and establish and reinforce positive relationships with caring adults and peers.

NYSED developed the NYS Social Emotional Learning Benchmarks to support social and emotional development for K-12. The K-12 Benchmarks are organized by grade bands. The Prekindergarten Social Emotional Learning Standards are aligned to the K-12 Benchmarks to make it easier to see the progression of skills from the prekindergarten level to early elementary. To explore the K-12 Benchmarks, visit http://www.p12.nysed.gov/sss/documents/NYSSELBenchmarks.pdf

SELF-AWARENESS AND SELF-MANAGEMENT SKILLS

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

PK.SEL.1 Indicators:

a. Expresses feelings, needs, opinions and desires in a way that is appropriate to the situation
b. Appropriately names types of emotions (e.g., happy, excited, sad) and associates them with different words and behaviors
c. Demonstrates an ability to independently modify behavior in different situations

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

PK.SEL.2. Indicators:

a. Describes self, using several different characteristics
b. Identifies self as being part of a family and identifies being connected to at least one significant adult
c. Demonstrates knowledge of own uniqueness (e.g., talent, interests, preferences, gender, culture, etc.)
d. Exhibits self-confidence by attempting new tasks independent of prompting or reinforcement
e. Identifies the range of feelings one experiences over time and that feelings can change
f. Identifies likes and dislikes, needs and wants, strengths and challenges
g. Exhibits confidence and pride in home language and culture

SOCIAL AWARENESS AND RELATIONSHIPS WITH OTHERS

PK.SEL.3. Demonstrates and continues to develop positive relationships with significant adults (primary caregivers, teachers, and other familiar adults)

PK.SEL.3. Indicators:

a. Interacts with significant adults
b. Seeks guidance from primary caregivers, teachers and other familiar adults
c. Transitions into unfamiliar setting with the assistance of familiar adults

Note: In a culturally and linguistically responsive environment, students demonstrate progress toward this goal in various ways.

PK.SEL.4. Develops positive relationships with their peers

PK.SEL.4. Indicators:

a. Approaches children already engaged in play
b. Interacts with other children (e.g., in play, conversation, etc.)
c. Shares materials and toys with other children
d. Sustains interactions by cooperating, helping, and suggesting new ideas for play
e. Develops friendship with one or more peers
f. Offers support to another child or shows concern when a peer appears distressed

PK.SEL.5. Demonstrates pro-social problem-solving skills in social interactions

PK.SEL.5. Indicators:

a. Seeks input from others about a problem
b. Uses multiple pro-social strategies to resolve conflicts (e.g., trade, take turns, problem solves)
c. Uses and accepts compromise; with assistance

DECISION-MAKING SKILLS

PK.SEL.6. Understands and follows routines and rules

PK.SEL.6. Indicators:

a. Displays an understanding of the purpose of rules
b. Engages easily in routine activities (e.g., story time, snack time, circle time)
c. Uses materials purposefully, safely and respectfully as set by group rules
d. With assistance, understands that breaking rules has a consequence
e. Applies rules in new, but similar situations
f. Demonstrates the ability to create new rules for different situations

ADAPTABILITY

PK.SEL.7. Adapts to change

PK.SEL.7. Indicators:

a. Easily separates themselves from parent or caregiver
b. Transitions, with minimal support, between routine activities and new/unexpected occurrences
c. When appropriate, adjusts behavior for different settings and/or events
d. Uses multiple adaptive strategies to cope with change (e.g., seeking social support from an adult or peer, taking deep breaths, engaging in another activity)

Domain 4A: Communication, Language and Literacy

DOMAIN: COMMUNICATION, LANGUAGE AND LITERACY

PART A: APPROACHES TO COMMUNICATION (AC)

Building a strong foundation of oral language in the early years in English and/or the child's home language(s) contributes to learning to read. Young children need to hear conversation and practice speech with adults and peers to strengthen communication skills. When children hear and use a lot of language substantially within instructional frameworks, spontaneous interactions, and play, they learn new concepts, build background knowledge, and gain meaning from print. Familiarity with conversation and talking lays the groundwork for reading comprehension.

Communication is a gateway for children to express themselves, regulate behavior, feel understood, and connect with others. Children should be encouraged to use the language they are most comfortable with, especially when describing events, retelling stories, and playing. Approaches to communication is not an isolated instructional event and is to be integrated throughout the curriculum.

New York State's Next Generation English Language Arts (ELA) Standards do not include Approaches to Communication, however, these areas are vital through 2nd grade. To further support the implementation of these standards, additional guidance is provided through a series of topic briefs here: http://www.nysed.gov/bilingual-ed/linguistically-diverse-learners-and-nys-next-generation-p-12-learning-standards.

MOTIVATION

PK.AC.1. Demonstrates motivation to communicate

PK.AC.1. Indicators:

a. Participates in small or large group activities for story-telling, singing or finger plays
b. Asks questions
c. Listens attentively for a variety of purposes (e.g., enjoyment, to gain information, to perform a task, to learn what happened, to follow directions)
d. Initiates and extends conversations, both verbally and nonverbally
e. Makes choices about how to communicate the ideas they want to share (e.g., gestures, scribbles, home language, sign language, speaking)

Note: In a culturally and linguistically responsive environment, students demonstrate progress toward this goal in various ways.

BACKGROUND KNOWLEDGE

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

PK.AC.2. Indicators:

a. Asks questions related to an item, event or experience
b. Correctly identifies meanings of words in read-alouds, in conversation, and in descriptions of everyday items in the world around them
c. Attempts to use new vocabulary correctly
d. Makes comparisons to words and concepts

VIEWING

PK.AC.3 Demonstrates understanding of what is observed

PK.AC.3. Indicators:

a. Uses vocabulary relevant to observations
b. Asks questions related to visual text and observations
c. Makes inferences or draws conclusions based on information from visuals, including observation of situations, peers and adults (e.g., sees another child crying and says, “he is sad”)

VOCABULARY

PK.AC.4. Demonstrates a growing receptive vocabulary

PK.AC.4. Indicators:

a. Understands and follows spoken directions
b. Identifies pictures related to words (e.g., points to the correct picture in book if prompted)
c. Responds/reacts to questions/comments indicating meaning is understood (e.g., body language, gestures, facial expressions, and words, including home language use)
d. Expresses understanding of words used in read-alouds, in conversations and in descriptions of everyday items in the world

PK.AC.5. Demonstrates a growing expressive vocabulary

PK.AC.5. Indicators:

a. Uses facial expressions, body language, gestures, home language, and/or sign language to engage in reciprocal conversations
b. Increasingly uses more complex words in conversations
c. Uses new and rare words introduced by adults or peers
d. Begins to use appropriate volume and speed so that the spoken message is understood
e. Initiates conversations about a book, situation, event or print in the environment

REPRESENTING

PK.AC.6. Demonstrates their ability to represent ideas using a variety of methods
PK.AC.6. Indicators:

a. Uses facial expressions, body language, gestures, or sign language to express ideas
b. Uses existing objects to represent desired or imagined objects in play or other purposeful way
c. Uses visual media to represent an actual experience
d. Reviews and reflects on their own representations
e. Writes and/or draws to communicate meaning with peers and adults during play

Domain 4B: Communication, Language and Literacy

DOMAIN: COMMUNICATION, LANGUAGE AND LITERACY
PART B: ENGLISH LANGUAGE ARTS AND LITERACY

Students in prekindergarten are at the early emergent reader level and have not yet developed the foundational word reading skills necessary to read texts independently. Prekindergarten children should experience a balance of literature and informational texts in the context of instruction designed to create opportunities to engage with a variety of topics, texts, and discussions that support language development and knowledge building. Creating this learning environment for emergent readers can take a variety of formats, including read-alouds, shared readings, pretend readings, learning activities and play that incorporates literacy materials, talking, experimenting with written materials, and other literacy activities. We refer to these instructional events as "reading or literacy experiences" because the focus is on using texts, printed and visual, to develop emergent readers' concepts of how meaning is conveyed through reading and writing while building their language and background knowledge within responsive units of study.

For more information on New York State's Next Generation ELA Standards, including introductory statements, visit http://www.nysed.gov/curriculum-instruction/english-language-arts-ela-literacy/. To further support the implementation of the ELA Standards, additional guidance is provided through a series of topic briefs here http://www.nysed.gov/bilingual-ed/news/new-topic-brief-series-linguistically-diverse-learners-and-nys-next-generation-p

READING FOUNDATIONS

Print Concepts

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

a. Recognizes that words are read from left to right, top to bottom, and page to page
b. Recognizes that spoken words are represented in written language
c. Understands that words are separated by spaces in print
d. Recognizes and names some upper/lowercase letters of the alphabet, especially those in own name
e. Recognizes that letters are grouped to form words
f. Differentiates letters from numerals
g. Identifies front cover and back cover

Note: Emergent Multilingual Learners can demonstrate this Standard when they recognize the organization and basic features of print in English and/or their home language, even if it does not follow a left to right, top to bottom format.

Phonological Awareness

PK.ELAL.2. [PKRF.2.] **Demonstrates an emerging understanding of spoken words, syllables, and sounds (phonemes)**
PK.ELA.2. Indicators:

a. Begins to recognize and match spoken words that rhyme (e.g., songs, chants, finger plays)
b. Begins to recognize individual syllables within spoken words (e.g., cup-cake, base-ball)
c. Isolates and pronounces the initial sounds (phonemes) in spoken one-syllable words (e.g., the/m/in map)

Phonics and Word Recognition

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

a. Demonstrates one-to-one letter-sound correspondence by producing the primary sound of some consonants

Note: Emergent Multilingual Learners can demonstrate this Standard when they recognize that letters have similar and different sounds in English and their home language.

Fluency

PK.ELAL.4. [PKRF.4.] **Displays emergent reading behaviors with purpose and understanding**

READING

Key Ideas and Details

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)

Note: The word, "text" encompasses far more than printed material. Text may also refer to speech, graphics, visual art, digital representations, video, and other visual and audio depictions of ideas, concepts, and experiences.

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

Note: Non-verbal learners can retell using sign language or a storyboard. Emergent Multilingual learners can also use a storyboard or retell in English, their home language(s) or both.

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

Craft and Structure

PK.ELAL.8 [PKR.4] **Exhibits an interest in learning new vocabulary** (e.g., asks questions about unfamiliar words)

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

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

Integration of Knowledge and Ideas

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

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)

WRITING

Text Types and Purposes

PK.ELAL.13 [PKW.1] **Uses a combination of drawing, dictating, oral expression, and/or emergent writing to state an opinion about a familiar topic in child-centered, authentic, play-based learning**

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.15. [PKW.3] **Uses a combination of drawing, dictating, oral expression, and/or emergent writing to narrate an event or events in a sequence**

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

Research to Build and Present Knowledge

PK.ELAL.17. [PKW.6] **Develops questions and participates in shared research and exploration to answer questions and to build and share knowledge** (e.g., record and discuss an experiment of items that float and sink)

PK.ELAL. 18. [PKW.7] **Engages in a discussion using gathered information from experiences or provided resources** (e.g., collect materials from a nature walk; record and discuss what they are)

SPEAKING AND LISTENING

Comprehension and Collaboration

PK.ELAL.19. [PKSL.1] **Participates in collaborative conversations with diverse peers and adults in small and large groups and during play**
PK.ELAL.19. Indicators:

a. Follows agreed-upon rules for discussions, including listening to others, taking turns, and staying on topic
b. Participates in conversations through multiple exchanges
c. Considers individual differences when communicating with others

PK.ELAL.20. [PKSL.2] **Interacts with diverse formats and texts (e.g., shared read aloud, video clips, oral storytelling)**

PK.ELAL.21. [PKSL.3] **Identifies the speaker**

Presentation of Knowledge and Ideas

PK.ELAL.22. [PKSL.4] **Describes familiar people, places, things and events**

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

PK.ELAL.24. [PKSL.6] **Expresses thoughts, feelings, and ideas** (e.g., role-playing, music, drawing, art work, building, writing)

Language

PK.ELAL.25. [PKL.1] **Demonstrates command of the conventions of academic English grammar and usage when writing or speaking.** *Organized within grade bands. These banded skills can be found in Appendix A at the end of the standards document. For the Core Conventions Skills and Core Punctuation and Spelling Skills for Grades

P-2, the student is expected to know and be able to use these skills by the end of 2nd grade.

PK.ELAL.26. [PKL.2] **Demonstrates command of the conventions of academic English capitalization, punctuation, and spelling when writing.** *Organized within grade bands. These banded skills can be found in Appendix A at the end of the standards document. For the Core Conventions Skills and Core Punctuation and Spelling Skills for Grades P-2, the student is expected to know and be able to use these skills by the end of 2nd grade.

Knowledge of Language

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

Vocabulary Acquisition and Use

PK.ELAL.28. [PKL.5] **Explores and discusses word relationships and word meanings**
PK.ELAL.28. Indicators:

a. Sorts common objects into categories (e.g., shapes, foods) for understanding of the concepts the categories represent
b. Demonstrates understanding of frequently occurring words by relating them to their opposites (e.g., hot/cold)

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**

Domain 5A: Cognition and Knowledge of the World: Mathematics

DOMAIN: COGNITION AND KNOWLEDGE OF THE WORLD
MATHEMATICS (MATH)

Mathematical learning in prekindergarten focuses on the exploration of concepts. Instructional time should focus on: 1) developing number sense including concepts of correspondence, counting, cardinality, and comparison; and 2) recognizing basic two and three-dimensional geometric shapes and describing shapes found in their everyday environment.

Developmentally appropriate instructional tools include math manipulatives, games, learning centers; play; and selected books or themes with mathematical concepts.

The word ***"explore(s)"*** in the Prekindergarten Math Standards below indicates that the topic is an important concept that builds the foundation for progression toward master in later grades. Repeated experiences with these concepts, with immersion in the concrete, are vital.

COUNTING AND CARDINALITY

Know number names and the count sequence

PK.MATH.1. [NY-PK.CC.1.] **Counts to 20**

Note: Emergent Multilingual Learners may demonstrate this Standard by counting in their home language(s).

PK.MATH.2. [NY-PK.CC.2.] **Represents a number of objects (0-5), with a written numeral 0-5 (with 0 representing a count of no objects)** Note: Students can select the corresponding number card and/or write the numeral.

Counts to tell the number of objects

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

PK.MATH.3a. [NY-PK.CC.3a.] **When counting objects, says the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. (1:1 correspondence)**

PK. MATH.3b. [NY-PK.CC.3b.] **Explores and develops the concept that the last number name said tells the number of objects counted, (cardinality). The number of objects is the same regardless of their arrangement or the order in which they were counted.**

PK.MATH.4a. [NY-PK.CC.4a.] **Answers counting questions using as many as 10 objects arranged in a line, a rectangular array, and a circle. Answers counting questions using as many as 5 objects in a scattered configuration** (e.g., how many ____ are there?")

Note: Non-verbal students may demonstrate this skill by using an answer card, objects, computer program, or their fingers.

PK.MATH.4b. [NY-PK.CC.4b] **Given a number from 1-10, counts out that many objects**

Compares numbers

PK.MATH.6. [NY-PK.CC.5.] **Recognizes whether the number of objects in one group is more than, fewer than, or equal to (the same as) the number of objects in another group** (e.g., using matching and counting strategies Note: Include groups with up to five objects

PK.MATH.7. [NY-PK.CC.6.] **Identifies first and last related to order or position**

OPERATIONS AND ALGEBRAIC THINKING

Understands addition as adding to, and understand subtraction as taking from

PK.MATH.8. [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 2 more, how many apples do we have all together?)

Understands simple patterns

PK.MATH.9. [NY-PK.OA.2.] **Duplicates and extends simple patterns using concrete objects** (e.g., what comes next?)

MEASUREMENT AND DATA

Describes and compares measurable attributes

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)

Sorts objects and counts the number of objects in each category

PK.MATH.11. [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

GEOMETRY

Identifies and describes shapes (squares, circles, triangles and rectangles)

PK.MATH.12. [NY-PK.G.1.] **Describes objects in the environment using names of shapes and describes the relative positions of these objects using terms such as top, bottom, up, down, above, below, in front of, behind, over, under, next to**

PK.MATH.13. [NY-PK.G.2.] **Names shapes regardless of size**

Explores and creates two and three-dimensional objects

PK.MATH.14. [NY-PK.G.3.] **Explores two-and three-dimensional objects and uses informal language to describe their similarities, differences, and other attributes**

PK.MATH.15. [NY-PK.G.4.] **Creates and builds shapes from components** (e.g., sticks, blocks, clay)

Domain 5B: Cognition and Knowledge of the World: Science

DOMAIN: COGNITION AND KNOWLEDGE OF THE WORLD
SCIENCE (SCI)

Prekindergarten students have a sense of wonder about the natural world and are curious about natural phenomena. Educators can foster young learners' natural inclination toward scientific exploration, discovery, and experimentation by planning responsive, integrated units and themes. The inclusion of science topics and scientific inquiry provides children time to develop questions, make and discuss predictions, engage in hands-on experiments and observations, record observations, and compare and describe their ideas.

For additional information on New York State's P-12 Science Learning Standards:
http://www.nysed.gov/curriculum-instruction/science/

PHYSICAL SCIENCE

PK.SCI.1. [P-PS1-1.] **Asks questions and uses observations to test the claim that different kinds of matter exist as either solid or liquid**
PK.SCI.1 Indicators:

a. Observes and describes similarities and differences between solids and liquids based on their physical properties
b. Compares and categorizes solids and liquids based on their physical properties

PK.SCI.2. [P-PS2-1.] **Uses tools and materials to design and build a device that causes an object to move faster with a push or a pull**
PK.SCI.2 Indicators:

a. Explores forces (pushes and pulls) on objects, such as those caused by gravity, magnetism, and mechanical forces (e.g., a string attached to an object being pulled or a ramp to increase the speed of an object)

PK.SCI.3. [P-PS4-1.] **Plans and conducts investigations to provide evidence that sound is produced by vibrating materials**
PK.SCI.3 Indicators:

a. Investigates vibrating materials such as percussion instruments (e.g., drum, triangle), string instruments (e.g., guitar, piano), wind instruments (e.g., recorder, whistle), and audio speakers

LIFE SCIENCES

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

a. Explores what a variety of living organisms need to live and grow (e.g., water, nutrients, environment)

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.5 Indicators:

a. Observes the relationships between the physical and living environment (e.g. views habitats of plants and animals)
b. Recognizes the different structures of familiar plants and animals (e.g., roots, stems, leaves for plants and eyes, ears, mouth, arms, legs for animals)

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.**
PK.SCI.6 Indicators:

a. Observes and represents familiar plants and animals (e.g., draws pictures, builds and plays with toy or model animals in their habitats)
b. Compares baby and adult animals and recognizes similarities (e.g., matches adult stuffed animals with their baby in a play setting)

EARTH AND SPACE SCIENCES

PK.SCI.7. [P-ESS1-1.] **Observes and describes the apparent motions of the sun, moon, and stars to recognize predictable patterns**
PK.SCI.7 Indicators:

a. Explores characteristics and movements of the sun, moon, stars and clouds (e.g., the sun and moon appear to move across the sky in a predictable pathway, day and night follow predictable patterns, seasons change in a cyclical pattern, the moon's shape appears to change in a cyclical pattern, and stars other than our Sun can be visible at night depending on local weather conditions)

PK.SCI.8. [P-ESS2-1.] **Asks questions, makes observations, and collects and records data using simple instruments to recognize patterns about how local weather conditions change daily and seasonally.**
PK.SCI.8 Indicators:

a. Discusses daily weather conditions and the impact of weather (e.g., recorded over time and how those conditions impact student activities and what clothes they wear)
b. Uses vocabulary to describe weather conditions (e.g., cloud cover (sunny, partly cloudy, cloudy, foggy), precipitation (no precipitation, snow, hail, rain), wind (no wind, some wind, strong wind), and temperature (cold, cool, warm, hot))

PK.SCI.9. [P-PS3-1.] **Plans and conducts an investigation to determine the effect of sunlight on Earth's surface.**
PK.SCI.9 Indicators:

a. Discusses the effects of the sun (e.g., provides light, creates shadows, and the warming effect on living organisms and nonliving things.)

ENGINEERING DESIGN

The Engineering Design standards are organized in grade bands. The student is expected to know and be able to use these skills by the end of 2nd grade. While the Engineering Design standards do not begin until kindergarten, prekindergarten teachers may wish to introduce students to the principles of Engineering Design.

PK.SCI.10. [K-2-ETS1-1.] **Asks questions, makes observations, and gathers information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool**

PK.SCI.11. [K-2-ETS1-2.] **Develops a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem**

PK.SCI.12. [K-2-ETS1-3.] **Analyzes data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs**

Domain 5C: Cognition and Knowledge of the World: Social Studies

DOMAIN: COGNITION AND KNOWLEDGE OF THE WORLD
SOCIAL STUDIES (SOC)

Social Studies in prekindergarten focuses on children's natural interest in learning about themselves and other people, what they do, what languages they speak, and their roles and responsibilities. Prekindergarten children begin to become curious about places and events that are meaningful to them within the context of their own lives. They also have a strong sense of fairness and are honing their understanding of right and wrong in the greater community. This natural curiosity about people sets the stage for teachers to incorporate learning experiences that help children learn more about themselves and others. The Social Studies Practices, especially civic participation (e.g., following rules in the classroom) and gathering as well as interpreting and using evidence (e.g., asking questions to clarify something), should be woven into prekindergarten classroom practices.

To see how the NYSPLS align with New York State's K-12 Social Studies Framework, visit http://www.nysed.gov/curriculum-instruction/social-studies/

INDIVIDUAL DEVELOPMENT AND CULTURAL IDENTITY

PK.SOC.1. Develops a basic awareness of self as an individual, self within the context of group, and self within the context of community
PK.SOC.1. Indicators:

a. Identifies self by using characteristics such as eye color, hair color, age
b. Describes how each person is unique and important
c. Identifies as a member of a group

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

a. Talks about and/or shows items related to cultural traditions . [E.g. Describes some of the dances, foods, and special events related to culture
b. Describes own community and/or cultural group

CIVIC IDEALS AND PRACTICES

PK.SOC.3. Demonstrates an understanding of roles, rights, and responsibilities

PK.SOC.3. Indicators:

a. Recognizes community workers and their roles and responsibilities (e.g., asks questions about and shows an interest in the community jobs
b. Recognizes that people depend on community helpers to provide goods and services
c. Identifies the tools and equipment that correspond to various roles and jobs
d. Recognizes that all children and adults have roles, rights, and responsibilities at home, school, and the community

PK.SOC.4. Begins to learn basic civic and democratic principles

PK.SOC.4. Indicators:

a. Expresses that rules are for everyone
b. Identifies rules that protect themselves and others
c. Describes possible consequences when rules are not followed
d. Participates in making group rules and/or rules for daily routines and transitions
e. Follows rules and may remind others of the rules
f. Demonstrates preferences and choices by participating when the class votes to make simple decisions

GEOGRAPHY, HUMANS AND THE ENVIRONMENT

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

PK.SOC.5. Indicators:

a. Identifies features of own home and familiar places
b. Names the street, neighborhood, city and/or town where they live
c. Uses words that indicate direction, position and relative distance
d. Creates representations of topographical features in art work, and/or while playing with blocks, sand or other materials

TIME, CONTINUITY AND CHANGE

PK.SOC.6. Develops an understanding of how people and things change over time and how to relate past events to their present and future activities

PK.SOC.6. Indicators:

a. Identifies routines and common occurrences in own life
b. Identifies changes over time in themselves, their families, and in the wider community
c. Retells important events in sequential order
d. Demonstrates interest in current events that relate to family, culture, and community
e. Uses words and phrases that differentiate between events that happen in the past, present and future, e.g., uses phrases like “when I was a baby” or “before I moved to my new house”

ECONOMIC SYSTEMS

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

PK.SOC.7. Indicators:

a. Recognizes that goods and services may be purchased using different forms of payment, (e.g., coins, paper money, checks, electronic payment, credit cards, vouchers, food assistance programs)

Domain 5D: Cognition and Knowledge of the World: The Arts

DOMAIN: COGNITION AND KNOWLEDGE OF THE WORLD
THE ARTS (ARTS)

The Arts develop a variety of children's skills, thought processes, and socio-emotional understandings through dance, music, theater, visual and media arts. The NYS P-12 Arts Standards explore four artistic processes: Create, Present/ Perform/ Produce, Respond, and Connect. These processes provide an instructional frame to develop children's skills through dance, music, theater, visual and media arts. At the prekindergarten level, educators can integrate the Arts by anchoring the artistic processes to interdisciplinary themes or units of study.

The NYS P-12 Art Standards provide additional instructional notes embedded throughout the indicators. To see the full articulation of the Arts Standards and access glossaries and additional resources, visit http://www.nysed.gov/curriculum-instruction/arts/

DANCE

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

a. Expresses and engages using movement elements and skills (locomotor and non-locomotor) to a series of sensory stimuli (e.g., music, visual cues)
b. Moves in spontaneous and imaginative ways to music, songs, rhythm, and silence

PK.ARTS.2. [DA:Pr4-6.PK] **Performs Dance**
PK.ARTS.2. Indicators:

a. Demonstrates basic full-body locomotor movements (crawl, walk, run), non-locomotor movements (bend, twist, reach) and spatial relationships (over, under, around) while moving in general space
b. Identifies the speed of a dance (for example fast vs. slow) and move to varied rhythmic sounds at different tempo
c. Moves with opposing qualities (loose/tight, light/heavy, shaky/smooth) and explores movement with simple props in response to verbal cues or expressive music

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

a. Identifies a movement in a dance by repeating it
b. Demonstrates observed or performed movements originating from diverse dance genres (e.g., tap, ballet, contemporary) and imitate those dance movements
c. Observes a movement and shares impressions

PK.ARTS.4. [DA:Cn10-11.PK] **Connects to Dance**
PK.ARTS.4. Indicators:

a. Recognizes the expression of emotion while watching or performing a dance
b. Demonstrates a dance movement experienced at home or elsewhere
c. Observes a work of dance, replicates movements and asks questions about the choreography

MEDIA ARTS

We recognize that not all prekindergarten programs have the technological supports for all items under the media arts standards. However, simple media arts experiences can be designed with minimal technology, or media technology found in most classrooms. A helpful idea is to think of media arts as "4-D art", which includes the element of time. Some examples include video, animation, a recording of viewer interaction with an artwork that changes its physical qualities over time (e.g., an artwork made of food, which gets eaten over time), a sequence or series of still images that are experienced simultaneously with sound patterns or music, etc.

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

a. Discovers and explores media arts tools

PK.ARTS.6. [MA:Cr4-6.PK] **Produces Media Arts**
PK.ARTS.6. Indicators:

a. Explores various ways to present media artwork

PK.ARTS.7. [MA:Re7-9.PK] **Responds and Connects to Media Arts**
PK.ARTS.7. Indicators:

a. Explores and discusses the components of a variety of media artwork (i.e., still and moving images, human-made images (like drawings, Claymation) or characters (puppets), real-life video, text, etc.)
b. Identifies personal experiences with media artwork (e.g., talks about where they have seen media artwork, such as tablets, TV, computers, museums, concerts, classroom

MUSIC

PK.ARTS.8. [MU:Cr1-3.PK] **Creates Music**
PK.ARTS.8. Indicators:

a. Explores and experiences a variety of music and favorite musical ideas (e.g., experiments with musical instruments, makes up silly and rhyming verses, imitates rhythmic patterns, uses music to tell stories and express feelings)
b. Shares musical ideas with peers

PK.ARTS.9. [MU:Pr4-6.PK] **Performs Music**
PK.ARTS.9. Indicators:

a. Performs music with expression (e.g., keeping rhythm using instruments, performing through oral, or visual expression- singing songs, moving in time to the music with dance props or bodily movements)
b. Practices and demonstrates what they like about their own performances

PK.ARTS.10. [MU:Re7-9.PK] **Responds to Music**
PK.ARTS.10. Indicators:

a. Demonstrates and states personal preference for varied musical selections provided by the teacher
b. Explores and demonstrates awareness of the contrasts and expressive qualities of music (i.e., voice/sound quality, tone, dynamics, pitch, and tempo)
c. Responds appropriately to aural and visual cues

PK.ARTS.11. [MU:Cn10-11.PK] **Connects to Music**
PK.ARTS.11. Indicators:

a. Explores and imitates sounds found in the environment
b. Imagines and describes places, times, and reasons for making and listening to music
c. Performs/explores folk music from a variety of cultures
d. Performs/explores music that tells a story, adding physical movements and/or experimenting with loudness and softness (dynamics) and tempo to add expressivity and enhance story

THEATER

PK.ARTS.12. [TH:Cr1-3.PK] **Creates Theatrical Arts**
PK.ARTS.12. Indicators:

a. Transitions between imagination and reality in dramatic play
b. Uses non-representational materials to create props, puppets, and costume pieces for dramatic play
c. Uses gestures, words, sounds, and movements in dramatic play

PK.ARTS.13. [TH:Pr4-6.PK] **Performs Theatrical Arts**
PK.ARTS.13. Indicators:

a. Identifies characters and setting in dramatic play or guided drama
b. Engages in dramatic play to tell known stories and newly imagined stories (i.e., re-enacts a story or creates their own story to act out)
c. Uses body and voice to communicate emotions in dramatic play

PK.ARTS.14. [TH:Re7-9.PK] **Responds to Theatrical Arts**
PK.ARTS.14. Indicators:

a. Identifies preferences in dramatic play (i.e., express their own feelings, roles, and use of materials)
b. Discusses the experiences of characters in dramatic play
c. Makes connections between themselves and a character

PK.ARTS.15. [TH:Cn10-11.PK] **Connects to Theatrical Arts**
PK.ARTS.15. Indicators:

a. Identifies the similarities between a story and personal experiences in dramatic play
b. Identifies stories that are similar to one another in dramatic play
c. Tells a short story in dramatic play

VISUAL ARTS

PK.ARTS.16. [VA:Cr1-3.PK] **Creates Visual Arts**
PK.ARTS.16. Indicators:

a. Engages in self-directed imaginative play with a variety of materials and/or art-making tools
b. Creates, shares and/or talks about art that communicates a familiar place or object (e.g., using blocks to build a castle or clay to create a snake)
c. Shares and talks about personal artwork

PK.ARTS.17. [VA:Pr4-6.PK] **Presents Visual Arts**
PK.ARTS.17. Indicators:

a. Selects art objects for saving or display, explaining why they are chosen
b. Identifies places, both inside and outside of school, where art can be displayed or saved

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

a. Recognizes and shares preferences and/or reactions to art in one's environment
b. Distinguishes between images and real objects
c. Selects a preferred artwork

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

a. Imagines, invents, and creates art that tells a story about life
b. Recognizes that people make works of art and design

Domain 5E: Cognition and Knowledge of the World: Technology, Computer Science, and Digital Literacy

DOMAIN: COGNITION AND KNOWLEDGE OF THE WORLD
TECHNOLOGY, COMPUTER SCIENCE, AND DIGITAL LITERACY

Technology in a prekindergarten classroom is used to accomplish specific learning goals. It is not used in place of high-quality adult-child interactions and activities. Technology tools are useful when used in intentional and developmentally appropriate and responsive ways, when educators work with children to explore different types of technology, when technology is incorporated in authentic ways into different learning centers, and when children have equal access.

For more information about how technology and media might be used in preschool classrooms, visit the National Association for the Education of Young Children, https://www.naeyc.org/resources/topics/technology-and-media.

Computer Science and Digital Literacy Standards are currently under development at the New York State Education Department.

Instructional unit framework example

This instructional unit framework illustrates one way to design an integrated thematic unit that aligns with the prekindergarten standards, leaves room to build on student interest, and can be tailored to meet individual needs. While this unit centers on a traditionally "scientific" theme, it is interdisciplinary as content from all domains of learning is embedded throughout.

Unit Eight: Plants

Interdisciplinary Unit of Study

The enclosed curriculum units may be used for educational, non-profit purposes only. If you are not a Pre-K for All provider, send an email to prekinstruction@schools.nyc.gov to request permission to use this curriculum or any portion thereof. Please indicate the name and location of your school or program and describe which units you would like to use and how you intend to use them.

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.

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

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

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

Mathematics

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

Life Sciences

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

Economic Systems

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

The Arts

Theater

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

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

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.

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

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.

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

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

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.

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
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?**
Foundational Learning Experiences	**Large Group** Foundational Text Read Aloud: See page 40 for lesson plan and Section VI for Inquiry and Critical Thinking Questions. *PK.AC.1. Demonstrates motivation to communicate*	**Walking Trip** Walking Field Trip: Invite children to join on a walking field trip to look for plants in the program neighborhood. *PK.ELAL.23. [PKSL.5] Creates a visual display* See page 45 for lesson plan.	**Small Group** Class List Poem: Introduce children to poetry, specifically List Poems, and generate a List Poem about plants together as a class. *PK.ELAL.9. [PKR.5] Interacts with a variety of genres (e.g., storybooks, poems, songs)* See page 49 for lesson plan.	**Small Group** 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. *PK.SCI.4. [P-LS1-1.] Observes familiar plants and animals (including humans) and describes what they need to survive* See page 53 for lesson plan.
Foundational Texts	***Up in the Garden and Down in the Dirt*** by Kate Messner	***The Curious Garden*** by Peter Brown	***An Orange in January*** by Dianna Hutts Aston	***The Vegetables We Eat*** by Gail Gibbons
Key Vocabulary	botany, branch, bud, bulb, dirt, flower, food, fruit, grow, leaves, nutrients, petals, plant, pollen, rain, roots, seed, seedling, soil, sprinkler, sprout, stem, sunlight, trunk, vine, water, watering can	botanist, bouquet, courtyard, environment, farm, farmer, field, forester, floral arrangement, florist, garden, gardener, greenhouse, ground, landscape, lawn, nature, nursery, park, patio, terrarium, vegetation, yard	bush, cactus, evergreen, grass, herbs, seaweed, succulent, tree, weeds, vegetables, water lily	compost, edible, fabric, habitat, harvest, medicine, shade, shelter, vegetarian, wood

	Week One	Week Two	Week Three	Week Four
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?**
Family and Community Engagement *EFQ 4: High quality programs promote families' role as primary caregivers, teachers, and advocates*	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.
Culminating Celebration	Terrarium. Create a terrarium together as a class or invite children to create their own terrariums. See Section XI: Appendices for directions and examples. *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* 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. *PK.AC.6. Demonstrates their ability to represent ideas using a variety of methods*			

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.

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.

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 com-

plexity. 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:

Underground by Denise Fleming.
Invite children to use blocks to create their own underground environments.

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

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:

Provide shoe boxes or other boxes for children to use as a container for a garden. They can use the plants they create in the Build Plants activity to create a container garden. 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? How do they use them in connection 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

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:

A Seed is Sleepy by Dianna Hutts Aston.
Invite children to reflect on the art in this book and share their thoughts and opinions.

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 consider 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

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 tap gently on 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

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.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)

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:

Ten Red Apples by Pat Hutchins.
Cut out small apples from paper about the size of the apples in the book. Invite children to use them as they read or retell this story.

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.11. [NY-PK.MD.2.] Sorts objects and shapes into categories; counts the objects in each category.

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

What do you notice about the child's attempts to place the stems in the holes in the colander?

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 they are taller or shorter than the tree. Children can write their names on, or near, the tree to indicate their own height.

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, 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:

Ocean Sunlight: How Tiny Plants Feed the Seas
by Molly Bang
Invite children to reference this book as they create or play with underwater environments (i.e. Seaweed or Frog Pond activity suggestion).

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

How does the child 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

Author Study:

Place several of Lois Ehlert's plant-related books (e.g., ***Growing Vegetable Soup, Planting a Rainbow, Red Leaf, Yellow Leaf***) in a basket in the library. Share that the same person wrote the words for all of these books so they all have the same author. Encourage children to explore the books and provide reactions to them. Consider prompts such as, what do you think about the books? What do you think about the illustrations? Which book do you like best? Why?

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

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 are using and/or eating.

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.

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 do they 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:

Wiggling Worms at Work by Wendy Pfeffer.
After reading about worms, invite children to dig in the dirt outside, if possible, and look for worms. Be sure children wash their hands when finished.

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

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.8. [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:

Chicka Chicka Boom Boom by Bill Martin, Jr.
Add an assortment of small plastic letters and a drawing of a tree. Invite children to use the letters to retell the story.

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

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:

Flip, Float, Fly: Seeds on the Move by JoAnn Early Macken. Invite children to act out and explore some of the movement words from this text.

PK.PDH.2. Uses sensory information to plan and carry out movements

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

Up in the Garden and Down in the Dirt by Kate Messner: Explore the hidden world of a garden.

The Curious Garden by Peter Brown: A little boy named Liam discovers a struggling garden and decides to take care of it.

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

The Vegetables We Eat by Gail Gibbons: Vegetables come in many shapes, colors and forms.

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.

****The Carrot Seed*** by Ruth Krauss: Everyone thinks the seed won't grow except for the young boy who planted it.

Chicka Chicka Boom Boom by Bill Martin, Jr: Can the whole alphabet fit in the coconut tree?

Cooking With Sunshine: How Plants Make Food by Ellen Lawrence: Explore the process of photosynthesis and how it powers the lives of plants.

Composting: Nature's Recyclers by Robin Koontz: Dive in to composting!

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

Flip, Float, Fly: Seeds on the Move by JoAnn Early Macken: A gust of wind lifts a maple seed, sending it spinning like a shiny green helicopter through the sky. Where will it land?

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 Flower to Honey by Robin Nelson: Follow each step in the production of honey.

From Seed to Plant by Gail Gibbons: Explore the intricate relationship between seeds and the plants they produce.

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

Go, Go, Grapes! A Fruit Chant by April Pulley Sayre: Celebrate the joy of healthy eating.

Green Kid's Guide to Composting by Richard Lay: How to make a compost bin and use compost to fertilize a garden without the use of chemicals.

Green Kid's Guide to Watering by Richard Lay: How to plant seeds in a raised bed and keep it properly watered.

****Growing Vegetable Soup*** by Lois Ehlert: A father and child plant a family garden.

****How a Seed Grows*** by Helene J. Jordan: How does a tiny acorn grow into an enormous oak tree?

How Does a Seed Sprout? And Other Questions About Plants by Melissa Stewart: A virtual garden of information on seeds and plants.

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

Let's Go Nuts! Seeds We Eat by April Pulley Sayre: What do nuts, beans, grains and even some spices have in common?

The Little Red Hen by Paul Galdone: No one wants to help the Little Red Hen make the cake but everyone wants to eat it!

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

Ocean Sunlight: How Tiny Plants Feed the Seas by Molly Bang: A picture of the life cycles and food chains deep within our oceans.

Plants Feed Me by Lizzy Rockwell: Explore the edible parts of plants such as leaves, flowers, stems, roots and seeds.

****Planting a Rainbow*** by Lois Ehlert: A guide to understanding how to plant bulbs, seeds and seedlings as well as nurture their growth.

Poetrees by Douglas Florian: A poetic exploration of trees.

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

Red Leaf, Yellow Leaf by Lois Ehlert: An introduction to the life of a tree.

Seeds by Ken Robbins: Learn how seeds grow as well as how they vary in shape, size and dispersal patterns.

A Seed Is Sleepy by Dianna Hutts Aston: An informative look at the intricate, complex and often surprising world of seeds.

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

Seed to Plant by Lisa M. Herrington: The bright, giant sunflower begins as a tiny black seed.

So Happy! by Kevin Henkes: There once was a boy, a rabbit, a magic seed and a book…

Stone Soup by Heather Forest: If each person makes a small contribution the result can be huge.

Tap the Magic Tree by Christie Matheson: Help a tree change through the seasons.

Ten Red Apples by Pat Hutchins: There are ten red apples hanging on the tree. Yippee, fiddle-dee-fee!

The Tiny Seed by Eric Carle: The life cycle of a flower told through the adventures of a tiny seed.

Titch by Pat Hutchins: Titch is little and so is everything he has until one day his little seed grows much bigger than everything he has.

Underground by Denise Fleming: The down and dirty secrets of underground creatures.

The Watermelon Seed by Greg Pizzoli: What will happen if a crocodile swallows a watermelon seed?

Wiggling Worms at Work by Wendy Pfeffer: Explore how worms enrich the cycle of life.

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[1], 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.

Up in the Garden and Down in the Dirt by Kate Messner

PK.AC.1. Demonstrates motivation to communicate

Level 1: Recall

What are some things that happen up in the garden?

What are some things that happen down in the dirt?

What happens in the garden at night?

Level 2: Skill/Concept

What does it mean for some things to be up in the garden and other things to be down in the dirt?

Why do the little girl and Nana water the garden?

Level 3: Strategic Thinking

What happens in the garden in the fall?

What does the garden do in the winter?

Level 4: Extended Thinking

Why do different things happen in the garden at different times?

The words in this book make a pattern. We hear about things that are up in the garden, down in the dirt, then up and back down again. The pattern is up, down, and up, down, and up, down. Can you find another pattern somewhere in our classroom?

The Curious Garden by Peter Brown

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

Where did the garden start growing?

Where did the garden spread?

What did Liam do in the winter?

Level 2: Skill/Concept

How does the city look at the beginning of the book? How does the city look at the end of the book? Do you prefer the way it looks at the beginning or the end? Why?

The book says that Liam didn't feel like a gardener at first but after a while he did. Why do you think that happened?

Other people in the city decided to be gardeners too. Why do you think they wanted to be gardeners?

Level 3: Strategic Thinking

Do you think the people in the city felt different after there were many gardens and plants growing in the city? Why or why not?

How do plants and gardens make you feel?

[1] http://schools.nyc.gov/NR/rdonlyres/522E69CC-02E3-4871-BC48-BB575AA49E27/0/WebbsDOK.pdf

Level 4: Extended Thinking

Can you be a gardener? Why or why not?

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

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

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?

The Vegetables We Eat by Gail Gibbons

PK.AC.4. Demonstrates a growing receptive vocabulary

Level 1: Recall

What parts of plants can be vegetables?

What are some different types of vegetables?

Where do vegetables grow?

How do vegetables get to grocery stores?

Level 2: Skill/Concept

What are some different ways that you eat vegetables?

What are some things people have to do if they want to grow a vegetable garden?

Level 3: Strategic Thinking

Some people grow their own vegetable garden. If you were going to grow a vegetable garden, what vegetables would you grow? Why?

Why do you think farmers on big farms sometimes use machines to harvest the vegetables?

Level 4: Extended Thinking

Vegetables are good for your body. How do they help your body?

Why is it important to take good care of your body?

Vegetables can be different colors. 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, grow, leaves, nutrients, petals, plant, pollen, rain, roots, seed, seedling, soil, sprinkler, sprout, stem, sunlight, trunk, vine, water, watering can

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 encourage any mark 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 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.				

WEEK ONE continued...

Week 1	Monday	Tuesday	Wednesday	Thursday	Friday
Large Group Meeting *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.*	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). 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. *PK.ELAL.18. [PKW.7] Engages in a discussion using gathered information from experiences or provided resources*	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. *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.* *PK.SCI.4. [P-LS1-1.] Observes familiar plants and animals (including humans) and describes what they need to survive.*	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. If you do not have a plant available, use a picture of a plant instead. See Section XI: Appendices for a diagram of basic plant parts. *PK.SCI.4. [P-LS1-1.] Observes familiar plants and animals (including humans) and describes what they need to survive.*	Foundational Text Read Aloud: *Read Up in the Garden Down in the Dirt* by Kate Messner aloud to the class. See page 40 for lesson plan and Section VI for Inquiry and Critical Thinking Questions.	Sing: *And the Green Grass Grew All Around, All Around*. 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. *PK.ARTS.9. [MU:Pr4-6.PK] Performs Music.*
Foundational Text	***Up in the Garden Down in the Dirt*** by Kate Messner	***Up in the Garden Down in the Dirt*** by Kate Messner	***Up in the Garden Down in the Dirt*** by Kate Messner	***Up in the Garden Down in the Dirt*** by Kate Messner	***Up in the Garden Down in the Dirt*** by Kate Messner
Supporting Text	***How a Seed Grows*** by Helene J. Jordan	***Let's Go Nuts! Seeds We Eat*** by April Pulley Sayre	***The Watermelon Seed*** by Greg Pizzoli	***If You Plant a Seed*** by Kadir Nelson	***Lola Plants a Garden*** by Anna McQuinn

WEEK ONE continued...

Week 1	Monday	Tuesday	Wednesday	Thursday	Friday
Small Groups Implement at least two of the three small group activities per week. *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 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.*	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. *PK.ELAL.1. [PKRF.1.] Demonstrates understanding of the organization and basic features of print.* Write children's initials below: Group 1: Group 2: Group 3: Group 4: Group 5:	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. *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)* Write children's initials below: Group 1: Group 2: Group 3: Group 4: Group 5:	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. *PK.AC.5. Demonstrates a growing expressive vocabulary.* Write children's initials below: Group 1: Group 2: Group 3: Group 4: Group 5:	Foundational Text Read Aloud: Read Up in the Garden Down in the Dirt by Kate Messner aloud to the class. See page 40 for lesson plan and Section VI for Inquiry and Critical Thinking Questions. Between Monday and Thursday, implement two to three small group activities. Write children's initials below: Group 1: Group 2: Group 3: Group 4: Group 5:	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):
Outdoors	See Section IV, Ideas for Learning Centers.				
Lunch	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 made from plants, discuss the plants and the process of preparing the food.				
Centers	See Section IV, Ideas for Learning Centers.				

WEEK ONE continued...

Week 1	Monday	Tuesday	Wednesday	Thursday	Friday
Opportunities for differentiation and integration of goals for children with IEPs	To be completed as needed by teachers.				
Differentiation for children whose home language is a language other than English.	To be completed as needed by teachers.				

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 1: Class Plants

Activity Type: Center Time

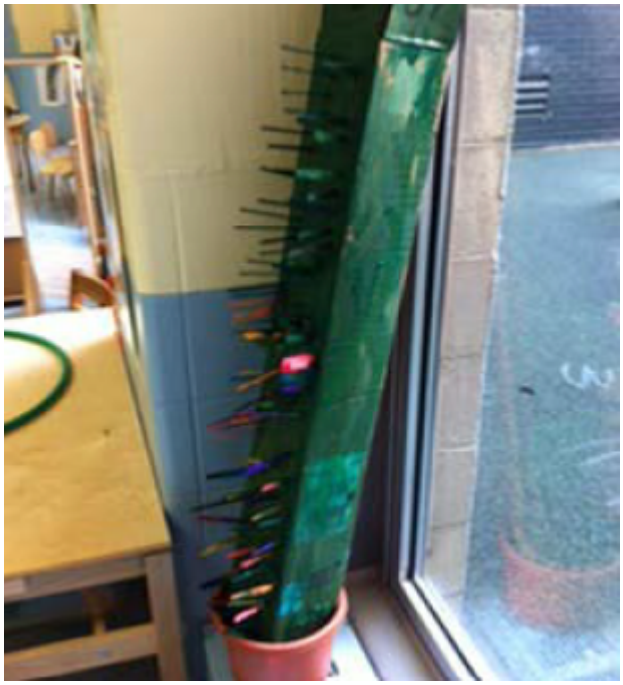
NYSPLS Standard: PK.SCI.4 [P-LS1-1] Observes familiar plants and animals (including humans) and describes what they need to survive.

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

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.



"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."

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.prospect-park.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.prospect-park.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: Up in the Garden and Down in the Dirt by Kate Messner

Type: Read Aloud

Unit of Study: Plants	Focus Question: What are plants?
Objective: Children will listen attentively to the book and respond to questions the teacher asks about the book.	
NYSPLS Focus Standard: *PK.AC.1. Demonstrates motivation to communicate.* **Additional NYSPLS Standards:** *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)*	**Link to Authentic Assessment Systems** WSS:II.A.I: Gains meaning by listening TSG:8: Listens to and understands increasingly complex language COR:M: Listening and comprehension
Materials: ***Up in the Garden and Down in the Dirt*** by Kate Messner	**Vocabulary:** dirt, grow, plant, rain, tools, soil, sunlight, water, watering can

Procedure:

Hook: Show children the cover of the book.

Beginning:
Share the title of the book.
Share the author's name as well as the illustrator's name.
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 do during the read aloud? How do they engage with the book? How did they respond to the questions?

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: ***Up in the Garden and Down in the Dirt*** by Kate Messner

NYSPLS Focus Standard:
PK.AC.1. Demonstrates motivation to communicate.

Authentic Assessment Alignment:
WSS:II.A.I: Gains meaning by listening
TSG:8: Listens to and understands increasingly complex language
COR:M: Listening and comprehension

Child's name	What did the child do during the read aloud? How did they engage with the book?	How did the child respond to questions?	Notes

Lesson: Local Plants
Type: Walking Trip

Unit of Study: Plants	Focus Question: What do plants need and where do we find them?
Objective: Children will create drawings to share information.	
NYSPLS Focus Standard: *PK.ELAL.23 (PKSL.5): Creates a visual display.* **Additional NYSPLS Standards:** *PK.AC.2: Demonstrates they are building background knowledge.*	**Link to Authentic Assessment Systems** 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
Materials: Pictures of plants that are common in the program neighborhood or the city of New York Park, garden, gardening store or greenspace within walking distance of site	

Hook: 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.

Beginning:
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.

Middle:
Transition to outside, making sure that you have enough adults and reminding children of safety rules, as needed.
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.
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.

End:
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.

Assessment: What was the child able to recall about the trip? What did they include in their drawing?

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: Take pictures on the walk to provide visual cues for children who may need help recalling what they saw.

For children who are ready for a challenge: Invite these children to add their own text to their drawings.

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?

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.

Teacher Tip: 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.

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

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	Information shared	Details included in drawing	Notes

Lesson: List Poem

Type: Large Group Activity

Unit of Study: Plants	Focus Question: What are some different kinds of plants?
Objective: Children will be introduced to the concept of poetry and work together to create a list poem.	
NYSPLS Focus Standard: *PK.ELAL.9 [PKR.5.] Interacts with a variety of genres (e.g., storybooks, poems, songs).* **Additional NYSPLS Standards:** *PK.AC.5. Demonstrates a growing expressive vocabulary.*	**Link to Authentic Assessment Systems** 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
Materials: Sample list poem Chart paper Marker Index cards	**Vocabulary:** bush, cactus, evergreen, flower, fruit, grass, herbs, seaweed, succulent, tree, vegetables, water lily, weeds

Procedure:

Hook: Read a list poem to the children. See Section XI: Appendices for a sample list poem.

Beginning:
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.

Middle:
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

Lesson: Plant Taste Test

Type: Small Group Activity

Unit of Study: Plants	Focus Question: Why are plants important?
Objective: Children will understand that some plants can be a source of food.	
NYSPLS Focus Standard: *PK.SCI.4. [P-LS1-1.] Observes familiar plants and animals (including humans) and describes what they need to survive.* **Additional NYSPLS Standards:** *PK.SEL.2. Recognizes self as an individual having unique abilities, characteristics, feelings and interests.*	**Link to Authentic Assessment Systems** 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
Materials: Variety of plant-based foods for children to sample Paper and writing utensils for children to record taste test preferences	**Vocabulary:** edible, fruit, harvest, herbs, leaves, nutrients, plant, roots, seed, stem, vegetable, vegetarian

Procedure:

Hook: Show children a variety of real fruits or vegetables or labeled pictures.

Beginning:

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.

Middle:

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' interests, strengths, and needs. For example, 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: How did the child demonstrate their understanding 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?

E**mergent 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

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

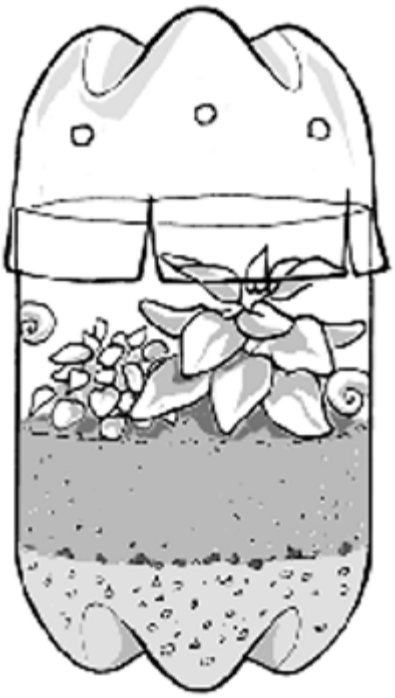
Appendix B: Terrarium

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:

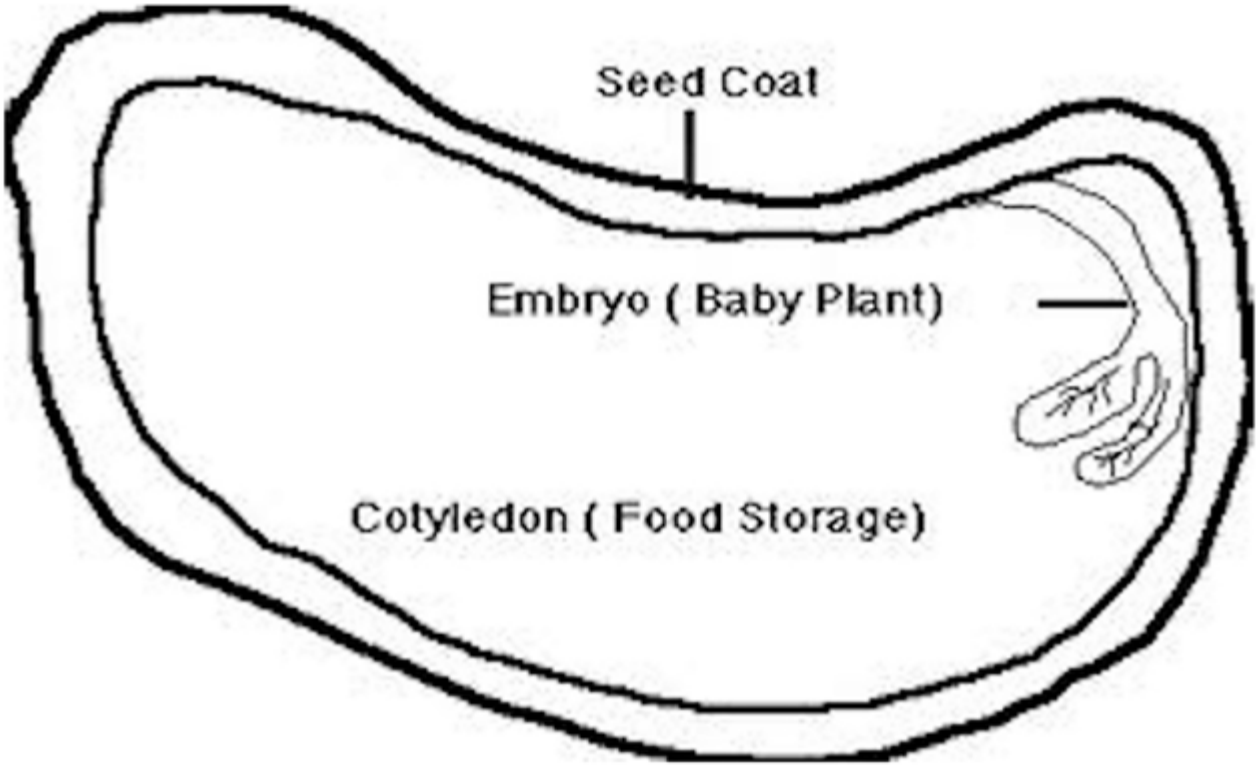
- Glass bowls
- Jars
- Fish tanks
- Empty two-liter or other plastic bottles
- Recycled clear plastic food containers.



www.kidsgardening.org

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.

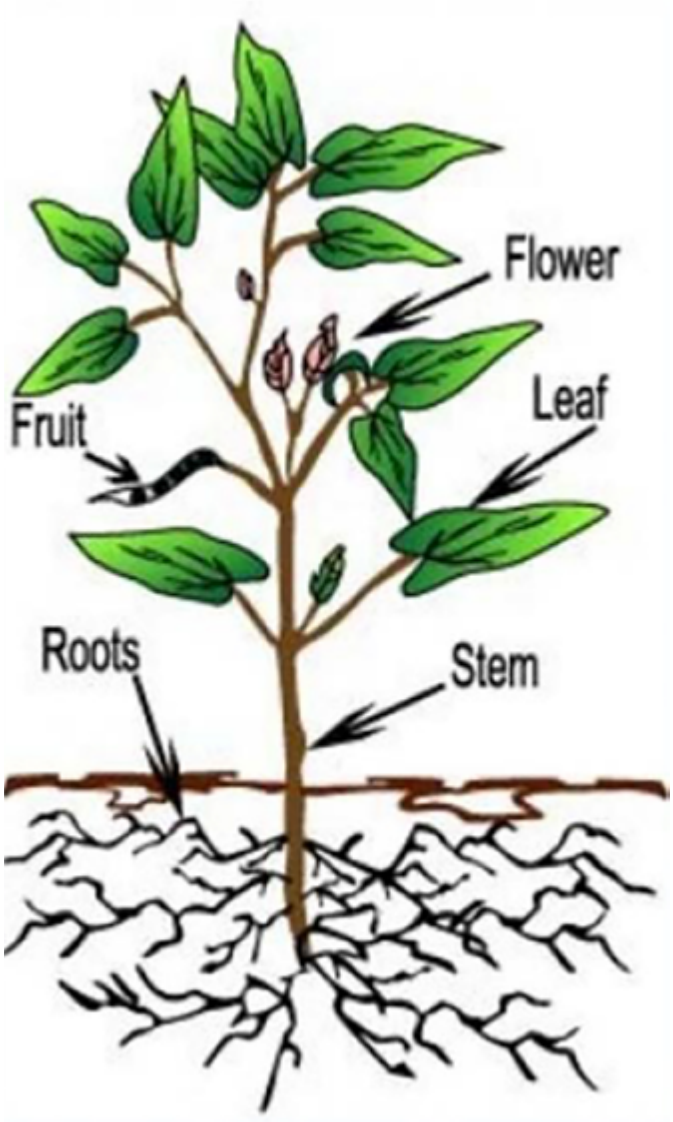
Outside

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



References and Resources

Lesaux, N. K., Galloway, E. P. (2017). A Series of Topic Briefs focused on Advanced Literacies designed to aid New York State educators in implementing the NYS Next Generation Learning Standards. Albany, NY. New York State Education Department. http://www.nysed.gov/bilingual-ed/linguistically-diverse-learners-and-nys-next-generation-p-12-learning-standards

Morell, Z. and Medellin, C. (2018). Core Principles for Supporting Emergent Multilingual Learners (EMLLs). New York, NY. New York City Department of Education Division of Early Childhood Education. https://infohub.nyced.org/docs/default-source/default-document-library/emll-core-principles.pdf?sfvrsn=84952a93_2

New York State Education Department. (2016). Introduction to the NYS Next Generation Early Learning Standards. By Zoila Morell in partnership with the New York State Education Department. Albany, NY. Articulating the New York State Learning Standards for children in prekindergarten through third grade required particular attention to the nature of learning in early childhood. The purpose of this document is to articulate this. http://www.nysed.gov/common/nysed/files/introduction-to-the-nys-early-learning-standards.pdf

Early Childhood Advisory Council. Developmentally Appropriate Practice Briefs: Behavior; Leadership; Curricula; Environments; Interaction; Assessment; and Family Engagement. http://www.nysecac.org/news/developmentally-appropriate-practice-guidance/

New York State Education Department. (2018). Office of Early Learning Prekindergarten Curriculum Field Memo. Albany, NY. http://www.p12.nysed.gov/earlylearning/

New York State Education Department. (2017). Planning for High-Quality Prekindergarten Programs: Building a Foundation for School Success. Albany, NY. The University of the State of New York. http://www.p12.nysed.gov/earlylearning/documents/2017PreschoolPlanningGuide.pdf

Northeast Comprehensive Center. (2017). A Resource for Understanding the Relationships Between the State Standards and the P3 Instructional Cycle. In partnership with the New York State Education Department. http://www.nysed.gov/common/nysed/files/programs/curriculum-instruction/standards-and-the-instructional-cycle-document-11-30-17-conference.pdf

New York Education Department. (2017). Emergent Multilingual Learners in Prekindergarten: A Protocol for Identification, Instructional Planning, and Programming. By Zoila Morell in partnership with the New York State Education Department. Albany, NY. http://www.nysed.gov/bilingual-ed/emergent-multilingual-learners-prekindergarten-programs

THE NEW YORK STATE PREKINDERGARTEN LEARNING STANDARDS:

A RESOURCE FOR SCHOOL SUCCESS

New York State Education Department 2019