



A Guide to Using *The Creative Curriculum*[®] for Infants, Toddlers & Twos to Support Farm-to-ECE Models

Kelly Etter, Ph.D.
September 2018



A Guide to Using *The Creative Curriculum*[®] *for Infants, Toddlers & Twos* to Support Farm-to-ECE Models

Developed by The Policy Equity Group in collaboration with Teaching Strategies, LLC
with funding from the W.K. Kellogg Foundation.

The Creative Curriculum[®] and *GOLD*[®] are copyrighted by and registered trademarks of
Teaching Strategies, LLC, Bethesda, MD. All rights reserved. Product content and images
used with permission.



THE | POLICY EQUITY | GROUP
EMPOWERING THE SOCIALLY CONSCIOUS



W.K.
KELLOGG
FOUNDATION[®]



Introduction

Infants, toddlers, and twos learn primarily through sensory experiences and active exploration of the world around them. Learning about food, gardens, and farms through farm-to-early care and education (ECE) provides children with rich opportunities for hands-on discovery and sensory engagement. A *young infant* (0–9 months) may respond to the bright colors and shapes in the garden or listen to the sound of a rattle made from a gourd. A *mobile infant* (8–18 months) might fill and dump containers of soil or experiment with pulling up on a bale of hay. *Toddlers* (16–25 months) and *twos* (24–36 months) can help water the garden, scrub and mash yams, or do a dance fluttering like butterflies and wiggling like worms in the garden.

As a teacher, you support young children’s learning and development by providing experiences that are responsive to their changing interests and abilities. Although learning about food, gardens, and farms draws on many of young children’s interests, you can never predict exactly what will capture their attention at a particular moment. Therefore, farm-to-ECE should be one of many tools you use to flexibly respond to what attracts children’s curiosity and engagement. Let children’s interests guide how you incorporate farm-to-ECE into your classroom. This can mean intentionally planning an experience or selecting materials based on children’s interests. For example, after noticing several children watching a ladybug on the playground, the next day you might invite children to use magnifiers in the garden to find other insects and talk about how they interact with the garden. You can also extend children’s learning about farm-to-ECE during in-the-moment interactions throughout the day. For instance, when a mobile infant rolls a truck across the floor, you might say, “I wonder what’s in the truck. Maybe a farmer is bringing his strawberries to the market in the truck.”

One of the most widely used curricula is *The Creative Curriculum® for Infants, Toddlers & Twos*.¹ This comprehensive, research-based curriculum is designed to help teachers provide experiences that promote learning through play, exploration, and discovery—a natural fit for farm-to-ECE. Teachers can use *The Creative Curriculum®* strategies and resources to provide meaningful learning opportunities that build on young children’s innate interest in and curiosity about food and its connections to their lives and the world around them.

This guide explores how teachers can use *The Creative Curriculum® for Infants, Toddlers & Twos* and associated resources as a foundation to embed farm-to-ECE learning opportunities into their existing practices. The guide is organized into four sections:

- Embedding Farm-to-ECE in Environments and Interactions
- Planning for Experiences that Support Farm-to-ECE Learning
- Using Farm-to-ECE Learning to Support Child Assessment
- Supporting Family Engagement through Farm-to-ECE Learning

By bringing farm-to-ECE learning opportunities into *The Creative Curriculum®* classroom, children develop a strong foundation for future learning and lifelong healthy food choices. The following pages provide simple, concrete guidance to enhance existing teaching practices that support the health and wellness of our youngest generation and their families.



Embedding Farm-to-ECE in Environments and Interactions

There are many opportunities to embed farm-to-ECE learning into the environments and interactions that make up the daily experiences of infants, toddlers, and twos. *The Creative Curriculum® for Infants, Toddlers & Twos* focuses on eight daily experiences:

- Playing with toys
- Imitating and pretending
- Enjoying stories and books
- Connecting with music and movement
- Creating with art
- Tasting and preparing food
- Exploring sand and water
- Going outdoors²

Within these experiences, teachers and caregivers can offer materials and opportunities to explore cooking, gardening, farming, and healthy food choices. The following pages describe ways in which farm-to-ECE learning can be woven into these daily experiences for each age group. Information is also provided about specific activities that might take place during these daily experiences that can be adapted to support farm-to-ECE learning (see description of *Intentional Teaching Cards™* in the next section).





Playing with toys. For very young children, some of the most engaging playthings are common objects and natural materials that they can explore safely.³ There are many examples that relate to farm-to-ECE such as wooden and plastic kitchen utensils, whole pieces of fresh produce (that can be consumed later), leaves or other non-toxic materials from the garden, or empty food containers. Commercial toys such as animal figurines, a child-sized shopping cart, toy farm vehicles, and small plastic garden tools can also help children make connections to farming, food, gardening, and cooking.

Farm-to-ECE Opportunities	Young Infants	Mobile Infants	Toddlers	Twos
Place a few objects with interesting shapes or textures (e.g., whisks, bumpy gourds, potato masher) on a blanket for infants to explore.	●	●		
Introduce stuffed animals, hand puppets, and for older children, wood or plastic figurines that represent animals you would find on a farm. Comment on children’s experiences as they explore the animals (e.g., “ The sheep’s wool is so soft ”) and encourage older children to create scenes with or design homes for the animals using blocks or other materials.	●	●	●	●
Provide measuring cups and spoons that children can grasp, shake, pull apart and fit together, and dump and fill.	●	●	●	●
Introduce toys related to farms with interactive components (e.g., a toy barn where turning a dial opens a door to reveal a cow).		●	●	●
Offer puzzles with pictures of items related to farms, gardening, and cooking. Increase the complexity of puzzles as children’s skills grow, from 2- to 3-piece puzzles with knobs for mobile infants, to 6- to 12-piece puzzles for twos.		●	●	●
Provide small wooden or plastic tractors or other vehicles related to food production or delivery (e.g., milk tanker truck).		●	●	●
Introduce simple matching games, beading items, and sewing cards that reflect examples of animals found on a farm, food grown on a farm, or farm buildings.				●
Provide props related to farms or gardens (e.g., toy animals, food, tractors, seed markers, plastic trowels, watering cans) for children to incorporate into their block play.				●

Relevant Intentional Teaching Cards™*

- LL20, “This Is the Same”
- LL31, “I’ll Find You”
- LL38, “The Same and Different”
- LL56, “Where Did It Go?”
- M09, “Let’s Make Two”
- M13, “What’s Inside?”

- M16, “Growing Sizes”
- M17, “This Little Piggy”
- M21, “Build a Zoo”
- M24, “Putting Puzzles Together”
- P05, “Surprise!”
- P26, “Let’s Fill Up the Box”



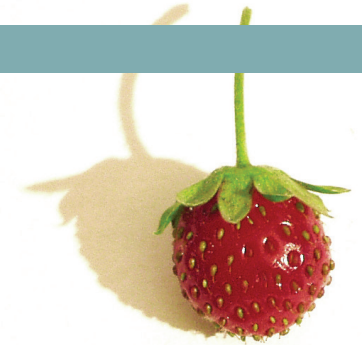
*Intentional Teaching Cards™ are described in detail in the “Planning for Experiences that Support Farm-to-ECE Learning” section.



Imitating and pretending. Imitating actions they have seen others perform (e.g., raising a spoon to their mouth) and later acting out events and familiar routines (e.g., putting plastic fruit in a child-sized shopping cart) are important ways for infants, toddlers, and twos to learn about the world around them and how people live. This includes exploring the places, people, animals, plants, and tools that are a part of how food comes to our plates.

Farm-to-ECE Opportunities	Young Infants	Mobile Infants	Toddlers	Twos
Offer play items that allow infants to try different actions and observe the results they have on the world (e.g., a wooden spoon to bang on an oatmeal container, a toy duck that squeaks when squeezed).	•	•		
Introduce stuffed animals, hand puppets, and for older children, wood or plastic figurines that represent animals you would find on a farm. Imitate animal noises (being mindful of individual children’s tolerance for sensory input) and encourage older children’s pretend play (e.g., “Let’s feed the animals on the farm you set up. What should we feed the chickens?”).	•	•	•	•
Have real or realistic pretend food (i.e., produce, plastic or wooden food replicas, recycled packaging from real food items) for children to explore that is grown locally or in the garden, is seasonal, and that reflects what children eat at home.	•	•	•	•
Provide lifelike dolls that children can pretend to feed using doll bottles, spoons, bibs, etc.		•	•	•
Offer child-sized pots, pans, and plastic dishes and utensils that children can explore and at later ages incorporate into their play.		•	•	•
Invite children to fill up child-sized shopping carts or wagons with play food to deliver to other parts of the classroom. Extend children’s play by suggesting, “You could be a farmer delivering those vegetables to the farmer’s market” or “What else should we buy at the grocery store?”		•	•	•
Provide clothing, props, and puppets that allow children to transform themselves into roles such as farmers, gardeners, chefs, cheese makers, spinners, scientists, bakers, butchers, grocers, and different farm animals.			•	•
Invite children to decorate large cardboard boxes as farm stands, tractors, or food trucks and support their pretend play using the boxes.			•	•
Create prop boxes that help children explore settings such as farms, restaurants, grocery stores, or farm stands. For example, a “life on a farm” prop box (located indoors or outdoors) could contain overalls, sun hats, gloves, plastic hoes and shovels, baskets, buckets, a wheelbarrow, hay, cornstalks, and produce items such as pumpkins or other gourds.				•





Enjoying stories and books. Through books and stories, children can travel beyond the classroom walls to explore and experience gardens, farms, kitchens, and other related topics. For descriptions of books for each age range, see the section on “Selecting Books for Different Ages” in Chapter 13: Enjoying Stories and Books in *The Creative Curriculum® for Infants, Toddlers & Twos, Volume 2: Routines and Experiences*. For a list of suggested books that relate to farm-to-ECE, see Appendix A.

Farm-to-ECE Opportunities	Young Infants	Mobile Infants	Toddlers	Twos
Offer age-appropriate books related to: <ul style="list-style-type: none"> gardening (e.g., seeds, soil, insects, garden produce) cooking (e.g., fruits and vegetables, restaurants, food around the world, recipe books with pictures) farming (e.g., farm animals, barns, planting and harvesting) For a list of suggested titles, see Appendix A. Include books that have foods and recipes from around the world and include images of non-traditional farmers, cooks, and other roles (e.g., images of women and people of color). See The Food Trust’s multicultural collection of farm-to-ECE books at http://www.pareadysetgrow.org/book-list/?ct=t(Ready_Set_Grow11_28_2017)&mc_cid=93d78583de&mc_eid=b7c5f86429 .	•	•	•	•
Create homemade books using pictures of farm animals, fruits, vegetables, and other local foods. Or use sequenced photos of a classroom gardening or cooking project. Encourage older children to contribute through drawings or dictation.			•	•
Use props or puppets (e.g., puppets of animals in <i>The Little Blue Truck</i> ; play food representing what is eaten in <i>The Very Hungry Caterpillar</i>) to retell a familiar story. Encourage older children to participate in the retelling.			•	•
Give familiar fairy tales or other stories a “farm-to-ECE spin.” For example, “Cinderella lives on a farm where she weeds and harvests the vegetables. While she works in the long rows of carrots, lettuce, peas, green beans, and tomatoes, her stepsisters only sit on the patio and enjoy their roots. Their favorites are beets, turnips, and parsnips.... The fairy god-mother is beautiful; she wears a gown stitched with lemongrass and lined with thistle down.”			•	•

Relevant Intentional Teaching Cards™

- LL02, “Reading Wordless Books”
- LL12, “What’s in the Picture?”
- LL17, “Three Bears”
- LL26, “Reading Rhyming Books”
- LL36, “Puppet Stories”

- LL45, “Animal Books”
- LL54, “Sharing Storybooks”
- LL58, “Tuneful Tales”
- M28, “Counting Books”





Connecting with music and movement. Music and movement activities provide children with a unique modality to explore farm-to-ECE concepts with different senses. For examples of songs that relate to farm-to-ECE, see Appendix B.

Farm-to-ECE Opportunities	Young Infants	Mobile Infants	Toddlers	Twos
Sing familiar songs or chants related to farms, gardens, and food (e.g., “Old MacDonald,” “One Potato, Two Potato”) or adapt other songs to be about these themes (e.g., “I’m a Little Watering Can” [instead of tea pot], “This is the Way We ... [plant the seeds; milk the cows]”).	●	●	●	●
Introduce instruments made from natural materials such as gourd drums or seed rattles.	●	●	●	●
Make your own instruments out of common kitchen items (e.g., drums from oatmeal boxes or pots, cymbals from pie pans).		●	●	●
Use plastic eggs and tape to make seed maracas with different types of seeds (e.g., bean, sunflower, carrot, tomato, pea) and invite children to explore the different sounds made by each type of seed.		●	●	●
Encourage children to explore different movements by pretending to be farm animals (e.g., waddle like a duck, gallop like a horse).			●	●
Invite children to move and dance in ways related to farms, gardens, and food (e.g., dance like a chicken, wiggle like a worm, flip like a pancake).			●	●
Encourage children to engage in “seed yoga.” Invite children to curl into a ball to pretend to be a seed, then guide them through movements of unfurling and stretching as they “grow roots,” “send out leaves,” and “grow flowers and fruit.”			●	●

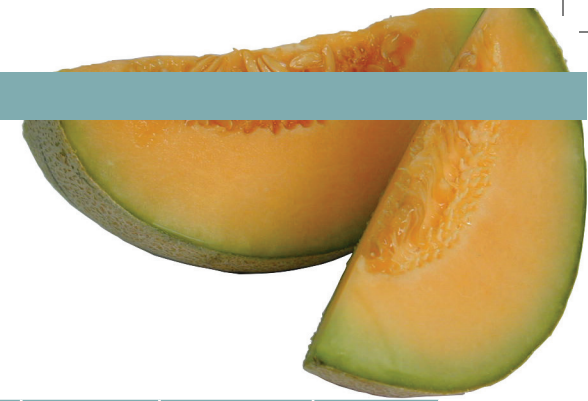
Relevant *Intentional Teaching Cards*™

- LL15, “Whisper Songs”
- M08, “Pots and Pans Band”





Creating with art. Through art experiences, children can create and represent their ideas and experiences related to local food, farms, and gardening in a visual form. You can offer a variety of materials related to food and fibers during art experiences that children can incorporate into their artwork and enjoy and explore on a sensory level.



Farm-to-ECE Opportunities	Young Infants	Mobile Infants	Toddlers	Twos
Offer a variety of textures for very young children to explore such as wool or other natural textiles and waxed paper.	●	●		
Allow older children to help measure and mix ingredients such as flour, water, and salad oil to make molding dough. Children may enjoy using kitchen tools such as potato mashers, rolling pins, and garlic presses to explore the dough.		●	●	●
Put a sheet of clear adhesive paper on the wall and provide natural materials such as leaves, flowers, fruit, or vegetable peelings for children to stick to the paper.		●	●	●
Give children buckets of water and large brushes to explore painting water on gourds or other sturdy produce or garden surfaces such as planters, trellises, plants, vines, etc.		●	●	●
Provide materials for collage-making such as seed catalogues, empty seed packets, dried flowers and weeds, and leaves (ensure all materials are non-toxic).			●	●
Offer non-conventional materials that children can use as paint applicators such as wheat stalks, leaves, spatulas, and whisks or potato mashers and slices of yams or carrots as “stamps.”			●	●

Relevant Intentional Teaching Cards™

- LL40, “Sticky Surface”
- P02, “Nature Painting”
- P12, “Molding Dough”





Tasting and preparing food. Food preferences are formed as early as infancy, and although innate preferences exist, repeated offering of foods and positive food experiences can influence children’s food preferences and their willingness to try new foods. Children’s engagement with their food—ranging from exploring textures through squishing and mashing to making choices about what they eat to being involved in food preparation—can contribute to lifelong healthy eating habits and choices. For thorough guidance on tasting and preparing food, all of which is applicable to a farm-to-ECE approach, see Chapter 16: Tasting and Preparing Food in *The Creative Curriculum® for Infants, Toddlers & Twos, Volume 2: Routines and Experiences*.

Farm-to-ECE Opportunities	Young Infants	Mobile Infants	Toddlers	Twos
Whenever possible, highlight food grown locally or in your garden.	●	●	●	●
Use rich language to describe food preparation and tasting experiences. Talk with children about where different foods come from, how they are grown, and how the food you are preparing might be different from what you might buy in a store.	●	●	●	●
Offer opportunities and materials for children to participate in food preparation. Mobile infants can use wooden spoons, plastic mixing bowls, and rubber spatulas. Toddlers and twos can use these as well as plastic measuring cups, vegetable brushes, wire whisks, and potato mashers. As much as possible, offer real utensil and gadgets.		●	●	●
Set up taste tests of local ingredients and food from the garden.		●	●	●

Relevant Intentional Teaching Cards™

LL10, “Yummy Foods”
 LL29, “Describing Food”
 LL43, “Lemonade”
 LL44, “Fruit Salad”
 LL46, “Veggie Mash-Up”
 LL47, “Roll-Ups”

LL48, “Applesauce”
 LL49, “Pancakes”
 LL52, “Fruit Smoothies”
 M10, “Making Butter”
 M25, “The Crunchy Bunch”

*The activities listed here are not listed in Table 1 because they would need minimal adaptations to be relevant to farm-to-ECE. When doing cooking projects, use local ingredients whenever possible and engage children in discussions about healthy foods and those that are enjoyed for special occasions, such as cookies and cake.





Exploring sand and water. Sand and water play allows children to explore two key elements needed for plant growth—earth and water. These substances provide rich sensory input, offer opportunities for “little scientists” to investigate and discover, and can also be a backdrop for emerging pretend play.

Farm-to-ECE Opportunities	Young Infants	Mobile Infants	Toddlers	Twos
Provide kitchen tools such as measuring cups, whisks, sieves, ladles, and muffin tins for children to use in the water (and sand for mobile infants, toddlers, and twos).	●	●	●	●
Offer buckets of water for children to wash produce from the garden or raw wool, fleece, or other textile materials to touch.		●	●	●
Add props related to farms (e.g., toy animals, tractors) that children can use to create scenes or bury and dig up.		●	●	●
Select gardening items such as small trowels, rakes, and watering cans that children can use to explore.		●	●	●
Offer different kinds of sand and soil for children to explore with their hands and/or with magnifying glasses.		●	●	●

Relevant Intentional Teaching Cards™

- LL57, “Waterworks”
- M02, “Dig It!”
- M05, “Sink or Float?”
- P01, “Cups of Water”
- P32, “Water Soup”





Going outdoors.

The outdoors is a laboratory for children’s first-hand exploration of how things grow.

Farm-to-ECE Opportunities	Young Infants	Mobile Infants	Toddlers	Twos
Arrange a space by the garden or container plants where infants can safely experience the sights, sounds, and smells from the garden.	•			
Find a nearby gardening center or farm where you can obtain some bales of hay to put in the yard. Young infants can explore the texture, mobile infants can practice pulling up on them, and toddlers and twos may enjoy them as part of an obstacle course.	•	•	•	•
Select different materials to add to the garden periodically such as a magnifying glass, scarecrows, a trellis or other structure, insect and weed identification cards, signs in the snow, and a variety of plants.	•	•	•	•
Ensure that modifications are made in the garden that facilitate the participation of children with disabilities (e.g., garden beds raised to the level of a wheelchair, smooth garden paths for walker access, a variety of textural components for visually impaired children to experience).	•	•	•	•
In the sandbox, offer kitchen tools (e.g., measuring cups, whisks, sieves, ladles, muffin tins), gardening tools (e.g., small trowels and rakes), and objects related to farms (e.g., plastic animals, tractors).		•	•	•
Offer gross-motor equipment such as wheelbarrows, shovels, hoes, hobby horses, and buckets. Encourage children to use gross-motor skills in the garden such as weeding and digging, or using a wheelbarrow on a variety of surfaces (e.g., dirt, mulch, grass, concrete).			•	•
Create a “play garden” where children can plant objects such as pinecones, rocks, sticks, and other treasures.			•	•
Allow children to have time in the garden for exploration and free play as well as more structured experiences such as a scavenger hunt for different colors, vegetables, or bugs.				•

Relevant Intentional Teaching Cards™

- LL22, “Neighborhood Walk”
- LL32, “Observing Insect Life”
- LL59, “Playground Textures”
- M11, “Garden Party”
- SE04, “Picnic”



Planning for Experiences That Support Farm-to-ECE Learning

The Creative Curriculum[®] for Infants, Toddlers & Twos provides the content and tools for teachers to fill every day with meaningful routines and intentional experiences that support the learning needs of all children. These curriculum resources are described below, followed by a series of tables presenting farm-to-ECE adaptations.



Intentional Teaching Cards[™] describe warm, nurturing activities that teachers can use throughout the day and across routines and experiences. Each activity includes step-by-step instructions and guidance on how to adapt activities to meet the needs of each child.⁴ Many of the *Intentional Teaching Cards*[™] can be easily adapted to include a focus on farm-to-ECE content to support learning and development in areas such as language, literacy, math, science, social studies, and physical skills. A list of selected *Intentional Teaching Cards*[™] activities are presented in Table 1 with suggestions about how to incorporate farm-to-ECE learning opportunities.



Mighty Minutes[®] are short but meaningful activities that teachers can use to foster a close and loving relationship with the children in their care. Like the *Intentional Teaching Cards*[™], these songs, chants, rhymes, games, and short activities are designed to support development and learning across many domains,⁵ and with a few simple modifications can be tailored to focus on farm-to-ECE themes. A list of selected *Mighty Minutes*[®] activities are presented in Table 2 with suggestions about how to incorporate farm-to-ECE learning opportunities.

Many of the *Intentional Teaching Cards*[™] and *Mighty Minutes*[®] can be adapted to include farm-to-ECE concepts by using books, rhymes and songs, props and pictures, and vocabulary that address farm-to-ECE content. The following tables are provided as a starting point of inspiration for you to incorporate farm-to-ECE into your daily activities:

- Books with farm-to-ECE content (Appendix A)
- Rhymes and songs related to farm-to-ECE (Appendix B)
- Props and pictures to use in farm-to-ECE activities (Appendix C)
- Farm-to-ECE vocabulary words (Appendix D)



Highlights Hello[™] is a collection of 24 books written specifically for children birth through age 2. The books are available in English and Spanish, with an additional set that families can borrow to support family-school connections.⁶ Many of the stories, songs, rhymes, and puzzles included in the books touch on themes of food, farming, gardening, and cooking. These books provide an excellent springboard for meaningful conversations and learning opportunities. See Table 3 for a list of relevant books in the *Highlights Hello*[™] collection and prompts or activities to use during or after reading. *Book Conversation Cards*[™] accompany each book, providing suggestions for introducing the book, emphasizing vocabulary, commenting on stories and illustrations, and asking questions to invite children's interaction.⁷ The strategies provided in the *Book Conversation Cards*[™] can also be applied to other books to support vocabulary acquisition and engaging conversations related to farm-to-ECE themes.



Table 1. Adapting *Intentional Teaching Cards*™ to Support Farm-to-ECE Learning

<i>Intentional Teaching Card</i> ™ Activities ⁸	Farm-to-ECE Adaptations
<p>LL02, “Reading Wordless Books” <i>Using wordless picture books to support vocabulary development or tell simple stories.</i></p>	<p>Create your own homemade books using pictures of farm animals; fruits, vegetables, and other local foods; or sequenced photos of a classroom gardening or cooking project. Or use a published book with few or no words like the titles listed in Appendix A.</p>
<p>LL11, “Let’s Talk” <i>Imitating children’s actions and vocalizations to engage in back-and-forth exchanges.</i></p>	<p>As children are naturally drawn to objects that relate to food, farms, or gardens during daily activities, take the opportunity to observe them and engage in a “conversation” by imitating or responding to actions, vocalizations, or words. For instance, “Ba ba ba. You saw a bird in the garden!” “You’re using that big spoon to stir. Now I’m stirring too.”</p>
<p>LL12, “What’s in the Picture?” <i>Photos of familiar people and things are used as conversation or story starters.</i></p>	<p>Find photos related to food, farming, or gardening (see Appendix C for suggestions) as conversation starters. Find photos online, take photos around your classroom or garden, or ask families to bring in photos from home.</p>
<p>LL15, “Whisper Songs” <i>Singing familiar songs softly and loudly.</i></p>	<p>Sing songs related to food, farms, and gardens (see Appendix B for examples).</p>
<p>LL17, “Three Bears” <i>Retelling a familiar story without a book.</i></p>	<p>Tell familiar stories related to food, farms, and gardens (e.g., <i>Jack and the Beanstalk</i>, <i>The Little Red Hen</i>, <i>The Three Little Pigs</i>).</p>
<p>LL20, “This Is the Same” <i>Game inviting children to find objects that are the same as an object you show them.</i></p>	<p>Use items related to food, farming, and gardening (see Appendix C for suggestions). For example, “This cucumber is green. Can you find something in the room that is green like my cucumber?” “You found a ball that is round like my tomato! Look, the ball is bigger than the tomato.”</p>
<p>LL22, “Neighborhood Walk” <i>Visit to a local place of interest.</i></p>	<p>Plan a visit to a local market, garden, bakery, or garden center. Provide photos or examples of what the children might see, hear, smell, taste, feel, or do.</p>
<p>LL26, “Reading Rhyming Books” <i>Reading books with rhyming text.</i></p>	<p>Use rhyming books related to food, farming, and gardening like the titles in Appendix A.</p>
<p>LL27, “A Cup Is for…” <i>Talking about everyday objects in the environment.</i></p>	<p>As opportunities arise in your daily activities, name objects related to cooking, eating, and gardening and talk about how they are used (e.g., “This is a watering can. We use it to give plants water so they can grow.” “What are whisks for? That’s right. Whisks are for mixing things when we cook or bake”).</p>
<p>LL31, “I’ll Find You” <i>Game where children try to find a hidden stuffed animal.</i></p>	<p>Instead of a bear, use stuffed animals related to farms (e.g., “Pink pig, pink pig, where did you go? You’re hiding from me. I’ll find you—I know!”). Alternatively, use large pieces of real or pretend produce (e.g., orange pumpkin, red apple).</p>
<p>LL32, “Observing Insect Life” <i>Using magnifiers to get a closer look at insects and other tiny animals in nature.</i></p>	<p>Do this activity in the garden and talk about how insects interact with the garden (e.g., “Worms dig tunnels in the dirt, making it easier for plants to get air and water.” “Ladybugs eat other bugs called aphids, which can hurt plants”).</p>
<p>LL36, “Puppet Stories” <i>Using puppets as props to tell stories.</i></p>	<p>Use puppets you already have or make stick puppets to represent characters in a story related to food, farms, or gardens (e.g., <i>The Little Red Hen</i>; for more farm-to-ECE-related stories, see Appendix A).</p>
<p>LL38, “The Same and Different” <i>Noticing similarities and differences among objects.</i></p>	<p>Use objects related to food, farms, or gardens (e.g., “The tomato and the strawberry are the same color. They’re both red. How are they different? Let’s feel them”). See Appendix C for examples.</p>
<p>LL40, “Sticky Surface” <i>Exploring contact paper and sticking collage materials to it.</i></p>	<p>Offer children materials such as flowers, leaves, and seeds to use in their collages.</p>



<i>Intentional Teaching Card™ Activities⁸</i>	Farm-to-ECE Adaptations
<p>LL45, “Animal Books” <i>Using animal-themed books to encourage children to make animal sounds and movements.</i></p>	Use books with pictures of farm animals (see Appendix A for suggestions).
<p>LL50, “What Do I See?” <i>Describing and talking about what children see, hear, feel, taste, and smell.</i></p>	Notice when children show interest in objects related to food, farms, or gardens and use rich vocabulary to help describe their experience. For example, “I see you looking at the leaves in the garden. They are fluttering in the wind.” “You’re enjoying that peach. It’s plump and juicy.” See Appendix D for vocabulary related to farm-to-ECE.
<p>LL54, “Sharing Storybooks” <i>Reading storybooks aloud.</i></p>	Read books related to food, farms, and gardens (see Appendix A for examples) and follow the guidance on supporting children’s learning through books.
<p>LL56, “Where Did It Go?” <i>Game hiding objects under a box or towel for children to find.</i></p>	Hide objects related to food, farms, and gardens and invite children to find them (see Appendix C for ideas of objects to use).
<p>LL57, “Waterworks” <i>Experimenting with watering cans.</i></p>	Talk about how plants need water. Model how to water indoor and outdoor plants and help children to do so.
<p>LL58, “Tuneful Tales” <i>Reading and singing songbooks based on familiar songs.</i></p>	Use books based on songs related to food, farms, and gardens (see Appendix A for examples).
<p>LL59, “Playground Textures” <i>Exploring textures in the outdoor environment.</i></p>	Invite children to explore different textures in the garden (e.g., leaves, trellis, produce, garden tools).
<p>M02, “Dig It!” <i>Sensory experience for children to dig, sift, and explore sand or other materials.</i></p>	Provide children with soil to explore and talk about how plants grow in soil. Offer a collection of farm animals and vehicles or kitchen and garden tools (e.g., sifters, sieves, slotted spoons, strainers, small rakes and shovels) to aid children in their exploration.
<p>M05, “Sink or Float?” <i>Opportunity to test whether objects sink or float.</i></p>	Use different fruits and vegetables that tend to sink (e.g., potatoes, avocados, plums) or float (e.g., zucchini, cranberries, apples).
<p>M08, “Pots and Pans Band” <i>Inviting children to use pots, pans, spoons, and other tools to make music.</i></p>	Offer common kitchen objects such as pots, pans, wooden spoons, and spatulas for children to explore as musical instruments. Comment on the items children choose (e.g., “We used a spatula like that when we made muffins. Now you’re using it to tap, tap, tap on the pot!”).
<p>M09, “Let’s Make Two” <i>Talking about number concepts during daily activities.</i></p>	Notice times when children have two of something related to food, farms, or gardens (e.g., two toy tractors, two blueberries, two zucchinis growing on a vine). Model counting the pairs.
<p>M11, “Garden Party” <i>Exploration of garden tools, materials, and experiences.</i></p>	Talk about what plants you are planting and what they need to grow. If planting edible plants, show children pictures of the food that will grow.
<p>M13, “What’s Inside?” <i>Offering children boxes of interesting objects to explore.</i></p>	Use objects related to food, farms, and gardens (see Appendix C for suggestions).
<p>M16, “Growing Sizes” <i>Exploration of objects that can be nested or stacked.</i></p>	Use cooking tools such as measuring cups, measuring spoons, and nesting bowls.



<i>Intentional Teaching Card™ Activities⁸</i>	Farm-to-ECE Adaptations
<p>M17, “This Little Piggy” <i>Exploring number concepts through the nursery rhyme “This Little Piggy.”</i></p>	<p>Use the toy pigs to talk about what pigs say, what they eat, and where you might find them on a farm (pig sty). If children are interested, repeat the activity substituting other farm animals (e.g., “This little turkey went to market...”). See Appendix D for a list of farm animals and associated words.</p>
<p>M21, “Build a Zoo” <i>Using blocks to create homes for toy animals.</i></p>	<p>Provide farm animals instead of zoo animals and encourage children to build homes for the animals. You might introduce names of animal enclosures such as a <i>sty</i> for a pig, <i>stalls</i> in a barn for horses, a <i>coop</i> for chickens, etc. See Appendix D for a list of farm animals and associated words.</p>
<p>M24, “Putting Puzzles Together” <i>Exploration of puzzles (of appropriate difficulty levels depending on children’s ages and abilities).</i></p>	<p>Use puzzles that reflect examples of animals found on a farm, food grown on a farm, or farm buildings.</p>
<p>M28, “Counting Books” <i>Using counting books and props to explore number concepts.</i></p>	<p>Use books and objects related to food, farms, and gardens (see Appendix A for suggested books).</p>
<p>P01, “Cups of Water” <i>Water play with props.</i></p>	<p>Provide kitchen or garden tools (e.g., large spoons, measuring cups, whisks, plastic rakes and shovels) for children to use in the water.</p>
<p>P02, “Nature Painting” <i>Painting with natural objects.</i></p>	<p>Offer children natural items from the garden (e.g., plant stems, leaves, etc.; ensure that they are non-toxic and are not choking hazards) to paint with water or paint. Alternatively, let children paint with water in the garden, experimenting with different surfaces such as planters, trellises, plants, vines, produce, etc.</p>
<p>P05, “Surprise!” <i>Encouraging infants to explore moving their bodies by offering interesting objects for them to reach for, grasp, and explore.</i></p>	<p>Offer interesting objects related to food, farms, and gardens (e.g., stuffed animals representing farm animals, pieces of fresh or pretend produce, plastic rakes; see Appendix C for more ideas).</p>
<p>P12, “Molding Dough” <i>Exploration of molding dough with various tools and utensils.</i></p>	<p>Provide kitchen and garden tools and utensils for working with the dough (e.g., rolling pins, potato mashers, cookie cutters, plastic rakes).</p>
<p>P26, “Let’s Fill Up the Box” <i>Filling and dumping containers.</i></p>	<p>Invite children to fill up and dump out a box filled with objects related to farms, gardens, or food (e.g., toy farm animals, play food items; see Appendix C for more ideas).</p>
<p>P30, “Flowers in the Garden” <i>Creating paper flowers with pictures of children’s faces that children can place in a classroom “garden” as they arrive each morning.</i></p>	<p>Take children to an outside garden or on a walk and help them identify what color or kind of flower they would like to have. Alternatively, you could print pictures of different kinds of produce that grow in a garden and affix children’s pictures.</p>
<p>P32, “Water Soup” <i>Pretending to make soup with water and props.</i></p>	<p>Offer kitchen tools (e.g., measuring cups, ladles, spoons, whisks, bowls) for children to use in the water. If available, provide real or pretend produce that would not be damaged in water to add to the soup (e.g., small gourds, plastic produce).</p>
<p>SE04, “Picnic” <i>Pretend picnic using props.</i></p>	<p>Offer a collection of realistic food props (e.g., plastic food, small food containers, empty food boxes) that represent local produce and other foods when possible. Talk about where these foods come from and how they grow.</p>



Table 2. Adapting *Mighty Minutes*® to Support Farm-to-ECE Learning

<i>Mighty Minutes</i> ® Activities ⁹	Farm-to-ECE Adaptations
MM02, “Silly Animal Walk” <i>Exploring animal movements.</i>	Invite children to move like various farm animals (e.g., goose, goat, horse, rooster). See Appendix D for a list of farm animals and associated words.
MM06, “The Creeping Ladybug” <i>Song about a ladybug.</i>	When this song becomes familiar to children, reference it when you see ladybugs in the garden. Talk about how ladybugs help our garden by eating other bugs that can hurt plants.
MM07, “The Hungry Crane” <i>Rhyme about animals and the food they eat.</i>	Encourage children to use animal/food combinations that relate to farms (e.g., “Hungry cow, what do you see? I see some tasty hay!”). Alternatively, use children’s names and ask them to name a food they like (e.g., “Hungry Harlow, what do you see? I see some tasty raspberries!”). See Appendix D for examples of animals and foods.
MM08, “From Seed to Tree” <i>Rhyme inviting children to pretend to grow from seeds to trees.</i>	Follow the activity prompts. Talk about what seeds need to grow (e.g., water, food from the soil, sunlight) and foods that grow on trees (e.g., apples, peaches, nuts).
MM09, “The Answer Is No!” <i>Silly questions with “no” as the obvious answer.</i>	Ask questions related to food, farms, and gardens (e.g., “Do sheep eat pizza?” “Does cheese grow in the garden?”).
MM22, “Shake It Up” <i>Song sung while using shakers.</i>	Use rattles made with seeds or other natural materials. Or you might invite children to decorate containers (e.g., plastic storage containers, toilet paper rolls, plastic eggs) and fill with seeds or beans to make shakers (secure containers firmly with tape).
MM28, “Animals in the Barn” <i>Song exploring animal sounds.</i>	Use farm animal sounds (e.g., goats/maa, hens/cluck, bees/buzz). Use props and/or movements to add to the song. See Appendix D for a list of farm animals and associated words.
MM31, “The Farmer in the Dell” <i>Incorporating movements into a familiar song.</i>	After singing the verse about the farmer, encourage children to come up with animals and associated movements (e.g., “The cow in the barn, the cow in the barn... [<i>Stomp your feet</i>]”).
MM37, “The Rain and Me” <i>Rhyme with movements.</i>	Instead of <i>green grass</i> , name locally grown fruits or vegetables (e.g., <i>tomatoes, snap peas, carrots</i>). Rather than just saying <i>trees</i> , say a type of food-producing tree (e.g., <i>apple tree, peach tree, plum tree</i>). Replace the word <i>sidewalk</i> with <i>garden</i> . Talk about how rain helps plants get water, which they need to grow.
MM42, “Two Little Ducks” <i>Rhyme about ducks.</i>	After reciting the duck verse, add verses about other farm animals, the sounds they make, and how they move (e.g., turkey/gobble/waddle; horse/neighbor/gallop; goose/honk/strut). See Appendix D for a list of farm animals and associated words.
MM48, “Roll Play” <i>Song with movements about a rolling pin.</i>	If children show interest in the song, give them a small rolling pin to hold and explore. Tell them what it is and what it is used for. Later, sing the song again and connect it back to the object they explored.
MM49, “Merry Movements” <i>Rhyme about a garden.</i>	Substitute things that are growing in your garden for the words <i>silver bells and cockle shells</i> and <i>pretty maids</i> . For example, “...With red tomatoes and brown potatoes/And orange carrots all in a row.”
MM57, “Remember When...” <i>Talking with children about things that happened in the recent past.</i>	Talk about recent cooking and gardening experiences with children. “Remember yesterday when we made apple-sauce? Miss Arianna chopped up the apples, and then you added cinnamon, brown sugar, and water. Miss Arianna cooked everything together, and then you mashed everything up. When we ate it, Tyler thought it tasted sweet and sour.”
MM72, “What’s in the Bag?” <i>Guessing game about objects hidden in a bag.</i>	Hide objects related to food, farms, and gardens and invite children to find them (see Appendix C for ideas of objects to use).








<i>Mighty Minutes® Activities</i> ⁹	Farm-to-ECE Adaptations
MM74, “I’m Big, I’m Small” <i>Movement activity exploring concepts of big and small.</i>	Invite children to pretend to be big and small animals or objects related to food, farms, and gardens (e.g., as big as a tree, as small as a peanut; as big as a tractor, as small as a seed; as big as a cow, as small as a chick). For ideas, see Appendix D.
MM80, “Follow That Toy” <i>Using an interesting toy that makes noise to capture an infant’s attention.</i>	Use a gourd rattle or shakers made with seeds to engage a child’s interest.
MM88, “Just Like Me” <i>Chant inviting children to copy movements.</i>	Use movements related to food, farms, and gardens (e.g., planting a seed, milking a cow, mashing potatoes).
MM94, “Detailed Descriptions” <i>Using rich language to describe something a child is interested in.</i>	Notice when children show interest in objects related to food, farms, or gardens and use rich vocabulary to help describe their experience. For example, “I see you looking at the pumpkin. It’s big and orange and has ridges down the side. It has some brown spots on it and a thick green stem that feels rough.”
MM99, “Buzz Like a Bee” <i>Inviting children to imitate sounds.</i>	Use farm animal sounds (e.g., cows/moo, pigs/oink, donkeys/bray). See Appendix D for a list of farm animals and associated words.
MM100, “Sounds on the Farm” <i>Chant about farm animals and their sounds.</i>	Follow activity prompts, inviting children to come up with other animals (using pictures or prompts as necessary). See Appendix D for a list of farm animals and associated words.








Table 3. Using *Highlights Hello*™ to Support Farm-to-ECE Learning



<i>Highlights Hello</i> ™ Books ¹⁰ and <i>Book Conversation Cards</i> ™ ¹¹	Story, song, game, and poem titles	Farm-to-ECE Extensions
 <p>HH01 <i>Book Conversation Card 01</i></p>	“Greetings”	<ul style="list-style-type: none"> Follow the guidance on the <i>Book Conversation Card</i>™ for the appropriate age-range, drawing children’s attention to the farm animals and animal sounds.
 <p>HH04 <i>Book Conversation Card 04</i></p>	“Find It”	<ul style="list-style-type: none"> For younger children, name some of the items in the picture (e.g., bowl, cup, cereal). For older children, wonder aloud about some of the picture elements and make connections to the child’s life. “I wonder what the baby’s mommy is bringing in the bowl. You had cereal that looked like that this morning!” “There are mixing bowls on the counter. We made muffins yesterday in a big bowl. What did we put in the muffins?”
 <p>HH05 <i>Book Conversation Card 05</i></p>	“Five Little Ducks”	<ul style="list-style-type: none"> Talk about the ducks on the page (e.g., “What color are the baby ducks? They are yellow. What color is the momma duck? She is white”). Invite older children to follow you around the room as you waddle and quack like a duck. Explain that a baby duck is called a duckling and name other types of baby farm animals (e.g., piglets, calves, lambs, foals) and encourage children to make animal sounds and/or movements.
 <p>HH06 <i>Book Conversation Card 06</i></p>	“Bedtime Now”	<ul style="list-style-type: none"> Describe what is happening on each page and talk about where each animal is sleeping. Talk about where other animals on a farm sleep (e.g., “Chickens sleep in a <i>coop</i>. Pigs sleep in a <i>sty</i>”). See Appendix D for more examples. For older children, talk about similarities and differences in where people and animals need to sleep.
 <p>HH07 <i>Book Conversation Card 07</i></p>	“Springtime”	<ul style="list-style-type: none"> Point out the animals and plants in the story and make connections to farm-to-ECE and/or children’s experiences. “These are baby chicks. They’ll grow up to be chickens who lay eggs.” “There are butterflies by this bush, just like in our garden.” “The flowers on these trees will turn into apples. People will pick them and bring some to our school.”
	“Find It”	<ul style="list-style-type: none"> Notice the insects and flowers and make connections to gardens. “Bumblebees go from flower to flower, helping them make new seeds.” “These look like the sunflowers in our garden!” “Ladybugs help our garden by eating other bugs that can hurt plants.”



PLANNING FOR EXPERIENCES THAT SUPPORT FARM-TO-ECE LEARNING

<p><i>Highlights Hello™ Books¹⁰</i> and <i>Book Conversation Cards™¹¹</i></p>	<p>Story, song, game, and poem titles</p>	<p>Farm-to-ECE Extensions</p>
 <p>HH09 <i>Book Conversation Card 09</i></p>	<p>“Baby’s Mealtime”</p>	<ul style="list-style-type: none"> Describe the different foods in the story and make connections to foods or mealtime experiences children have had. After the story, invite older children to pretend to feed a stuffed animal or baby doll. Encourage children to describe what they are feeding the toy.
 <p>HH11 <i>Book Conversation Card 11</i></p>	<p>“Who Says ‘Boo?’”</p>	<ul style="list-style-type: none"> Name or invite the child to name the animals and their sounds. Offer children animal puppets or costumes (e.g., hats, headbands, masks, shirts) to explore and try on. Count the pumpkins and talk about how pumpkins grow on vines in the garden or on farms.
	<p>“Find It”</p>	<ul style="list-style-type: none"> Talk about the animals on the farm, the sounds they make, where they live (e.g., horse in a pasture, chicken in a coop, cow in a barn), and what they do on a farm (e.g., chickens lay eggs, cows make milk). See Appendix D for a list of farm animals and associated words. Talk about the pumpkins in the picture and make connections to the classroom garden or a field trip, if applicable. After reading the book, do a cooking project with pumpkin (e.g., pumpkin muffins, bread, or pancakes).
 <p>HH12 <i>Book Conversation Card 12</i></p>	<p>“Papa’s Making Pancakes”</p>	<ul style="list-style-type: none"> Describe what’s happening in the story. Invite children to notice how Papa is pouring and flipping the pancakes. For older children ask, “What else do you see on the table?” Explain where some of these foods came from (e.g., “Orange juice is made from oranges, which grow on trees. Syrup is made from sticky sap that comes out of trees. Butter is made from milk from cows.”). Talk about what children recently ate for breakfast or snack. After reading, offer dramatic-play props for older children to pretend to make pancakes. Or do a cooking project using <i>Intentional Teaching Card LL49</i>, “Pancakes,” or <i>M10</i>, “Making Butter.”
	<p>“Applesauce!”</p>	<ul style="list-style-type: none"> Offer younger children a soft spoon to hold as you read the poem. Demonstrate how to rub your tummy and invite the child to imitate your movements. Point out the different fruits in the picture (e.g., bananas, apples, oranges in the bowl; apples on the baby’s bib and curtains). Talk about how these fruits all grow on trees. Invite older children to do a taste test of red apples and green apples. Make applesauce using the guidance on <i>Intentional Teaching Card LL48</i>, “Applesauce.” As you serve the applesauce, sing this rhyme. Sing this rhyme during snack or mealtime, altering the words to match other foods children are eating.
	<p>“Let’s Dance!”</p>	<ul style="list-style-type: none"> Point out the gourds on the table in the picture. Make connections to gourds grown in your garden or brought into the classroom if applicable.



Highlights Hello™ Books ¹⁰ and Book Conversation Cards™ ¹¹	Story, song, game, and poem titles	Farm-to-ECE Extensions
 <p>HH16 <i>Book Conversation Card 16</i></p>	<p>"Find It"</p> <p>"Four Fun Chicks"</p>	<ul style="list-style-type: none"> • Help children find the animals in the picture and talk about the sounds they make or the food they eat. • Offer the child a toy chick, if available. • Describe what's happening in the illustrations, noting details such as the color and texture of the chicks, the mother hen in some pictures, what the chicks are eating, and where they sleep. • After reading, invite older children to pretend to be chicks, offering props such as pipe cleaner "worms" and cozy blankets to make a "nest."
 <p>HH18 <i>Book Conversation Card 18</i></p>	<p>"The Little Gardener"</p>	<ul style="list-style-type: none"> • Describe what's happening in the illustrations and encourage children to notice the gardening items as you read (e.g., hat, shovel, seeds, water, soil, seedlings). • Encourage children to notice the plant stakes in the garden. Talk about their purpose (e.g., to remind us where we planted seeds before they grow, and what kind of plants we planted). • After reading, invite older children to plant nontoxic herbs in a container of nontoxic soil. • For older children, offer props such as watering cans, small hand trowels, and plastic pots or containers. Invite children to plant blocks as "seeds" in rows or in containers. Then stack the blocks to make the plants "grow." • Connect the story to children's experience in the garden. "The story we read this morning said plants need soil, water, and sun to grow. Let's go water the plants in our garden!"



Using Farm-to-ECE Learning to Support Child Assessment

Learning about local food, nutrition, and agriculture is not only a key part of healthy development and learning, but these learning opportunities also provide an ideal context for teachers to gather information about children’s current levels of knowledge and skills to inform future learning opportunities. *The Creative Curriculum® for Infants, Toddlers & Twos, Volume 3: Objectives for Development & Learning, Birth Through Third Grade* covers 10 areas of development and learning. Teachers use 38 research-based objectives to understand children’s growth and development and use formative assessment data to individualize instruction to meet the needs of every learner. The objectives for development and learning are at the heart of *GOLD®*, the authentic, ongoing observational system for assessing children from birth through third grade.¹² Table 4 presents examples of how teachers might use farm-to-ECE learning opportunities to support assessment across all 10 areas of development and learning.





Table 4. Using Farm-to-ECE Learning Experiences to Support Assessment Across the *GOLD*® Objectives for Development and Learning

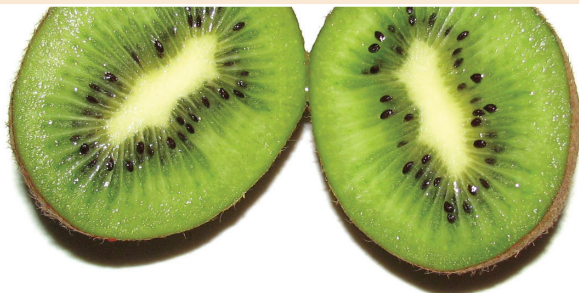
Examples of What a Child Might Do	Examples of Related <i>GOLD</i> ® Objectives for Development and Learning
<p>Social-Emotional Development</p> <p>Toddler touches a leaf in the garden when adult reminds child to touch plants gently.</p> <p>Mobile infant dips finger in pea puree and brings hand to her mouth.</p> <p>Mobile infant goes to explore raised bed during the first trip to the garden, but periodically looks back at his teacher.</p> <p>Toddler sits next to another child while both explore toy tractors.</p> <p>Two-year-old gives another child a turn stirring muffin batter when asked.</p>	<p>Objective 1. Regulates own emotions and behaviors b. Follows limits and expectations</p> <p>Objective 1. Regulates own emotions and behaviors c. Takes care of own needs appropriately</p> <p>Objective 2. Establishes and sustains positive relationships a. Forms relationships with adults</p> <p>Objective 2. Establishes and sustains positive relationships c. Interacts with peers</p> <p>Objective 3. Participates cooperatively and constructively in group situations a. Balances needs and rights of self and others</p>
<p>Physical Development</p> <p>Mobile infant pushes a child-sized shopping cart filled with play food.</p> <p>Toddler pours milk into a mixing bowl while helping to make pancakes.</p>	<p>Objective 4. Demonstrates traveling skills</p> <p>Objective 7. Demonstrates fine-motor strength and coordination a. Uses fingers and hands</p>
<p>Language Development</p> <p>Toddler points to cow, horse, and pig when prompted while looking at a book about farm animals.</p> <p>Two-year-old follows the two-step direction to place one seed in a hole, then cover it with soil.</p> <p>Mobile infant uses the sign for “more” to request more peaches.</p> <p>Toddler tells mother, “Whisk eggs!” at pick-up time, referring to a cooking project that happened earlier in the day.</p>	<p>Objective 8. Listens to and understands increasingly complex language a. Comprehends language</p> <p>Objective 8. Listens to and understands increasingly complex language b. Follows directions</p> <p>Objective 9. Uses language to express thoughts and needs a. Uses an expanding expressive vocabulary</p> <p>Objective 9. Uses language to express thoughts and needs d. Tells about another time or place</p>



Examples of What a Child Might Do	Examples of Related GOLD® Objectives for Development and Learning
<p>Cognitive Development</p> <p>Young infant focuses on teacher’s face as teacher sings, “Baa Baa Black Sheep.”</p> <p>Toddler continues trying to dig in the garden and attempts using different tools in a spot where the soil is hard.</p> <p>Two-year-old asks teacher to hold the measuring cup while she pours milk.</p> <p>Young infant moves hand repeatedly over the bumpy texture of a squash, looks at a caregiver and smiles.</p> <p>Toddler uses a wooden spoon to drum on a pot.</p> <p>Mobile infant looks for stuffed pig under a blanket where a teacher has hidden it during a game.</p> <p>Toddler goes to get apron when teacher invites him to participate in a cooking project.</p> <p>Two-year-old picks out all the cows from a set of farm animals.</p> <p>Toddler pretends to be a seed growing into a plant during a music and movement activity.</p> <p>Two-year-old sets up stuffed animals around the classroom and pretends to be a farmer feeding and caring for the animals.</p>	<p>Objective 11. Demonstrates positive approaches to learning a. Attends and engages</p> <p>Objective 11. Demonstrates positive approaches to learning b. Persists</p> <p>Objective 11. Demonstrates positive approaches to learning c. Solves problems</p> <p>Objective 11. Demonstrates positive approaches to learning d. Shows curiosity and motivation</p> <p>Objective 11. Demonstrates positive approaches to learning e. Shows flexibility and inventiveness in thinking</p> <p>Objective 12. Remembers and connects experiences a. Recognizes and recalls</p> <p>Objective 12. Remembers and connects experiences b. Makes connections</p> <p>Objective 13. Uses classification skills</p> <p>Objective 14. Uses symbols and images to represent something not present a. Thinks symbolically</p> <p>Objective 14. Uses symbols and images to represent something not present b. Engages in sociodramatic play</p>
<p>Literacy</p> <p>Toddler joins in rhymes such as “Little Miss Muffet.”</p> <p>Two-year-old joins in singing songs with repeating initial sounds such as, “I’m bringing home a baby bumblebee ...”</p> <p>Mobile infant brings teacher the book <i>Barnyard Dance</i> to read.</p> <p>Two-year-old points to a sign in the garden and says, “Tomatoes growing here.”</p> <p>Toddler provides animal sounds when teacher pauses while reading <i>Moo, Baa, La La La</i>.</p> <p>Two-year-old pretends to read <i>Little Blue Truck</i> to a doll, using pictures as cues.</p> <p>Two-year-old retells some events from <i>The Three Little Pigs</i> with teacher prompting.</p> <p>Toddler uses scribble marks to make a sign to identify which seeds were planted in the garden.</p>	<p>Objective 15. Demonstrates phonological awareness a. Notices and discriminates rhyme</p> <p>Objective 15. Demonstrates phonological awareness b. Notices and discriminates alliteration</p> <p>Objective 17. Demonstrates knowledge of print and its uses a. Uses and appreciates books and other texts</p> <p>Objective 17. Demonstrates knowledge of print and its uses b. Uses print concepts</p> <p>Objective 18. Comprehends and responds to books and other texts a. Interacts during reading experiences, book conversations, and text reflections</p> <p>Objective 18. Comprehends and responds to books and other texts b. Uses emergent reading skills</p> <p>Objective 18. Comprehends and responds to books and other texts c. Retells stories and recounts details from informational texts</p> <p>Objective 19. Demonstrates emergent writing skills b. Writes to convey ideas and information</p>



Examples of What a Child Might Do	Examples of Related <i>GOLD</i> [®] Objectives for Development and Learning
<p>Mathematics</p> <p>Two-year-old counts out four plates and puts them on the table for a taste test.</p> <p>Toddler says, “More carrot” to indicate he wants more than he was given.</p> <p>Toddler follows teacher’s direction to put a seed in the cup.</p> <p>Mobile infant pours water from one measuring cup to another.</p> <p>Two-year-old points to tomatoes from the garden the teacher has lined up and says, “Red, yellow, red, yellow.”</p>	<p>Objective 20. Uses number concepts and operations a. Counts</p> <p>Objective 20. Uses number concepts and operations b. Quantifies</p> <p>Objective 21. Explores and describes spatial relationships and shapes a. Understands spatial relationships</p> <p>Objective 22. Compares and measures a. Measures objects</p> <p>Objective 23. Demonstrates knowledge of patterns</p>
<p>Science and Technology</p> <p>Two-year-old predicts that an apple will float when placed in water.</p> <p>Young infant explores textures of different leaves in the garden.</p> <p>Toddler notices that the bread dough got bigger after it rested.</p> <p>Two-year-old investigates different types of soil found outside with a magnifying glass.</p> <p>Mobile infant uses a whisk during a cooking project.</p>	<p>Objective 24. Uses scientific inquiry skills</p> <p>Objective 25. Demonstrates knowledge of the characteristics of living things</p> <p>Objective 26. Demonstrates knowledge of the physical properties of objects and materials</p> <p>Objective 27. Demonstrates knowledge of Earth’s environment</p> <p>Objective 28. Uses tools and other technology to perform tasks</p>
<p>Social Studies</p> <p>Toddler says, “Papá make tamales.”</p> <p>Two-year-old explores community jobs like a chef through dramatic play.</p>	<p>Objective 29. Demonstrates knowledge about self</p> <p>Objective 30. Shows basic understanding of people and how they live</p>
<p>The Arts</p> <p>Mobile infant experiments with finger painting using items from the garden.</p> <p>Young infant explores a tambourine made from a gourd.</p> <p>Toddler uses movement and dance to represent the growth of a seed.</p> <p>Two-year-old explores roles on a farm through dramatic play.</p>	<p>Objective 33. Explores the visual arts</p> <p>Objective 34. Explores musical concepts and expression</p> <p>Objective 35. Explores dance and movement concepts</p> <p>Objective 36. Explores drama through actions and language</p>
<p>English Language Development</p> <p>Toddler goes to the table when teacher says, “Time for snack” and gestures by bringing her hand to her mouth.</p> <p>Two-year-old says, “I do a cookie” during a cooking project.</p>	<p>Objective 37. Demonstrates progress in listening to and understanding English</p> <p>Objective 38. Demonstrates progress in speaking English</p>



Supporting Family Engagement through Farm-to-ECE Learning Partnerships

.....

Within The Creative Curriculum® for Infants, Toddlers & Twos, there are many opportunities to include and involve families in children’s farm-to-ECE learning. These opportunities include:

Letters to Families

Letters to families (available in English and Spanish) introduce the routines and experiences you provide in your program and give information about opportunities for family participation and support.¹⁴ These letters are provided in an editable form, making them an ideal tool to highlight farm-to-ECE material in your communications with families. For example, in the letter about Tasting and Preparing Food, you might highlight the importance of using locally grown, healthy foods and offer a simple recipe for families to make at home. In the letter about Going Outdoors, you might talk about your classroom garden and invite parents to volunteer in the garden. You could also use these letters as an opportunity to include families in special celebrations or invite families to share their own food traditions. For example, you might invite families to share family bread recipes and photos of family gatherings where special breads are eaten.



The Creative Curriculum® LearningGames®

The Creative Curriculum® LearningGames® are ready-to-print activities that teachers can send home with families to connect what is learned at school with what families can do at home.¹⁵ Many of these easy-to-use, engaging activities can support learning about nutrition, gardening, and cooking. Table 5 presents simple suggestions that you can provide to parents to encourage farm-to-ECE learning at home through the LearningGames® activities.

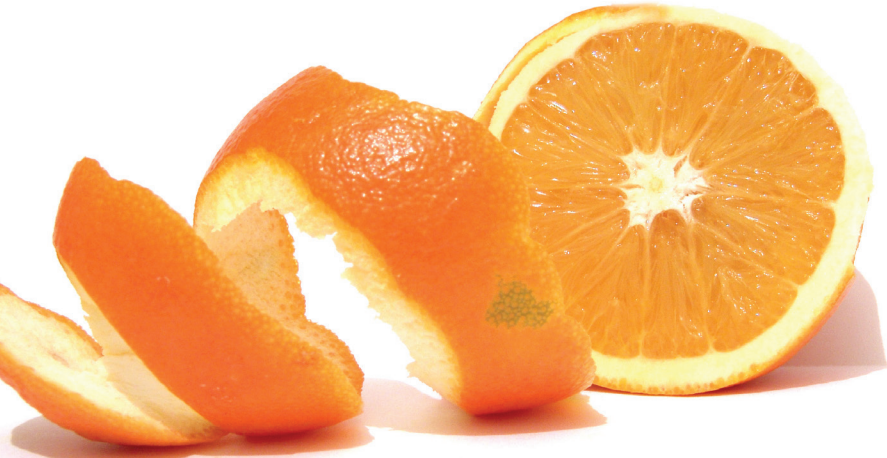


Table 5. Adapting *The Creative Curriculum® LearningGames®* to Support Farm-to-ECE Learning

<i>The Creative Curriculum® LearningGames®</i> ¹⁶	Farm-to-ECE Adaptations
LG03, “Showing Your Baby Something Interesting” <i>Positioning an infant where they can focus on an interesting object</i>	Encourage families to give infants opportunities to observe plants and nature (e.g., “Look at the basil plant in the window”) or cooking activities (e.g., “Grandma is stirring the vegetable soup!”).
LG06, “Holding and Dropping” <i>Offering items that infants can grasp and release.</i>	Suggest that families use stuffed animals (e.g., lamb, bumblebee) or small cooking tools infants can grasp (e.g., rubber spatula, measuring cup).
LG16, “Ride a Horsie” <i>Gently bouncing an infant to the rhythm of a short rhyme</i>	Invite families to substitute other farm animals (e.g., “Ride-a-piggy, ride-a-piggy, ride him into town. Ride-a-piggy, ride-a-piggy, up and down”).
LG19, “Reading Pictures and Books” <i>Naming pictures in books</i>	Suggest that families pick books with simple photographs of food and farm animals, both of high interest to young children.
LG28, “Puzzle Play” <i>Creating a “puzzle” out of a muffin tin and objects that fit in the pan</i>	Provide suggestions of locally grown foods that might fit well into muffin tin cups (e.g., peaches, apples, small onions, small pumpkins).
LG32, “Things to Taste” <i>Describing children’s experiences as they touch and taste.</i>	Offer families suggestions for locally grown and other healthy foods to try with their child.
LG37, “Animal Sounds” <i>Exploring and imitating animal sounds using animal toys or pictures.</i>	Suggest good books that include farm animals (like those in Appendix A) or provide suggestions on where to find good pictures online.
LG45, “Water Play” <i>Supporting children’s exploration of water with common household items</i>	Provide families with a list of common kitchen or garden items that could be used in water play (e.g., measuring cups, bowls, watering can, turkey baster, whisks, ladles, sieves). Encourage families to name and talk about the primary uses of these items as children explore.
LG49, “Sing Together” <i>Singing familiar songs.</i>	Offer families suggestions of songs related to food, farms, and gardens like those found in Appendix B.
LG50, “Nesting Objects” <i>Exploring objects of different sizes and how they fit together.</i>	Suggest that families use common kitchen objects (e.g., measuring cups or spoons, bowls of graduated sizes) or items related to the garden (e.g., plastic flower pots of different sizes).
LG52, “Matching Shapes and Sizes” <i>Matching two objects in a set of three.</i>	Suggest that families have children match the shapes of kitchen items (e.g., small and large whisks, spoons, forks, spatulas).
LG60, “Exploring Outdoors” <i>Using rich language to describe children’s outdoor experiences.</i>	Explain to families that gardens are full of opportunities for children to explore with all their senses and that they can play an important role in giving children the words to describe these experiences and build their vocabulary. Provide them with a list of words they might use to describe textures, smells, sights, sounds, and tactile experiences in the garden.
LG61, “How Does It Feel?” <i>Exploring textures of different objects.</i>	Invite families to find produce with different textures in their home or school garden, farmer’s market, or grocery store (e.g., bumpy gourd, fuzzy peach, smooth pepper).
LG65, “Matching Colors” <i>Matching two like-colored items in a group of three.</i>	Provide families with, or suggest they find, photographs of locally grown produce with groups of at least two items per color (e.g., strawberry/tomato, purple cabbage/purple onion, corn/yellow summer squash).



<i>The Creative Curriculum® LearningGames®</i> ¹⁶	Farm-to-ECE Adaptations
<p>LG73, “See It a New Way” <i>Exploring the world with a magnifying glass.</i></p>	<p>Encourage families to explore plants, produce, and other healthy foods up-close in a garden, kitchen, park, farmer’s market, or grocery store.</p>
<p>LG75, “Sharing Nursery Rhymes” <i>Reciting familiar nursery rhymes</i></p>	<p>Provide families with a list of suggested nursery rhymes in Appendix B or invite families to send in their favorite rhymes or songs about food, farms, and gardens. Collect these in a classroom book to share with all families.</p>
<p>LG76, “Show One and Two” <i>Talking about number concepts with small groups of items.</i></p>	<p>Suggest that families use snack and mealtimes to explore number concepts (e.g., “You have one piece of tomato and two pieces of cucumber on your plate”).</p>
<p>LG89, “Giving One to Each” <i>Setting the table to help children pair one item with another.</i></p>	<p>Encourage families to talk about the function of different items (e.g., “We use napkins to wipe food off our face”) and play this game with locally grown food (e.g., “One strawberry on Grandma’s plate, one strawberry on Dad’s plate ...”).</p>
<p>LG93, “Pair and Sort Pictures” <i>Game sorting and matching pictures.</i></p>	<p>Suggest that families use pictures of fruits, vegetables, other local food, familiar kitchen or garden items, and farm animals.</p>
<p>LG94, “What’s Gone?” <i>Game where child is asked to remember a missing item.</i></p>	<p>Suggest that families use toy food or pictures of fresh produce, familiar kitchen and garden tools, or farm animals.</p>
<p>LG96, “Help Him Help Himself” <i>Encouraging children to serve themselves food at mealtime.</i></p>	<p>Provide families with ideas for healthy recipes and locally grown foods that children can practice serving themselves.</p>
<p>LG100, “I See Something That Is ...” <i>Guessing game where child is given clues based on an object’s color and other characteristics.</i></p>	<p>Suggest that families play this game while cooking dinner, using kitchen objects and food (e.g., “I see something brown that you use to stir” “I see something that is red and crunchy to eat”).</p>

Intentional Teaching Cards™, Mighty Minutes®, Book Conversation Cards™, The Creative Curriculum®, The Creative Curriculum® for Infants, Toddlers & Twos, Volume 2: Routines and Experiences, © 2015 and GOLD® Objectives for Development & Learning, Birth Through Third Grade © 2016 by Teaching Strategies, LLC. The Creative Curriculum® LearningGames® © 2007 by Joseph Sparling. All rights reserved. Used with permission.

The Creative Curriculum, LearningGames, GOLD, and Mighty Minutes are registered trademarks of Teaching Strategies, LLC, Bethesda, MD. All rights reserved. Used with permission.



Appendix A. Books Related to Farm-to-ECE

Book Title and Author	Book Characteristics				
	Few or no words	Rhyming	About Animals	Songbooks	Counting Books
<i>Baa Baa Black Sheep</i> ¹⁷ As told by Iza Trapani		•	•	•	
<i>Baby, Let's Eat!/iBebé Vamos a Comer!</i> ¹⁸ Stephan Lomp	•				
<i>Barnyard Dance</i> ¹⁹ Sandra Boynton		•	•		
<i>Bee Bim Bop</i> ²⁰ Linda Sue Park		•			
<i>Big Fat Hen</i> ²¹ Keith Baker		•	•		•
<i>Counting in the Garden</i> ²² Emily Hruby				•	
<i>Cows in the Kitchen</i> ²³ June Crebbin				•	
<i>The Farmer and the Clown</i> ²⁴ Marla Frazee	•				
<i>Flower Garden</i> ²⁵ Eve Bunting		•			
<i>From the Garden: A Counting Book About Growing Food</i> ²⁶ Michael Dahl					•
<i>Fruit</i> ²⁷ Sara Anderson	•				
<i>Growing Vegetable Soup</i> ²⁸ Lois Ehlert	•				
<i>Hello, Farm!</i> ²⁹ Maddie Frost	•		•		
<i>How Big is a Pig?</i> ³⁰ Clare Beaton		•	•		
<i>Inch by Inch: The Garden Song</i> ³¹ David Mallett		•		•	
<i>Little Blue Truck</i> ³² Alice Schertle		•	•		



APPENDIX A. BOOKS RELATED TO FARM-TO-ECE

Book Title and Author	Book Characteristics				
	Few or no words	Rhyming	About Animals	Songbooks	Counting Books
Little Seeds ³³ Charles Ghigna		•			
Moo, Baa, La La La ³⁴ Sandra Boynton		•	•		
Old MacDonald Had a Farm ³⁵ Salina Yoon			•	•	
Over in the Garden ³⁶ Jennifer Ward		•	•	•	•
Pancakes for Breakfast ³⁷ Tomie de Paola	•				
This Little Chick ³⁸ John Lawrence		•	•		
Vegetables ³⁹ Sara Anderson	•				
Wiggle! March! ⁴⁰ Kaaren Pixton	•		•		
The Very Busy Spider ⁴¹ Eric Carle			•		

Appendix B. Rhymes and Songs Related to Farm-to-ECE

For lyrics and tunes to the rhymes and songs, search for their titles online. Many websites also have creative ideas for farm-to-ECE content sung to the tunes of familiar songs (e.g., “The cow in the barn goes ‘moo, moo, moo’” sung to the tune of “The Wheels on the Bus”). For example, the website <https://www.kidsparkz.com/preschool-sings-farm.html> has many such songs. For other websites, try the search terms “Children’s rhymes about food” or “Children’s songs about gardens.”

- “Apples and Bananas”
- “Baa Baa Black Sheep”
- “Do You Know the Muffin Man?”
- “Five Little Ducks”
- “Little Bo Peep”
- “Little Boy Blue”
- “Little Miss Muffet”
- “Mary Had a Little Lamb”
- “Mary, Mary Quite Contrary”
- “Oats and Beans and Barley Grow”
- “Old MacDonald Had a Farm”
- “One Potato, Two Potato”
- “Pat-a-Cake, Pat-a-Cake”
- “Peter, Peter, Pumpkin-Eater”
- “Peter Piper”
- “This Little Piggy”
- “Turkey in the Straw”

Appendix C. Props and Pictures to Use in Activities

Food	Farm
<ul style="list-style-type: none"> • fresh produce • wooden or plastic play food • pictures of locally grown foods • empty food containers 	<ul style="list-style-type: none"> • toy tractors and trucks • toy animals or pictures of animals • wool • model barns and silos or pictures of farm buildings • grain • ears of corn or pictures of other crops • overalls
Gardens	Cooking
<ul style="list-style-type: none"> • trowels • seed packets • ball of twine • watering cans • plastic bugs • gloves • non-toxic leaves 	<ul style="list-style-type: none"> • funnels • whisks • wooden spoon • juicers • potato mashers • plastic or metal bowls • spatulas • egg beaters • pot holders • recipe cards • measuring cups • pots and pans

Appendix D. Farm-to-ECE Vocabulary

Food		Cooking	
apple bean bell pepper blueberry brussels sprouts cabbage cantaloupe catnip carrot celery chives cilantro corn cucumber dill garlic kale lettuce mint	melon mushroom onions parsley pea peanut potato pumpkin radish rosemary scallion spinach strawberry Swiss chard sunflower tomato verbena watermelon	bake batter beat blender boil bowl bread char dice dough grater grind juice kettle knead mash measure melt	oil peel plate pour pulp recipe roll salt scramble spoon stove toast whisk yeast zest
Farms		Farm Animals	
agriculture bale (of hay) barley barn corn crop dairy egg fence fertilizer grain harvest hay irrigation	mower oats orchard plow rake shears silo stable till tractor trough wheat	<p>cow (calf, bull, cattle, herd, moo, udder, milk, beef)</p> <p>chicken (hen, rooster, chick, eggs, flock, cluck, cock-a-doodle doo, peck, coop, poultry)</p> <p>donkey (jenny, jack, foal, bray)</p> <p>duck (drake, duckling, quack, waddle, swim, pond)</p> <p>goat (doe/nanny, buck/billy, kid, maa, milk, cheese)</p> <p>goose (gosling, gander, flock, honk, strut)</p> <p>horse (mare, stallion, foal, neigh, gallop, barn, stall)</p> <p>pig (sow, boar, piglet, snort, oink, wallow, mud, pen, sty)</p> <p>sheep (ewe, ram, lamb, baa, wool, pasture, meadow, shear)</p> <p>turkey (hen, tom, chick, gobble, waddle)</p>	

Gardens		
ant bee bulb compost dig flower grow harvest herb hoe leaf mulch pollinator rake	root scarecrow seed shoot shovel soil sprout sun trowel vine water weed wheel barrow worm	

References



- ¹ Dodge, D. T., Berke, K., Rudick, S., Baker, H., Colker, L. J., Dombro, A. L., ... Sanders, S. (2015). *The Creative Curriculum® for infants, toddlers & twos* (3rd ed.). Bethesda, MD: Teaching Strategies, LLC.
- ² Dodge, D. T., Berke, K., Rudick, S., Baker, H., Colker, L. J., Dombro, A. L., ... Sanders, S. (2015). *The Creative Curriculum® for infants, toddlers & twos, Volume 2: Routines and experiences* (3rd ed.). Bethesda, MD: Teaching Strategies, LLC.
- ³ Ibid.
- ⁴ Teaching Strategies, LLC. (2015). *Guide to The Creative Curriculum® for Infants, Toddlers & Twos*. Bethesda, MD: Author.
- ⁵ Ibid.
- ⁶ Ibid.
- ⁷ Ibid.
- ⁸ Teaching Strategies, LLC. (2015). *The Creative Curriculum® for infants, toddlers & twos* intentional teaching cards. Bethesda, MD: Author. Selected titles and descriptions used with permission of Teaching Strategies, LLC.
- ⁹ Teaching Strategies, LLC. (2015). *Mighty Minutes® for infants, toddlers & twos*. Bethesda, MD: Author. Selected titles and descriptions used with permission of Teaching Strategies, LLC.
- ¹⁰ Highlights for Children, Inc. (2013–2014). *Highlights Hello™*. Honesdale, PA: Author.
- ¹¹ Teaching Strategies, LLC. (2015). *The Creative Curriculum® for infants, toddlers & twos Book Conversation Cards™*. Bethesda, MD: Author.
- ¹² Burts, D. C., Berke, K., Heroman, C., Baker, H., Bickart, T. S., Tabors, P., & Sanders, S. (2016). *GOLD® objectives for development & learning: Birth through third grade*. Bethesda, MD: Teaching Strategies, LLC.
- ¹³ Teaching Strategies, LLC. (2016). *GOLD® objectives for development & learning, birth through third grade*. Bethesda, MD: Author. Objectives reprinted with permission.
- ¹⁴ Dodge, D. T., Berke, K., Rudick, S., Baker, H., Colker, L. J., Dombro, A. L., ... Sanders, S. (2015). *The Creative Curriculum® for infants, toddlers & twos, Volume 2: Routines and experiences* (3rd ed.). Bethesda, MD: Teaching Strategies, LLC.
- ¹⁵ Teaching Strategies, LLC. (2015). *Guide to The Creative Curriculum® for Infants, Toddlers & Twos*. Bethesda, MD: Author.
- ¹⁶ Sparling, J. (2007). *The Creative Curriculum® LearningGames®*. Bethesda, MD: Teaching Strategies, LLC. Selected titles and descriptions used with permission.
- ¹⁷ Trapani, I. (2001). *Baa Baa Black Sheep*. Watertown, MA: Charlesbridge.
- ¹⁸ Lomp, S. (2018). *¡Bebé Vamos a Comer!*. New York, NY: Workman.
- ¹⁹ Boynton, S. (2014). *Barnyard Dance!*. New York, NY: Workman. (Original work published in 1993).
- ²⁰ Park, L. S. (2008). *Bee Bim Bop!*. Boston, MA: Houghton Mifflin Harcourt.
- ²¹ Baker, K. (1994). *Big Fat Hen*. Orlando, FL: Harcourt.
- ²² Hruby, E. (2011). *Counting in the Garden*. Los Angeles, CA: Ammo Books.
- ²³ Crebbin, J. (2000). *Cows in the Kitchen*. Boston, MA: Houghton Mifflin Harcourt.
- ²⁴ Frazee, M. (2014). *The Farmer and the Clown*. San Diego, CA: Beach Lane.
- ²⁵ Bunting, E. (2000). *Flower Garden*. Orlando, FL: Harcourt.
- ²⁶ Dahl, M. (2004). *From the Garden: A Counting Book About Growing Food*. Mankato, MN: Picture Window.
- ²⁷ Anderson, S. (2008). *Fruit*. Brooklyn, NY: Handprint Books.
- ²⁸ Ehlert, L. (2004). *Growing Vegetable Soup*. San Diego, CA: Red Wagon.
- ²⁸ Frost, M. (2018). *Hello, Farm!*. New York, NY: Workman.

- ³⁰ Beaton, C. (2002). *How Big is a Pig?*. Cambridge, MA: Barefoot.
- ³¹ Mallett, D. (1997). *Inch by Inch: The Garden Song*. New York, NY: HarperCollins.
- ³² Schertle, A. (2015). *Little Blue Truck*. Boston, MA: Houghton Mifflin Harcourt.
- ³³ Ghigna, C. (2012). *Little Seeds*. Mankato, MN: Picture Window.
- ³⁴ Boynton, S. (1982). *Moo, Baa, La La La*. New York, NY: Little Simon.
- ³⁵ Yoon, S. (2008). *Old MacDonald Had a Farm*. New York, NY: Price Stern Sloan.
- ³⁶ Ward, J. (2002). *Over in the Garden*. Flagstaff, AZ: Rising Moon.
- ³⁷ dePaola, T. (1978). *Pancakes for Breakfast*. Orlando, FL: Harcourt.
- ³⁸ Lawrence, J. (2013). *This Little Chick*. Cambridge, MA: Candlewick.
- ³⁹ Anderson, S. (2008). *Vegetables*. Brooklyn, NY: Handprint Books.
- ⁴⁰ Pixton, K. (2009). *Wiggle! March!*. New York, NY: Workman.
- ⁴¹ Carle, E. (2006). *The Very Busy Spider*. New York, NY: Grosset & Dunlap. (Original Work published in 1984).