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# Harvest of the Month Kits for Early Care and Education Settings

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## FNUTR 7990: MASTER'S PROJECT PROPOSAL

Student Name: Diana Myers

Semester of Initiation: Fall 2017

### **TOPIC OF STUDY: Harvest of the Month Kits for Early Care and Education Settings**

**PROJECT AGENCY AND CONTACT PERSON, IF APPLICABLE:** Include name of agency and contact person, address, telephone number, fax number and e-mail address.

**PROJECT DESCRIPTION:** Briefly state the purpose of the project.

Four Harvest of the Month (HOTM) Kits will be created to be used in Early Care and Education settings with three-to-five-year-olds. These HOTM Kits will be correlated with Georgia's Department of Education's kindergarten through twelfth grade Harvest of the Month resources. Each kit will combine a locally grown Georgia fruit or vegetable, recipe to prepare the seasonal produce, nutritional activity to tie in learning, children's literature connection, handout to send home, and a local procurement handout. The purpose of the Harvest of the Month kits are to provide a hands-on learning experience to enhance three-to-five year old children's knowledge of fruits and vegetables through activities and literature connections, allow them an opportunity to try new fruits and vegetables through taste testing, and empower them in the kitchen through recipe creations.

**LITERATURE REVIEW:** Briefly state topic areas you plan to review for your project and attach a review of the literature and references.

Project areas to be included in the literature review include:

- Early Care in the United States
- Fruit and Vegetable Consumption in Early Care and Education Settings
- Farm to Early Care and Education
- Harvest of the Month Kits in Action
- Food Choices in Early Care and Education Settings
- Harvest of the Month Kit Capstone Project
- Harvest of the Month Kit Components

**TENTATIVE OUTLINE OF STEPS/ACTIVITIES AND TIME FRAME FOR PROJECT COMPLETION:**

Include the time frame for submission of the final outcome document and the projected date for the defense. The defense must be held on or prior to the last day of classes for the semester.

Brainstorming for Project: December 2017

Creation of Harvest of the Month Kits: February – May 2018

Apply for IRB: June 2018

IRB Approval: August 31<sup>st</sup>, 2018

Testing of Harvest of the Month Kits: September – October 2018

Complete Editing and Final Product of Harvest of the Month Kits: October 2018

Present Harvest of the Month Kits to Farm to Early Care Coalition Meeting: November 2018

Present Harvest of the Month Kits to Nutrition Department and Committee: November 2018

**DATA COLLECTION AND/OR ANALYSIS, IF APPLICABLE:** Summarize the types of data you will gather or describe the data set you will have access to, how you will assemble the data and how you plan to do your analysis. If needed, include a signed contract permitting use of the data and/or review and approval by the Institutional Review Board for the Protection of Human Subjects.

Diana will test out HOTM Kits at two pilot sites, Little Ones Learning Center and Kids r' Kids. At each facility, one class of 20 students and 2 teachers will attend the HOTM kit lesson for 1.25 hours, once a week for two weeks. Children will help in preparing simple recipes, performing nutrition-activities as outlined by the kits, learning about the nutritional components of the specific fruit or vegetable, and listening to a children's book being read to them. Teachers will complete non-identifying paper surveys at the end of the lesson to assess the age-appropriateness, receptibility, and implementation potential for the future. The data from these surveys will be combined. Quantitative data received from scales on the survey will be averaged out and qualitative data will be combined. Data will be used to make any changes necessary to ensure age-appropriateness and early care center ability to replicate kits.

**ADDITIONAL INFORMATION, IF APPLICABLE:** List any special requirements for this project.

**OUTCOME DOCUMENT:** Describe the final outcome document (e.g., journal manuscript, grant proposal) and attach a copy of the guidelines for authors, grant guidelines, etc.)

The final outcome document will be a combined PDF document for each of the four Harvest of the Month kits. The kits will also be printed out and put in a binder for all to view at the professional and defense presentation. All of the Harvest of the Month Kits will be uploaded to ScholarWorks.

## **Harvest of the Month Kit Capstone Project Literature Review**

*By: Diana Myers*

### **Introduction**

The demand for early care and education (ECE) facilities for young children aged zero to five years old is growing at a rapid rate.<sup>1</sup> A societal shift is occurring as more women are working and parents are recognizing the importance of this time period in a child’s life.<sup>2</sup> The American Academy of Pediatrics states that, “The most active period of neurologic development occurs in the first 1,000 days of life, the period beginning at conception and ending at the start of the third postnatal year...Although neurodevelopment continues throughout the life of a healthy person, by age two the brain has undergone tremendous restructuring. Many of the developmental changes expected to occur during this period will not be able to occur in later life.”<sup>3</sup> When considering nutrition, research also tells us that a young child’s food preferences develop within the first few years of life, as an infant transitions from eating one food to a multitude of foods with varying flavor profiles.<sup>3</sup> In referencing these critical periods of life, the conversation of ECE facilities becomes even more vital. According to the U.S. Census, there are 15.1 million children within the age range for early care facilities; that is 15.1 million children that have the potential to be nutritionally impacted by these facilities.<sup>1</sup> With the understanding of how influential these years are, early care facilities have the ability to target and help influence dietary preferences in a healthy, engaging, and positive way.

### **Early Care in the United States**

On February 17<sup>th</sup>, 2009, President Barack Obama signed the American Recovery and Reinvestment Act into law.<sup>4</sup> This act included funding for early childhood programs that had lost monetary support during the economic crisis. During the 2013 State of the Union speech, President Barack Obama called on Congress to expand access to high-quality early care learning for all children in America.<sup>5</sup> Between 2009-2016, the Obama Administration increased investments in early childhood programs by over \$6 billion.<sup>6</sup> Focusing on a child’s early years is especially critical in influencing the development of food preferences and building lifelong healthy dietary habits. One example of a healthy dietary habit is the consumption of fruits and vegetables. Despite numerous campaigns to promote increased intake of fruits and vegetables, there were no improvements of vegetable intake for children between 2003-2010.<sup>7</sup> According to a study conducted by the Centers for Disease Control and Prevention (CDC), children aged 2-18 years old ate 67% more fruits from 2003-2010.<sup>8</sup> Although this is a positive statistic, the data still shows that fruit and vegetable consumption is lower than the Dietary Guidelines for Americans (DGA), which ranges from 1.5-3 cups per a day.

### **Fruit and Vegetable Consumption in Early Care and Education Settings**

Eating a diet rich in fruits and vegetables provides great value to overall health. Fruit and vegetable consumption can lead to reduced cardiovascular and chronic disease risk and healthy weight management.<sup>9,10</sup> This is especially true when fruits and vegetables are eaten as a whole ingredient rather than drinking it as juice. Eating the whole fruit or vegetable provides children with more vitamins, minerals, and fiber. Several influences in children’s lives have been shown

to impact their fruit and vegetable consumption; these include repeated exposure, modeled behavior, social experiences, taste testing, and availability.<sup>9</sup> Each of these influences have the ability to be modeled in a positive way within early care facilities. The Child and Adult Care Food Program (CACFP), a federal program that provides aid to child and adult centers through nutritious foods, has become a catalyst for behavior change. After almost 50 years of no changes, the CACFP guidelines shifted in October 2017.<sup>11</sup> These revisions, which were related to the Healthy, Hunger-Free Kids Act of 2010, now offer more whole grains, less added sugar, and a greater variety of fruits and vegetables.<sup>11</sup> With the understanding of various types of interventions and federal programs, as well as the knowledge of how food preferences have been shown to develop, nutritional interventions can be created to aid in lifelong healthy dietary habits and food preferences.

### **Farm to Early Care and Education**

The increase of ECE centers has provided the opportunity for enormous expansion of Farm to ECE programs. Farm to School is an evidence-based program embraced by schools and early care facilities to increase student engagement in school gardens, taste testing, cooking lessons, nutrition activities, standards-based curriculum, and local foods.<sup>12</sup> These programs help create a connection between children and food origination. In 1938, John Dewey first wrote about the impact of experiential learning. He explained that “there is an intimate and necessary relation between the processes of actual experience and education.”<sup>13</sup> Farm to School programs in early care environments are an effective nutrition intervention tool utilizing experiential opportunities to provide hands-on learning focusing on nutrition, food, and agriculture.<sup>11</sup> In Georgia, some ECE centers are involved in farm to school programs to some capacity. The 2014 Georgia Farm to Preschool survey stated that “94% of the 859 centers who participated reported that they had conducted some type of Farm to ECE activity within the year.” This statistic speaks to the openness of surveyed facilities in trying this intervention in early care settings; however, 859 centers is only a small percentage of the 6,000+ ECE centers in Georgia. The Georgia Farm to ECE Coalition, comprised of stakeholders in early care, food, farming, and nutrition, has a mission to connect early care facilities, local farmers, and stakeholders to increase the number of ECE centers incorporating Farm to School programs into their curriculum.

### **Harvest of the Month Kits in Action**

Harvest of the Month (HOTM) kits combine lesson plans following mandatory curriculum standards to complete educational requirements, hands-on activities, themed recipes, and age-appropriate books that focus on a specific seasonal fruit or vegetable; they are designed to increase knowledge and exposure while meeting educational objectives. The multi-factorial elements of this nutrition intervention have been shown to be effective; intertwining the hands-on activities with the nutritional component and taste testing has been shown to have a beneficial impact on fruit and vegetable intake and likeability.<sup>14,15</sup> HOTM kits have been created nationwide. For example, one study looked at kits used in California with low-income Hmong and white middle school students.<sup>14</sup> South Dakota used HOTM kits which were modified from the California models.<sup>15</sup> Both interventions were an interactive and informative way to expose children to fruits and vegetables and encourage them to eat more. In addition to taste testing, a handout sent home to caregivers in the South Dakota intervention was effective and expanded

the reach of the HOTM kits.<sup>15</sup> While school is an influential environment, home is most influential; reinforcing what is being taught at school in the home increased fruit and vegetable consumption and knowledge.<sup>15</sup> Although the children in both of these studies are older than children in early care settings, we can learn from the studies by correlating experiential interventions to outcomes. These two HOTM kit examples can help teach others about the impact of using hands-on activities to provide experiential learning focusing on nutritious foods.

Children’s hands-on participation while cooking fruit and vegetable recipes from a young age will increase their experiential learning. One study of six to ten-year-old children looked deeper into the impact of hands-on recipe preparation. Children were separated into two study groups; one group helped prepare a meal with parental assistance and the other group had a meal prepared for them by a parent.<sup>16</sup> Children in the “child cooks group” ate significantly more salad, chicken, and calories than in the “parent cooks group”. Not only did they eat significantly more of their meal and the healthy components, the children in the “child cooks group” also reported a significant increase in feelings of valence and dominance. This has the potential to lead to feelings of self-efficacy in the kitchen setting. Another intervention for fourth graders – *Cooking with Kids* – was created and implemented in school systems to evaluate the effect it had on fruit and vegetable preferences.<sup>17</sup> After program completion, which included 15 hours of hands-on-cooking throughout the year, the fruit and vegetable preference score increased within the intervention group. After compiling the data from a written follow-up test, the *Cooking with Kids* intervention was also shown to increase self-efficacy in the kitchen. This study suggests the impact that recipe creation may have on a child’s comfort levels in the kitchen in early care settings.

### **Food Choices in Early Care and Education Settings**

What is the most effective way to promote healthy eating among children is a relevant question since the majority of children do not meet the DGA for fruit and vegetable consumption. Several factors appear to be included in the answer – food procurement, teacher-modeling, and children serving their own food.<sup>18,19,20,21</sup> When it comes to nutrition, having multiple influencers and opportunities in making this decision can be a challenge. Macro-level environments, physical environment and settings, social environments, and individual factors at both a provider and child level are all barriers that need to be addressed when considering nutrition and food purchases in ECE facilities.<sup>18</sup> One study delving into how early care providers purchase food revealed multiple influencing factors; examples of these included regulations, suppliers and vendors, budget, facility space, facility kitchen access, professional networks, peers, child allergies, child preferences, and providers’ skills.<sup>18</sup> Food procurement is one critical component of the nutrition within these facilities; however, the process through which food is prepared, served and eaten with these students also has a great impact. Having teachers explain how a meal is prepared and involving children in the preparation process has a valuable impact on children’s food choices.<sup>19</sup> One study also suggests that having students serve their own food increases their likelihood of trying these foods.<sup>20</sup> Furthermore, one study found that when teachers eat with students through an enthusiastic model, children are more likely to try the food.<sup>21</sup> HOTM kits provide the instruction to create an enthusiastic environment for children-centered food preparation, teacher modeling, and healthy food choices to expand children’s future nutritious food preferences.

## **Harvest of the Month Kit Capstone Project**

For this capstone project, four HOTM kits will be created to be used in ECE settings with three- to five-year-olds. All materials will be created using evidence-based practices which specifically fit the abilities of this age group.<sup>22</sup> In ECE settings, each age group has different age-appropriateness of learning. Each kit will be tested within a pilot ECE setting to analyze age-appropriateness. These HOTM kits will be correlated with Georgia’s Department of Education’s kindergarten through twelfth grade HOTM resources because there are none specific to early care. Each kit will combine a locally grown Georgia fruit or vegetable with recipes to prepare the seasonal produce, nutritional activity to tie in learning related to early care curriculum standards used to complete educational requirements, children’s literature connection, and handout to send home. Along with each kit, a handout will be included to provide information to ECE facilities about where to find local farmers and farmer’s markets; this will help ECE facilities with the local food procurement process. By encouraging locally sourced produce, the HOTM kits have the potential to put dollars back into the surrounding community as well as provide fresh produce that has been recently harvested.<sup>23</sup> The learning outcomes related to the use of the HOTM kits include 1) providing a hands-on learning experience to enhance children’s knowledge of fruits and vegetables through activities and literature connections, 2) allowing children an opportunity to try new fruits and vegetables through taste testing, and 3) empowering children in the kitchen through recipe creations.

During the process of the kit development, HOTM kit components will be tied to early care curriculum standards called Georgia Early Learning and Development Standards (GELDS). These standards are set in place by Georgia’s Quality Care for Children and are designed for ECE facilities to complete educational requirements within the learning environment. Aspects of childhood food preference development, hands-on learning, nutrition education, fine and gross motor skills, and healthy food modeling will be woven into each kit.

## **Harvest of the Month Kit Components**

**Recipes:** Each kit will have two age-appropriate recipes to be used, depending on availability of facility cooking equipment. One recipe will use basic equipment such as bowls, spoons, and/or hands while the second will use blenders, induction burners, and/or ovens; both will contain instructions specific to the intended age group to align with the research and potentially impact their willingness to try new foods<sup>16</sup>

**Hands-on Activity:** Three- to five-year-olds will have the opportunity to participate in an activity that will tie in nutritional components. Each activity will be hands-on in order to engage children in the learning process in an experiential and more memorable way.<sup>22</sup> By connecting the activity to nutrition, several GELDS will be intertwined into each activity. For example, physical development and motor skills will be integrated by having the child participate in a hands-on nutrition activity using fine motor skills. Tying an activity in with the cooking lesson will help in a child’s ability to learn and remember.<sup>14</sup>

**Literature:** Nutrition education and the food children are served will be tied together through a children’s literature connection. Several books will be chosen to correlate with each seasonal fruit or vegetable. Reading to children has been shown to have a positive effect on reading skills, language skills, and cognitive development.<sup>24</sup> Additionally, being read to from a young age is correlated with socio-economic success later in life.<sup>25</sup> As described earlier, the literature component has a deeper connection with the early care GELDS and will be another element in making these kits standards-based. For example, standard CLL2 states that the child will acquire vocabulary introduced in conversations, activities, stories, and/or books. Tying in literature may also expand teacher’s willingness to add these kits to the classroom as they cover a multitude of types of learning experiences for the children.

**Family Handout:** The last component of the HOTM kits is the handout that will be sent home to families. The goal of this handout is to bring the impact of HOTM kits home so the family can continue influencing healthy dietary habits. According to the Centers for Disease Control, children and adolescents consumed an average of 12.4% of their daily calories from fast food.<sup>26</sup> By exposing three- to five-year-olds to fresh fruits and vegetables at ECE centers, children have the capability of expanding their food preferences. By bringing this influence home, families have the opportunity to learn with their children and increase the impact of nutritious food choices within the family.

While considering the results of the presented studies, the federal policies surrounding early care facilities, and the activities and behaviors that impact a child’s food choices, ECE facilities appear to be a promising setting to focus on cultivating food preferences and nutrition intake at a young age. Much of the research that has been completed for HOTM kit models are for kindergarten through eighth grade settings; therefore, more research needs to be conducted in ECE settings. Understanding the traits and abilities of children in ECE centers is fundamental in creating effective multi-component, hands-on interventions. Using the knowledge of this age group, the creation of HOTM Kits serve as a catalyst in the development of healthy food interactions for children in ECE centers.

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2. Bureau UC. Child Care an Important Part of American Life.
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## Did You Know?

- Apples grow on trees! In order to pick apples, you must reach up to the apple in the tree, grab onto it, twist and pull it. Let’s try this together!
  - *Fun tip:* Have children stand up together and try picking their “apples” from an invisible tree.
- Apples are one of the most widely grown tree fruit.<sup>[1]</sup>
- Apples come in a variety of colors including red, yellow, green, and pink. What is your favorite apple color?
  - *Fun tip:* Open up a conversation with the children about their favorite apple colors.
- The first apple trees came from Central Asia.<sup>[2]</sup>
  - *Fun tip:* Show children where Central Asia is on a map.
- Apple trees blossom in the Spring and apples are picked and eaten in the Fall.
  - *Fun tip:* Discuss the order of the seasons with the children.
- Apples are high in Vitamin C! This helps to keep germs away, keep us from getting sick and heal our bumps and scratches.
- Fiber is found in high amounts within the skin of the apples. Fiber keeps you full and going to the bathroom regularly.

## References

1. <https://www.britannica.com/plant/apple-fruit-and-tree>
2. <https://news.nationalgeographic.com/news/apples-of-eden-saving-the-wild-ancestor-of-modern-apples/>

## Apple Themed Children’s Books

### *Georgia Early Learning and Development Standards (GELDS):*

- CLL2 – The child will acquire vocabulary introduced in conversations, activities, stories, and/or books.
- CLL5 – The child will acquire meaning from a variety of materials read to him/her.

### *Book Options:*

- [Apples Go On a Tree](#) by Mari Schuh
- [How Do Apples Grow?](#) by Betsy Maestro

- [5 Little Apples](#) by Yusuke Yonezu
- [Apple Farmer Annie](#) by Monica Wellington
- [Apple Pie ABC](#) by Alison Murray
- [Apple Cider Making Days](#) by Ann Purmell
- [An Apple Pie for Dinner](#) by Susan Vanhecke
- [The Apple Pie That Papa Baked](#) by Lauren Thompson
- [Up, Up, Up! It’s Apple Picking Time](#) by Jody Fickes Shapiro
- [The Apple Pie Tree](#) by Zoe Hall
- [The Apple Orchard Riddle](#) by Margaret McNamara
- [Ten Apples Up On Top](#) by Dr. Seuss
- [Little Mouse and the Big Red Apple](#) by A. H. Benjamin
- [I Am An Apple](#) by Jean Marzollo
- [One Red Apple](#) by Harriet Ziefert
- [The Fruits We Eat](#) by Gail Gibbons
- [Mrs. Peanuckle’s Fruit Alphabet](#) by Mrs. Peanuckle

## Apple Printing Activity

*Georgia Early Learning and Development Standards (GELDS):*

- CD-CR2 – The child will create and explore visual art forms to develop artistic expression.
- PDM5 – The child will demonstrate gross motor skills.

*Supplies:*

- Knife (\$15)
- Paint (\$12)
- Marker (\$2.50)
- Apples (\$1.50/each)
- Paper towels (\$1/roll)
- Cutting board (\$7)
- Construction paper (\$8)
- Aluminum pans (\$4/2-count)

*Instructions:*

1. Cut apples in half using a knife and cutting board; get creative and try a variety of different cutting methods to add new patterns to the apple stamps.
2. Place a paper towel at the bottom of the shallow paint dish and pour paint on top to create a stamp pad.
3. Write each child’s name on a sheet of construction paper and hand it to them.
4. Show children an example of an apple print. Dip the cut side of the apple in the paint, wipe excess paint onto the paper towel in the shallow dish, and stamp the construction paper with the painted side of the apple.
5. With adult supervision, have children stamp their own apples into the paint, wipe off excess paint, and stamp their paper.

*Tips:*

- Creating stations with different paint colors and adult supervision will help in managing the paint and apple stamps with the children. If you need another activity for children to do while they are waiting to apple print, pass out sheets of construction paper and crayons and ask the children to draw an apple on their paper.
- Have wet paper towels ready at each paint station and line the tables with a plastic tablecloth to help with easy clean up.
- Paint brushes can also be used instead of stamping. In order to do this, an adult may help a child paint onto their apple and then hand the apple to the child to stamp.



# An Apple a Day

*Georgia Early Learning and Development Standards (GELDS):*

- PDM2 - The child will participate in activities related to nutrition.
- PDM4 - The child will use senses (sight, touch, hear, smell, taste) to explore the environment and process information.
- PDM5 - The child will demonstrate gross motor skills.
- PDM6 - The child will demonstrate fine motor skills.

Below, you will find two different ways of taste testing apples. If you have all of the supplies, consider making both of these recipes and introducing children to raw apples and cooked apples. In doing this, children will have an opportunity to learn that fruits and vegetables taste and feel differently when they are cooked versus raw. Encourage the children to keep an open mind as each recipe tastes different and unique. Enjoy!

The simplest way to taste test apples is to slice them and eat them raw. In doing this, children are introduced to apples in their most basic state. They are able to hear the crunch of the first apple bite and taste the natural apple sweetness. There are many varieties of apples which lend to diverse colors and flavors (i.e. sweet versus tart). Refer to the "Harvest of the Month Kit Guide to Local Purchasing" for tips on procuring Georgia Grown apples.

## Raw Apples

*Taste testing serving size: 1 slice of an apple*

*Servings per apple: About 10 servings*

*Ingredients:*

- Variety of apple types (i.e. pink lady, granny smith, golden delicious)

*Supplies:*

- Knife (\$15)
- Cutting board (\$7)
- Paper plates (\$5/100-count)

*Instructions:*

1. For proper food safety, have all adults and children wash their hands thoroughly before preparation and taste testing.
2. Once hands are clean, have an adult cut each of the apples into slices so that each child has a variety of slices to try.
3. Place a paper plate on the table in front of each child.
4. Place a slice of each type of apple on the plate in front of the child.
5. As a class, begin tasting each of the apple types together.
6. Go through the entirety of the apple taste test together while engaging in conversation about what the children think.
7. Enjoy!

*Tips:*

- Stimulate conversation by asking the children sensory questions.
  - *Examples of questions include:* What sound does the apple make when you bite into it and chew? What color is the apple? Is the apple sweet or is it sour?
- Ask children their opinion of each of the apples.
  - *Examples of questions include:* Have they tried an apple before? Would they try an apple again?
- Teach children how to give respectful responses, even if they don’t like what they tried. “Don’t yuck my yum!” is a great way of teaching children that they may not like it, however, their friends might so it’s important to be conscious of that. By reinforcing this concept, it helps to teach children about how to give respectful responses. Remember, it can take a child multiple times of exposure before they like a new food.

## Homemade Applesauce

*Adapted from Sarah’s Applesauce Recipe on Allrecipes.com*

*Recipe makes about 4 cups*

*Taste testing serving size: ¼ cup*

*Servings per recipe: About 16 servings*

### *Ingredients:*

- 6 apples, peeled & cored (\$9)
- 1¼ cup water
- 1 tsp. ground cinnamon (\$1/2-oz.)

### *Supplies:*

- Peeler (\$9/3-count)
- Knife (\$15)
- Cutting board (\$7)
- Medium bowl (\$12/2-count)
- Measuring cups & spoons (\$10)
- 3-quart saucepan & lid (\$17)
- Induction burner (\$50)
- Large spoon (\$6)
- Potato masher (\$5)
- Paper plates (\$5/100-count)
- Plastic spoons (\$2/100-count)

### *Preparation:*

- Peel and core the apples and chop them into chunks.
- Measure out the water and cinnamon.

*Instructions:*

1. For proper food safety, have all adults and children wash their hands thoroughly before preparation, cooking, and taste testing.
2. Call on three children as volunteers. Have one child dump the apples, one child pour the water and one child sprinkle the ground cinnamon into the saucepan.
3. Place the saucepan on an induction burner and cover with a lid. Make sure that the induction burner is displayed at a distance from the children and that the cord does not cause a tripping hazard.
4. Heat the saucepan to medium high heat and heat for 15 to 20 minutes or until apples are soft.
5. Once heated through and softened, stir with a large spoon and allow applesauce to cool in a fridge.
6. Once cooled, mash the applesauce with a potato masher. Give each child a chance to mash the apples until thoroughly broken down.
7. Using a spoon, divide the applesauce up into taste testing bowls.
8. Hand each child a taste testing bowl and a spoon.
9. As a classroom, try the applesauce together.
10. Enjoy!

*Tips:*

- If time constraints are a concern, complete steps 1-5 ahead of time. At this point, the applesauce will be cooled and ready to mash. Have children play a part in the recipe by having them each mash the applesauce before taste testing.
- Have one child volunteer at a time help with pouring the ingredients; this reduces the chaos in the classroom with excited children.
- Stimulate conversation by asking the children sensory questions.
  - *Examples of questions include:* What does the applesauce feel like in your mouth? Is it sweet? Does the applesauce make a sound?
- Ask children their opinion of the applesauce.
  - *Examples of questions include:* Did you like the applesauce? Have you tried applesauce before? What did you like about it? Would you eat it again?
- Teach children how to give respectful responses, even if they don’t like what they tried. “Don’t yuck my yum!” is a great way of teaching children that they may not like it, but their friends might so it’s important to be conscious of that. By reinforcing this concept, it helps to teach children about how to give respectful



responses. Remember, it can take a child multiple times of exposure before they like a new food.

- If you taste tested both recipes, ask the children about the difference between raw and cooked apples.
  - *Examples of questions include:* Did they like the raw or cooked apples best? What did they like about each of them? What was the difference between the raw and cooked apples?



## Did You Know?

- Sweet potatoes were found to be grown in Peru as early as 750 BC.<sup>[1]</sup>
  - *Fun tip:* Show children where Peru is on a map.
- Sweet potatoes are packed with nutrition! They are high sources of fiber, potassium, and vitamins A and C.
  - Fiber keeps you full and going to the bathroom regularly.
  - Potassium is important in keeping us alive! It helps to keep your heart, muscles, and kidneys strong and healthy.
    - *Fun tip:* Show children the heart, muscles, and kidneys are on/in the body.
  - Vitamin A keeps our eyes, skin, teeth, and bones happy and healthy.
  - Vitamin C helps to keep germs away, keep us from getting sick and heal our bumps and scratches.
- Sweet potatoes are the official state vegetable of North Carolina and Louisiana.
  - *Fun tip:* Show children where North Carolina and Louisiana are on a map.
- After transplanting sweet potatoes, it takes 90 to 120 days to harvest.
  - *Fun tip:* Show children the amount of days on a calendar to help put this length of time from beginning to harvest into perspective.
- In February, we celebrate National Sweet Potato Month!
  - *Fun tip:* Show the children February on the calendar.
- Sweet potatoes love Georgia's weather and grow well during the long, hot summers.<sup>[2]</sup>

## References

1. [https://blogs.loc.gov/inside\\_adams/2010/11/a-sweet-potato-history/](https://blogs.loc.gov/inside_adams/2010/11/a-sweet-potato-history/)
2. <http://extension.uga.edu/publications/detail.html?number=C1014&title=Home%20Garden%20Sweet%20Potatoes>

## Sweet Potato Themed Children's Books

*Georgia Early Learning and Development Standards (GELDS):*

- CLL2 - The child will acquire vocabulary introduced in conversations, activities, stories, and/or books.
- CLL5 - The child will acquire meaning from a variety of materials read to him/her.

*Book Options:*

- [Little Sweet Potato](#) by Amy Beth Bloom
- [The Enormous Potato](#) by Aubrey Davis
- [From Eye to Potato](#) by Ellen Weiss
- [Jamie O’Rourke and the Big Potato](#) by Tomie dePaola
- [The Vegetables We Eat](#) by Gail Gibbons
- [The Gigantic Sweet Potato](#) by Dianne De Las Casas
- [Rhino, Rhino Sweet Potato](#) by Francine Prose
- [Sweet Potato Pie](#) by Kathleen D. Lindsey

## Sweet Potato Play Dough Activity

*Adapted from Healthy Mama Info*

*Georgia Early Learning and Development Standards (GELDS):*

- CD-CR2 – The child will create and explore visual art forms to develop artistic expression.
- PDM5 – The child will demonstrate gross motor skills.

*Ingredients:*

- 2½ cups flour (\$3)
- ½ cup salt (\$1)
- 1 Tbsp. cream of tartar (\$4)
- 2 Tbsps. canola oil (\$2)
- ¾ cup water
- 1 medium sweet potato (\$1.50/pound)

*Supplies:*

- 3-quart saucepan (\$17)
- Large spoon (\$6)
- Induction burner (\$50)
- Medium bowl (\$12/2-count)
- Paper bowls (\$2.50/42-count)
- Plastic forks (\$2/100-count)

*Instructions:*

1. Pierce the sweet potato with a fork five times and microwave for 5–7 minutes while rotating it halfway through.
2. Combine 2 cups of flour, salt, cream of tartar, oil and water in a pot of the stovetop or induction burner.
3. Mix well and put on medium–high heat, stirring continuously.
4. When the dough forms a ball in the middle of the pot, turn the heat off and take the dough ball out of the pot and into a medium bowl to let cool.
5. Once cooled, knead the dough ball.
6. Scoop out the insides of the sweet potato into a small bowl and mash with a fork.
7. Add ½ cup of flour slowly to the sweet potato and mix well.
8. Combine the mashed sweet potato with the dough ball and knead again.
9. Once combined and kneaded, the play dough is ready to enjoy with the children!

*Tips:*

- If the dough ball becomes too sticky when adding the sweet potato, add extra flour.
- Include children in the process of making the play dough by having them each help knead the dough ball and mash the sweet potato.
- Draw or print out outlines of sweet potatoes for children to form a sweet potato shaped play dough on top of the design.

# Sprouting Sweet Potatoes Activity

*Adapted from Pre-K Pages: Science for Kids*

*Georgia Early Learning and Development Standards (GELDS):*

- CD-SC3 – The child will demonstrate knowledge related to living things and their environments.

*Supplies Needed:*

- Knife (\$15)
- Cutting board (\$7)
- Sweet potato (\$1.50/pound)
- Clear cup (\$1)
- Water
- Toothpicks (\$2)
- Sunny windowsill

*Instructions:*

1. Use a knife to cut the sweet potato in half width wise on a cutting board.
2. Fill the clear cup with water.
3. Insert four toothpicks into the middle of the sweet potato half. There should be enough room for 2 inches of the sweet potato to be immersed in water.
4. Set the sweet potato in the cup. The toothpicks should hold the sweet potato at the top of the cup while the bottom part is submerged in the water.
5. Set the sweet potato in a sunny windowsill.
6. Monitor water amounts in the cup to ensure that the sweet potato is always partly submerged in the water.
7. On a daily basis, observe the changes of the sweet potato with the children. You will begin to see roots growing down into the water over time from the bottom cut of the sweet potato. You will also see shoots with leaves growing from the top; these shoots are called slips.

*Tips:*

- After putting the sweet potato in the windowsill on day one, ask the children their thoughts on what they think will happen.
- Create a daily log and spend time with the children each day to observe and discuss the changes.
- Educate the children on what is happening while it is happening. The sweet potato stays hydrated by being in the water on the bottom half and the top half soaks in the air and sunlight needed for growth.
  - *Fun tip:* Show students this growth by sitting on the ground and slowly rising up with your arms in the air to reach the sunlight. Ask the children what they need to grow big and strong like a sweet potato.
- If you have a school garden, you can plant the slips from the sweet potatoes! In order to do this, carefully twist each of the slips off of the sweet potato. Place the bottom of the slips in water with the leaves above the water; watch closely as roots begin to form off of the bottom of the slips within a couple of days. Once the roots grow to about one inch, you may plant them in loose, well-drained soil. Plant each slip in a hole about four inches down and one foot apart from each other. Water them and watch them grow! In doing this type of farm to early care experience, the children will begin to form a connection between how their food grows and where it comes from.

## Sensational Sweet Potatoes

### *Georgia Early Learning and Development Standards (GELDS):*

- PDM2 – The child will participate in activities related to nutrition.
- PDM4 – The child will use senses (sight, touch, hear, smell, taste) to explore the environment and process information.
- PDM5 – The child will demonstrate gross motor skills.
- PDM6 – The child will demonstrate fine motor skills.

Below, you will find three ways of taste testing sweet potatoes. If you have all of the supplies, consider making all of these recipes and introducing children to raw sweet potatoes and cooked sweet potatoes in a variety of ways. This is an opportunity to teach children that fruits and vegetables taste and feel differently when they are cooked versus raw. Encourage them to keep an open mind as each recipe tastes different and unique!

The simplest way to taste test sweet potatoes is raw. Sweet potatoes cut into thin slices are an opportunity to share them in their most basic way. It is just as important to teach children to eat fruits and vegetables raw as it is to teach them to eat them cooked. Sweet potato fries are another great way to provide a healthier alternative and connect children to something they recognize. Lastly, savory mashed sweet potatoes will teach the children a unique spin on traditional mashed potatoes. They may even ask their parents to make this for the holidays! Refer to the “Harvest of the Month Kit Guide to Local Purchasing” for tips on procuring Georgia Grown sweet potatoes.

## Raw and Baked Sweet Potato Fries

### Raw Sweet Potato Fries:

*Taste testing serving size: 1 sweet potato strip*

*Servings per sweet potato: About 30 servings*

### Baked Sweet Potato Fries:

*Taste testing serving size: 2 sweet potato fries*

*Servings per recipe: About 30 servings*

### *Ingredients:*

- 3 sweet potatoes (*\$1.50/pound*)
- 2 Tbsp. canola oil (*\$2*)
- ½ tsp. garlic powder (*\$1.50*)
- ½ tsp. paprika
- ⅛ tsp. salt (*\$1*)

### *Supplies:*

- Knife (*\$15*)
- Cutting board (*\$7*)
- Paper plates (*\$2/100-count*)

*Preparation:*

- Slice one sweet potato into  $\frac{1}{4}$  inch thick strips for the raw sweet potato taste test.
- Slice two sweet potatoes into  $\frac{1}{2}$  inch thick strips for the sweet potato fries taste test.
- Measure out the oil, garlic powder, paprika, and salt.

*Instructions:*

1. Pre-heat the oven to 425 degrees Fahrenheit or the toaster oven to 400 degrees Fahrenheit.
2. For proper food safety, have all adults and children wash their hands thoroughly before cooking and taste testing.
3. Pass out one  $\frac{1}{4}$  inch thick raw sweet potato strip to each child to taste test prior to preparing the sweet potato fries. *Note: Raw sweet potatoes may serve as a choking hazard if not cut thin enough. If you are unsure if your raw sweet potato strips are small enough, please skip the raw sweet potato taste test.*
4. After taste testing the sweet potatoes raw, have five child volunteers help with pouring ingredients into the bowl, including sweet potatoes, oil, garlic powder, paprika, and salt.
5. Mix the seasonings with the sweet potatoes so that they are combined evenly.
6. Place sweet potato strips on a baking sheet for the oven or toaster oven.
7. Bake the sweet potato fries for 15 minutes. After 15 minutes, take the baking sheet out, flip the fries and put back in the oven or toaster oven.
8. Bake for another 10 minutes or until crispy.
9. Take the baking sheet of sweet potato strips out of the oven or toaster oven and let cool. Make sure the baking sheet is not able to be reached by the children.
10. As a class, taste the sweet potato fries together.
11. Enjoy!



*Tips:*

- Stimulate conversation during both taste tests by asking the children what the sweet potato tastes like.
  - *Examples of questions include:* What color are the sweet potatoes? Do they make a sound when you bite into them? What do they smell like? Do they remind you of anything that you’ve tried before?
- Ask children their opinion of each of the sweet potatoes.
  - *Examples of questions include:* Have they tried sweet potatoes before? Would they try them again?
- Teach children how to give respectful responses, even if they don’t like what they tried. “Don’t yuck my yum!” is a great way of teaching children that they may not like it, but their friends might so it’s important to be conscious of that. By reinforcing this concept, it helps to teach children about how to give respectful responses. Remember, it can take a child multiple times of exposure before they like a new food.
- If you have an herb garden at the school or are feeling creative, try making different seasonings to put on the fries using different herbs.



## Savory Mashed Potatoes

Adapted from [Cookie + Kate](#)

*Recipe makes about 2 cups*

*Taste testing serving size: 2 Tbsp.*

*Servings per recipe: About 16 servings.*

### *Ingredients:*

- 2 sweet potatoes (\$1.50/pound)
- 2 Tbsp. melted butter (\$4)
- 2 Tbsp. plain Greek yogurt (\$1)
- 1/3 cup fresh parsley, torn (\$1)
- 1/3 cup green onions, minced (\$1)
- Salt & pepper, to taste (\$3)
- 1 clove garlic, minced (\$2)

### *Supplies:*

- Cutting board (\$7)
- Knife (\$15)
- Medium bowl (\$12/2-count)
- Potato masher (\$5)
- Large spoon (\$6)
- Measuring cups & spoons (\$10)
- Wavy cutters (\$6)
- Paper plates (\$5/100-count)
- Plastic forks (\$2/100-count)

### *Preparation:*

- Wash, dry and poke holes with a fork into the sweet potatoes.
- Microwave sweet potatoes for 10-15 minutes, until tender.
- Let the sweet potatoes cool for 1 hour before continuing with the recipe.
- Mince the garlic.
- Measure out the butter, Greek yogurt, salt, pepper, and garlic.

*Instructions:*

1. For proper food safety, have all adults and children wash their hands thoroughly before cooking and taste testing.
2. Scoop out the insides of the cooked and cooled sweet potatoes into a medium bowl.
3. Pass out parsley and have the children tear the parsley into little pieces.
4. Pass out the wavy cutters and the green onions.
5. Have the children cut the green onions into small pieces using the wavy cutters.  
*Note: Pre-chop if wavy cutters are not available.*
6. Have seven child volunteers individually come up and add the butter, Greek yogurt, parsley, green onion, garlic, salt and pepper to the bowl.
7. Give each child a chance to use the potato masher to mash the potatoes until smooth.
8. Serve and enjoy!

*Tips:*

- The sweet potato will take some time to cool. Consider heating this up and allowing an hour to cool before mashing them with the children.
- Have one child at a time help with measurements and pouring; this reduces the chaos in the classroom with excited children.
- Stimulate conversation by asking the children questions about senses, past experiences, and thoughts.
  - *Examples of questions include:* Have you ever mashed sweet potatoes? Have you ever eaten sweet potatoes? If so, when have you eaten sweet potatoes? Do they taste sweet or salty? Would you try them again? What do they feel like in your mouth? What do they smell like? What do they look like?
- Teach children how to give respectful responses, even if they don’t like what they tried. “Don’t yuck my yum!” is a great way of teaching children that they may not like it, but their friends might so it’s important to be conscious of that. By reinforcing this concept, it helps to teach children about how to give respectful responses. Remember, it can take a child multiple times of exposure before they like a new food.

## Did You Know?

- Kale is high in Vitamins A, C, and K.
  - Vitamin A keeps our eyes, skin, teeth, and bones happy and healthy.
  - Vitamin C helps to keep germs away, keep us from getting sick and heal our bumps and scratches.
  - Vitamin K keeps our blood flowing through our bodies and helps our wounds stop bleeding.
- There are over *FIFTY* varieties of kale. That’s a lot of kale!<sup>[1]</sup>
- After an icy cold frost hits the growing kale, it becomes sweeter.<sup>[2]</sup>
- Kale has been grown and cultivated for over 6,000 years – that’s older than your great-great-great-grandparents!<sup>[1]</sup>
- In Kenya, kale is traditionally sautéed to create a dish called sukuma wiki. Kenyans use this as a nutritious staple in their diet.<sup>[3]</sup>
  - *Fun tip:* Show children where Kenya is on a map.
- Thomas Jefferson experimented with kale by growing several varieties in his garden in the early 1800s.<sup>[4]</sup>
- Kale has several other nutritious and delicious cousins including cabbage, broccoli, and cauliflower.<sup>[5]</sup>
  - *Fun tip:* Show children pictures of these vegetables and have a conversation to discuss them. Ask the children if they know any of these types of vegetables and if they have tried them before.

## References

1. <http://www.americankaleassociation.com/learn.html>
2. <https://www.thekitchn.com/food-science-vegetables-that-a-63776>
3. <http://www.foodbycountry.com/Kazakhstan-to-South-Africa/Kenya.html>
4. <http://www.gracelinks.org/blog/2027/real-food-right-now-and-how-to-cook-it-kale>
5. <https://www.vox.com/xpress/2014/8/6/5974989/kale-cauliflower-cabbage-broccoli-same-plant>

## Kale Themed Children's Books

### *Georgia Early Learning and Development Standards:*

- CLL2 - The child will acquire vocabulary introduced in conversations, activities, stories, and/or books.
- CLL5 - The child will acquire meaning from a variety of materials read to him/her.

### *Book Options:*

- [The Wondrous World of Kale](#) by Sarah Khan
- [Captain Kale and the Superfoods](#) by Amy Roth
- [The Tale of Kale: Based on a Real Kid's Real Story](#) by Lisa Borden
- [Our School Garden!](#) by Rick Swann
- [If You Plant a Seed](#) by Kadir Nelson
- [The Vegetables We Eat](#) by Gail Gibbons

## Kale Confetti Activity

### *Georgia Early Learning and Development Standards:*

- CD-CR2 - The child will create and explore visual art forms to develop artistic expression.
- PDM5 - The child will demonstrate gross motor skills.
- PDM6 - The child will demonstrate fine motor skills.

### *Supplies:*

- Glue (\$0.50)
- Marker (\$2.50)
- Paper bowls (\$2.50/42-count)
- Construction paper (\$8)
- Kale leaf print-outs (<http://www.supercoloring.com/pages/collard-greens-leaf?version=print>)

*Preparation:*

- Rip up construction paper into tiny pieces.

*Instructions:*

1. Give a kale leaf print-out to each child.
2. Write the child’s name on their print-out using a marker.
3. Give each child a bowl of ripped up construction paper.
4. Demonstrate the activity to the children by putting a dot of glue on your kale print-out and putting a piece of torn construction paper on top of the glue.
5. Put glue on top of each child’s kale leaf print-out.
6. Have the children pick up a torn piece of construction paper and put it on top of the glue.
7. Continue adding construction paper until the colorful kale design is complete.
8. Decorate the classroom with the final creations!

*Tips:*

- Looking for extra help? Have the children help rip up the construction paper with you prior to the activity.
- Consider having older children use glue sticks rather than having the teachers add the glue.
- Prior to beginning this activity, make a kale leaf as an example to show the children.
- Bring in real kale leaves to show the children prior to starting the kale confetti activity. Open up a discussion with the children to talk about the kale.
  - *Examples of questions include:* What does the kale look like? What colors do you see on the kale leaves? What does the kale smell like? What does the kale feel like? Does the kale make a sound when you pull it apart?

## All Hail Kale!

### *Georgia Early Learning and Development Standards (GELDS):*

- PDM2 - The child will participate in activities related to nutrition.
- PDM4 - The child will use senses (sight, touch, hear, smell, taste) to explore the environment and process information.
- PDM5 - The child will demonstrate gross motor skills.
- PDM6 - The child will demonstrate fine motor skills.

The simplest way to introduce kale to children is in its most basic way, as a plain kale leaf. Kale is a beautiful leaf with vibrant colors and healthful nutrition. Taste testing in this way will teach children that you don't have to cook everything to eat it. Try taste testing with a simple vinaigrette. A recipe is provided for you, however, get creative! A vinaigrette can be made using 3 parts oil, 1 part vinegar, and seasonings to taste. Refer to the "Harvest of the Month Kit Guide to Local Purchasing" for tips on procuring Georgia Grown kale.

### *Sweet Balsamic Vinaigrette*

*Adapted from [Foodlets](#)*

*Recipe makes about 1 cup*

*Taste testing serving size: 1 Tbsp.*

*Servings per recipe: Makes about 16 servings*

### *Ingredients:*

- Kale (\$1/bunch)
- 1 small garlic clove, minced (\$2)
- Pepper (\$1)
- 5 Tbsp. balsamic vinegar (\$2.50)
- 1 Tbsp. maple syrup (\$5)
- 2 Tbsp. Dijon mustard (\$1)
- ½ cup extra virgin olive oil (\$3/8-oz.)

*Supplies:*

- Small bowl (\$5)
- Measuring cups & spoons (\$10)
- Knife (\$15)
- Cutting board (\$7)
- Paper plates (\$5/100-count)
- Whisk (\$7)

*Instructions:*

1. For proper food safety, have all adults and children wash their hands thoroughly before cooking and taste testing.
2. Mix together all of the dressing ingredients in the bowl or mason jar.
3. Give each child an opportunity to whisk the dressing.
4. Pass around a kale leaf on a plate for each child.
5. Have them touch it and ask them what it feels like. Does it make a sound? What does the texture remind you of?
6. While conversing with the children about the kale, pour a small amount of dressing on each plate for the children to dip their kale in.
7. If they want seconds and there is enough, encourage them to try more if they like it.
8. Enjoy!

*Tips:*

- Depending on the amount of kids, this recipe may need to be doubled.
- Taste testing the kale with the children will help to encourage them to try it themselves.
- Rather than using a bowl and a whisk, consider making the dressing in a plastic jar. This will reduce the equipment and allow each child an opportunity to shake the dressing to mix it. This helps children to feel like they’re part of it and will increase the likelihood of them trying it since they helped make it.
- Ask children their opinion of each of the kale.
  - *Examples of questions include:* Have they tried it before? Would they try it again?
- Teach children how to give respectful responses, even if they don’t like what they tried. “Don’t yuck my yum!” is a great way of teaching children that they may not



like it, but their friends might so it’s important to be conscious of that. By reinforcing this concept, it helps to teach children about how to give respectful responses. Remember, it can take a child multiple times of exposure before they like a new food.

## Kale Salsa

*Adapted from FoodCorps*

*Recipe makes about 3 cups*

*Taste testing serving size: 2 Tbsp.*

*Servings per recipe: Makes about 24 servings.*

### *Ingredients:*

- 5 tomatoes (*\$1.50/pound*)
- 2 large kale leaves (*\$1/bunch*)
- 1/3 cup cilantro (*\$1/bunch*)
- 1/2 medium white onion (*\$0.50*)
- 1 clove garlic (*\$2*)
- 2 Tbsp. lime juice (*\$0.60*)
- 2 Tbsp. lemon juice (*\$1*)
- 1/2 tsp. cumin (*\$3.50*)
- Whole-wheat tortilla chips (*\$3*)

### *Supplies:*

- Measuring cups & spoons (*\$10*)
- Blender (*\$35*)
- Knife (*\$15*)
- Juicer (*\$8*)
- Cutting board (*\$7*)
- Paper plates (*\$2/100-count*)

*Preparation:*

- Cut tomatoes in quarters.
- Remove hard stems of kale.
- Cut onion in half.
- Peel garlic clove

*Instructions:*

1. For proper food safety, have all adults and children wash their hands thoroughly before cooking and taste testing.
2. Have children help pull the leaves off of the cilantro stalk and juice the lime and lemon.
3. Have individual children help put each of ingredients into the blender.
4. Pulse until the salsa is fully processed. *Note: If the salsa doesn’t pulse upon starting the blender, add ¼ cup of water.*
5. Serve with chips and enjoy!

*Tips:*

- Giving children small responsibilities such as tearing off cilantro leaves helps empower them through being part of the recipe creation process.
- If additional adults are present for supervision, consider creating stations for each responsibility in the preparation and instructional process. This may be helpful in maintaining classroom management.
- Place the blender in an area where children cannot trip on the cord but can still see the blending process.
- Stimulate conversation by asking children questions.
  - *Examples of questions include: Have you tried kale before? Did you like the kale salsa? What did you like about it? Would you try it again?*
- Teach children how to give respectful responses, even if they don’t like what they tried. “Don’t yuck my yum!” is a great way of teaching children that they may not like it, but their friends might so it’s important to be conscious of that. By reinforcing this concept, it helps to teach children about how to give respectful responses. Remember, it can take a child multiple times of exposure before they like a new food.

## Did You Know?

- Carrots were first grown in Afghanistan in 900 AD.<sup>[1]</sup>
  - *Fun tip:* Show children where Afghanistan is on a map.
- Carrots are one of the best sources of Vitamin A which keeps our eyes, skin, teeth, and bones happy and healthy.
- Baby carrots are processed from large carrots that grow in the ground.
- You can eat all parts of a carrot including the carrot itself and the greens! The actual carrot is the root that grows underground, and the greens act as a handle to pull the carrot out of the ground. The greens also soak in the sunlight to provide nutrients to the carrot for it to grow big and strong.
  - *Fun tip:* Have children stand up and practice the motion of harvesting carrots by reaching down to the ground, grabbing the greens, and pulling the carrot out of the ground.
- Carrots come in a variety of colors including orange, yellow, white, and purple.
  - *Fun tip:* Show each of these colors to the children so they can visualize them.
- Raw carrots contain 88% water and help you stay hydrated. Did you know that water is a vital nutrient to help carry vitamins and minerals to cells, remove harmful products from our bodies, and control our body temperature?<sup>[2]</sup>
- Americans eat an average of 10.6 pounds of fresh carrots per a year.<sup>[3]</sup>

## References

1. <https://www.ars.usda.gov/midwest-area/madison-wi/vegetable-crops-research/docs/simon-carrot-facts/>
2. <http://www.naturalhydrationcouncil.org.uk/hydration-facts/hydration-and-water-facts-for-kids-2/>
3. <http://www.wafarmtoschool.org/toolkit/16/carrots/facts>

## Carrot Themed Children's Books

*Georgia Early Learning and Development Standards (GELDS):*

- CLL2 - The child will acquire vocabulary introduced in conversations, activities, stories, and/or books.
- CLL5 - The child will acquire meaning from a variety of materials read to him/her.

*Book Options:*

- [The Giant Carrot](#) by Jan Peck
- [The Carrot Seed](#) by Ruth Krauss
- [Carrots Grow Underground](#) by Mari Schuh
- [Too Many Carrots](#) by Katy Hudson
- [The Very Big Carrot](#) by Satoe Tone
- [Giant Carrot](#) by Allan Manham
- [Carrot Soup](#) by John Segal
- [You Are the Pea, And I Am the Carrot](#) by J. Theron Elkins
- [Just Enough Carrots](#) by Stuart J. Murphy
- [Harry Loves Carrots](#) by Laura Baldwin
- [Carrot and Pea: An Unlikely Friendship](#) by Morag Hood
- [Going for Carrots](#) by Sherri Cook
- [Curious George: The Perfect Carrot](#) by H. A. Rey
- [Caillou: The Carrot Patch](#) by Anne Paradis
- [The Vegetables We Eat](#) by Gail Gibbons

## Carrot Top Growth Spurt Activity

*Georgia Early Learning and Development Standards (GELDS):*

- CD-SC3 – The child will demonstrate knowledge related to living things and their environments.

*Supplies:*

- Water
- Carrot tops (*\$1/pound*)
- Cotton balls (*\$1.50*)
- Clear plastic tupperware (*\$4*)
- Sunny windowsill

*Instructions:*

1. Line the clear plastic tupperware with cotton balls.
2. Pour water over the cotton balls until they are soaked through.
3. Place the carrot tops on top of the wet cotton balls.
4. Set the carrot top trays in a sunny windowsill.
5. Water the carrot tops each day until the cotton swabs are soaked through.
6. Observe the growth of the carrots each day with the children.

*Tips:*

- When watering the carrot tops, make sure the cotton balls are soaked through with no excess water in the bottom of the tupperware. Adding too much water can cause the carrot tops to grow mold.
- After setting the carrot tops in a sunny windowsill, ask the children what they think will happen to them.
- On a daily basis, engage the children through discussion of their observations of the carrot growth.
- This activity visually teaches children about the growth of carrots, it does not actually grow full carrots. This is a great opportunity to educate the children on the need for water, sunshine, and soil for plant growth.



## Reduce, Reuse and Recycle Carrot Activity

*Georgia Early Learning and Development Standards (GELDS):*

- CD-SC3 - The child will demonstrate knowledge related to living things and their environments.
- PDM5 - The child will demonstrate gross motor skills.

*Supplies:*

- Knife (\$15)
- Recycled 2-liter plastic bottles
- Soil (\$8)
- Carrot seeds (\$3)
- Water
- Sunny windowsill
- Aluminum pan (\$4/2-count)

*Instructions:*

1. Using a knife, cut the top half of the 2-liter bottles off so that the bottles are open.
2. Pour soil into the 2-liter bottle and leave three inches of space at the top.
3. Have children help place the carrot seeds in the soil and press a ½ inch down into the soil.
4. Have a child volunteer water the soil and place the bottle in a sunny windowsill.
5. Observe the growth and water each day with the children.
6. After about 3 months, the carrots will be ready to harvest.
7. Gently dump the soil and carrots into an aluminum tray.
8. Spread out the carrots for the children to see the root system.
9. Count the carrots with the children to see how many have grown.
10. Have the children touch the roots and the leaves.
11. Wash the carrots thoroughly before tasting them.
12. Enjoy the harvest!

*Tips:*

- After harvesting the carrots, discuss each of the plant parts including the root, stem, and leaves. Discuss how the carrot is a modified tap root and carries all of the food for the carrot up from the soil and into the carrot stem. Discuss how the leaves are edible and how they help to increase the amount of sunlight that is soaked into them. The sunlight is what makes the leaves of the carrots green.
- Have the children describe what they feel when they touch the different plant parts.
  - *Examples of questions include: Are the carrots rough or smooth? Which parts of the carrot are hard and which parts are soft?*
- Lay out the carrots to compare the different shapes and sizes. This is a great opportunity to talk about the uniqueness of each carrot, just like humans.
- Take this opportunity to discuss the concept of above and below. The carrot greens are *above* the soil and the carrots grow *below* the soil.

## Cravin’ Carrots

*Georgia Early Learning and Development Standards (GELDS):*

- PDM2 – The child will participate in activities related to nutrition.
- PDM4 – The child will use senses (sight, touch, hear, smell, taste) to explore the environment and process information.
- PDM5 – The child will demonstrate gross motor skills.
- PDM6 – The child will demonstrate fine motor skills.

Below, you will find two ways of taste testing carrots. Consider making both of these recipes and introducing children to raw carrots and cooked carrots. This is an opportunity to teach children that fruits and vegetables taste and feel differently when they are cooked versus raw. There are several colors of carrots including orange, yellow, purple, and white. These colors add diversity to the taste testing as children get to try different carrot colors. *Note:* a dip is not necessary in taste tasting the carrots, however, it may be a fun way to allow children the opportunity to be part of making a recipe. Refer to the “Harvest of the Month Kit Guide to Local Purchasing” for tips on procuring Georgia Grown carrots.

### Honey Mustard Hummus

*Adapted from [Super Healthy Kids](#)*

*Recipe makes about 1½ cups*

*Taste testing serving size: 1 Tbsp.*

*Servings per recipe: About 24 servings*

#### *Ingredients:*

- 1-15 oz. can white cannellini beans, drained and rinsed *(\$1)*
- ¼ cup yellow mustard *(\$1)*
- ¼ cup honey *(\$4)*
- ½ tsp. garlic powder *(\$1.50)*
- Salt & pepper, to taste *(\$3)*
- Variety of carrot types *(\$1/pound)*



*Supplies:*

- Measuring cups & spoons (\$10)
- Can opener (\$8)
- Colander (\$6)
- Knife (\$15)
- Cutting board (\$7)
- Blender (\$35)
- Paper plates (\$2/100-count)

*Preparation:*

- Cut the carrots into matchsticks for children to taste test.

*Instructions:*

1. For proper food safety, have all adults and children wash their hands thoroughly before cooking and taste testing.
2. Combine all hummus ingredients in a blender and blend until smooth.
3. Place a paper plate on the table in front of each child.
4. Place a slice of each color of carrot on the plate in front of the child.
5. Add a dollop of dip to each plate, if using.
6. As a class, begin tasting each of the carrots together.
7. Go through the entirety of the carrot taste test together.
8. Enjoy!

*Tips:*

- As stated above, this dip is not necessary in the taste testing of carrots. Get creative! Is there another nutritious dip recipe that you think the children would enjoy dipping their carrots into?
- Stimulate conversation by asking the children what the carrot tastes and feels like.
  - *Examples of questions include:* What sound does the carrot make when you chew? What color is the carrot? Have they tried carrots before? Would they try carrots again?
- Teach children how to give respectful responses, even if they don’t like what they tried. “Don’t yuck my yum!” is a great way of teaching children that they may not

like it, but their friends might so it’s important to be conscious of that. By reinforcing this concept, it helps to teach children about how to give respectful responses. Remember, it can take a child multiple times of exposure before they like a new food.

## Superpowered Vegetable Soup

Adapted from [Chowhound](#)

*Recipe makes about 6 cups*

*Taste testing serving size: ¼ cup*

*Servings per recipe: About 24 servings*

### *Ingredients:*

- 4 tsp. olive oil (\$3/8-oz.)
- 1 medium onion, chopped (\$0.50)
- Salt & pepper, to taste (\$3)
- 4 medium carrots, chopped (\$1/pound)
- 2 medium garlic cloves, chopped (\$2)
- 1 celery stalk, chopped (\$1.50)
- 1 cup peas (\$1)
- 1 bay leaf (optional) (\$3)
- 1 tsp. dried thyme (optional) (\$4)
- 4 cups low-sodium vegetable broth (\$2)
- 1-pound Yukon Gold potatoes, chopped (\$1/pound.)

### *Supplies:*

- Induction burner (\$50)
- Large spoon (\$6)
- 4-quart saucepan & lid (\$20)
- Knife (\$15)
- Fork (\$2)
- Cutting board (\$7)
- Measuring cups & spoons (\$10)
- Paper bowls (\$2.50/42-count)
- Plastic spoons (\$2/100-count)

*Preparation:*

- Chop the onion, carrots, celery, and potatoes.
- Mince the garlic.
- Measure out the ingredients.

*Instructions:*

1. For proper food safety, have all adults and children wash their hands thoroughly before cooking and taste testing.
2. Heat the olive oil in a large pot over medium-high heat.
3. Once heated, add the onion and cook until translucent, stirring occasionally. This will take about 5 minutes.
4. Add the carrots and garlic, and cook, stirring occasionally until the garlic is fragrant, about 2 minutes.
5. Add the celery and if using, the bay leaf and thyme.
6. Add the broth, potatoes, and peas.
7. Let the soup come to a boil, then reduce the heat to low and gently simmer, uncovered, until the potatoes can be easily pierced with a fork, about 15-25 minutes.
8. Season with salt and ground pepper and let cool.
9. While cooling, read one of the recommended carrot themed children’s books.
10. Place a spoonful of vegetable soup into each child’s tasting bowl.
11. Try the soup together as a class.
12. Enjoy!

*Tips:*

- Consider making the soup ahead of time and cooking a smaller batch with the children. Young children have a harder time waiting so having soup for them to taste test immediately after cooking it would be most beneficial.
- Place the induction burner in an area where children are not close to it and ensure that the cord cannot be tripped over.
- Have one child at a time help with measurements and pouring; this reduces the chaos in the classroom with excited children.

- Ask the children about other ways that they have eaten carrots.
- Ask the children about what they like in their soup.
  - *Examples of questions:* Do they have any other ideas of items to add to the soup? Have they tried vegetable soup before? Would they try this soup again?
- Teach children how to give respectful responses, even if they don't like what they tried. "Don't yuck my yum!" is a great way of teaching children that they may not like it, but their friends might so it's important to be conscious of that. By reinforcing this concept, it helps to teach children about how to give respectful responses. Remember, it can take a child multiple times of exposure before they like a new food.



# LOCAL PROCUREMENT

FOR HARVEST OF THE MONTH KITS AT EARLY CARE AND EDUCATION CENTERS

## WHY PROCURE LOCALLY?

- Procuring items from local farms will help to support the local economy and create jobs.
- When produce doesn't have to travel far, it is able to be harvested closer to its peak ripeness causing it to taste better and fresher.
- With less travel time and a sooner harvest date, produce has longer shelf life which helps to reduce waste.
- Children will begin to develop a connection surrounding the origins of their food.

## HOW DO I PROCURE LOCALLY?

- Reach out to your food distributor to ask for local foods.
- Connect with nearby farmers on purchasing from their farm.
- Find nearby farmers markets to purchase local produce from.
- Reach out to local purchasing agencies on procuring local produce.

## RESOURCES FOR LOCAL PROCUREMENT

- Farm'd
  - Local Harvest
  - Georgia Grown
  - The Turnip Truck
  - The Common Market
  - LocalFarmMarkets.org
  - Georgia Organics Good Food Guide
  - Locally Grown: Athens, Atlanta, Augusta, Northeast Georgia
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