

The Farm at Lotus Village

Where Hope Blossoms

With deepest gratitude to:

The Children's Trust
Miami-Dade County
Miami-Dade County Environmental Department
South Florida Health Foundation
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TABLE OF CONTENTS	2
Introduction	3
Background and Need	4
Innovative Solutions	5
Educational Programming	7
Overview	7
Grounding Theories	9
Program Intervention Summary	13
Course Structure	15
Program Evaluation	16
Activities Manual	17
Farm activities	17
Food activities	21
Physical activities	26
Recipes	28
SOURCES	40

Introduction

Lotus Village is a state-of-the-art, comprehensive homeless services facility nestled in the heart of the historic African American district of Overtown, one of the poorest neighborhoods of Miami, Florida¹, itself one of the poorest large cities in the United States.² Lotus Village is home to the Lotus House Women's Shelter ("Lotus House"). Sheltering up to 500 high special needs women and children nightly from across Miami-Dade County, it is one of the largest women's shelters in the country. Based on principles of education and empowerment, Lotus House offers a trauma-informed sanctuary with comprehensive support services, education, tools and resources to heal and empower women and children to reclaim their lives and build the foundation for safer, brighter futures. Among many unique features, Lotus House includes an intake sanctuary, therapeutic children's wellness center, employment and education center, working classroom kitchen, yoga/meditation room, salon, art and activities lab, neighborhood health clinic, and a children's playroom and play spaces throughout. The newest innovation at Lotus Village is a climate-controlled, hydroponic urban garden and science lab for children and families, affectionately called the "**Farm.**" With embedded seed-to-harvest and farm-to-table educational programming, the Farm feeds bodies, minds and spirits on all levels. Everything about the Farm at Lotus Village is groundbreaking, including the fact that its urban farmers, the children and youth of Lotus House, never break ground!

The Farm operates as an innovative children's science lab and urban garden, bringing transparency and sustainability to the production of vegetables with the added benefit of producing high-quality, pesticide-free, fresh vegetables year-round for the supportive food service of those sheltered by Lotus Village. Through fun, interactive, hands-on, educational programming, the Farm offers children and families the opportunity to learn-by-doing in ongoing after-school, summer and weekend activities. Children deepen their understanding of the seed-to-harvest life cycle of plants, share in the wonder of growing and harvesting their crops, explore new tastes, and learn new ways to prepare, eat and appreciate nutritious plant-based foods. In the process, they have the opportunity to build new life skills, confidence and self-esteem; see and reap the fruits of their labor; and celebrate and be celebrated as their harvests are enjoyed by the entire Lotus Village community.

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¹American Community Survey 2017. United States Census Bureau. Retrieved from <https://www.census.gov/programs-surveys/acs>.

² Lipscomb, J. (2017, Aug. 22). *Miami Ranks Second-Worst in Nation for Income and Poverty Level, Census Says*. Miami New Times. Retrieved from <https://www.miaminewtimes.com/news/miami-ranks-second-worst-in-country-for-income-and-poverty-level-census-survey-says-9689540>.

our collaborating advisors and volunteers Dr. Emily Arcia, Dr. Kathryn Villano, and Drs. Cristina Palacios and Catherine Coccia of Florida International University.

Background and Need

Children and families experiencing homelessness are at an extremely disproportionate risk for hunger, malnutrition, dietary inadequacies and the associated health problems of food insecurity and poor nutrition.³ Statistics show homeless children are twice as likely to be hungry as their peers and suffer the long-ranging impacts of malnutrition and dietary inadequacies with adverse consequences to their cognitive development, physical growth, educational success and social and emotional wellbeing.⁴

A pilot study conducted at Lotus House confirmed that hunger and food insecurity were normative in the lives of women and children experiencing homelessness prior to entering the shelter. The baseline survey assessed 110 program participants' hunger and food insecurity in the month before arrival. The majority of those surveyed were subsisting on high fat, high starch, sugary, processed and fast foods – with few vegetables. 58% of women reported running out of food, eating less than they wanted (with 31% not eating for an entire day), and regularly eating foods they deemed “not good for them” because of lack of money. About 60% reported consuming chips, soda, fast food and candy frequently, and 70% reported not consuming enough fruits, vegetables, grains, proteins, or dairy products. Only 16% reported including vegetables in a typical dinner. As measured by BMI, 77% and 32% of women and children, respectively, were overweight, with 48% and 23% in the obese range, a recognized consequence of poor dietary intake.⁵ 15% of children were underweight. Resource-constrained homeless shelters frequently perpetuate malnutrition, add to the problem of obesity, and fail to serve as a model and teaching opportunity for healthy eating. Carbohydrate-heavy meals that are high in fat but low in protein are standard fare at homeless shelters due to cost constraints, lack of funding for supportive services, and the overwhelming number of people served.

In this special project, Lotus House aims to change this dynamic with the Farm at Lotus Village, transforming the trauma of homelessness into a window of opportunity for children and families to build safer, brighter futures. With an innovative, multifaceted approach, the Farm at Lotus Village targets hunger, food insecurity, malnutrition and dietary inadequacies normative in the lives of homeless children and families. It provides a high-quality, interactive learning environment for children and families and

³ Institute for Children, Poverty, and Homelessness. American Almanac of Family Homelessness. (2015). New York, NY.

⁴ (2011). The Characteristics and Needs of Families Experiencing Homelessness. Needham, MA: The National Center on Family Homelessness.

⁵ Fanzo, J. (2019, July 17). *If You're Poor in America, You Can Be Both Overweight and Hungry*. Bloomberg. Retrieved from <https://www.bloomberg.com/opinion/articles/2019-07-17/how-hunger-and-obesity-coexist-in-america?eType=EmailBlastContent&eld=709935f3-fbc1-4c88-ae21-db91fec8a5d3>.

offers an intimate view of the natural world, deepening their appreciation for the importance of plants and vegetables for healthy bodies and minds. It invites them to discover new tastes and experiences even while it produces fresh vegetables to enrich the nutritional content of their supportive food services at the shelter. In this innovative project, we feed bodies, minds and spirits of homeless and at-risk children and youth on every level, so that they may blossom into who they are meant to be.

Innovative Solutions

In the Farm at Lotus Village, we aim to improve the conditions in which children and families experiencing homelessness eat, learn, play and live by offering a fun, hands-on, physically engaging, educational environment in which they seed, nurture, grow and harvest their own fresh vegetables; develop a deeper understanding of and appreciation for the natural world, plant-based foods and the importance of vegetables to their health and well-being; and build life and social skills through their individual and team efforts. In shared learning and play, meals prepared with the produce of their labor, and celebration of their accomplishments, this project is designed to foster the development of healthy relationships amongst homeless children and youth - many with developmental, social and emotional challenges and trauma histories - and their families.

At the same time, the Farm will provide high-quality, fresh vegetables to enhance the nutritional content of the supportive food service for the children and families of Lotus Village. The Farm is intended to promote a healthier environment through highly efficient energy and water production methods for fresh vegetables grown on-site, and offer an innovative and scalable model to enrich many other types of institutional and educational facilities across Miami-Dade County and the nation.

Thanks to its generous funders, Lotus House purchased, installed, assembled and launched the Farm on the grounds of Lotus Village as a working, interactive science lab and urban garden for its sheltered children and families. The Farm was designed and outfitted by the manufacturer with climate-controlled, hydroponic technology for sustainably grown vegetables year-round, including rich varieties of lettuce, spinach, collard greens, bokchoy, beets, carrots, and herbs. This closed loop system uses 90% less water than traditional farming methods, includes an energy efficient automation system for climate control, requires no soil, and obviates the need for harmful pesticides; with vertical growing walls, it is also capable of producing thousands of pounds of vegetables per year.⁶

Lotus House adapted the Farm for its programming purposes and to ensure accessibility for all children and families. The Farm includes a custom seedling area

⁶ Farmhand Knowledge Base, Freight Farms, Inc. According to the manufacturer, the patented vertical column design is the equivalent of two acres for growing purposes. **To learn more, contact us at president@lotushouse.org.**

where children and youth can learn to plant the seeds themselves before transferring them to easy-access, vertical crop columns where plants are fed via a closed-loop hydroponic system that delivers nutrient-rich water directly to their roots. Most crops mature in 6-8 weeks and can be easily harvested by children and youth during their stay in Lotus Village. The produce harvested from the Farm by the children is incorporated in freshly prepared, healthy, nutrient-rich meals provided at the shelter.

To create a guided learning experience for its residents, Lotus House developed special educational programming for this Farm tailored specifically to the needs of its children and families, creating fun-filled, educational, after-school and weekend activities, and regular harvest celebrations for all. The trauma-informed, evidence-based, educational programming is discussed below in further detail.

The Farm will be an experiment in both high-tech farming techniques and educational programming in the context of a homeless shelter. While Lotus House staff underwent specialized training for this special urban garden equipment, no previous farming experience was required. The largest expense of this project was the initial capital investment needed to procure the Farm, which has a useful life of many decades. The savings derived from the direct production of fresh vegetables with this highly energy-efficient technology is projected to exceed the costs of gardening supplies, utilities and program staff once fully operational and stabilized. As always, we wish to express our deepest gratitude to the many community volunteers that have been enlisted to assist with this project, including Hammock Greens.

Educational Programming

Overview

The Farm educational programming has four primary goals: (1) increasing knowledge of plant and nutritional science concepts (“Knowledge”), (2) increasing preference for and consumption of fruits and vegetables (“FV P&C”), (3) increasing time spent in physical activity outside of school (“Physical Activity”), and (4) promoting positive youth development through social-emotional learning (“PYD & SEL”). It accomplishes this through a variety of hands-on activities, wherein students learn the ins and outs of the seed-to-harvest life cycle and farm-to-table sequence, the importance of variety and moderation in the diet, and the role of food in culture and science. In congruence with overarching Lotus House philosophies, the Farm curriculum places special emphasis on the benefits of a plant-based diet and the practice of mindfulness.^{7,8}

Rather than recycle content from the hundreds of pre-existing educational gardening programs, Lotus House developed a brand-new, original curriculum utilizing evidence-based principles and best practices for a variety of reasons. Only a small handful of copyrighted hydroponic gardening curricula currently exist, none of which take place inside a high-capacity, state-of-the-art growing environment such as the one installed at Lotus Village. Moreover, this science lab and urban garden is intended to serve the dual purposes of both educational programming for sheltered children and families, and meaningful support for the culinary center at the shelter. In developing the educational programming, Lotus House was particularly cognizant of the importance of a trauma-informed curriculum specifically adapted to the unique needs of children experiencing homelessness.⁹ The complex trauma histories present in the lives of children and youth sheltered at Lotus House often manifest themselves in a variety of behavioral challenges including ADHD, learning disabilities, developmental delays and more. Evidence-based assessments of Lotus House children upon intake revealed 85% had one or more areas of concern,¹⁰ with 55% showing delay in at least one of five

⁷ Dinu, M.; Abbate, R.; Gensini, G.; Casini, A.; & Sofi, F. (2017). Vegetarian, vegan diets and multiple health outcomes: A systematic review with meta-analysis of observational studies. *Critical Reviews in Food Science and Nutrition*, Vol. 57 (No. 17), pp. 3640-3649.

⁸ Brown, K.W. & Ryan, R.M. (2003). The Benefits of Being Present: Mindfulness and Its Role in Psychological Well-Being. *Journal of Personality and Social Psychology*, Vo. 84 (No. 4), pp. 822-848.

⁹ ICPH 2015.

¹⁰ In ongoing service-driven research, Lotus House utilizes evidence-based measurement screeners at intake to assess children’s needs and mother-child interactions with a view toward offering appropriate child and family supports during their shelter stay. Assessment tools include: *For Children*: Battelle Developmental Inventory Screening Test (Glascoe, 2007), Child and Adolescent Trauma Screen (Sachser, 2016), and Eyberg Child Behavior Inventory (Eyberg & Pincus, 1999); *For Mothers*: Parenting Stress Index 4- SF (Abidin, R.R., 2012), Dyadic Parent-Child Coding System (Eyberg, Nelson, Duke, Boggs, 2004) and Clinical Interview. Internal data is for a 2-year period only ending 7/30/2019, as the study is ongoing.

areas of development (*Battelle Developmental Inventory Screening Test*), 81% experiencing at least one traumatic event (*Child and Adolescent Trauma Screen - Caregivers Report*), and 36% of mothers reporting problem behavior in their children above the 85% percentile threshold (*Eyberg Child Behavior Inventory*). 21% of children are reported to have chronic health issues. The Farm programming extends the trauma-informed, therapeutic environment cultivated by Lotus Village in order to be responsive and sensitive to the varied and high special needs of sheltered children.

Programming takes place at Lotus House after school and on weekends, so fun and activity are maximized and instruction time is minimized. The curriculum seeks to meet mothers, youth, and children of all ages where they are to make healthy eating and living as accessible and entertaining as possible. Activities are designed to engage all ages and utilize a peer mentorship model wherein older children assist younger children, and more experienced attendees assist newcomers throughout the lessons. When appropriate, classes may be divided by age group or broken into different sessions to ensure each child receives adequate attention, opportunity and care.

Grounding Theories

Through comprehensive research into successful nutrition and gardening education programs across the country, a number of theories were identified to inform Farm curriculum development. Each of these theories function within the larger organizational principles of Trauma-Informed Care (TIC) and plant-based nutrition.

Social Cognitive Theory (SCT)

Albert Bandura's well-established theory posits that individuals learn by observing the behavior of others. This learning occurs through a variety of cognitive, motivational, environmental, and affective mechanisms that often result in a behavioral change. A behavioral change is most likely to occur when the learner understands and expects the outcome of a particular behavior, and when they possess a sufficient sense of agency and self-efficacy to achieve that outcome.¹¹

The Farm curriculum makes use of this theory through positive modeling. First and foremost, Farm teachers are trained on modeling appropriate behaviors and attitudes towards plant-based diets and physical activity, and cultivating a therapeutic environment through mindfulness. They will also be briefed on trauma-informed teaching techniques, such as acting with intentionality to build trusting relationships, praising positive behaviors and consistently showing warmth and respect.¹² As mothers become steadily involved in their child's Farm activities and participate in nutrition education classes of their own, reciprocal modeling and shared learning will take place between parent and child.

In addition to modeling, the program targets other specific SCT constructs like positive reinforcement, self-regulation and collective efficacy to increase children's agency and overall self-efficacy. Positive reinforcement will be used in place of any type of punishment, and good behavior will be promoted through the use of non-food, in-class rewards and privileges.¹³ As an incentive, students who attend more than ten unique classes will be honored in a farmer "graduation" ceremony and receive special take-home items from class. The exclusive use of strength-based messaging will inform children of the power of healthy eating and living, and mindfulness-based teaching techniques will facilitate improved self-regulation for positive behavioral change. Collective and self-efficacy will be emphasized through the children's ability to grow and cook food for the entire village.

¹¹ Bandura, A. 1977. *Social Learning Theory*. Englewood Cliffs, NJ: Prentice-Hall.

¹² Ho, Jeannie & Funk, Suzanne. March 2018. Promoting Young Children's Social and Emotional Health. *Young Children*, Vol. 73 (No. 1). National Association for the Education of Young Children.

¹³ Fedewa, A.; Courtney, A. & Hinds, C. (2014). White Paper - The Use of Food As A Reward in

Experiential Learning or “Learning By Doing”

Numerous meta-analyses have identified experiential learning within multicomponent nutrition education programs as a key factor to boosting FV consumption.¹⁴

Interventions that combine gardening with cooking and nutrition education are more effective than either component alone.¹⁵ And as previously mentioned, the high prevalence of developmental delays and learning challenges in children and youth experiencing homelessness, as well as the limited attention spans inherent in after-school programming, require that no time is wasted with lecturing or instruction. Every activity is interactive and enables children to learn through sensory experiences, verbal communication, and physical movement.

Social Ecological Theory

Social Ecological Theory postulates that in order to understand human development, one must consider the entire ecological system in which learning occurs.¹⁶ It contextualizes an individual’s behavior and choices within the broader spheres of interpersonal relationships, organizational/institutional environment, community setting, and policy framework, in that order. In their most recent dietary guidelines, the U.S. Department of Agriculture states that the more social layers involved in a nutrition intervention, the more impactful its outcomes.¹⁷

Lotus Village works tirelessly to improve the status of women and children experiencing homelessness at every social-ecological strata. The Farm classes are embedded within a larger organizational initiative aimed at improving the health and wellbeing of all Lotus House guests - in addition to the already largely plant-based meals provided at the culinary center, educational messages have been posted around the central living and dining center at Lotus Village (“Pavilion”), often spotlighting topics explicitly mentioned throughout the Farm curricula. Lotus House sponsors a variety of community events promoting preventive health, including the Back-to-School Block Party and Overtown Neighborhood Health Initiative. Lastly, Lotus Village works closely with Miami-Dade County through The Children’s Trust, Domestic Violence Oversight Board, and the Homeless Trust on a policy and advocacy level, and strives to be a national model for ending homelessness through holistic principles and best practices based on education and empowerment. Again, the intention is to meet families experiencing homelessness

¹⁴ Jarpe-Ratner, E., Folkens, S., Sharma, S., Daro, D., & Edens, N.K. (2016). An Experiential Cooking and Nutrition Education Program Increases Cooking Self-Efficacy and Vegetable Consumption in Children in Grades 3-8. *Journal of Nutrition Education and Behavior*, Vol. 48 (No. 10), pp. 697-705.

¹⁵ Meiklejohn, S.; Ryan, L.; & Palermo, C. (2016). A Systematic Review of the Impact of Multi-Strategy Nutrition Education Programs on Health and Nutrition of Adolescents. *Journal of Nutrition Education and Behavior*, Vol. 48 (No. 9), pp. 631-646.

¹⁶ Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, Vol. 32 (No. 1), pp. 513-531.

¹⁷Chapter 3: Everyone Has A Role in Supporting Healthy Eating Patterns, Dietary Guidelines for Americans 2015-2020: Eighth Edition (Pages 63-72). Washington, D.C.: U.S. Department of Health and Human Services & U.S. Department of Agriculture.

where they are, and provide all the necessary social-emotional-ecological tools to best facilitate healthy eating and living.

Mindfulness and Mindful Eating

The benefits of mindfulness and mindful meditation are well-documented and have wide-ranging impacts on stress reduction, decreased feelings of depression and anxiety, less emotional reactivity, and improved empathy and self-compassion.¹⁸ The practice of mindful eating - which emphasizes eating when hungry, stopping when full, listening to internal cues, and exploring the sensory experience of eating - has been shown to boost FV consumption, foster positive body image in adults and children,¹⁹ and bolsters the concept of dietary moderation to prevent overeating and obesity.²⁰ Mindfulness principles and activities are interwoven into every session to help children further appreciate plants and the natural world, their bodies, and the wonder of food. The Plant Yoga was designed by Lotus House staff with extensive yoga training and experience, and the mindful eating activity was adapted from a publication by the American Diabetic Association.²¹

Mindfulness has been identified as a powerful tool to enhance self-regulation skills in children.²² The Child Mind Institute defines self-regulation as “the ability to manage your emotions and behavior in accordance with the demands of the situation... it is a set of skills that enables children, as they mature, to direct their own behaviors towards a goal, despite the unpredictability of the world and our own feelings.”²³ Whereas the fear and lack of safety inherent to childhood trauma hamper the development of executive functioning - leading to emotional dysregulation and problematic behaviors - mindfulness and meditation enhance this functioning by practicing focused attention, emotional regulation, and self-awareness.²⁴

Positive & Strength-Based Messaging

In addition to its role as a SEL tool, positive messaging - encouraging healthy behaviors rather than discouraging unhealthy behaviors - has been advocated by the American

¹⁸ Davis, D.M. & Hayes, J.A. (2012). What are the benefits of mindfulness? *Monitor on Psychology*, Vol. 43 (No. 7), page 64. American Psychological Association.

¹⁹ Wylie, A., Pierson, S., Goto, K., & Giampaoli, J. (2018). Evaluation of a Mindful Eating Intervention Curriculum Among Elementary School Children and Their Parents. *Journal of Nutrition Education and Behavior*, Vol. 50 (No. 2), pp. 206-208.

²⁰ Jordan, C.H., Wang, W., Donatoni, L., & Meier, BP. (2014). Mindful eating: state and trait mindfulness predict healthier eating behavior. *Personality and Individual Differences*, Vol. 68, pp. 107-111.

²¹ Nelson, J.B. (2017). Mindful Eating: The Art of Presence While You Eat. *Diabetes Spectrum*, Vol. 30 (no. 3), pp. 171-174.

²² Garey, J. (n.d.). The Power of Mindfulness. Retrieved from <https://childmind.org/article/the-power-of-mindfulness/>.

²³ How Can We Help Kids with Self-Regulation? (n.d.). Retrieved from <https://childmind.org/article/can-help-kids-self-regulation/>.

²⁴ Greenberg, MT. (2006). Promoting Resilience in Children and Youth. *Annals of the New York Academy of Sciences*, No. 1094, pp. 139-150.

Dietetic Association to reduce confusion about nutritional concepts and promote a “total diet” approach.²⁵ Because of the vast age range of students at the Farm and the limited nutrition education backgrounds, messaging must be consistent, simple, and void of shaming.

The Power of Food

Lastly, the Farm capitalizes on the evolutionary benefits of sharing food on social bonding and belonging, and the power of food to unite people of all ages.²⁶ Youth gardening programs can boost social connectedness,²⁷ and numerous studies reveal that simply sharing the same food builds trust among those eating it.²⁸ In every lesson at the Farm, children will communicate with peers, work together as a team, prepare food collaboratively, and enjoy dishes “family style.”

²⁵ Academy of Nutrition and Dietetics. (2013). Position of the Academy of Nutrition and Dietetics: Total Diet Approach to Healthy Eating. *Journal of the Academy of Nutrition and Dietetics*, Vol. 113 (No. 2), pp. 307-317.

²⁶ Neely, E., Walton, M., & Stephens, C. (2014). Young people’s food practices and social relationships: A thematic synthesis. *Appetite*, Vol. 82, pp. 50-60.

²⁷ Fifolt, M., Ferguson Morgan, A., & Ripple Burgess, C. (2018). Promoting School Connectedness Among Minority Youth Through Experience-Based Urban Farming. *Journal of Experiential Education*, Vol. 41 (No. 2), pp. 187-203.

²⁸ De Backer, C.J.S., Fisher, M.L., Poels, K., & Ponnet, K. (2015). “Our” food versus “my” food: Investigating the relation between childhood shared food practices and adult prosocial behavior in Belgium. *Appetite*, Vol. 84, pp. 54-60.

Program Intervention Summary

<p>Target population</p>	<ul style="list-style-type: none"> - Homeless or low-income children and youth ages 3-18 - High special needs (developmental and behavioral disorders, histories of trauma and abuse)
<p>Average “dose” and reach</p>	<ul style="list-style-type: none"> - 60-minute class - Classes offer 5x per week, 50 weeks per year, 250 sessions annually - Predicted 300 children attending 1 class, 150 attending 3 classes, and 75 attending 6 classes
<p>Guiding theories</p>	<ul style="list-style-type: none"> - Social Cognitive Theory - Experiential learning - Social Ecological Theory - Mindfulness and mindful eating - Positive/strengths-based messaging
<p>Target outcomes</p>	<p>Knowledge, FV P&C</p> <ul style="list-style-type: none"> - Basic knowledge of: plant parts and the seed-to-harvest life cycle; the farm-to-table sequence; nutrition and cooking - Increased preference for and consumption of FV <p>SEL & PYD</p> <ul style="list-style-type: none"> - Increased mindfulness - Improved self-regulation and self-efficacy <p>Physical Activity</p> <ul style="list-style-type: none"> - Increased time spent in physical activity outside of school
<p>Learning objectives and covered material</p>	<p>Science concepts:</p> <ul style="list-style-type: none"> - Plant life cycle and reproduction - Properties of the food system - Phase change (cooking) - Lab safety - Human relationship to the environment - Food processing - Structure and function of seeds, plants, and animals - Plant properties and nutrients - Interactions among living organisms (ecology) <p>Health concepts:</p> <ul style="list-style-type: none"> - Nutrition for energy and growth - Physical activity for wellbeing - Making healthy choices - Balance and variety in the diet - Food safety <p>Social-emotional/cultural concepts</p>

	<ul style="list-style-type: none"> - Mindfulness and mindful eating - Self-regulation and moderation - Teamwork and mentorship - Food as social bonding and care - Cultural and historical contexts of food
<p>Activity categories</p>	<p>SEL & PYD activities</p> <ul style="list-style-type: none"> - Interpersonal communication and group discussion - Mindful eating exercise - Family involvement during snack time - Graduation ceremony <p>Physical activity</p> <ul style="list-style-type: none"> - Yoga - Relay activity <p>Garden maintenance - every class</p> <ul style="list-style-type: none"> - Planting seeds - Transplanting - Harvesting - Cleaning and maintenance <p>Food prep and cooking</p> <ul style="list-style-type: none"> - Food and kitchen safety - Cutting and mixing - Juicing, blending, processing - Cooking with water - Cooking with oven - Cooking with stove - Harvest celebration feast - Clean-up

Course Structure

The curriculum was designed to accommodate the nature of shelter stays at Lotus House while still permitting the possibility of sound program evaluation. The average duration of stay within the shelter is six months, but can differ significantly in either direction. A myriad of individual, family, health and other factors in the lives of women and children experiencing homelessness make program attendance at the shelter highly variable, and one cannot reliably expect all students present in one class will return for a second or third. Also worth noting is the fact that the shelter itself serves as both a home and after-school program for the kids; children are eager to kickback and play outside of the traditional confines of a school setting.

Accordingly, the curriculum has been organized around a single core lesson structure that can be modified with various activities to accommodate the size, age, timing and resource configurations of each unique class. In this way, any student, regardless of how many sessions attended, will be exposed to the fundamental concepts of the seed-to-harvest life cycle and farm-to-table system in a single class while still achieving enough variety to keep every day new and exciting.

We hope that the Farm curriculum can be easily adopted by any after-school setting due to its flexibility. In addition, as Lotus House shares its innovative model of ending homelessness nationally, we hope the Farm sows seeds of hope and change to educate, empower, and uplift the millions of homeless and special needs children in shelters and schools across the country.

Activities Manual

Gardening activities

Planting

Overview:

Students embark on the first chapter of their plant journey by planting seeds at the work table. First, they retrieve one of the seedling trays and fill them with the seedling “plug” grow medium, then place a single seed in each hole using a cup of seeds and tweezers. Students always wear gloves during farm activities and may wear an apron if desired. Always label new trays with the type of seed, the date of planting and the name(s) of the student(s) who planted.

Suggested script:

Seeds are planted inside a small pod, made of recycled coconut husk fibers. We call them plugs because they get “plugged” into the tray. Can you guess how many plugs go to a single tray? There are 288 holes. That’s a lot of seeds! Every single plant you see inside the farm right now started as a seed. Usually seeds are planted in soil, but our Farm is soilless, so we use small pods that look and feel like soil to give the seeds their stable place. This “place” stays with the plant all throughout its farm journey from tray to wall to harvest. Our plugs are squishy and spongy so that they can soak up as much water and nutrients as possible. Make sure you only put one seed in each hole so that each plant has its own cozy room and enough space as possible to grow big and wide. It’s okay if you put two in one, but then the seeds have to compete against each other for the space and might not grow as large.

Once the tray is completely planted, it stays under the humidity dome so that it has extra moisture for its roots and shoots to explore and sprout out of the seed coat. This is called germination. It then gets the dome removed after the first week to give it some fresh air and stays there for another two weeks. The trough fills with water that contains all the nutrients the plant needs to grow. Usually, a seed has to search out and suck up all its nutrients from the soil, but here in the farm we have special tanks and computers that put the exact amount of nutrients into the water for the plant to grow. That way, it doesn’t have to use energy trying to find nutrients and can grow much larger and faster. We’re going to put a piece of tape on the end of the tray with today’s date and your name so we know when and who planted it!

Transplanting

Overview:

Students transfer the sprout plugs from tray to wall. A student, with the help of the teacher, removes one of the panels from the wall and lays it on the work table. As a team, students and teacher gently remove the sprouts from their tray and arrange them along the panel according to guide tape on the table. Students then insert the plugs into the channels, label the completed panel and hang it back up on the wall where it stays until harvesting. This part is a little challenging for younger folks, so it's recommended that this activity be reserved for students ages 8 and up.

Suggested script:

I have a special job for you! This part is a little harder for younger kids, so I need the big kids' help. Be sure to wear gloves so that the plug stays clean and safe on its new journey. Once the sprout has grown big enough after a few weeks, it can be removed from the tray along with its pod and transplanted into the wall where it has more space to grow. It's really important that we put it in the wall the right way so that it gets enough water. First we take the plug out of the tray using some tweezers, then lay them out on the wall so that they're all equally spaced apart. When you're ready to insert the plug, use two fingers to pull the foam and white fabric towards you. This fabric is what soaks up all the water and gives it to the sprout, so it's super important that the plug be snuggled close up against it! Gently pinch the plug from the sides to insert it, rather than pushing from the top, and lastly push it a little bit to the left so that when the panel is hanging vertically, water can easily drip from plug to plug. The pod must also be sticking out slightly so that the plant doesn't get suffocated. Make sure we leave about six inches at the very top and bottom of the panel so that they have plenty of space to grow big and wide. Once we hang it back up, the plant stays there for five weeks until we harvest! Let's make sure we put a piece of tape on the edge of the panel with the date of planting, today's date (date of transplanting) and your name!

Since we're inside a container and no sunlight gets in, the farm has to create its own sunlight. The light panels have two colors of light that scientists have decided are the best to help the plant grow bigger and more quickly. The lights are really bright and can hurt our eyes, so they only turn on at night when we're not here. So while we're sleeping, the plants are awake!

Harvesting

Overview:

At the workstation, students will remove fully grown plants from the vertical panels and collect the harvested greens to take to the kitchen. All plugs will be set aside during the

process for later compost. The two most well-behaved students get to carry the bins of greens and take them to the kitchen for weighing and counting. Be sure to make this clear throughout the session, and praise the specific positive behaviors that you appreciate.

Suggested script:

After a total of eight weeks the plants are ready to be harvested. Does anyone remember how we get that number? We have three weeks in the seedling area, then five weeks in the wall. Harvesting is the easiest and funnest part of the whole plant journey. As always, we want our plants to stay clean and safe, so be sure to put on a pair of gloves first. Instead of pulling from the top, you want to stick your finger all the way underneath the plant and pluck the entire plug out of its column. This way, we take the whole plant out rather than ripping off all the leaves and making a mess. While gently holding the plant with one hand, twist the plug until it rips off and set it aside in a pile to be composted. Place the greens in a bin, which we'll take to the kitchen. Does anyone know what a compost is? Basically, we take all the plugs and or dead plants and mix them together with a little heat and water to create new soil. This new soil can then be used to grow all new plants!

Maintenance and tending

Overview:

You might be surprised to find out that students love taking care of and cleaning the farm itself. This is good, because we want to maintain a clean lab environment and ensure the farm's longevity. There are a range of maintenance activities that can be done and used as teaching opportunities. Students can identify and remove algal growth throughout the farm, check plants for diseased leaves or pests and clean the seedling trough area of debris. The work area must be swept every day after activities, and debris can be added to the compost bin.

Suggested script:

Does anyone want to help with a special job? Great! Do you see that green stuff growing over there? This is called algae. Algae is usually a single-celled organism that grows in water. Not all algae is harmful, but if we don't clean it up and keep it in check, it would grow everywhere and take nutrients from the plants. This is also why we must keep the farm clean and avoid any spills - algae will grow anywhere there's water. To clean it, wipe it up with a cloth until all the green is gone, then spray it with some sanitizer to keep it from growing back.

Script 2:

Today we are going to tend to the plants. Does anyone know what tending means? It's another way of saying that we will take care of the plants and check on them to make sure they're growing their best.

Be sure to look at all the leaves - especially the outermost ones - on the heads of lettuce. Do you see any brown, crispy edges? What about any droopy, wrinkled leaves? Usually if you see these, it means that part of the plant isn't getting all the nutrients it needs, or it's blocked from the light by other leaves. If you see any of these, gently pluck them off and add them to the compost. When we remove the dead leaves from plants, it frees up more food and resources for the plant to grow bigger and healthier. Plus, the dead leaves are a great addition to the compost.

Composting

Overview:

As mentioned throughout this curriculum, almost all "waste" from the farm is fully compostable. The seedling plugs are made from peat moss and coconut husk fiber, and inedible greens decay rapidly. Lotus House opts to keep three bins in the farm at all times - trash, laundry and compost - and keeps a separate compost tumbler outside of the farm. It is important to routinely remove compost from the farm to prevent pests. Composting is an excellent educational opportunity to talk with the children about food waste. Leftover plant foods from any kitchen activities are also collected.

Suggested script:

Does anyone know what composting is? Composting is a way of turning food and plant waste into soil. We can then use this soil to grow new plants! Any organic material, meaning anything that comes from plants (not animals) can be composted.

Did you all know that 40% of all food grown in our country ends up in the trash? That's a lot of food waste! This is bad because as you can see from the farm, it takes a lot of time, nutrients, water and light to grow all this food. All of that gets wasted when we throw it away. And when it sits in a landfill, it rots and releases lots of greenhouse gases that heat up the planet. When we compost, we can actually do our part to reduce food waste and global warming. We make sure that instead of wasting our leftover food, we make it useful by turning it into soil that helps grow new plants.

We use a compost tumbler. Here, we're going to add all our plugs, plant scraps and food scraps. We want to take the time to break all of this stuff up into the smallest pieces possible. This helps it break down faster. Chop things up or pull them apart with your hands, then add it to the tumbler. Depending on how it looks, we might add a little water or things to dry it up, like newspaper shreds or sawdust. We then close it up, and

tumble it a few times a week to mix it all together. Who wants to turn the compost? Let's all take turns! It's a little heavy, so two people at a time. You can do it!

Food activities

Farm Stand

Overview:

The Farm Stand consists of a wooden cart on wheels with after-school snacks, crop samples from the farm, educational coloring pages and nutrition infographics.²⁹ This special outreach and engagement tool brings the contents of the farm to the entire shelter. Guests of all ages explore new tastes, and students play the role of a real farmer by showing off their knowledge about what they've grown to "sell" to new customers.

Mindful Eating Exercise³⁰

Overview:

In this activity, students travel through each of the five senses to deepen their appreciation for the plant-based foods they helped grow and prepare. The children are always eager to taste their food immediately after harvesting or cooking. This short activity is a great way to mindfully slow them down and explore multiple aspects of what and how they eat.

Suggested script:

I want you to imagine that you're an alien who just arrived on Earth for the first time ever. Everything is new, and you know nothing about food, plants, or humans. Take a deep breath and let your body relax.

Feel the leaves in your hands. How do they feel against your skin? Are they heavy or light? Are they sharp or soft? What is the texture?

Give the leaves a good look. Are there parts that are shiny? Is it dull? How would you describe the colors? What does the surface look like and what is its texture?

Smell the leaves, and think about how the smell makes you feel.

Rub the leaf gently next to your ear and listen to the sound it makes.

²⁹ Coloring pages purchased from Experience Delicious LLC. For more information, visit www.experiencedeliciousnow.com.

³⁰ Nelson, J.B. (2017)

Place one of the leaves between your lips, but not completely in your mouth yet. How does this make you feel?

Go ahead and put the rest of the leaf in your mouth. Roll it around a bit before chewing. What is the taste? What's happening inside your mouth? Do you start to feel hungry?

Slowly begin to chew the leaves, thinking about how every bite is different. How does the leaf move inside your mouth? How long does it take to break down? How does the flavor change?

Once you're ready, go ahead and swallow the leaf. Close your eyes and take a breath. How do you feel?

Repeat these steps and finish the rest of the leaves if you'd like. If not, you can drop them in the composting bin.

Cooking and snack time

See "Recipes" section for cooking session details and proceeding recipe cards with talking points.

Physical activities

Plant Yoga

Overview:

This children's yoga sequence is designed around the plant life cycle for non-fruit-bearing plants (i.e., most crops in the farm). Poses are custom-designed for this activity, but relevant postures include (in order): child's pose, seated forward fold, prayer position, seated mountain pose, standing forward fold, mountain pose, cactus.

Suggested script:

Everyone grab a yoga mat and spread out to arms' distance apart. First, let's shake out all our extra energy! Shake your arms, shake your hips, shake your head, stomp your feet, and stretch your face out like you're roaring like a lion! Let it all out!

Okay, so I have an important question. Can anyone tell me what a seed is?

Seeds are the small but mighty beginnings of a plant. Can anyone tell me how they become a plant?

Seeds have some stuff packed inside of them to help them survive in the ground, but just like humans, they need some basic things to grow and thrive.

The first thing that a seed needs to turn into a plant is a safe place. Once they've found the right place in the ground, they stay there forever unless someone or something moves them. So sit down firmly on your mat with your knees to your chest, tucking your chin between your knees. You're a small packed seed, so give yourself a big hug and squeeze tight! Maybe roll around a bit on your butt before you settle in a comfy position.

The next thing seeds need is liquid, or water. Once the seed gets wet inside the ground, it pops open and starts sending out its roots and shoots. We're going to pretend that our legs and toes are the roots, and our hands and fingers are the shoots. It's really dark underground, so the roots and shoots have to do some exploring. Stay seated on your booty, and slowly step out your legs in front of you like they're feeling the soil for the first time. Feel your heels root into the ground, wiggle and point your toes, and flex them high towards the ceiling. Let your arms wiggle and explore a bit too, then crawl your fingers towards your toes until you're bent over your legs and touching your toes. Count to three, then walk your fingers, hands, and shoots back up towards your sides until you're sitting like we were before exploring.

Once the roots have spread out far and wide, the shoot starts to go up to poke its head out of the ground. It does this to get air so it can breathe. Sit tall with your back straight,

like a string is attached to your head and pulling you up. Slowly lift your arms until your hands are touching over your head, then reach as high into the air as you possibly can! Keep your hands in a prayer position and slowly bring them back down until your thumbs are touching your chest. Now that our shoots are above ground, we're going to take three deep breaths so we can drink in all the yummy air around us. Breathe in slowly through your nose and feel your tummy and chest get bigger with air, then deflate again as you breathe out. Every time you breathe, the air travels all the way from your head down to your roots. Do we feel calm and strong like the brave little plant?

A plant can't become big and beautiful overnight, so it needs all the nutrients in the soil around them and lots of time to keep growing bigger and taller. We're going to stand up now, but not all the way just yet. Stay folded over your legs and let your hands hang over your toes; sway side to side a bit if you would like. That string attached to our heads earlier is right between our shoulders now. Let it slowly pull you up until standing. Make it the slowest thing you've done all day! Plants take weeks or months to grow, so they need a lot of time.

Once you're standing, adjust your feet so that they're spaced about shoulder distance apart. Let your knees bend a little bit so your legs are strong but relaxed. Feel all four corners of your feet rooted into the ground, keeping you planted and sturdy with your back tall. This is called mountain pose. Whenever you're feeling stressed or scared, you can always use mountain pose and focus all your attention on your feet rooted into the ground below.

Bring your arms overhead again and feel your whole body stretch out as you reach for the sky! Grab and pull down as if there were handlebars hanging above you, bending your arms into right angles. Tighten your fists and squeeze hard, then let your arms relax and open your palms like you're holding a plate. Our hands are the leaves of the plant, and they absorb all the sunlight shining down on them so they can get their energy. Focus on your hands, with your palms open and fingers stuck together. Can you feel the heat and energy going into them?

Let's focus again on our big strong roots. They drink up all the water and nutrients in the ground. Feel the strength and power in your roots! Then, our big strong stem carries all those water and nutrients up and throughout our whole body, out to our leafy hands. And while that's happening, our big leafy hands soak up all the air and sunlight and give its power back to the stem and roots.

The whole plant is working together to stay healthy and strong, just like how our human body uses all its parts to work together to stay healthy and strong! Do you feel all the magical plant power running through your body?

Good job everyone! Give yourself a pat on the back or give your neighbor a high-five.

Plant Yoga Extension

Overview:

An extension to the previous yoga sequence to include fruit-bearing plants. Relevant poses include (in order): neck stretch, upper body twist and forward fold.

Suggested script:

Now that our whole plant body is working together, we can grow a big flower on our heads! You can be any flower you like - sunflowers, roses, daisies, lavender. Pick your favorite and imagine its bright, beautiful colors.

Plants do this really cool thing where they can turn their leaves or flowers towards the sun to get as much light as possible. Imagine the sun is on your left side - turn your head and take your chin towards your left shoulder, still holding up the imaginary plate with your leaf hands. Now the sun is setting, so it's on our right side - turn your head and take your chin towards your right shoulder. How does that feel on your neck? Now the wind is blowing all around us, so gently sway your body from side to side, wave your leafy arms, and turn your head from side to side. Have you ever been outside in the spring and seen a layer of yellow powder on your car or on the leaves of a tree? That's called pollen, and plants share their pollen with each other during something called pollination. Keep letting the wind blow you from side to side, and twist the upper half of your body at your hips. Shake your head and hair. Raise your arms out wide and gently swing them until you and your neighbor are high-fiving each other. You're exchanging pollen!

Now that our flower has a bunch of different kinds of pollen, it can turn into a fruit or vegetable. Did anyone here know that every fruit or vegetable you've ever eaten came from a flower? While the fruit grows, your head gets heavier and heavier, hanging from the stem of your neck. Let your head fall backwards on its little stem, then fall towards the front with your chin towards your chest. Bend over your legs and let your heavy fruit head start to fall to the floor. Cross your arms and grab your elbows, swaying back and forth while your fruit hangs.

Eventually, the fruit falls to the ground and inside is a big seed that starts the cycle over. Let's turn back into seeds and give yourself a big hug!

Farm-to-Table Relay

Overview:

This relay game describes the farm-to-table sequence and how the Farm cuts out some steps and their associated impacts on our environment. This activity requires five students. Depending on how many more/fewer students there are, there will either be a

single group competing against their own time, two groups competing against each other, or props used as a substitute for student players. Students play the role of farmer, distributor, grocery store employee and consumer.

Suggested script:

How do plants that grow in the ground get to our dinner table? Do they just magically appear on the shelves on the grocery store or onto your plate?

To learn how plants get from the ground onto our plate, we're going to do another activity. I need some volunteers to play different parts. Who wants to stay a plant? Who wants to be a farmer? Distributor? Grocery store worker? Consumer?

First, the farmer is going to pull the plant out of the ground and sort it into a box.

Next, a truck driver, called a distributor, arrives to take the box of plants and deliver it to the grocery store. ("Distributor" role pushes box of "plant" towards the "grocery store worker.")

Once the plant gets to the grocery store, an employee needs to put it on the shelves so shoppers can see it. ("Grocery store worker" lifts "plant" from box and onto a chair, or "shelf.")

Once the shopper picks out the plant to go in her cart, she buys it and takes it home to cook for her family. ("Consumer" lifts "plant" off chair, puts a sticker on his/her/their forehead, and sets them down on a plate on the ground).

And that's how a plant gets from the farm to the table! Good job everyone! Now we're going to do the exact same thing again, but I'm going to time it and see how fast you can do it. If you keep coming back to class next week or the one after that, we'll see if you can go faster. (Repeat activity and record/share time).

Do you all know where our Farm is here at Lotus House? It's the big green and white box in the parking lot outside the glass doors by the elevator. Since this farm is located here at Lotus House, can anyone tell me which steps from our activity we can get rid of? Solicit answers, give praise, etc.

Since the Farm is here onsite, the farmers (all of us) can skip distribution and shopping and take the plants straight to the kitchen. Pretty cool, right? Can anyone tell me why this is a good thing?

Skipping those two steps saves a lot of time and money, and it's better for our planet because we don't have to drive our cars around.

Close or Far Game³¹

Overview:

This activity challenges students to distinguish between whole and processed foods by arranging them in order of how “close” or “far” they are from their whole plant form.

Divide students into groups of four. Provide each group with a food collection (e.g. whole carrots, canned sliced carrots, V8 vegetable/carrot juice, and carrot cake mix; apples, pre-sliced apples or dried apples, applesauce, apple juice, apple-flavored candy; rice, rice cakes, rice krispie treats, etc.). Instruct each group to organize their food products in order from most whole to most processed in “relay” style with one student at a time. If they arrange them incorrectly the first time, discuss with them what might be wrong.

Suggested script:

Has anyone ever heard the term “processed food”? Who can tell me what that means? Processing is just what it sounds like - foods in their original, whole form are processed, or changed into something else. This processing can be chemical or mechanical. For example, an orange can be changed mechanically by squeezing it into a juice. It can also be changed chemically by adding ingredients that make it last longer. Every time a food is processed, it becomes less fresh and loses some of its nutrients.

There are lots of ways to process foods and not all of them are bad. However, some processed foods are less nutritious than others. Generally, the more processed a food is, the less nutritious it is. I’m going to give you a few different types of food that all originated from the same plants, and I want you to arrange them in order of how close or far they are from this original plant form.

³¹ Close or Far Game adapted from Texas Sprouts Student Lesson 2 - Whole vs. Processed Food & Food Systems. For more information, visit www.txsprouts.com or contact txsprouts@gmail.com.

Program Evaluation

Evaluation is the second phase of this project, and will not be fully determined until after six months of classes when curriculum is fully refined.

The unique nature of residency at Lotus House restricts available impact evaluation tools commonly used in conventional nutrition education settings. As previously mentioned, program attendance is highly variable. Also, guests have only a small refrigerator in their rooms and no cooking appliances - all food is prepared and served by the Culinary Center. Any long-term follow-ups post-exit would prove particularly burdensome, as alumni of Lotus House often change addresses and phone numbers for personal safety reasons. Due to these constraints, longitudinal assessments of changes in anthropometric or biometric markers, grocery shopping behaviors, cooking, and meal preparation by mothers, children, and family are excluded from the evaluative framework.

Accordingly, The Farm is limited to short-term evaluation tools spanning each child's total attendance. Children attending one lesson only will serve as the control group, while those finishing six lessons or more will serve as the experimental using pre- and post-tests. Lotus House anticipates an annual approximate program participation rate of 300 children attending at least one class, 100 attending half of classes, and fifty attending all six classes in a given year.

The four target outcomes will principally be assessed using pre-existing, publicly available, independently validated, and peer-reviewed survey tools. The Knowledge, Attitudes, and Behavior Survey (KAB) provides a combined assessment of Knowledge, FV P&C, PA, and dietary self-efficacy, as does the Kids Activity and Nutrition Questionnaire (KAN-Q). Mindfulness will serve as a proxy measure for self-regulation and social-emotional skills using the Child and Adolescent Mindfulness Measure (CAMM) as well as the Mindful Eating Questionnaire for Children (MEQ-C). If desired, separate physical activity surveys exist - the Physical Activity Questionnaire for Children (PAQ-C) and Previous Day Physical Activity Recall (PDVAR).

However, it is imperative that evaluation be as seamlessly integrated and least burdensome as possible due to the special needs and limited attention spans of the study population. Surveys may instead be conducted in interview format, or age-adapted with the use of pictorial recall and shortened hedonic scales. Additionally, non-survey evaluative tools like plate waste analysis, taste test voting, behavioral observations, work samples, achievement of personal health goals, interviews or focus groups may be substituted. Again, these lessons take place during after-school hours and are intended to be as fun and engaging as possible. The aforementioned questionnaires, their validation studies, and other alternative evaluative tools are included at the end of this program packet.

Recipes

As previously stated, many recipes prepared will be dishes regularly served in the Culinary Center to enhance the social-ecological component of programming. These recipes include simple, whole, fresh, plant-based ingredients. Recipes will feature crops grown in the farm whenever possible. Students will also learn to prepare healthy snacks for themselves and basic cooking skills like chopping, mixing and blending with increasing difficulty as appropriate.

Most cooking activities will take place in the Pavilion rather than the kitchen to minimize safety hazards and comply with codes. Occasionally, under heavy supervision from staff and volunteers, students will venture into the kitchen to stir soups, place pans in the ovens, etc. Safety measures will be taken wherever possible, including the purchase of child-safe knives.

Lotus House staff will document and compile signature Culinary Center recipes for eventual publication as a cookbook. This cookbook can be presented as a welcome home gift to guests exiting the shelter, during quarterly graduation ceremonies to students completing six or more classes, or as a fundraising and public relations tool.

Occasionally, the Farm may host visiting chefs from partner businesses and organizations to lead special cooking sessions, for example breadmaking with Zak the Baker, coffee brewing with Panther Coffee, or baking with Bunnie Cakes.

Snacks

CLASSIC HUMMUS

Ingredients:

- 1 15-ounce can of garbanzo beans, drained with liquid set aside
- 1 tablespoon olive oil
- 1 clove garlic, chopped
- 1 tablespoon of fresh lemon juice, or juice of half of one lemon
- ½ teaspoon ground cumin
- ½ teaspoon salt

Directions:

1. Blend all ingredients in a food processor until smooth. Add drained liquid gradually to achieve ideal consistency.
2. Add additional lemon juice, salt or pepper as desired.
3. Serve as a dip with your favorite pita bread or chopped vegetables, or add to sandwiches or wraps!

Fun fact:

A rose by any other name would smell as sweet! Chickpeas have many names around the world including garbanzo beans, egyptian peas, and chana dal.

Hot tip:

Not all olive oils are created equal! “Extra virgin” means the olives were pressed cold, while most standard olive oils use heat. Because of this, extra virgin olive oil (or EVOO) usually has a stronger, fresher flavor.

Ask the fam:

You can create any new hummus flavor by adding peppers, veggies, beans, or spices. What’s your ideal flavor of hummus?

CHUNKY GUACAMOLE

Ingredients:

4 avocados
1 small tomato, diced
½ small onion, chopped
1 clove of garlic, crushed
3 tablespoons cilantro, chopped
1 jalapeno, chopped (optional)
1 lime, juiced
Salt and pepper to taste

Directions:

1. Peel and pit avocados. Mash contents inside a bowl until smooth and pasty.
2. Mix in tomatoes, onion, garlic, cilantro, and jalapeno.
3. Add lime juice, salt and pepper gradually to taste.
4. Serve with your favorite tortilla chips, bell peppers, or chopped veggies!

Fun fact:

The name guacamole comes from the Aztec dish “ahuaca-molli” first prepared hundreds of years ago.

Hot tip:

Turn up the heat in your guacamole by adding your favorite pepper or jalapeno, or cool it down by adding chopped cucumbers and tomatillos.

Ask the fam:

Do you prefer your guacamole chunky and full of veggies, or smooth and spreadable?

STOVETOP POPCORN

Ingredients:

¼ cup yellow corn kernels
3 tbsp olive oil
Salt and pepper to taste

Directions:

1. Heat oil in a pot over medium heat until sizzling.
2. Add kernels, cover, and allow to pop.
3. Remove from heat when there is at least three seconds between each pop.
4. Season as desired with salt and pepper.

Fun fact:

Corn kernels “pop” because the water inside them starts boiling and expanding into a gas, eventually bursting open the kernel skin. Popcorn is science in action!

Hot tip:

Most store-bought microwave popcorn contains hydrogenated oils with trans fats that are harmful to heart health. Homemade stovetop popcorn is therefore often healthier and allows you to experiment with different flavors using nutritious oils like olive oil, coconut oil, and vegetable oils like canola or peanut.

Ask the fam:

Have you ever made popcorn on the stove before? Which do you think tastes best - microwave, stovetop, or movie theater-style?

GREEN SMOOTHIES

Ingredients:

1 banana
1 cup frozen strawberries
1 cup frozen blueberries
1 cup frozen cherries
1 cup fresh spinach
4 ice cubes
½ cup orange juice
⅔ cup plain or vanilla yogurt
½ teaspoon honey (optional)

Directions:

1. Place all contents in a blender and puree until smooth. Add more juice or ice as needed to reach desired consistency.

Fun fact:

The word “smoothie” wasn’t coined until the 1930s, around the time the blender was invented. It generally refers to a blended drink of fruit, ice, and a liquid like milk or juice.

Hot tip:

Sneak your daily servings of vegetables into smoothies by adding lots of leafy greens, which usually get overpowered by the fruit flavors. Sneak in protein by adding peanut butter.

Ask the fam:

Can you name three or more different kinds of berries?

FRESH-SQUEEZED JUICES WITH FLORIDA CITRUS

Ingredients:

Orange juice:

4 oranges per serving

Dilute with water as needed

Lemonade:

1:5 lemon juice to water

2:1 lemon juice to simple syrup

Farm-fresh basil as desired

Limeade:

1:3 lime juice to water

2:1 lime juice to simple syrup

Farm-fresh mint as desired

Simple syrup:

1 cup water

1 cup sugar

Directions:

1. In a medium saucepan, combine ingredients and bring to a boil.
2. Stir until sugar is dissolved.
3. Allow to cool.

Fun fact:

Florida is the world's largest producer of grapefruit and second-largest producer of oranges after Brazil.

Hot tip:

For a pulp-free version, pour juices through a strainer or clean cloth.

Ask the fam:

What is your favorite citrus? Can you peel an orange in one piece?

Salad Dressings

LOTUS HOUSE PINK RASPBERRY VINAIGRETTE

Ingredients:

1 cup fresh raspberries
2/3 cup balsamic vinegar
1/4 cup olive oil
1 tbsp white sugar
1 tbsp honey
1 tsp salt

Directions:

1. Mix raspberries and sugar together in a bowl. Set aside for about twenty minutes, or until juicy.
2. Mash berries using a fork until liquefied.
3. Pour berry mixture into a jar with all other ingredients; cover with lid and shake until dressing is mixed well. Store in refrigerator.

Fun fact:

Every single raspberry actually consists of over one hundred smaller fruits called drupelets - each a small red sac with its own seed.

Hot tip:

Sweeter dressings like this one pair well in a salad with nuts, seeds, fresh fruits, and soft cheeses like feta or goat cheese.

Ask the fam:

In general, do you prefer sweet or savory?

FARM GREEN GODDESS DRESSING

Ingredients:

1 cup mayonnaise
¾ cup sour cream or Greek yogurt
⅓ cup chopped fresh parsley
⅓ cup chopped fresh tarragon
¼ cup chopped fresh chives
2 tbsp fresh lemon juice
1 tbsp rice vinegar
1 anchovy fillet
1 clove garlic, chopped
1 pinch cayenne pepper
Salt and pepper to taste

Directions:

1. Combine all ingredients in a blender or food processor until smooth.

Fun fact:

The “Green Goddess” dressing was created in 1923 when a San Francisco hotel chef made a special dish for one of his guests, who starred in the hit Broadway play of the same name.

Hot tip:

For a smoother texture or non-dairy substitute, add fresh avocado instead of Greek yogurt.

Ask the fam:

What are some of your favorite salad bar toppings at Lotus House?

Soups

FARM GREENS SOUP

Ingredients:

1 onion, chopped
2 stalks celery, chopped
2 potatoes, diced
2 bay leaves
6 cups vegetable broth
2 zucchinis, chopped
1 head of broccoli, chopped
½ teaspoon dried basil
¼ teaspoon black pepper
4 cups fresh spinach, chopped
Salt to taste

Directions:

1. In a large pot over medium heat, combine onion, celery, potatoes, bay leaves and broth. Bring to a boil, then reduce heat, cover and simmer for one hour.
2. Remove bay leaves and stir in zucchini, broccoli, basil and black pepper. Simmer for 20 minutes, or until broccoli is tender.
3. Stir in spinach and remove from heat. Puree in a blender or food processor. Add salt and pepper to taste.

Fun fact:

Unlike most other herbs and spices, bay leaves are added at the beginning of cooking because they require extra time, heat and moisture to release their flavors.

Hot tip:

This recipe can be used as a “kitchen sink” - anytime you have extra veggies or greens that need to be used, throw them in one big soup! This works great with collard greens or the leafy tops of beets, carrots and other root vegetables.

Ask the fam:

Is there a specific part of cooking that you enjoy most - like chopping, mixing, or stirring?

TOMATO BASIL SOUP

Ingredients:

4 whole tomatoes - peeled, seeded, and diced
4 cups tomato juice
1 onion, chopped
4 cloves garlic, chopped
14 leaves fresh basil
1 cup vegetable stock
4 tbsp olive or canola oil
Salt and pepper to taste

Directions:

1. Simmer garlic, onion, tomatoes and juice in a stock pot over medium heat for 30 minutes.
2. Puree tomato mixture with basil leaves in a blender or food processor, then return to stock pot over medium heat.
3. Add stock, oil, salt and pepper. Stir until blended. Do not boil.

Fun fact:

The first recorded recipe for tomato soup was published in 1857 by Eliza Leslie. It was made popular by the Campbell Soup Company in 1897.

Hot tip:

For extra flavor, amp up your soup with garlic and crushed red pepper.

Ask the fam:

Debate: is a tomato a fruit or a vegetable?

Correct answer: Scientifically speaking, fruits contain seeds and grow from the flower of a plant. Vegetables come from any other part of the plant such as the leaves, stems, or roots. Because of this, a tomato is technically a fruit. But because it is not sweet, we identify and prepare it like a vegetable.

Sweets

BROWN RICE KRISPIE TREATS

Ingredients:

¼ cup butter
4 cups mini marshmallows
5 cups crisp brown rice cereal

Directions:

1. Melt butter in a large saucepan over low heat.
2. Add marshmallows and stir until melted and well-blended. Continue stirring for another two minutes, then remove from heat.
3. Add cereal, stirring until all pieces are well-coated.
4. Press mixture firmly into a greased 13x9 inch pan. Allow to cool for thirty minutes, then cut into 2x2 squares for serving.

Fun fact:

Brown rice is the whole grain form of rice. White rice is the starchy insides of the grain after the shell is removed. Brown rice, with its shell intact, has vitamins and extra fiber that keep you feeling fuller longer!

Hot tip:

Add food colorings in step 2 to creative festive treats for the holidays, or boost the nutritional content by adding seeds, nuts, oats or peanut butter in step 3.

Ask the fam:

Do you remember the first time you ever ate a marshmallow? What about a rice krispie treat? What was it like?

NO-BAKE OAT COOKIES

Ingredients:

1 cup butter
½ cup packed brown sugar
1 teaspoon vanilla extract
3 cups oats
4 tbsp cocoa powder
½ cup peanut butter

Directions:

1. Melt butter in a large saucepan over medium heat.
2. Stir in brown sugar, vanilla, oats and cocoa. Cook over low heat for 2 to 3 minutes.
3. Press half of the mixture onto a greased 9x9 baking pan.
4. Spread peanut butter evenly over mixture.
5. Add remaining oat mixture on top.
6. Cover and refrigerate overnight. Bring to room temperature before serving.

Fun fact:

All types of oats are the same whole grain milled in different ways. Traditional or “old-fashioned” oats are steamed and pressed flat, steel cut oats are thinly sliced by large steel blades, and instant oats are chopped to make them cook faster.

Hot tip:

For a vegan version, substitute half as much coconut oil for butter.

Ask the fam:

Was there a special cookie recipe in your life growing up? Where did they come from and how were they made?

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