

GARDENING AND COOKING PROGRAM ANNUAL REPORT

2017-2018

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The Berkeley Unified School District Gardening and Cooking Program publishes reports to highlight special projects, programming, events, and budgets. All reports are made available to the public on our website.

Berkeley
PUBLIC SCHOOLS
Berkeley Unified School District

REPORT OUTLINE

- **YEAR-END SUMMARY**

- **GARDEN-BASED LEARNING**
 - Second Edition Primary Grade Curriculum
 - Project-Based Learning at Longfellow Middle School

- **NUTRITION AND COOKING**
 - After school nutrition and family events
 - High school internship projects

- **COMMUNITY COLLABORATION**
 - UC Berkeley Internship Project

- **PROFESSIONAL DEVELOPMENT**
 - Teaching for Equity

- **GRANTS & BUDGET DEVELOPMENT**

- **CONTACTS**

GARDENING AND COOKING PROGRAM | 2017- ANNUAL REPORT 2018

The Berkeley Unified School District Gardening and Cooking Program engages students in preschool through high school with hands-on instruction in science, language arts, environment, and nutrition education. The Program is woven into student academic and social-emotional life by connecting them to their school community and helping them develop healthy habits and environmental stewardship. As a districtwide program that serves three preschools, eleven elementary schools, two middle schools, and two high schools, we model centralized programming across campuses.

This work was made possible through a Healthy Berkeley grant administered by the City of Berkeley Public Health Department with matching funds from the School District. This funding allows us to provide meaningful instruction designed for age clusters and adapted for all learners in support of District and City community-wide goals for the 2020 Vision for Berkeley's Children and Youth.

*WE WELCOMED 5,963 STUDENTS IN 17 SCHOOL GARDENS &
1,068 STUDENTS IN 4 KITCHEN CLASSROOMS*

GARDEN-BASED LEARNING

School campuses and communities are different across the District. Whether it's the size or location of the school garden, teacher buy-in, or access to a classroom kitchen, there are many external factors to consider when planning for instructing across campuses. In addition to having materials and staff time, we've learned that having a curriculum that outlines core concepts and lessons for all grades with compatible student workbooks enables us to provide consistent instruction. Our curriculum is the base for instruction at all school gardens, it helps reduce prep time, and invites instructors to collaborate with teachers. It also helps communicate what we do and how we do it to our teachers, leaders, and families.

We published a Second Edition of our Garden-Based Learning Curriculum for the 2017-2018 school year. Each lesson supports core content in Next Generation Science (NGSS) and Common Core State Standards (CCSS). It maps out how we teach Plant Biology, Nutrient Cycles, Soil Science, Animal and Plant Habitats, Cycles in Nature, Interdependence, Nutrition, and Food Systems. We shared this curriculum broadly with other school districts who have integrated it into their garden-based learning plans.

"Garden is a magical place, great that kids get to see it develop over the year, do so many tastings, and activities in the packets are great. Instructor clearly loves her work and showing what she knows to kids." – classroom teacher

At the end of the year, we surveyed classroom teachers who co-teach in the school gardens with our instructors on the usefulness of the curriculum. We collected a small sample size of 35 respondents across grades and schools. In summary, 85% of responding teachers find the curriculum supports teaching ELL and 88% stated they agree to strongly

agree that it supports teaching NGSS. All responses stated that the curriculum supports teaching nutrition and 91% stated that students were engaged during lessons.

PROJECT-BASED LEARNING AT LONGFELLOW MIDDLE SCHOOL

Project-based learning at Longfellow Middle School was co-developed by program administrators and our garden instructor, Ellen McClure. This year, we edited the 2-4 week long lessons that engaged students in a real-world problem and challenged them to work in groups to come up with solutions.

Science teachers helped develop and practice these lessons. Lesson content includes, Ancient Grains, Compost Science, Food Systems, Plant Biology, Plant Families, Pollinator Habitats, and Water Conservation.

We designed assessments and rubrics for evaluation with looped feedback from our educators. These assessments helped us identify whether we were effectively teaching, and whether the content was relevant to the learning goals. The curriculum will be published in Fall 2018.



FIGURE 1 STUDENTS HAND MILL GRAINS THEY GREW (ANCIENT GRAINS LESSON)

NUTRITION-COOKING AFTER SCHOOL

We partnered with the After School Program to instruct students in school cooking and nutrition activities at Thousand Oaks, Sylvia Mendez (formally known as LeConte), and John Muir elementary schools. We developed nutrition-cooking curriculum that draws from reputed sources, including: Life Lab; Nutrition Policy Institute at the University of California, Agriculture and Natural Resources; Rethink Your Drink; Network for a Healthy California, Champion for Change; and Columbia University’s Teacher’s College, Linking Food and Environment.



FIGURE 2 STUDENTS LEARN HOW TO READ NUTRITION FACTS AND PRACTICE FUN WAYS TO EAT MORE FRUITS AND VEGGIES



FIGURE 3 FAMILY NIGHT COOKING VEGGIE TACOS AND PICO DE GALLO

Activities are designed to increase awareness about the health impacts of drinking sugar sweetened beverages and encourages drinking and eating less sugar; as well as consuming more whole foods, including whole grains, fruits, and vegetables. We adapted existing recipes and new recipes from Joyful 12 and the Edible Schoolyard that invited our students and families to prepare and eat whole fruits and vegetables without added sugars, such as making agua frescas, healthy dips and dressings, and smoothies. We plan menus seasonally and harvest from our school gardens when possible. Favorite recipes with our students and families were the veggie tacos, citrus salads, mac n' greens, and infused waters. These recipes are compiled and included in our curriculum resources.

As part of our theory of change, starting with the students and radiating out to the families and communities, we planned for events that brought us all together over a healthy, delicious meal. We hosted two family events at each school (Longfellow, John Muir, Sylvia Mendez, and Thousand Oaks), where we prepared these recipes, highlighted activities we teach our students, and got to know each other over a shared meal.

WE HOSTED 194 FAMILY MEMBERS & STUDENTS AT 6 FAMILY EVENTS

HIGH SCHOOL INTERNSHIP PROJECTS

We focused on supporting our high schools in different ways. At Berkeley High School, we convened workshops with students in 10th-12th grades in collaboration with BRIDGE and Career Technical Education (CTE) program teachers and directors, and community partners at Ecology Center and Edible Schoolyard. The goal was to draft a public health pathway in CTE and food system internships for next year. Activities included mapping healthy food access on and off campus and creating and implementing surveys for peers asking about preferences and perceived needs. The School Board approved the CTE Public Health Pathway and we'll continue working with our community partners to offer this focused instruction and internship opportunities



FIGURE 4 BHS STUDENTS MAKING HEALTHY FOOD ACCESS MAPS

to students at the school of Applied Medicine and Public Health within BHS.

At Berkeley Technology Academy (BTA), students participated in entrepreneurial activities with Willard Middle School's Growing Leaders program, where they grew, harvested, and prepared added value products, like salsas, and made them available for sale. Students gained real-world experience, like creating business plans and following through, with guidance from experienced educators.

ASSESSMENTS

As we prepare and implement new programs, we also develop and administer assessments that measure how much we are doing, how well we're doing it, and if anyone is better off after we serve them. We worked with the City of Berkeley Department of Public Health to measure outcomes with Results Based Accountability concepts. Our team developed surveys that were administered before and after each four week long instructional intensive at Longfellow, our after school elementary sites, and at BHS and BTA. The District's Berkeley Research Evaluation and Assessment staff helped compile and present this data that we use in reports and to make program adjustments.

COMMUNITY COLLABORATION

We developed an internship program that connected our instructors with students studying food systems and/or education at UC Berkeley. We collaborated with Berkeley Food Institute, a project at UC Berkeley, to create best practices and mentorship for students and instructors. Each semester we welcomed a new cohort of interns, who supported our work with instruction and preparation in the school gardens and kitchen classrooms. In turn, these interns gained invaluable experience in education, community engagement, and food systems instruction.

"I was able to be part of a variety of lessons and note how Sarah altered them to the needs of a particular age level. I observed how art and music can be incorporated into the gardening curriculum. I was able to witness lessons and learn about teaching strategies in a nontraditional classroom space. Through asking questions and listening to Sarah describe reasoning behind her choices, I accumulated excellent insight to the life and thought process of a teacher." – student intern

PROFESSIONAL DEVELOPMENT

Our team consists of nine garden instructors, three nutrition educators, and two administrative supports. We meet monthly to review curriculum, share strategies on classroom management and student engagement, and present new teaching tools. Highlights this year were learning how to use scientific drawing techniques to observe and identify plant parts; drawing from narratives to tell the story of life cycles; and scaling up and down complex topics, like food systems and farm labor issues for elementary to high school.

Our development as educators is critical in order to support the development of our students; therefore, staff participates in field-related professional development each year, in addition to our collaboration time with each other. This year, we worked with experts at Life Lab, UC Santa Cruz to provide workshops with hands-on activities practicing science, English Language Learning strategies, and nutrition lessons in school gardens.



FIGURE 5 STAFF PRACTICE A MYPLATE ACTIVITY WITH LIFE LAB

Life Lab helped us expand our NGSS practices, including how to incorporate design and engineering practices and understanding cross cutting standards. A highlight was when trainers introduced new ways of teaching for all learners, regardless of access to verbal language, by incorporating more dramatic motions and props.

TEACHING FOR EQUITY

Antiracism in our schools and communities is a priority for us. Before the start of school, volunteers from staff participated in focused train the trainer style professional development on antiracism at a two-day training from Growing Food and Justice For All, hosted at Edible Schoolyard in Berkeley. These volunteers became our staff-driven equity leadership team to help guide conversations at staff meetings, help direct future professional development, and access essays in the book, *Everyday Anti-Racism*. Like our teachers at our school sites, we've begun reading this book and working as a group to practice cultural awareness, undoing biases, and techniques for welcoming and engaging all students. We were also fortunate to spend a day with Pam Harrison-Small, who guided us through different teaching for equity tools we can apply to our kitchens and gardens immediately. We will continue this work and program specific professional development next year.

GRANTS & BUDGET DEVELOPMENT

Over the last five years, we have partnered with local restaurants and businesses in Berkeley to co-host a food-filled day and night, we call Berkeley Dine Out. This event originated from our need to diversify our funding and reach out to our community when we lost our federal grant that fully funded the program for ten years in 2013. At this time, we encourage our families and communities to Dine Out at participating restaurants, who in turn donated a percentage of sales directly to us. These fundraising activities have helped fill in financial gaps, support special projects, such as our student internships at BTA and BHS, and talk with our community members.

*WE RECEIVED \$7,000 IN DONATIONS &
\$687,500 IN GRANTS THIS YEAR!*

Given our current financial stability, and being mindful of exhausting our fundraising base, we decided to only co-host one Berkeley Dine Out this year and are dedicated to collaborating with other programs who are not as financially stable to engage in these types of fundraisers in the future.

Another financial milestone that we reached is that we received a two-year grant from Healthy Berkeley of \$637,500 each year to reduce consumption of sugar sweetened beverages (SSBs) and increase awareness of the health detriments and campaigns supporting consumption of SSBs.



We were also awarded a grant of \$50,000 from General Mills to create farm to school projects with the goal of increasing consumption of fresh, local, seasonal fruits and vegetables. We will roll these new farm to school projects out next year at select schools in partnership with our Food and Nutrition Service friends.

CONNECT WITH US

The Gardening and Cooking Program is woven into Berkeley Unified School District's plans and goals within the Department of Special Projects. Our dedicated educators, students, supportive families, communities, School Board, District leaders, and generous local businesses make this work possible. We are grateful for the collaboration of our school site communities, teachers, principals, and parents. Strong support helps us continually innovate and serve our students in meaningful ways.

We want to keep our networks and families informed about our work. We invite you to visit our BUSD website <http://www.berkeleyschools.net/gcp/> and engage with us on social media via Facebook @BerkeleyPublicSchoolGardenBasedLearning and Twitter @BerkeleyDineOut.