

GARDENING AND COOKING PROGRAM ANNUAL REPORT

2016-2017

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June, 2017

The Berkeley Unified School District Gardening and Cooking Program publish reports to highlight special projects, fundraising efforts, budgets, and introduce future activities. All reports are made available to the public on our website.

Berkeley
PUBLIC SCHOOLS
Berkeley Unified School District

REPORT OUTLINE

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The Berkeley Unified School District Gardening and Cooking Program engages all students in preschool through high school with hands-on instruction in science, language arts, environment, and nutrition education in three preschools, eleven elementary schools, two middle schools, and two high schools, Berkeley Technology Academy (BTA) and Berkeley High School (BHS)-starting in 2017-2018. As part of the 2020 Vision for Berkeley Children and Youth, the Program is woven into student life to help close the achievement gap by ensuring the academic, physical, emotional, and social development of the whole child. In the seventeen school gardens and four nutrition classrooms, students connect to their environment and each other; develop healthy habits and stewardship; practice teamwork; and have opportunities for leadership. We model how to implement these programs across campuses as a districtwide program, sharing curriculums, materials, and other instructional resources with our school communities here in Berkeley and beyond.

We support students' academic learning through Next Generation Science and Common Core Standards in our Garden-Based Learning Curriculum, available free to download on our website. We measure our success, identify needs for improvement, and document best practices with assessment tools. We track this data and use it to inform ongoing improvements to our services so they are relevant, flexible, and address identified needs.

7000 STUDENTS WERE IN 17 SCHOOL GARDENS & 508 STUDENTS WERE IN 4 KITCHEN CLASSROOMS

CURRICULUM DEVELOPMENT

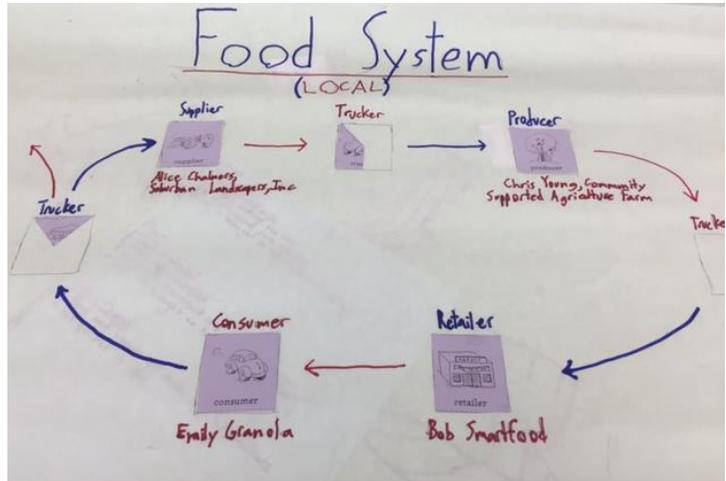
Each year, we develop new instructional tools. Having a standard curriculum with student workbooks supports our ability to provide consistent instruction across campuses. It's the foundation for accountability and provides a baseline for assessments (If we know what we are teaching and the tools required then we can assess how we are teaching, establish goals, and make changes based on analyzed information). These tools guide us in responding to the academic and emotional needs of our student body, and help us stay up-to-date with those used by our teachers and those made available by other nutrition and garden education leaders in the field.

GARDEN-BASED LEARNING FOR PRIMARY SCHOOL

In 2014-2015 we published our first Garden-Based Learning Curriculum for primary grades. The curriculum map includes, Plant Biology, Nutrient Cycles, Soil Science, Animal and Plant Habitats, Cycles in Nature, Interdependence, Nutrition, and Food Systems. Each lesson supports core content in Next Generation Science (NGSS) and Common Core State Standards (CCSS). Each grade is provided a student compatible workbook. Edits were made to the curriculum over the two years, based on lesson observations, professional development, and staff feedback. We incorporated these changes and are publishing our second edition in 2017-2018 FY.

PROJECT-BASED LEARNING AT LONGFELLOW MIDDLE SCHOOL

In summer, 2016, we organized a group of garden instructors and curriculum and standards experts to plan a program for project-based learning at Longfellow Middle School. We chose Longfellow, because there was a need for a strong garden curriculum and program there. We established base lessons designed for four to eight consecutive weeks that engaged students in a real-world problem, challenged them to work in groups to come up with solutions, and then present and build their solutions. This established the groundwork for developing, editing, and evaluating a curriculum draft.



This year, the curriculum team collaborated with science and humanities teachers to develop and practice these lessons. The team met regularly to review challenges, edit each lesson, and reflect on student assessments. The culmination of this work resulted in four week long lessons that invite students to lead projects, work in teams, and investigate problems that could be explored in their two school gardens, one in the courtyard and one on California St outside of the science classrooms.

Lessons draw from NGSS and CCSS to include, Ancient Grains, Compost Science, Food Systems, Plant Biology, Plant Families, Pollinator Habitats, and Water Conservation. Supporting materials, such as garden task cards that assign students specific jobs related to the lesson, created some ease in teaching a rigorous curriculum.

The team designed assessments and rubrics for evaluation. Student exit tickets were implemented at the end of each lesson, and teachers were invited to participate in surveys and informal interviews asking for feedback. These assessments helped us identify whether we were affectively teaching the lesson, applied classroom management, and whether the content was relevant to the teacher's learning goals. The curriculum draft includes this year's edits and assessments, and will be published internally in September, 2017 in preparation for publishing publicly in 2018.



HEALTH AND WELLNESS PROJECT

This year, our Program team grew to include three new nutrition educators to lead our pilot nutrition project at Thousand Oaks, LeConte, Longfellow, and BTA. This work was made possible through a Healthy Berkeley grant administered by the City of Berkeley. With this funding, we are developing a new Health and Wellness Curriculum for after school in elementary and during classroom minutes at middle and high school. This project includes family events, where we model what we teach our students and cook a healthy meal together.



In order to begin the planning stages for this project, we drew from data-driven and results-oriented lessons from leading educational resources in the field, 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. We were guided by Pat Crawford, Senior Director of Research and UC Cooperative Extension Specialist, to help guide our efforts.

We created activities from these compiled lessons designed to increase awareness about the health impacts of sugar sweetened drinks and food and encourage drinking and eating less sugar. We adapted these lessons to fit our school communities, including fun and relevant recipes that invited our students and families to practice preparing and eating whole fruits and vegetables without added sugars, such as agua frescas, healthy dips and dressings, and smoothies. These recipes are compiled in a suite of recipes we created that have nutrition facts as content to enhance the lessons. The lessons came alive when we cooked together, starting with our students who shared what they learned with their families.



We provided two family events this year at each pilot school, with a total of eight events, including two school wide events at Longfellow and BTA. At BTA, we invited The Bigger Picture Project, a collaborative project of YouthSpeaks and UC San Francisco with the “aims to inspire young people to join the

conversation about Type 2 diabetes and work to change the systems that lead to its spread.” Teachers and program staff facilitated a healthy community lunch after the assembly, including fresh salsas and fruit and veggie flavored waters made by students during their nutrition lesson.

We wanted to understand how we were affecting change over time, so we developed surveys that asked for base-level information about nutrition habits and awareness before and after participation. These surveys were developed with guidance from PhD researchers at UC Berkeley, who surveyed and reported on sugary drink consumption among youth in Berkeley for a UC Berkeley study.

We incorporated these nutrition focused lessons into our Second Edition Garden-Based Learning Curriculum for all 17 school gardens. We refocused our work at BTA, where our Health and Wellness team has begun leading youth participatory action projects (YPAR) with students. Next year, we will serve Berkeley High School students in the BRIDGE program, BHS’s Youth - College-Career Readiness and Success Programs, with YPAR as well.



PROFESSIONAL DEVELOPMENT

Program staff includes nine garden instructors, three new nutrition educators, and two administrative supports. We meet monthly to review our curriculum, share ideas, and present new teaching tools. Since our work is not centralized; rather it is housed at each school site. Therefore, staff meetings are critical times for us to learn from each other across campuses. Some of the highlights this year were learning how to teach scientific drawing techniques in the garden; using narratives to tell the story of soil and life cycles of compost; and talking through the challenges of teaching a complex topic like food systems and farm labor issues across grades from elementary to high school.



Our development as educators is critical to our ability to support the development of our students; therefore, staff participates in field-related professional development each year. This year, we worked with experts at Life Lab, a nationally renowned organization at UC Santa Cruz that provides workshops to educators of all kinds with hands-on activities connecting classrooms and students to school gardens. We worked with them last year for professional development on NGSS standards. In October, we dived deeper into what we learned last year with NGSS practices, including how to incorporate design and engineering practices and more cross cutting standards into our Curriculum. In January, Life Lab trained us on how to

support our students with our newly developed nutrition focused lessons. Together, we explored the national USDA curriculum, MyPlate, and nutrition facts and food media literacy.

Like our teachers at our school sites, we've begun working together on cultural awareness, undoing biases, and techniques for welcoming and engaging all students. As a team, we decided to read essays and book passages together as a framework for having these conversations. We will continue to have these constructive conversations and Program specific professional development next year.

COMMUNITY EVENTS

At the beginning of the school year, you can usually find our Supervisor at the Kinder Fair, talking with new and returning families about the programming we offer at all of our schools. We also like to talk about what we do with our broader Berkeley community. In October, we participated in the City of Berkeley's Harvest Festival. Our Health and Wellness team were at stage left leading cooking demonstrations from our nutrition lessons. Participants learned how to prepare apple and pear salsa and tomato and cucumber gazpacho. They also learned a few fun facts about nutrition content and healthy tips for reducing sugar intake. On stage right, we had a booth set up with our Supervisor demonstrating school garden activities by making newsprint seedling containers, which participants filled with soil and veggie seeds to take home. We appreciate the opportunity to talk with our families and communities in these more casual environments.



FUNDRAISING

Each year, we partner with local restaurants and businesses throughout Berkeley to co-host a food-filled day and night, we call Dine Out. We encourage our networks to Dine Out at these participating restaurants, who in turn donate a percentage of sales directly to us. We organized two Dine Outs this year, one for spring on April 20th, and for fall on December 1st. These fundraising activities help fill in financial gaps, support special projects like our youth participatory action internships at BTA and BHS planned for next year, pay staff time sheets for participating in



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professional development and special projects at school sites, and help us buy fresh fruits and veggies so students can try something healthy and seasonal at the end of each garden class.

We couldn't do the work that we do without our supportive families, communities, and generous local businesses and restaurants. We keep the public up-to-date on our Dine Out events on our Tumblr site <http://berkeleydineout.tumblr.com/>

WE RECEIVED \$11,000 IN DONATIONS THIS YEAR!

BUDGETS

Last year, the School Board voted to support our work with ongoing annual funding of \$300,000. We also received an increased grant of \$637,500 from the City of Berkeley's Public Health Department, Healthy Berkeley (Sugar Sweetened Beverage tax). This grant supports the reduction of sugar sweetened beverage consumption and increased awareness. It is reliant upon the District's annual funding. These funding sources reduced our need for school site contributions that generously supported our work in past years.

WE REDUCED OUR SCHOOL SITE FINANCIAL ASK THIS YEAR BY \$102,218

CONNECT WITH US

The Gardening and Cooking Program is woven into Berkeley Unified School District's plans and goals. We are able to do this work through collaboration with our school site communities, teachers, principals, and parents. Strong support from Berkeley organizations and businesses, educational institutions, and our friends and families help us continually innovate and serve our students in meaningful ways. We want to keep our networks and families informed about our work. We also want to let everyone know about our fundraisers and community events. 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.

