

Portland School Garden Assessment

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Supported by East Multnomah Soil and Water Conservation District

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Executive Summary

School gardens have played an increasingly important role in engaging students in the natural environment, teaching curricula in a dynamic way, and promoting the health benefits of eating fresh vegetables and fruit. In 144 schools surveyed in the Portland region, 99 have school gardens used to teach 15,720 students everything from environmental science to language arts. Of these, 12,240 students use the garden during the day, averaging out to 54 students per school, but with a wide variation from 15 to 700 students using the gardens ranging from once a week to a few times a year. At 68% of schools, thousands more engage in afterschool programs in gardens, especially through the Schools Uniting Communities (SUN) system. Respondents also noted that the gardens transcend differences of language, education, income, and culture, and serve as a pathway for families to connect to the school community. Encouragingly, there is a fairly equitable distribution of school gardens at schools with different Free and Reduced Lunch Rates, mostly due to a robust community of nonprofits in the area.

Gardens are excellent spaces for teaching a wide variety of subjects, especially environmental sciences including native plants, pollinators, soil conservation, climate, and other ecological systems. While over 80% of the garden programs are used to teach science, other subjects such as math, language arts, English as a second language, art, health, and nutrition are all frequently taught in the garden as well. The majority of lessons are integrated into academic standards such as Common Core and Next Generation Science Standards. Respondents noted that students with high behavior needs or who had trouble focusing in the classroom excelled in the garden setting.

Gardens also inspire children to establish healthy eating habits. 54% of schools donate garden produce to food pantries or directly to families, 50% use produce in cooking workshops, 37% use it at family events, 34% serve it in the lunch line, and 25% offer taste tests in the lunchroom.

Schools with dedicated, paid educators or coordinators had twice as many students visit the garden and for twice as much time per student than schools without a paid educator or coordinator, yet only one third of schools with gardens have a paid garden educator/coordinator. Even when the coordinator is paid less than 10 hours per week, there is an increase in student learning hours in the garden. Some schools noted that teachers were less inclined to bring their students to the garden if the teacher was responsible for creating their own curriculum or prepping the garden ahead of time. In 25% of schools with gardens, teachers brought the students out to the garden alone, whereas in the rest, garden educators or others lead or co-teach the lessons.

Assistance from enthusiastic volunteers is invaluable. Partnerships with nonprofit organizations also play a large part in the success of school gardens. Two thirds of schools surveyed have at least one partnership, and low income schools tend to lean more heavily on those organizations for curricula, funding, and staffing than high income schools.

Several common challenges to the long term success of school gardens were noted by respondents. A lack of proper and sustained funding is potentially fatal to a school garden program. Wages for educators and supplies were generated in a variety of ways, from PTA (40%), grants (27%), SUN (35%) and other sources like individual school budgets and partnerships with outside organizations. The PTA-funded programs are at schools with an average Free Reduced Lunch Rate of 24% -- much below the average FRLR of 55% for the surveyed schools. The PTA-funded programs average 410 students during the day and 60 after school, whereas SUN-funded programs average 227 kids during the day and 108 after school, which reflects the mission of SUN as an afterschool enrichment program. Supply budgets generally ranged from \$0 to \$2000. There is a correlation between garden budgets and student usage: students in schools with higher garden budgets had twice as much time in the garden as students in schools at the lower end of the garden budget spectrum. Grant funding can be highly variable. Funding from public or private sources is needed on an ongoing basis for school garden programming to be ongoing.

Another common challenge to continued momentum was personnel turnover - whether it be key volunteers, teachers or administrators. Behind many school gardens is a passionate person with little organized support. Infrastructure problems, such as broken spigots or locked doors were also noted to create barriers.

It is critical for school administrators to encourage teachers to use the garden as part of their instruction and include garden educators/coordinators as part of the core staff (inviting them to staff meetings, allowing building access, facilitating scheduling, etc.) This sets the tone that the garden is part of the school's core learning environment.

School district decision makers can act to ensure their schools have the best school garden experience possible. Having a paid garden coordinator/educator was seen as a vital piece of successful school gardens in the Portland region. Several options are available for districts to fill that role, whether by combining this part time role with an existing staff member's position, by hiring an employee, or by contracting with a nonprofit partner. Districts can also seize the opportunity for further integration of garden education into teaching core subjects, and especially in rolling out the Next Generation Science Standards. It is also vital that districts have policies in place that allow the students to eat food grown in the garden, since one of the main purposes of school gardens is to inspire kids to eat healthy, organic produce.

The Portland area is at the forefront of a national Farm to School movement and can serve as a model for other regions looking to institutionalize school gardens. These gardens are more than just an alternative space for classroom lessons. They bridge schools with the families in the surrounding community, they promote healthy eating, serve as therapeutic refuges for students with behavioral barriers, spark a passion for the environment and motivate students through meaningful learning.

Introduction

School gardens have been playing an increasingly important role in engaging students in the natural environment, teaching science and other subjects in a dynamic way, and promoting healthy eating. While many schools in the Portland metro area have gardens, until this study, it was unclear exactly how they were used and managed. This study measures the extent of school gardens, documents how they are used at each site, and compare and contrast different models of program delivery (e.g. school-based garden coordinator, nonprofit garden educator, lessons taught and organized by teachers, after-school programs, etc.). We were driven to understand how garden programs were financially and organizationally sustained year to year in hopes that the results will inform the strategy of scaling-up and institutionalizing school gardens so that they can have a greater impact on more students in years to come.

This study was designed and implemented by Growing Gardens staff and interns. We are grateful for the support of East Multnomah Soil and Water Conservation district for their ongoing support for school gardens over many years and specifically this study.

Scope

The study covered 144 schools (elementary, middle, high) in the following districts: Portland Public Schools (PPS) (78), Parkrose (6), Reynolds (16), Centennial (11), David Douglas (13), and Multnomah Education Service District (9).

Methodology

First, input was gathered from key stakeholders in the field to ask about specific questions they would like included, including Oregon Department of Education Farm to School Specialist (Rick Sherman), PPS Nutrition Services (Gitta Grether-Sweeney), PPS Resource Conservation Specialist (Nancy Bond), Ecotrust, Outgrowing Hunger, Grow Portland, Portland State University Science in the Learning Garden (Sybil Kelley), and others.

To generate a list of up to date contacts, we called each of the schools to ask a) if they had a garden and b) who is the best person to contact regarding the garden (see appendix for list). We developed the questionnaire (see Appendix) and sent a test run out to 10 garden educators. With their responses, we clarified questions and refined the study. Then, we sent the survey out, with 4 follow-up emails (and offered gift cards and discounts to Portland Nursery as an incentive). The emails included a list of resources for local gardening, including grant opportunities (such as EMSWCD), curricula and networking links. Online surveys were completed May-June, 2016. There were 64 responses, which equates to 64% of the 99 schools who have gardens.

We followed up with site visits to 21 schools in June-August, representing 21% of the schools with gardens. The questions used in the semi-structured interviews are included in the appendix. Profiles of each of the schools, drawing upon the survey and interviews, are also included in the appendix.

The roles of respondents reflect the diverse ways that gardens are managed.

| What is your role at the school? | | |
|----------------------------------|------------------|----------------|
| Answer Options | Response Percent | Response Count |
| Teacher | 14.1% | 9 |
| Parent | 15.6% | 10 |
| Other school staff | 6.3% | 4 |
| Paid garden educator/coordinator | 20.3% | 13 |
| Other (please specify) | 43.8% | 28 |

Of the "Other" respondents, 11 were SUN Site Managers, 5 were parents who were also "Garden Coordinators or chairs of "Garden Councils", 3 were AmeriCorps/FoodCorps, 2 were Garden Educators (but not "coordinators"), 2 principals, one secretary, one STEAM instructional coach, and one Student Achievement specialist.

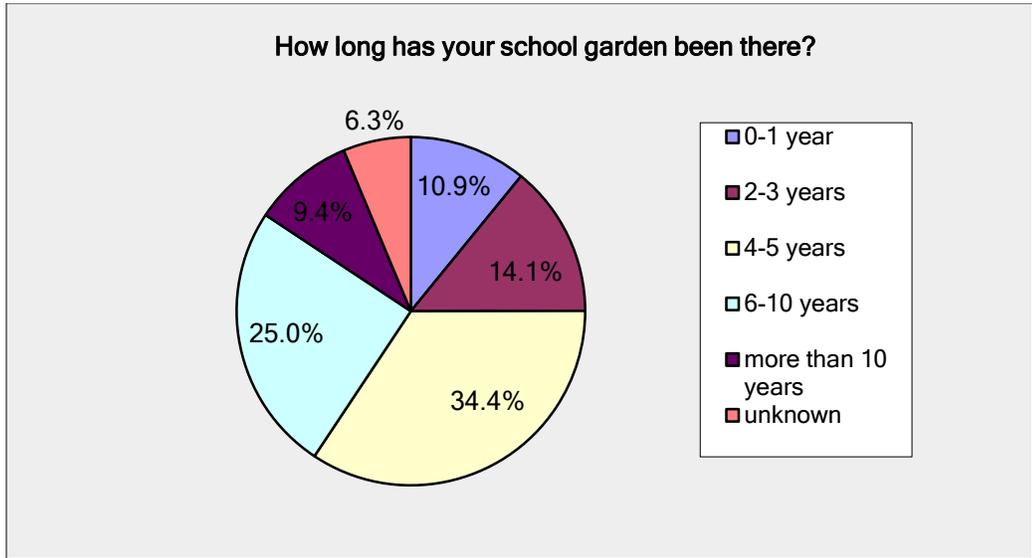
Most of the respondents had been involved in the garden program for 3 years or less.



Extent of School Gardens

We discovered that an **amazing 99 schools have gardens in these districts!** That's an incredible 68% of all of the schools. Portland Public Schools had the most gardens (64), but it is a much larger district. David Douglas had the highest percentage of schools with gardens: Portland: 78%, Centennial: 50%, Reynolds: 40%, Parkrose: 33%, David Douglas: 86% MESD: 33%.

Most gardens have existed for 4-5 years, although many have existed for longer, and many are newer.



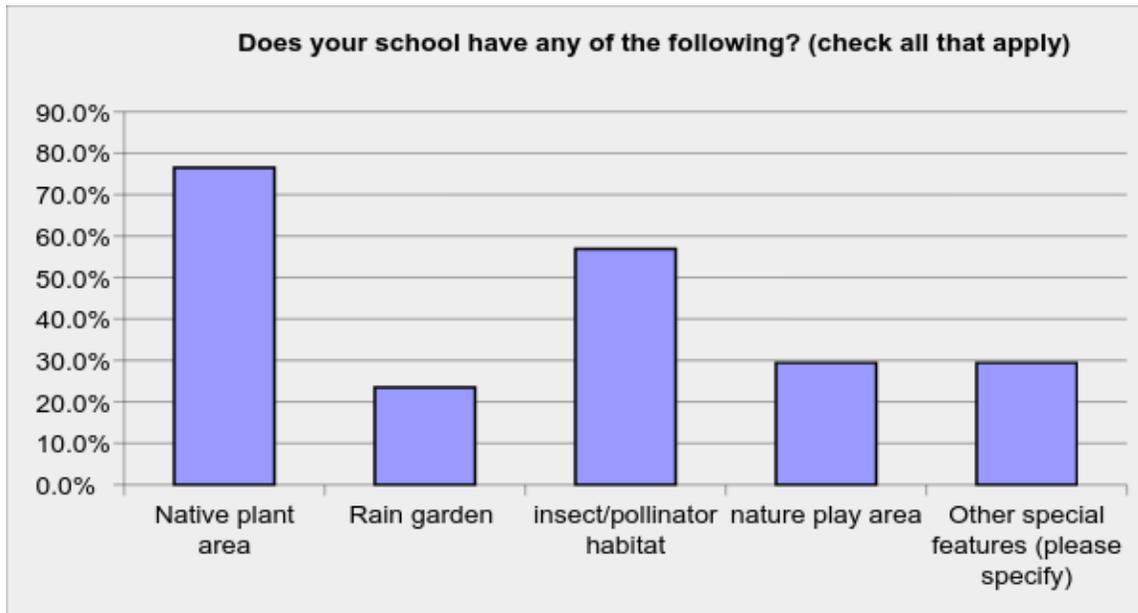
Physical Space

The total estimated amount of land that is now gardened by respondents is **24,300ft²**. If we extrapolate to include the other 32 school gardens that did not participate in the survey, the total would be 30,700ft² of land that has been converted from turf to flourishing vegetable and native plant gardens.

The majority were in the 100-300 ft² range. The vast majority of school gardens are on school property, although four are part of a Portland Community Gardens/Portland Parks and Recreation property, and two were on other city/government property.

Gardens come in all shapes and sizes. A few particularly unique ones include Trillium Charter School which is the only rooftop garden in Portland, which is often used to demonstrate storm water management, and includes a pollinator garden and soon, a native plant perimeter.

In addition to edible gardens, most garden areas also included a native plant area, insect/pollinator area and many included a rain garden and/or nature play area.



Other unique features reported include: greenhouse, prairie garden, outdoor classroom (3 responses), worm bins, pollinator garden, herb garden, memorial garden, permaculture, "hugelkultur" (raised bed of decomposing wood), Oregon grains garden, fairy garden, 1/2 mile interpretive trail in a restoration area and an arboretum, chicken coop and rabbit hutch (currently vacant).



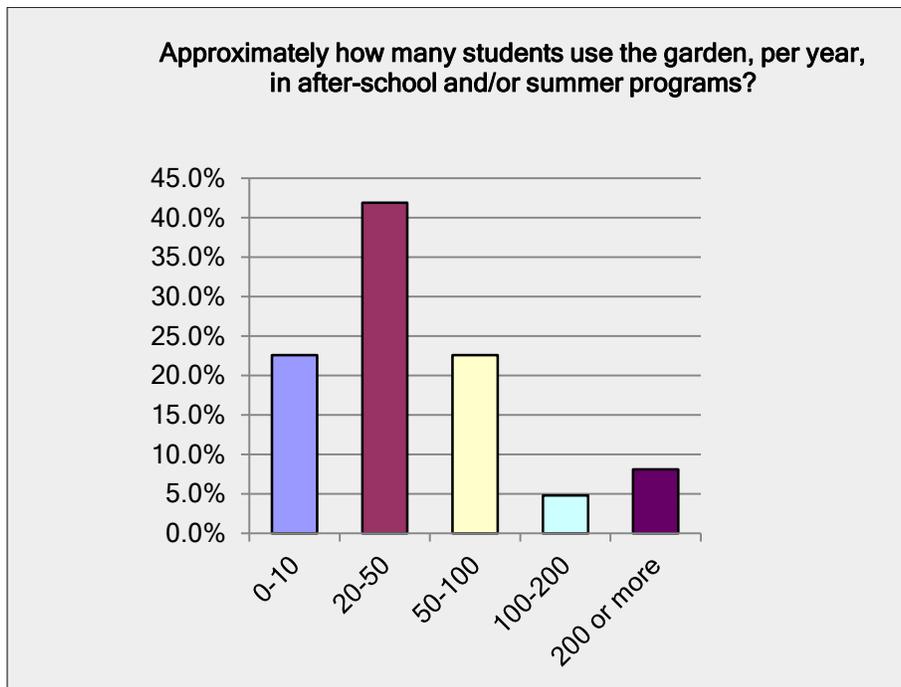
Outdoor classroom at Sabin *Photo Credit: Growing Gardens*

Gardens are often used to teach about lifecycles, from seed to plant to compost: 64% compost garden debris on site.

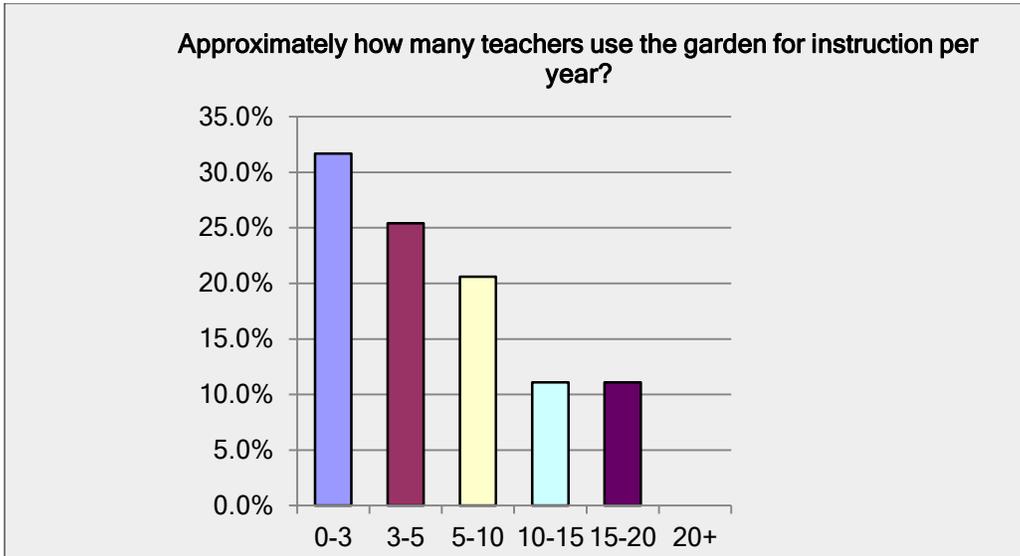
Student and Teacher Totals

There are 12,240 students actively learning in the gardens during school. There was a huge range of 15-700 students per school, with an average of 54 students at each school. Additionally, 3480 students use the garden after school in these 64 responses, totaling **15720 students engaged in dynamic hands-on learning in the garden.**

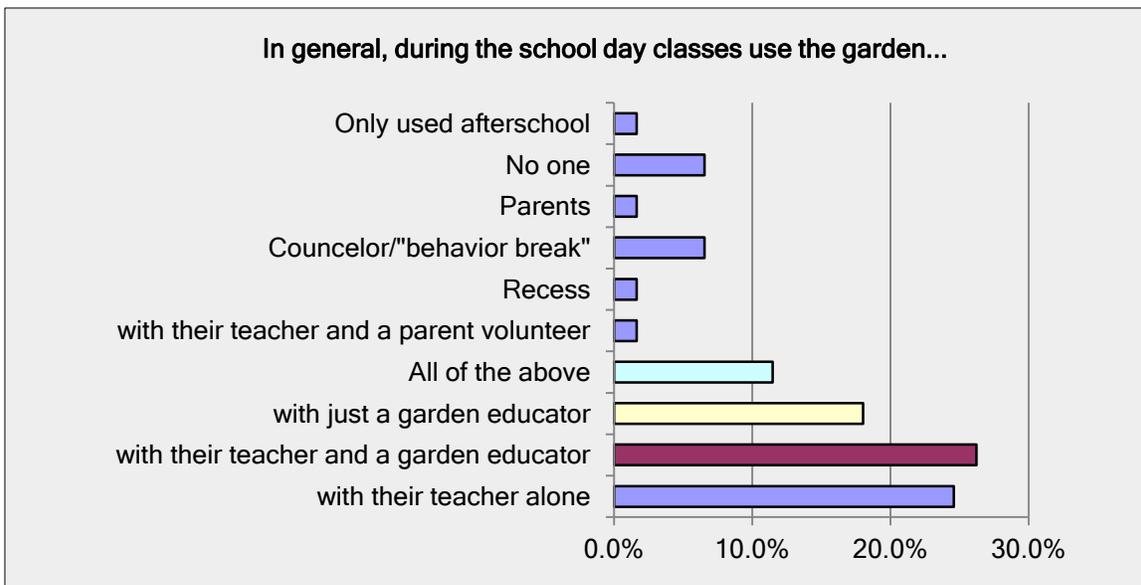
The majority (58.7%) of schools use the garden after school through the Schools Uniting Neighborhoods (SUN) program. An additional 11.1% use the garden through another after school program, while 27% only use the gardens during the daytime. And 10% of gardens are “only” used after school.



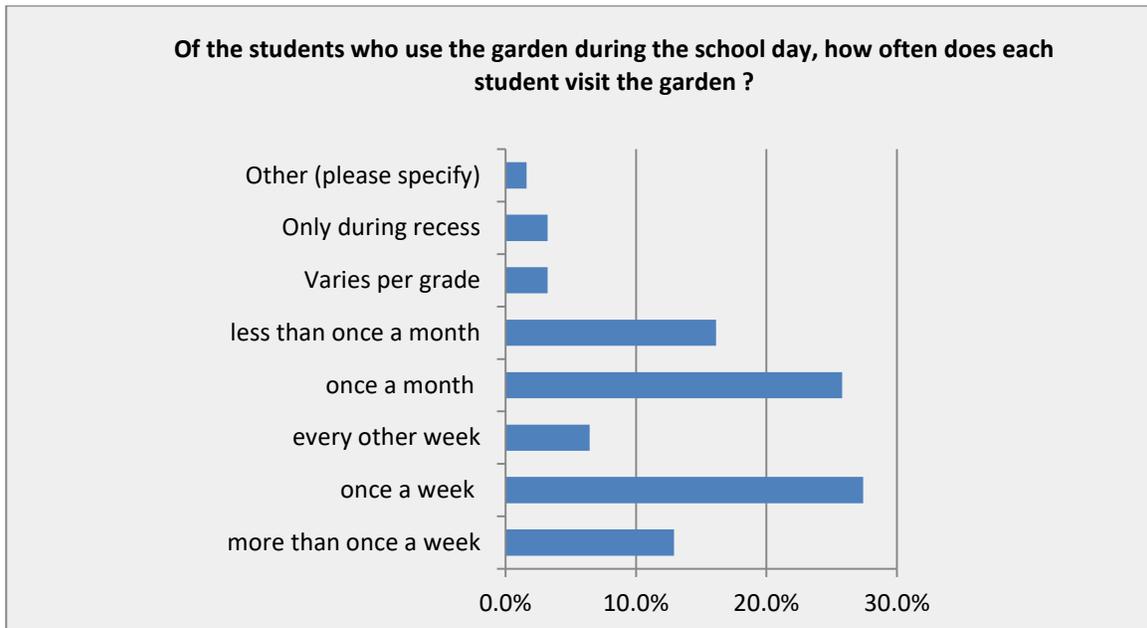
At 68% of schools, more than 3 teachers use the gardens, although there was a large range. At 32% of schools, the fact that three or fewer teachers use the garden reflects that, at most schools, garden education is seen as a voluntary "extra," championed by dedicated individuals and not part of the "core" school programming. While some coordinators listed engaging teachers as a challenge, others reported it as a strength: "Success with student and staff enthusiasm!"



The number of teachers who use the garden only tells part of the story. Most school gardens are used by a combination of different people. In only 25% of schools, teachers bring the students out to the garden without additional support. In fact, it is slightly more common for students to go out to the garden with a teacher and a garden educator together. In some schools, a garden educator alone leads garden lessons. The graph below includes the write-in answers in the “Other” category, including parents and the school counselor at several schools. The therapeutic use of gardens is a theme that surfaced throughout the study.



We also found a broad range of how often the gardens are used, from more than once a week, to less than once a month. Once a week or once a month were the most common answers – showing that there is some continuity and depth of lessons for the group of students using the garden.

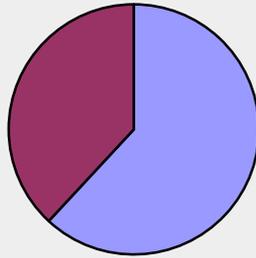


Objectives of School Gardens

Academics

Most of the lessons taught in the garden are integrated into academic standards (such as Common Core or Next Generation Science Standards [NGSS]). All 11 schools that said that part of their garden budget comes from the school's budget stated that their lessons are integrated into grade-level curriculum and/or Common Core and/or NGSS. For example, a recent Growing Gardens unit was on using tools to understand climate (air thermometer, soil thermometer and rain gauge) and make predictions about plant growth in different microclimates (sun, shade, etc.). Plant growth was measured over time and graphed.

Are lessons taught in the garden integrated into grade-level curriculum and/or Common Core and/or Next Generation Science Standards?

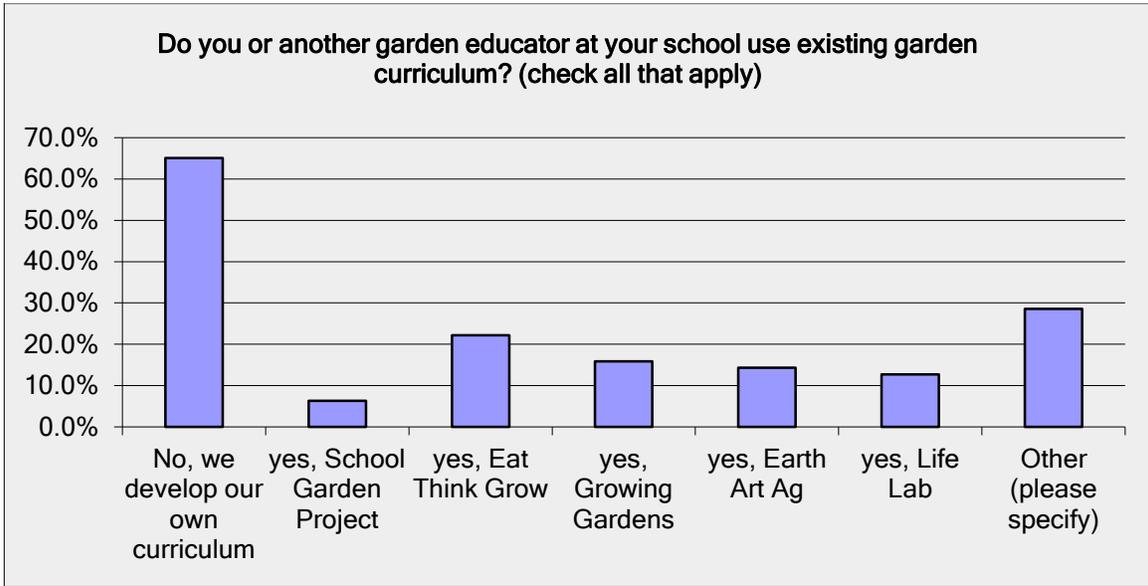


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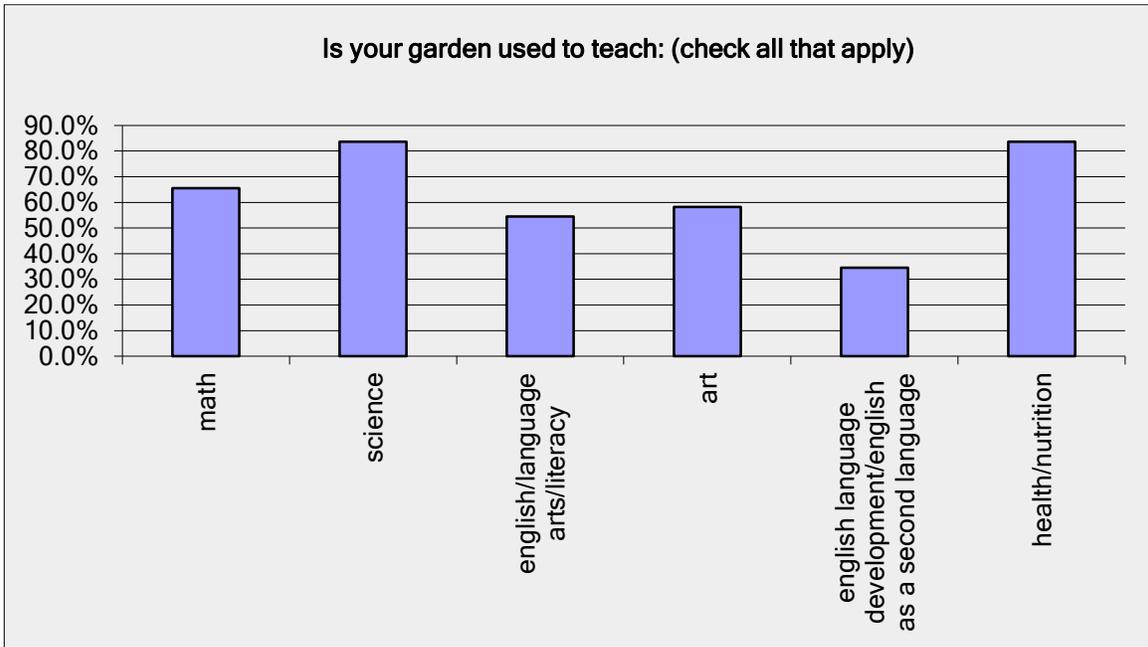
Hands on science experiments at Kelly elementary *Photo credit: Growing Gardens*

With the abundance of existing garden curriculum, it was surprising that most schools create and use their own. This may be related to the teacher's desire to integrate the garden into his or her existing plans. Garden curriculum can also be hard to standardize and transfer to other schools because it is dependent on what is growing in each garden and the stage of growth – which takes foresight and coordination to plant months ahead.



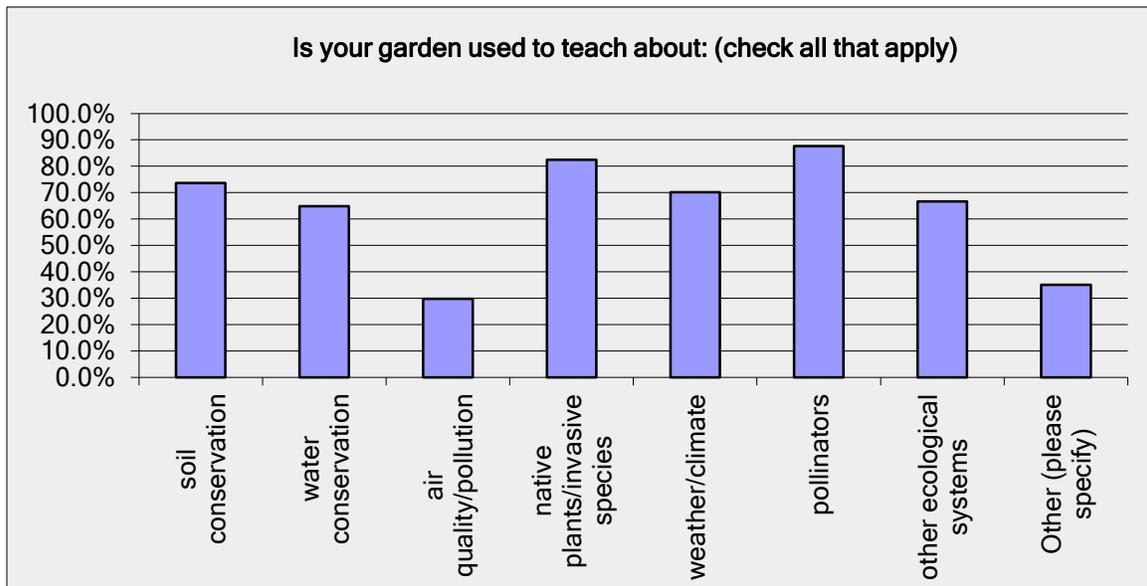
Most of the respondents who selected "Other" wrote in that they pull inspiration from a number of these. Respondents also mentioned Nature Works Everywhere, Oregon Food Bank Seed to Supper, Science Companion Prime, Got Dirt and Got Veggies, and Edible Schoolyard.

The gardens are used to teach a wide variety of subjects. While science and health/nutrition top the charts, gardens are also widely used for hands-on math, language arts, ESL, and art.



Environmental Education

Gardens are also used as teaching spaces for environmental sciences, especially native plants, pollinators, soil conservation, climate, and other ecological systems.



The “Other” category included a wide range of subjects: Growing food, ethnobotany, history, seed heritage, genetic diversity via heirlooms and seed saving, cooking, agricultural history, stages of plant development from seed to harvest, life cycles, permaculture, community building, work experience, food justice and food systems, self-management, food and carbon, and decomposition.



Plant lifecycle scavenger hunt at Cesar Chavez elementary. Photo credit: Growing Gardens

Therapeutic Uses

One trend that came to light in the study is the use of the garden for therapeutic or behavior uses. While this is a central purpose at the MESD schools, many other schools also reported using the gardens for “restorative justice” and as a place for kids to decompress. Several of the write-in answers touched upon this:

- *“We are a school for students with special needs. Our garden has been an important tool to calm and soothe students.”*
- *“In his [a teacher’s] work with our high behavior needs students, he has been taking them out to the garden as part of their time together. This has allowed them to take a vested interest in something and is now something they look forward to and work to earn.”*
- *“Executive functioning and observation skills; used also as a calming space for students with behavioral issues/ for restorative justice/community service.”*
- *“The garden is used by students who “need a break” during the day, and the SUN coordinator brings them out to water. She keeps watering cans full of water in her office for this purpose.”*

Healthy Food

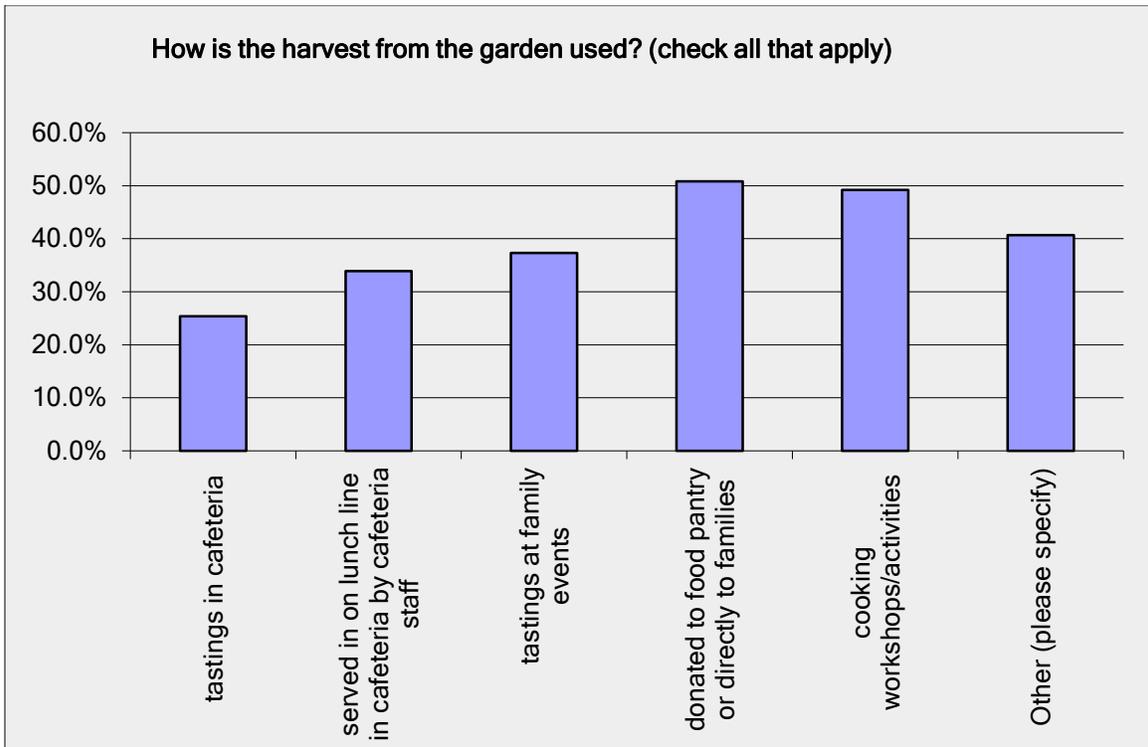
Beyond academics, gardens are used to increase enthusiasm for and availability of fresh produce. An anecdote from Chapman elementary illustrates the impact of gardens on children’s eating preferences:

“The greatest success is that the kids absolutely love it. They want to come to the garden, try the produce, and come back for more. Towards the end of the school year, a class harvested several buckets of kale, but they were unable to bring it into the lunchroom. During recess, Molly [Garden Coordinator] had the buckets of kale by the garden and students continued to come running over to eat up the raw kale. She had to limit how much kale students took because it was in such high demand.”

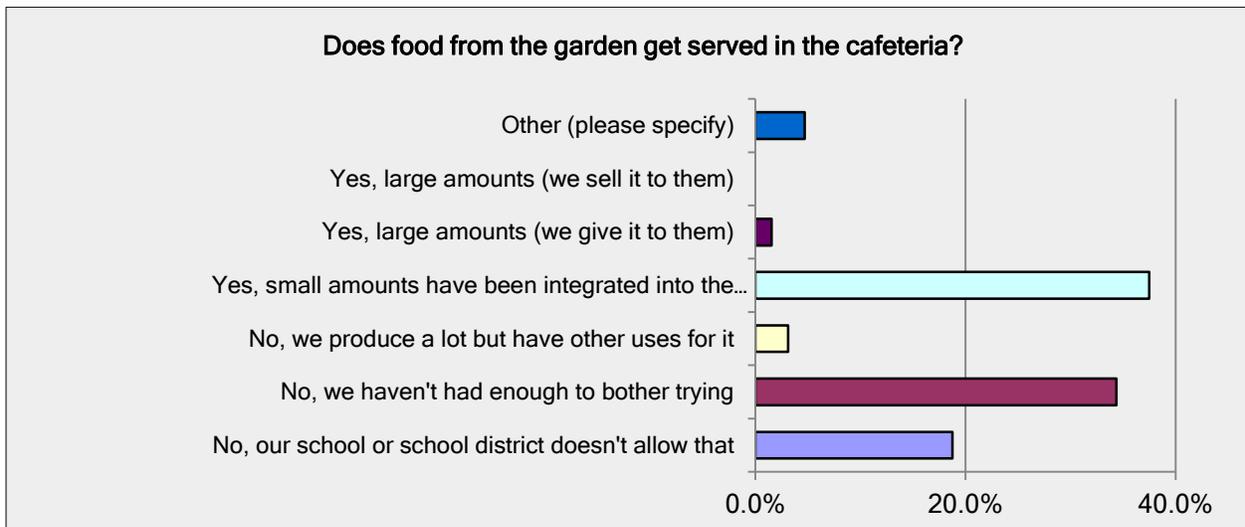


Lent School student harvesting rainbow chard *Photo credit: Growing Gardens*

The garden produce has multiple uses, especially donating food to food pantries or directly to families, as well as using the produce in cooking workshops. “Other” included write-in answers of students eating in the garden, tastings in class and in afterschool programs. One unique answer was farmers market sales of garden produce at Madison High School.



At 36% of schools a small amount of garden produce is used by the cafeteria, indicating that this is an untapped opportunity for many schools to reinforce healthy eating. 36% of schools reported that they do not produce enough to bother using it in the cafeteria, and 15% of schools, the school or district does not allow it.



Nature Play

Garden areas, including the native plant areas at many schools, are also used for nature play during recess and after-school. Some schools mentioned that the gardens were next to the playground structures so that children could choose to play there instead. One example of a garden program intentionally incorporating nature play is Gilbert Park, in the David Douglas School District. The Gilbert Park garden is a courtyard garden featuring many smaller garden and plant areas including a rain garden with a bridge, an Oregon agriculture garden, a memorial garden, many native plants and a “dig pit” where kids can dig up bones and other treasures.



“Dig pit” to play archeologist at Gilbert Park *Photo credit: Growing Gardens*

Community Engagement

Food brings people together. School gardens can play a role in uniting a school community and helping families find pathways to connect to the school community, regardless of language, culture, education or income. The respondent from Arleta said, "We have a large community of English Language Learners and the garden has proven to be a great resource through classes and events at getting these children and families to participate more fully in school." Another garden coordinator described the high food insecurity and socio-economic challenges of Harrison Park, a school with 94% Free and Reduced Lunch, yet a "large new immigrant population participates in the community garden and influences culturally diverse plantings."

One example of community connections is that Growing Gardens pairs its school garden program with a program helping low-income families establish home gardens. Staff and volunteers offer cooking taste tests at the school-based food pantries where they meet families interested in learning to garden at home. These same families are often engaged in helping to maintain the school garden and provide cooking workshops to other families. Another example is Irvington School where there are garden beds reserved for families. Trillium Charter School connects to the community in other ways; they participated in a neighborhood garden tour, have a presence at the farmer’s market and host workshops with community members.

School gardens are the hub of many events and activities. Collectively, respondents listed these events: Fall harvest fest, spring baby chickens, community Earth Art Day events, Oregon Museum of Science and Industry (OMSI) science night, Cesar Chavez day, retirement party, Iron Chef, "Lavender lot", Earth Day, volunteer appreciation events, Asia Pacific American Network of Oregon (APANO) for community-specific events, community clean-up days, Seed to Supper garden class, family cooking workshops and of course garden work-parties.

Many schools also coordinate with the Oregon Food Bank on-site pantries. For example, one school mentioned a partnership with the school-based food pantry in which the garden supplies fresh herbs and is used as a use space for child care.

Equity and garden education

How does the income level of the neighborhood correlate to garden access for students? The Free and Reduced Lunch Rate (FRLR) can be used as a proxy for poverty level of the school community. The average FRLR of schools in the study area is 55%. Surprisingly, the average FRLR of schools with gardens is also 55%, while the average of schools without school gardens is 57% -- so essentially the income level of the school is not correlated with the existence of a garden.

The average FRLR for schools with gardens, but without a formalized partnership with a garden nonprofit, was 51%, while the average FRLR for schools without nonprofit partnerships is 62%, indicating that nonprofits tend to work with slightly lower income schools than the average – but not by that much. One explanation is that some nonprofits have a hybrid model to maintain their financial sustainability. They seek grants to work with very low income schools, while contracting their services to higher income schools able to pay for the programing. Nonprofit partners do play a critical role in enabling garden programs at low income schools. Fifty eight percent of the programs at schools with higher FRLR (over 55%) and active garden programs (defined as over 500 learning hours/year) had programs funded and implemented by external nonprofit partners.

The schools with a paid coordinator were slightly more likely to be higher income: the average FRLR of schools that had a paid garden coordinator was 51% while the FRLR at schools with no paid coordinator was 58%.

While it is true that garden programs exist at schools that span the income spectrum, the few “superstar” schools that have much more in-depth garden programs, reaching more students with more learning hours, do tend to be higher income. For example, Sunnyside has 3 garden related staff positions: “There is a sustainability team, with a garden coordinator, a sustainability coordinator, and a farm to school coordinator. The students have a service relationship with a local farm, which they visit regularly as well. All the positions are paid for by the [Parent Teacher Student Association] (PTSA).”

At lower income schools, it seems more challenging to run a garden program coordinated by a volunteer parent, simply because there are fewer parents with the time to dedicate. The follow-up interviews also illuminated the additional challenges of low-income schools where there is huge student turnover, even within the school year due to families facing homelessness, evictions, needing to migrate for work, or foster care situations. For example, at one elementary school, 26% of students are “mobile” - not regular school attenders. Lower income schools also tend to have higher percentages of non-English speakers and recent immigrants. In this context, it is more challenging to establish an engaged, stable, cohesive volunteer garden committee. At schools with multiple language groups, it is hard to organize a group across languages. While most schools, both high income and low income, reported fewer than 20 volunteers, higher income schools were more likely than low income schools to report 40-50 volunteers. Total number of volunteer hours at high income schools also tended to be slightly higher than low income schools.

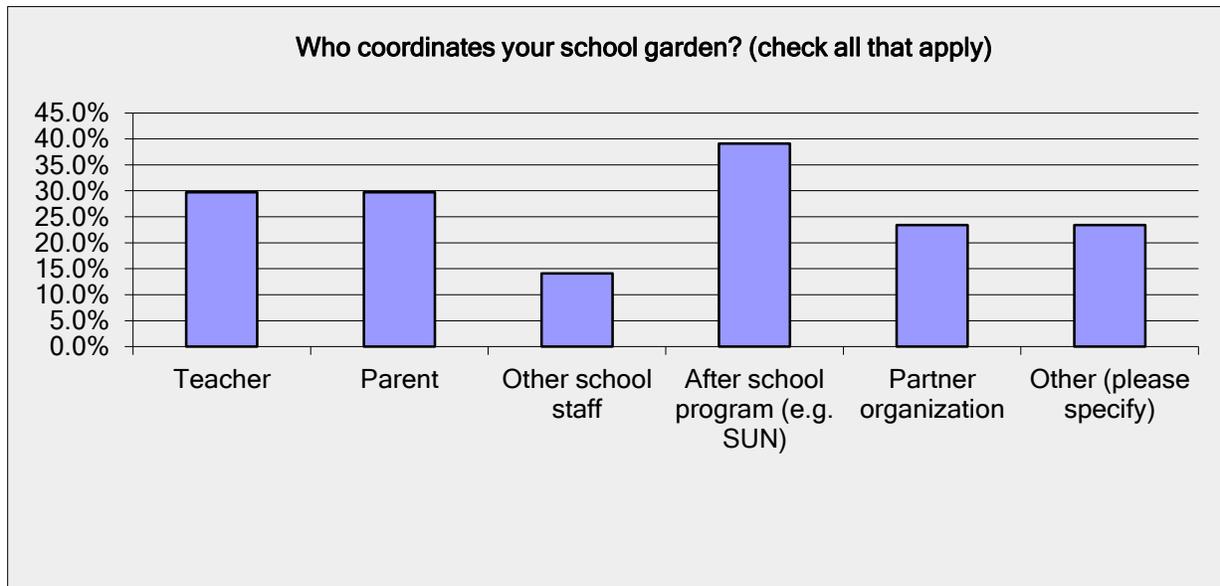
One shining example of using a garden to weave together a multicultural community is Harrison Park. Earth Art Ag has developed a school garden adjacent to a community garden established by Outgrowing Hunger. The community garden is used by many Chinese, Burmese, and Latino immigrant & refugee families. While this has been a huge success in community building and food access, it should be noted that the maintenance of the school garden is the role of the nonprofit, not parents volunteering their time.



Kids at Harrison Park enjoying a lemon cucumber harvest. *Photo credit: Earth, Art, Ag*

Program Coordination

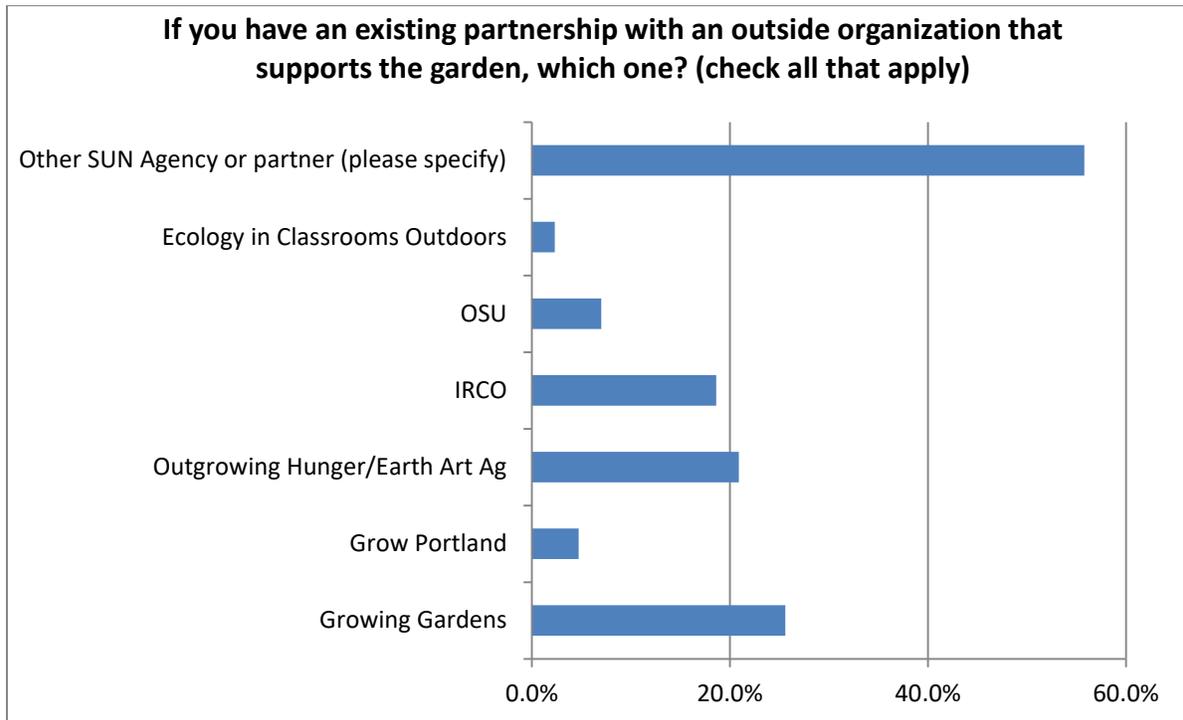
With nearly 100 school gardens in the area, one of our core research questions was: How are these gardens managed and sustained? We found that there is a huge range of management models, each with their pros and cons. Of the models, afterschool programs (e.g. SUN) were the most common, but there was a fairly even distribution between gardens coordinated by teachers, parents, afterschool programs and partner organizations. Taken as a whole picture, it does show that most gardens are not managed directly or formally by the school staff, which leads to some of the challenges of discussed later in the report of institutionalizing the gardens within the core structure of the school.



The "Other" categories include PTA (4), a parent committee, SUN Community School, Multnomah County Crops program (for MESD schools), and Garden Coordinators.

Partnerships

Partnerships play a key role in carrying out school garden programs. 67% of respondents reported that they have external partnerships. The study highlights that, in addition to the garden-focused nonprofits, SUN agencies are core partners to many garden programs.



The "Other" includes other SUN Agencies (10) (Self Enhancement Inc, Latino Network and Metropolitan Family Services). Other partnerships included Earth Art Ag (1), Green Schoolhouse (3), Multnomah County CROPS, PPS Sustainability - Green Schools Program, AmeriCorps (1) and Nature Conservancy (1), Friends of Trees, City of Portland Parks and Recreation, Beginner Urban Farm Apprenticeship program.

Some schools had multiple partnerships, for example, the respondent from Lent said, "The success of our garden is due, in large part, to all of our strong partnerships with groups such as: PPS Nutrition Services, Ecology in Classrooms Outdoors (ECO), Growing Gardens, Oregon State University SNAP Education, Portland State University's Science in the Learning Garden, and the Community Transitions Program."

Growing Gardens

Growing Gardens' mission is to strengthen people and communities through the experience of growing their own food. Its programs use gardening as a vehicle to provide fresh food access, science and nutrition education and job skills in low-income communities, high-poverty schools and correctional facilities across Oregon.

Since Growing Gardens' inception in 1996, it has helped over 1,275 families start home gardens, supporting fresh food access for over 5,000 adults and children. Since 2006, it has partnered with 13 schools to design and implement garden education programs for elementary school children. It currently runs gardening programs in 14 of the Oregon's correctional facilities and 2 juvenile detention centers. Using community-organizing principles that respect diversity, we help identify common goals, teach

problem-solving techniques and build skills for long-term project sustainability. Their years of data prove that the programs successfully increase fresh food access, reduce reliance on emergency food boxes, reduce grocery bills, increase children's consumption of fruits and vegetables and increase civic engagement.

In the 2016-17 school year, Growing Gardens is partnering with 9 schools to lead garden-based education during the school day to engage kids in interdisciplinary learning while building skills of classroom teachers, provide afterschool and summer garden education, improve access to and enthusiasm for healthy fruits and vegetables and facilitate intercultural and intergenerational community building. With professional Garden Educators and a FoodCorps Service Member, their model is to partner with a school for 3-5 years to build the skills, sense of ownership and resources to ensure that garden programs endure. Over time, the development of the garden and after-school Garden Clubs is taken over by the school community. At three schools, with the support of the Oregon Department of Education they are piloting a fully-integrated garden education program with .5FTE Garden Coordinators providing 10 hours of garden education per child per year.

Growing Gardens also runs a regional Learning Garden Professional Learning Community for teachers who would like to expand and improve their practice and the School Garden Coordinator Certificate Training for anyone looking to organize and sustain a school garden program. Both of these training opportunities were mentioned by a number of survey participants, indicating that they are helping to build the school garden movement in the Portland area. Participants in both of these opportunities can receive graduate credit through Portland State University. Growing Gardens also coordinates the Portland Farm and Garden Educators Network and is on the steering committee of the Oregon Farm to School and School Garden Network to help build the regional movement to expand and sustain school garden programs for more children, teachers and families.

Grow Portland

Grow Portland create vibrant school gardens and lead 2-3 full educational days each month at partner schools. By integrating school gardening into the regular day, and providing expert support, Grow Portland can impact far greater numbers of students than in an after school program. They use established curriculum resources and their own lessons to link garden sessions to Next Generation Science standards.

Grow Portland is committed to working with schools over the long term. Schools receive seeds, plants, soil amendments and season-extension products that we purchase for low cost in bulk. Fundraising for the program is a collaborative effort between Grow Portland and partner schools.

In the 2016-17 school year, Grow Portland is partnered with six school locations: Chief Joseph, Ockley Green, Sitton, Peninsula West Powellhurst and Menlo Park schools where 2000 students and 90 teachers are participating in Garden School.

Earth Art Agriculture

Earth Art Ag is the education division of Outgrowing Hunger. Both Portland-based nonprofits are committed to supporting and creating community through growing healthy food. Earth Art Ag teaches academically-supported, place-based garden education during the school day and after school in 11+ public K-8 schools. Through direct partnerships with teachers, parents, and school administrators, Earth Art Ag works to foster culturally-responsive pedagogies customized to each school context.

It is part of Earth Art Ag's mission to cultivate long-term partnerships with schools by providing highly trained, paid Garden Educators who teach through a broad curriculum encompassing soil science and health, botany, urban ecology and agriculture, nutrition, cultural food traditions, pollination and seed saving, native flora and fauna, and simple cooking. Through a partnership with Portland Public Schools Nutrition Services Earth Art Ag also delivers fresh produce to be served in school cafeterias.

Garden educators teach monthly garden lessons focused on seasonal, hands-on gardening skills, teamwork and collaboration, and connect to the diverse school communities they work with. Five of the eleven schools are Title 1 schools and receive funding for supplies (tools, soil, compost, seeds, plant starts, and educational materials) and programming through grants received by Earth Art Ag and Outgrowing Hunger; non-Title 1 schools use PTA funds to pay for programming. In the 2016-2017 school year Earth Art Ag is partnered with the following schools: ACCESS Academy, Atkinson, Beverly Cleary, Bridger, Cedaroak, Creative Science School, Grout, Harrison Park, Laurelhurst, Lincoln Park, and Vestal.

Green Schoolhouse

Green Schoolhouse provides a camp experience for children ages 5- to 10-years old using the magic of a garden to encourage children's sense of wonder, imagination, and adventure. In addition to camps, they run after school garden programs at Abernethy, Alameda, Hayhurst, Riverdale Grade School and Portland Youth Builders.

Schools Uniting Neighborhoods (SUN) agencies

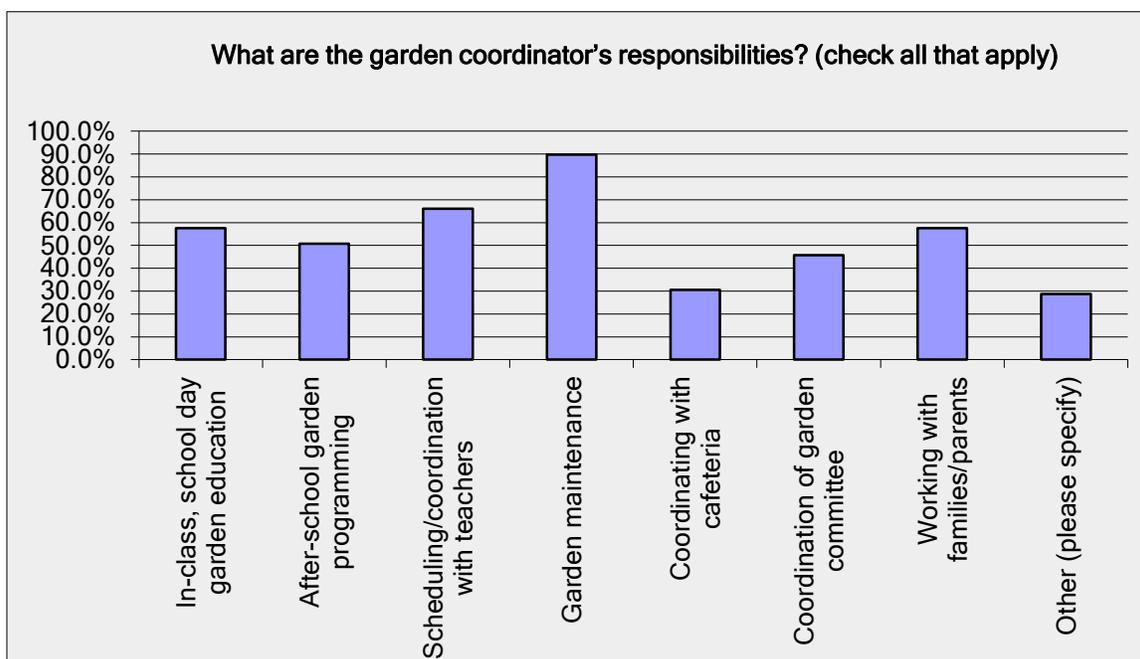
The Schools Uniting Neighborhoods Service System (SUN) "leads to educational success and family self-sufficiency through an integrated network of social and support services for youth, families and community members. Within the SUN Service System, [SUN Community Schools](#) are the school-based delivery sites for a comprehensive set of services including educational, enrichment, recreational, social and health services" (<https://multco.us/sun>). Multnomah County selects nonprofits as lead SUN agencies at each school to run after school and other services. SUN agencies that have been active in garden education include Immigrant and Refugee Community Organization (IRCO), Metropolitan Family Services (MFS), Latino Network and Self-Enhancement, Inc. The SUN managers, based at each school, are uniquely positioned to encourage community involvement in school gardens and coordinate after school use, including hiring garden educators to teach after school programs.

Oregon State University

OSU offers a Junior Master Gardener program, youth 4 H (afterschool and summer) as well as leading nutrition and cooking classes at schools. One innovative program brings high school and elementary school students together for garden education.

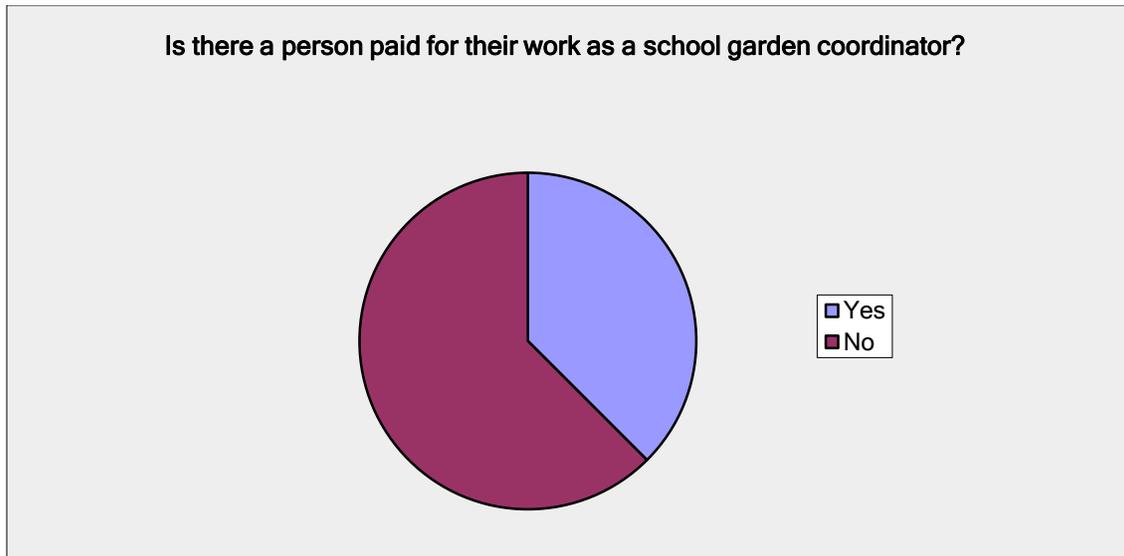
Role of Coordinators

Whether the coordinator is a teacher, volunteer, parent or partner, someone has to make decisions, maintain the space and implement the garden program. The role of the garden coordinator included the following tasks:



"Other" included school day garden education, curriculum development, garden design, volunteer training/coordination, coordinating with the cafeteria, summer maintenance, shopping for supplies, building partnerships, budgeting, fundraising, handling reimbursements, coordinating work parties, and grant writing.

In regards to whether a school had a paid garden coordinator or not, respondents were asked to respond "no" if the teacher or staff are doing the coordination work on top of other duties without extra compensation. Thirty seven percent of schools with gardens have a paid coordinator. Nearly 60% included school day education and 50% after-school education in the "coordinator's" role. However, when reading the details of the respondents that say "No" many of them had a paid "Educator" (often paid by a partner organization). Thus, when analyzing the impact of having a paid coordinator, we also analyzed the difference of having a paid "coordinator" or "educator."



Where there is a paid coordinator, **twice as many students use the garden**. The average number of students where there is no paid coordinator is 144, while the average number of students where there is a paid coordinator is 296. When including schools where there is a paid educator, even when there is no paid coordinator, the results tell the same story: twice as many students are engaged in garden education.

More classroom teachers also use the garden when there is a paid coordinator or educator. In the 24 schools with no paid coordinator or educator, the numbers of teachers using the garden were:

- 15 responses for 0-3 teachers (62%)
- 5 responses for 3-5 teachers (20%)
- 1 response for 5-10 teachers (4%)
- 2 responses 10-15 teachers (8%)
- 1 response 15-20 teachers (4%)

In the 39 schools where there was a paid coordinator *or* educator, the numbers of teachers using the garden are reported as:

- 5 responses 0-3 teachers (12%)
- 11 responses 3-5 teachers (28%)
- 12 responses 5-10 teachers (30%)
- 5 responses 10-15 teachers (13%)
- 6 responses 15-20 teachers (15%)

Similarly, after-school education also reaches more students (average 63 instead of 42) when there is a paid coordinator or educator. Where there is no paid coordinator, it is unclear how the afterschool programs are implemented. Perhaps there is a volunteer teaching a class or a staff member (like AmeriCorps) that the respondent did not consider a garden coordinator.

Analyzing the data through school day learning hours (students x number of hours of garden education), the same pattern emerges. The average number of learning hours in schools without a paid coordinator is 2919, while schools with a paid coordinator averaged 5713 learning hours -- **an increase of 96%**. When including no paid “coordinators” or “educators” learning hours averaged 3393 in comparison to 4489 hours where there was a paid coordinator and/or educator. This includes educators from partner organizations that may work at many schools. The bottom line is that paid garden coordinators/educators can maximize the benefits of school gardens by engaging many more students than when just relying on teachers to utilize the gardens on their own during the day.

Of the schools that do not have a paid coordinator or educator, and yet have high student usage numbers, most are higher income (Capitol Hill, West Sylvan and Winterhaven). It seems that at these schools there is a culture of teachers using the garden, supportive administrator and a strong volunteer base.

The respondents reported that most “Coordinators” work less than 10 hours a week. Eight schools have paid garden coordinators who work 10-40 hours a week. However, it seems that some respondents did not include "educator" in this same category as some schools have a separate educator who teaches after-school programs for example. Nonetheless, it does indicate that, even with fewer than 10 hours of paid time per week, there is an increase in student and teacher engagement when there is a coordinator.

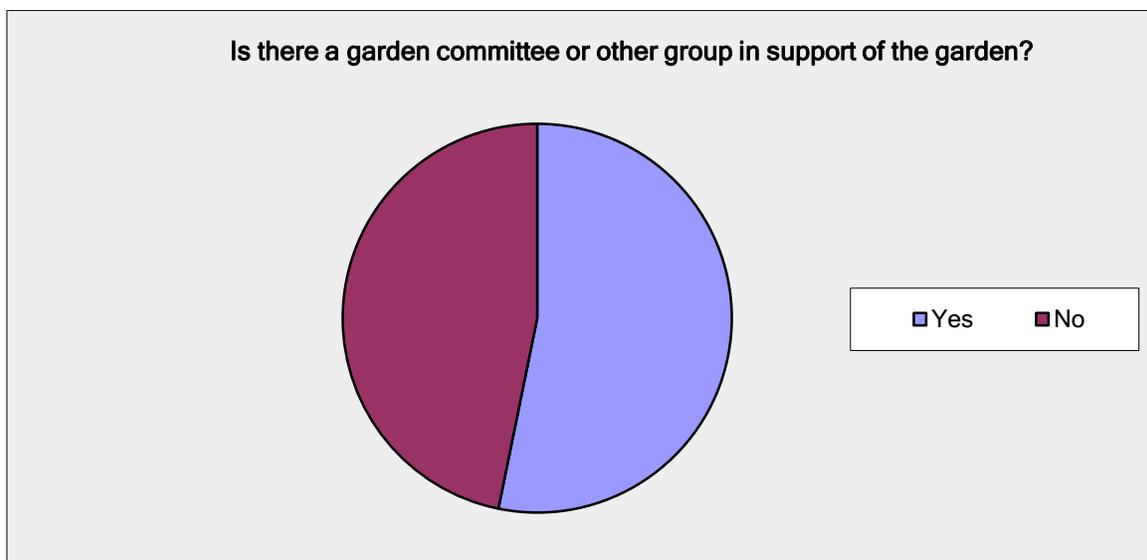


Growing Gardens’ staff helping kids learn from garden exploration.

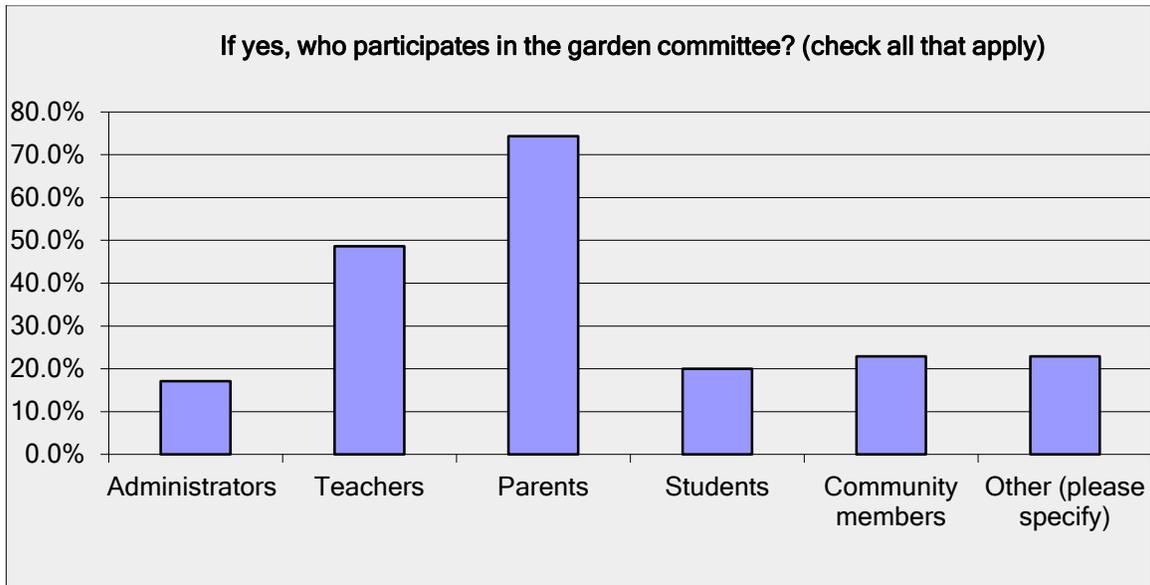
There is a correlation between the budget for materials and the number of students benefitting. The average number of students served during the school day at schools with low budgets (\$1-\$100) is 109, while the average number of students served at schools with higher budgets (over \$2000) was 368. Similarly, the learning hours at low budget schools were **less than half** of the learning hours at high budget schools. At schools with low materials budgets they averaged 2377 learning hours, while at programs with higher materials budget they averaged 5355 learning hours. The average number of students served, after-school, at schools with low budgets is 37, while the average number of students served after-school, at schools with high budgets is 40. Thus, the range of budget seems to be more highly correlated with school day learning.

Committees

About half of the schools have garden committees and half do not, although the definition can be blurry. Some may answer that there is a committee, yet it is an "ad hoc" collection of people who rarely meet. Conversely, some may have said that there is not a "garden committee" but there may be a garden coordinator with strong support from teachers, volunteers and administrators. Even schools without a "committee" report 20, 30 or more volunteers, and up to 40 volunteer hours a month, so someone or several people must be recruiting and coordinating these volunteers. There was no significant correlation between the existence of a committee and the length of time a garden has been operational.



Of those that answered that there is a garden committee, parents are the most common members, followed by teachers. Administrators are only on 18% of garden committees. Most of the "Other" category were SUN staff.



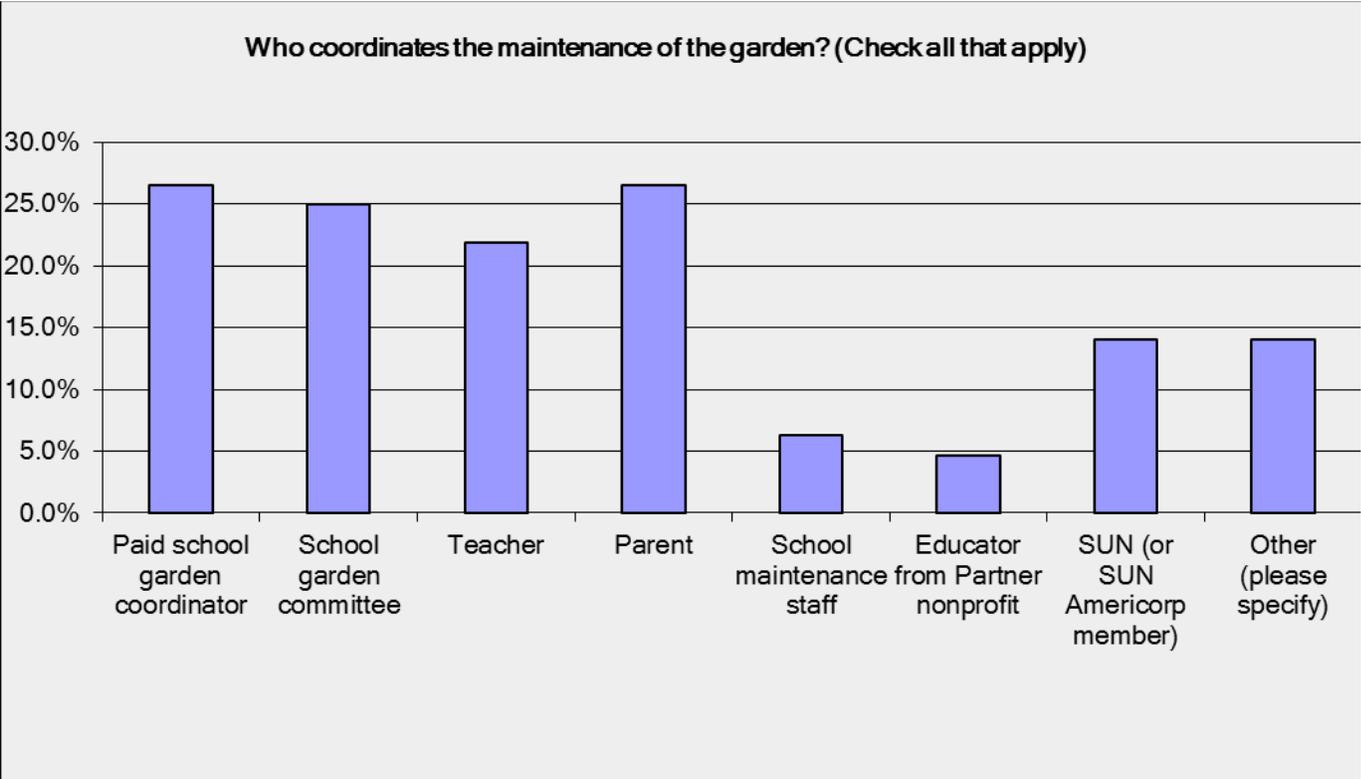
Does the existence of a garden committee correlate with socioeconomic level, as indicated by Free and Reduced Lunch (FRLR)? Slightly. The average FRLR for schools with garden committees is 51%, while those without tend to have a higher FRLR, averaging 64%.

Does the existence of a garden committee relate to having paid garden coordinators? No. At schools with no garden committee, half had no paid staff, and half had a paid staff or nonprofit partner with professional educators working at the school.

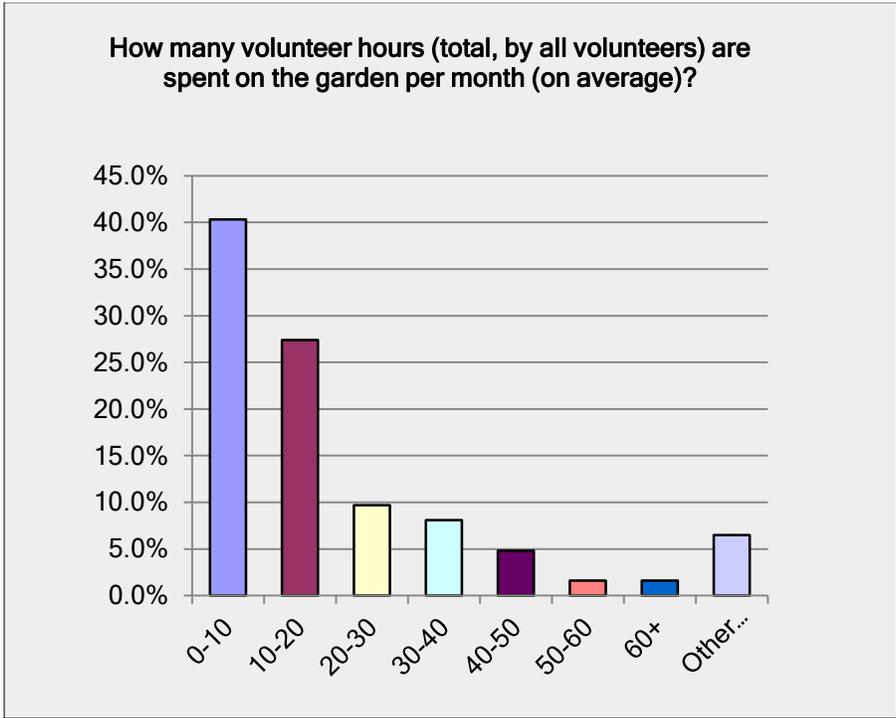
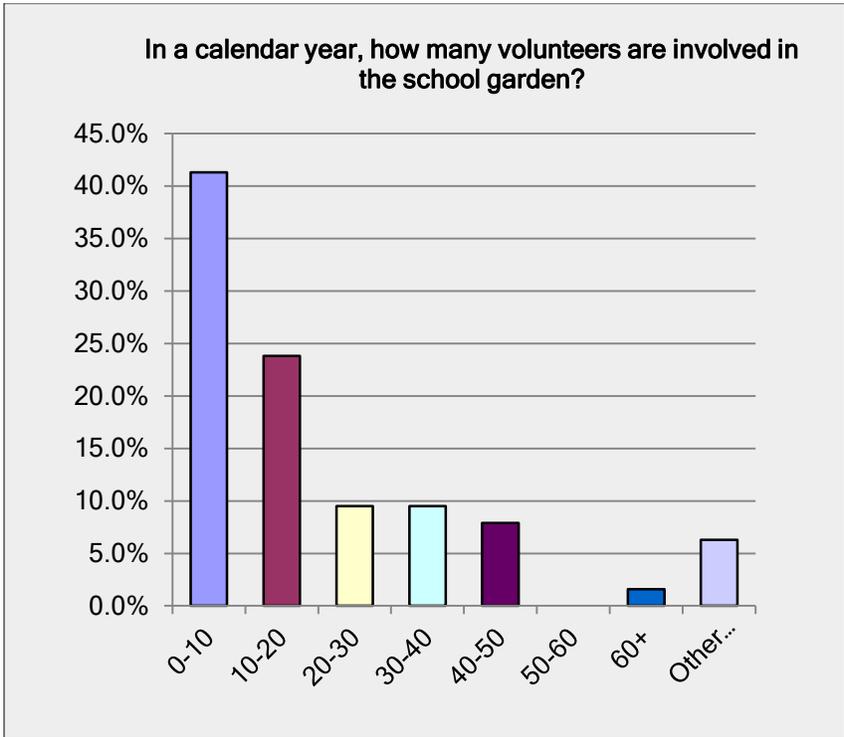
How does the existence of a garden committee correlate to the number of students who have access to garden education? At schools without a committee, an average of 169 students use garden in the day, while where there is a committee, the average is 235 (increase of 39%), suggesting that a committee encourages coordinated use.

Volunteers

Whether or not there is a formal committee, someone has to maintain the garden space. Parents, garden coordinators, committees and teachers, in that order, were the most common answers.

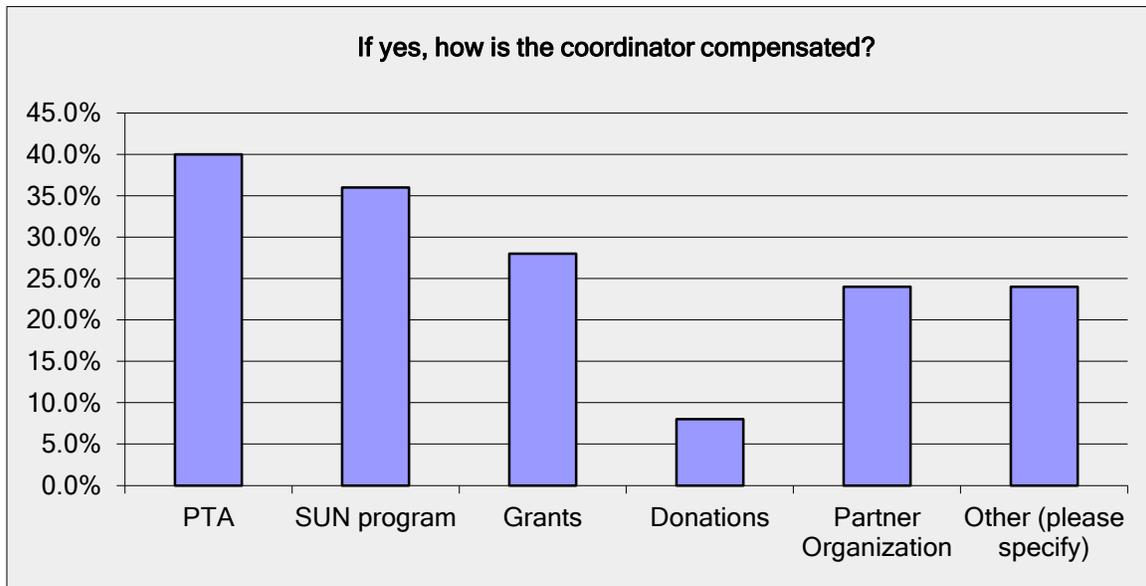


Hundreds of volunteers are committing a lot of time to keep school gardens flourishing. At 41% of schools, there are 10 or fewer volunteers, while at 60% of schools there are more than 10 volunteers, with the following breakdown.



Funding

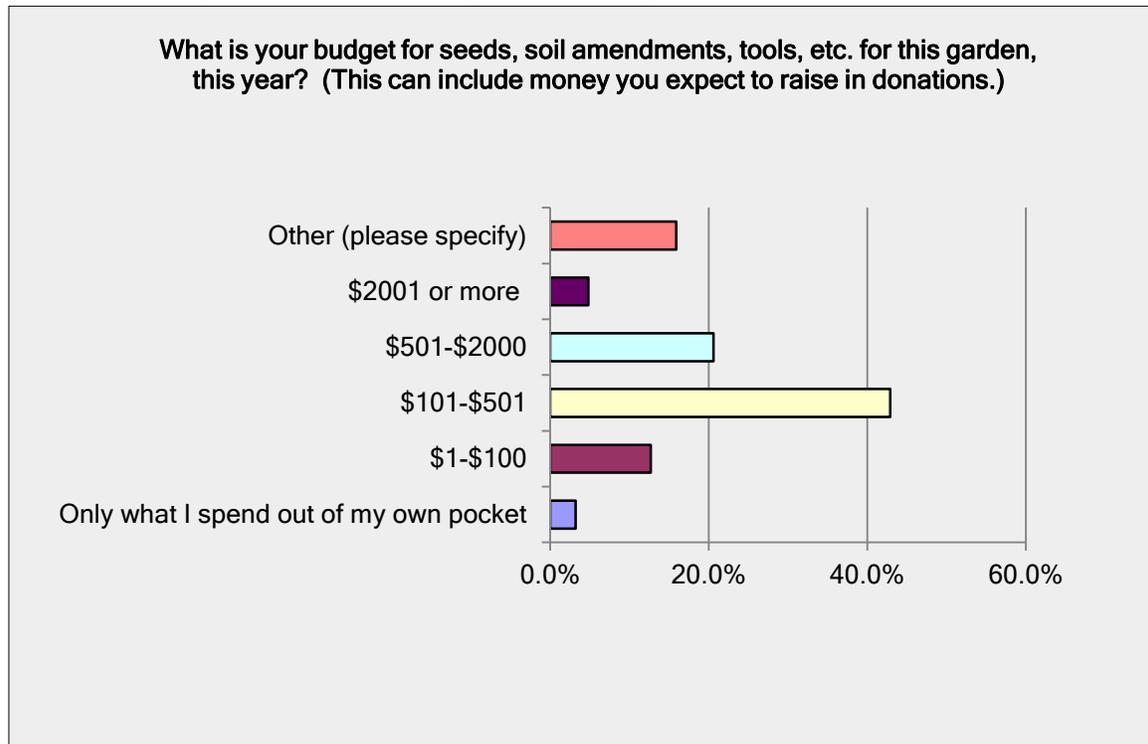
School gardens require some funding to keep them maintained, let alone to fully utilize them for education. Where coordinators are compensated, their wages are covered by the sources shown in the graph below. While the survey did not ask what the hourly wages were, it did include the number of hours per week a paid educator/coordinator works (see page 24). Of course the amount of garden classes taught are variable with the number of hours and educator is paid, and the scale of the budget. Teachers who use the garden during the school day (on their paid time) were not considered a "paid coordinator" for this question.



"Other" responses include "the school", "teacher employed by school district", "paid high school intern, and 21st Century Grant. While we did not ask specifically about fundraising events, one school mentioned selling plants from the garden.

The PTA funded programs average 410 students during the day and 60 after school, whereas SUN-funded programs average 227 kids during the day and 108 after school, which reflects the mission of SUN as an afterschool enrichment program. PTA funded programs also tend to be more stable. The average school garden program with PTA funding has existed for 6-10 years. While PTA funding may be a goal, it is out reach for many, if not most schools in the survey area. The PTA funded programs are at schools with an average Free Reduced Lunch Rate of 24% -- much below the average FRLR of 55% for the surveyed schools. SUN funded programs are at schools with an average FRLR of 67%.

A model unique to Abernethy school garden includes an after-school garden program that is able to fund a full-time garden educator during the school day.



Most of the "other" category was "no budget" or "just what I spend out of my own pocket" although there was one \$5000 response.

Challenges

The work of developing and managing a school garden is definitely a labor of love. Seeing the benefits to kids keeps people engaged, but there are many challenges along the way. One respondent summed it up this way: "Our biggest challenge at present is sustainability - to keep this new garden going into the future, volunteer procurement when needed for people to step up for important roles, working with the school office, the garden being locked behind a gate and teachers to step up to use the garden for more than planting seeds with their class." This section will parse out these challenges, drawing upon the themes that emerged from the surveys and especially the follow up visits.

The "lone champion" and turn-over

Behind many school gardens is a passionate person with little organized support. This person is sometimes a parent, teacher or coordinator. They have a strong passion for "their" garden, but there is a risk of burn-out or simply that the parent's child ages out of the school or the teacher transitions to another school. One respondent listed the main challenge as "burn-out for volunteers who have taken

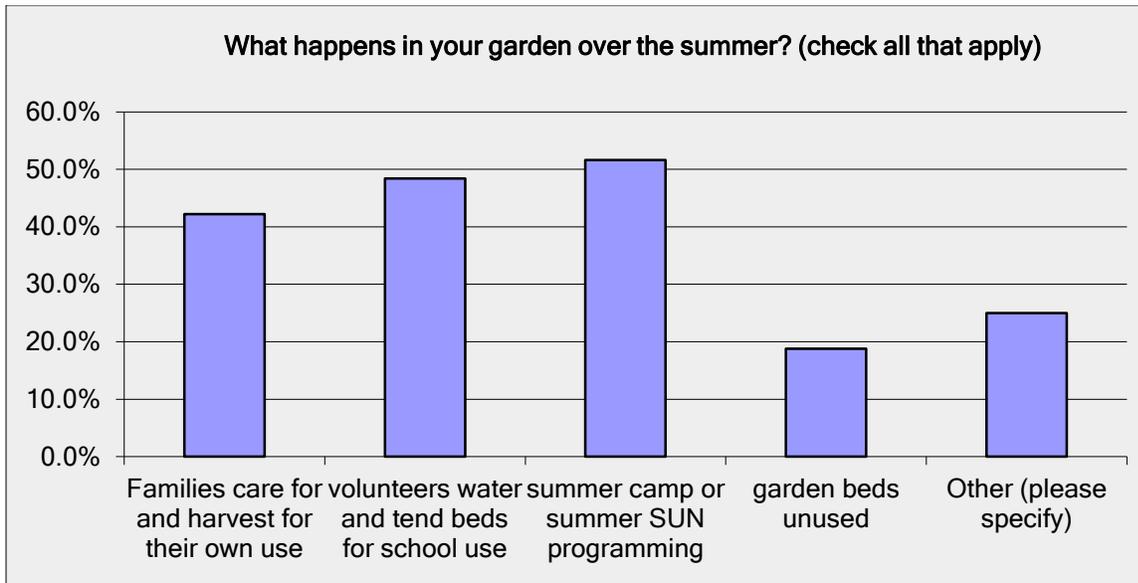
on projects and not had enough support". Another respondent said that "this is not a living-wage job or one with any room to grow, so it is unlikely to ever be held by one person for more than a few years at a time." Some cited a lack of continuum from year to year leading to underutilization. As described above, there is an immense amount of time needed to coordinate the garden, plant with students, harvest and educate. It is challenging for a single person to keep all of that up, especially operating on a volunteer or near-volunteer basis. One example of the "lone champion," is Lonny Gandera, a parent at Prescott Elementary. Menlo Park is a very low-income school (77% "economically disadvantaged") in the Parkrose School District. Lonny is the main force behind the garden, going regularly in the summer to turn on and move irrigation. He also has taken on beautifying the school grounds, where he has planted flowers around the school building. He has good relationships with school administrators and staff, but is currently the only person maintaining the garden. Another example would be Kirsten Holstein, a parent at Jason Lee. Kirsten has a background in landscape design, and was instrumental in planning and building the garden. Over the years she has been paid for some hours for instructional time, but like Lonny, she has dedicated many, many more unpaid hours to sustaining the garden at Jason Lee.

High turnover within the school community also poses a challenge to sustaining school garden programs -- as it does to sustaining high quality education in general. Many respondents pointed to high turnover in the administration, staff and SUN program. One respondent said that this turnover "gutted our garden program this year." Another said that "our school is challenged with high turnover in its staff; we've had 5 different principals in the 3 years I've been here. The lack of administrative consistency (and therefore, advocacy) has been in my view the single biggest obstacle to continuously developing programming here."

Growing Garden's model has been to build up the school communities' ability to run the garden program internally. While some schools have the internal capacity to do so, this transition also brings challenges, as one respondent said, "Our garden has been very successful with the help of growing gardens. We feel it might be hard to transition out of the partnership a year early and are concerned of the success of the garden after they leave." This school has been able to continue their afterschool program, and has an active parent committee, but the daytime garden education is not as robust as when a Growing Garden's educator was there.

Summer maintenance

Some respondents mentioned summer maintenance as one challenge, although most have found some combination of ways to address it.



The "Other" category included some variations of summer school, a garden coordinator on very limited hours, community gardeners tending to it. Two schools mentioned harvesting for the food bank, and two mentioned selling to local farmers markets.

Infrastructure

Many respondents listed broken infrastructure including:

- Broken spigots (mentioned several times).
- Building access (keys).
- Doors that don't open from outside.
- Lead issue.
- Access to water / No line of water out to the garden.
- Site so close to sidewalk/street with no boundaries.
- Poor soil.
- Lack of covered rain space/outdoor classroom.

Some of these issues require assistance from district Facilities Management. District-level support for school gardens should include reducing some of these infrastructure barriers.

Teachers time

There is a common vision to get more teachers out to the garden. There is a perception that there is so much testing that teachers feel that they do not have and time or flexibility to use the gardens more. As an example, one respondent said, "We are a courtyard garden and there is some resistance from teachers who feel that garden classes are disruptive to regular instruction time, and lack value." Support from principals and the administration would go a long way in promoting teacher buy-in. Tellingly, at

high income schools, a principal or teacher were more likely to be the respondents of the survey indicating that at these schools there is greater administrative support for using the garden.

In a similar vein, some respondents indicated that the lack of a paid educator meant that teachers would have to take it upon themselves to prep materials, organize and implement garden lessons, but "engaging with the garden is not part of teachers' plans, it is only fit in if volunteers pursue it."

One respondent also requested more curricula that ties into core standards to help teachers understand that the garden can be used to reinforce classroom learning.

Legitimacy of the garden program and Administrator support

These champions want to be seen as a legitimate part of the school community (with door access, badge, on staff email lists and invited to attend staff meetings). One person expressed some frustration about being siloed by the school community as just a parent volunteer, even though she is being paid to teach. She hopes to become more integrated into the staff community and for the garden to be recognized as part of the school culture and community. Another respondent said, "The gardens are yet to be part of the institutional planning. They need to have more programming in order to maximize the educational opportunity and participation of the students."

There was a wide range of support among school administration. While some sited unsupportive administrations as a challenge, others said that they had "excellent principal support."

Community involvement

While most garden programs envision a robust, vibrant community carrying them out, the reality is that the community organizing necessary can be challenging -- especially in schools with a lot of competing demands. As one respondent put it, "Community building is a huge challenge. No one is paid for community engagement around the garden. Not enough time to do education, maintenance, fundraising, work parties, etc. It's been difficult getting families out, getting the school involved, getting funds, and each year it's a bit up in the air where funds will come from for the next year."



Parents involved with the garden build at Arleta school. *Photo credit: Growing Gardens*

Many respondents echoed the challenge in getting enough volunteers. As one person put it, there is "not enough parent or school community support and too much sitting on the shoulders of the unpaid coordinator." Another mentioned that "minimal hours have made it difficult to focus on school and community engagement beyond maintenance."

Finally, at one multicultural school, the community organizing efforts faced an additional challenge of "inhibited inter-language communication (which resulted in a conflict this year), and lack of participation by parents non-English languages."

Unclear Lines of Responsibilities

When something is working, it's everyone's, when it needs fixing, it's no one's. Community organizing is more than having volunteers show up. It's also the messy work of figuring out who is doing what, when, where and with what resources, as these three quotes illustrate:

"We have school plots in a community garden. When the project was built long ago, a covered area and outdoor classroom were part of the design. One challenge is that after the initial build, there hasn't really been any agency who is clearly responsible for maintaining these; we now have some broken water features and non-functional electrical outlets in our space and no clear recourse to repair or continue maintaining them long-term. I feel like this is something folks forget about when they build gardens with one-time grant funding and multiple partner agencies with high turnover."

"There is much support for the garden program from individual teachers, parents, administrators, cafeteria staff, and SUN staff. However, it has been challenging to form a cohesive group to run the garden."

"When we became a SUN Community School, our past stakeholders (parents and teachers) looked towards the Site Manager to oversee all garden development, outreach and project management. There were many short-term work parties with no long-term collective visioning, planning and execution."

Financial Sustainability

Many respondents included funding in their discussion of challenges, especially for garden educators. Some said the Parent Teacher Organization money is not enough for staff or bigger/longer term projects. Some said that the school districts need to hire garden educators as contracts to offer garden educators more professional stable positions. Although we did not get responses from schools whose garden programs no longer exist, lack of funding is likely to be a critical factor. One respondent said, "I'd love to have more time, resources and knowledge about gardening and curriculum. This lack of resources has been the number one reason why I haven't kept up this year. We need a few things in the garden and it's just not in my budget."

Unique Challenges

There were also some challenges only mentioned by one respondent such as "Children in detention are not allowed to use any [garden] tools", Vandalism, "inappropriate behavior in the rainwater garden at night", and "Securing permission to sell in the cafeteria (some administrative personnel in our District are hesitant to give permission)." and lack of a school-year informed garden schedule.

Conclusions

Incredibly, over 15,000 students, at 99 schools in the Portland area, are growing and eating fresh food while learning everything from science to poetry in school gardens. Over 24,000ft² of turf has been converted into thriving gardens of native and edible plants -- creating rich learning environments right outside the school doors. Garden programs are enhancing academics, engaging community, connecting kids with nature and creating therapeutic spaces. As one respondent put it, "We have had many successes planting trees around the school, adding beauty and edible foods to the landscape, reducing food wastes from school lunches, and raising awareness around gardening and ecological issues."

Portland is at the forefront of a school garden movement and yet the level of institutional support varies widely. At a few schools there is stable funding, educators and administrative support for integrated garden education that reaches many students. However, at the majority of schools it seems that garden programs are driven by few, passionate volunteers or teachers putting in extra hours with tenuous budgets.

Successful, and sustainable, garden programs need supports from multiple stakeholders, from individuals in a school community to district-level decision makers. Lessons learned from this assessment suggest actions that each of these can take.

School Community (Administrators, Teachers, SUN, Volunteers)

- It is critical for school administrators to encourage teachers to use the garden as part of their instruction and include garden educators as part of the core staff (inviting them to staff meetings, allowing building access, facilitating scheduling, etc.) This sets the tone that the garden is part of the school's core learning environment, just as the library or media lab is.
- At most schools there are a few enthusiastic teachers who either use existing garden curriculum or create their own lessons to teach a range of subjects, but more could be done to connect them with existing curriculum that integrates into core subjects and find ways to support the rest of interested teachers. While many teachers are excited to use the garden when the lesson is organized by a garden educator and the garden is ready to use, fewer have the bandwidth to get the supplies, design the lesson and implement it, let alone do the garden maintenance. To reach more students and support teachers, schools can partner with nonprofit organizations so that specialized garden educators lead lessons side-by-side with classroom teachers during the day.
- A paid garden coordinator or educator doubles the number of students benefitting from garden education.
- Designating a teacher committee as responsible for coordinating the garden-based education, and including the time for the committee to meet on contract time, is an excellent way to promote the utilization of the garden.
- An after school program, such as through the SUN system, increases garden use and can be an excellent hub for community involvement. Some SUN agencies currently involved in coordinating gardens and even funding garden educator positions. Since SUN agencies are also responsible for running multiple afterschool and social services, garden education is not the focus or specialty of these agencies. There is potential in supporting these agencies with developing garden programs and helping them reach into the school day as well as afterschool.
- To maintain the garden space, it is important to have a strong volunteer base (or at least a few dedicated volunteers with time) and someone to coordinate their efforts, such as a garden committee or garden coordinator. Volunteers need to have garden work parties about 4 times a year and a strong plan for tending over the summer. Committees can be part of a PTA or stand alone, ad hoc or formal, depending on if there is a garden coordinator or if committee volunteers share those responsibilities.
- An obvious factor of success is a functional design and infrastructure access (i.e. close to water, maintainable size, and durable materials).
- It is important to have clear lines of responsibility for who is maintaining the space, seeking funding, coordinating use, etc.

Nonprofits

- Partnerships with garden education nonprofits seem to be a common thread of garden programs that exist in our area, since most schools do not have the bandwidth or resources to develop or implement them. Nonprofits can bring experienced educators to implement lessons and/or train teachers and volunteers to develop school garden programs.
- Especially at low income schools where there are fewer parents with time to volunteer or financially support a program, there are many gaps to fill in developing school gardens, coordinating maintenance, recruiting volunteers and implementing garden lessons.
- There needs to be ways to start new school gardens at schools that want them, but also ways to provide on-going support to the nearly 100 garden programs already existing on shoestring budgets and exhausted volunteers.
- Nonprofits can provide the connective tissue between different school gardens to share knowledge, resources, and support and collective advocacy
- Nonprofits could be doing a better job at focusing on low income schools.

Funders

- While some grantors only fund materials, the start-up costs and material costs are minimal in relation to the need for funding for garden educators.
- Funding is needed on an *ongoing* basis if we want garden programs to be ongoing. Since garden programs do not generate revenue, it is difficult for them to be self-sustaining.
- Grant funding can be “boom or bust”. It would be ideal to identify sources for consistent funding, such as revenue from a soda tax (as school gardens are funded in Washington DC), continued Farm to School and School Garden funding from Oregon Department of Education, Multnomah County SUN system or from school districts.
- High income schools may be able to match grants with PTA funding, but lower income schools may not be able to.

School districts

- Everyone interviewed is aware of the limited budget and capacity of facilities maintenance staff and none of the respondents expected district staff to maintain the gardens. Yet, the “small” issues in infrastructure (like a broken faucet) make a big difference on the ability of volunteers to keep on top of maintenance.
- In the long-term, for gardens to become integrated into the fabric of the school, it would be ideal for districts to hire garden coordinators/educators, or combine this part-time role with existing roles (TA, teacher, community agent, etc.) In order for this to happen, there needs to be clarity on what employment category (Classified? Contract?) that would be appropriate.
- There is an opportunity for further integration of garden education into teaching core subjects and especially rolling out the Next Generation Science Standards.

- Since one of the main purposes of school gardens is to inspire kids to eat healthy, organic produce, it is essential for district policies to allow students to eat garden produce. The scare of lead in the water and resulting halt on eating garden produce was a temporary setback in some districts and continues to be a major obstacle in other districts. All school gardens should be tested for lead in the soil. Once soil tests come back showing safe levels, garden produce should be properly washed and offered to students.
- The frequent administrative and teacher turn-over affects the ability of schools to develop and sustain innovative programs.

In the Portland area, there are school gardens at both high income and low income schools. Whereas PTAs support gardens at higher income schools, nonprofit garden education organizations and the SUN agencies play a critical role in implementing and sustaining gardens at low-income schools -- with uncertain funding year to year. Supporting garden education is a matter of equity for students with less access to fresh healthy produce, natural environments or academic enrichment.

In order to maximize the health, education, environment and community benefits of school gardens, it is necessary to recognize them as important parts of our schools, support them adequately, and extend the opportunities to more children.



Harvesting at Harrison Park. *Photo credit: Earth, Art, Ag*

Appendix

Survey Questions

1. School name (text box)
2. Your name (text box)
3. What is your role at the school?
 - a. teacher
 - b. parent
 - c. other school staff
 - d. paid garden educator/coordinator
 - e. other (please specify)
4. How long have you been involved with the garden at this school?
 - a. 0-1 year
 - b. 2-3 years
 - c. 4-5 years
 - d. 6-10 years
 - e. more than 10 years
 - f. unknown
5. How long has this school garden been there?
 - a. 0-1 year
 - b. 2-3 years
 - c. 4-5 years
 - d. 6-10 years
 - e. more than 10 years
 - f. unknown
6. Who coordinates your school garden? (check all that apply)
 - a. Teacher (s)
 - b. Parent (s)
 - c. Garden committee
 - d. PTA
 - e. Other school staff
 - f. Paid garden educator/coordinator
 - g. After school program at school (e.g. SUN)
 - h. Partner organization (Growing Gardens, Grow Portland, Earth Art Ag etc.)
 - i. Other (please specify)

7. If you have an existing partnership with an outside organization that supports the garden, which one? (check all that apply)
- a. Growing Gardens
 - b. Grow Portland
 - c. Outgrowing Hunger/Earth Art Ag
 - d. Kitchen Garden Laboratory
 - e. IRCO
 - f. Other SUN organization
 - g. OSU
 - h. Ecology in Classrooms Outdoors
 - i. Other (please specify)
8. Is there a person paid for their work as a school garden coordinator? (y/n) (NO if: volunteer, unpaid parent, or teacher or staff doing it on top of their other duties without extra compensation.)
9. If yes, how is the garden coordinator compensated?
- a. PTA (grants/fundraisers/donations)
 - b. SUN program
 - c. School budget
 - d. Partner organization
 - e. Other
10. What are the garden coordinator's responsibilities? (check all that apply)
- a. In-class, school day garden education
 - b. After-school garden programming
 - c. Scheduling/coordination with teachers
 - d. Garden maintenance
 - e. Coordinating with cafeteria
 - f. Coordination of garden committee
 - g. Working with families/parents
 - h. Other (please specify)
11. How many paid hours per week does the garden coordinator work (on the garden specifically)?
- a. 0-5
 - b. 5-10

- c. 10-20
- d. 20-30
- e. 30-40

12. In a calendar year, how many volunteers are involved in the school garden?

- a. 0-10
- b. 10-20
- c. 20-30
- d. 30-40
- e. 40-50
- f. 50-60
- g. 60+

13. How many volunteer hours (total, by all volunteers) are spent on the garden per month?

- a. 0-10
- b. 10-20
- c. 20-30
- d. 30-40
- e. 40-50
- f. 50-60
- g. 60+

14. Is there a garden committee at your school? (y/n)

15. If yes, who participates in the garden committee? (check all that apply)

- a. Administrators
- b. Teachers
- c. Parents
- d. Students
- e. Community members
- f. Other

16. What is your budget for seeds, soil amendments, tools, etc. for *this garden, this year*?

(This can include money you expect to raise in donations.)

- a. Only what I spend out of my own pocket
- b. \$1 - \$100
- c. \$101 - \$500
- d. \$501 - \$2000
- e. \$2001 or more

17. Where does that money come from?

- a. School budget
- b. Partner organization budget
- c. PTA
- d. Grants applied to by garden committee or garden coordinator
- e. Fundraising activities organized by garden committee or garden coordinator
- f. In-kind donations (plants, bark chips etc.)
- g. Other (please specify)

18. Approximately how many teachers use the garden for instruction per year?

- a. 0-3
- b. 3-5
- c. 5-10
- d. 10-15
- e. 15-20
- f. 20+

19. In general, during the school day, do classes use the garden...

- a. with their teacher alone
- b. with their teacher and a garden educator
- c. with just a garden educator
- d. other please specify

20. Approximately how many students are actively involved in the garden per year, during the school day? (text box)

21. Of the students who use the garden during the school day, how often does each student visit the garden?

- a. more than once a week
- b. once a week
- c. once a month
- d. less than once a month
- e. other (please specify)

22. Are lessons taught in the garden integrated into grade-level curriculum and/or Common Core and/or Next Generation Science Standards? (y/n)

23. Do you use any existing garden curriculum?

- a. No, we develop our own curriculum
- b. School Garden Project

- c. Eat Think Grow
- d. Growing Gardens
- e. Earth Art Ag
- f. Life Lab
- g. Other (please specify)

24. Is your garden used to teach: (check all that apply)

- a. Math
- b. Science
- c. English/language arts/literacy
- d. Art
- e. English language development/English as a second language
- f. Health/nutrition

25. Is your garden used to teach about: (check all that apply)

- a. soil conservation
- b. water conservation
- c. air quality/pollution
- d. native plants/invasive species
- e. weather/climate
- f. pollinators
- g. other ecological systems

26. Is your garden used for after-school education?

- a. Yes, through the SUN program
- b. yes, through another after-school program
- c. no

27. Approximately how many students are actively involved in the garden per year in after-school and/or summer programs?

- a. 0-10
- b. 20-50
- c. 50-100
- d. 100-200
- e. 200 or more

28. What happens in your garden in the summer? (check all that apply)

- a. Families care for and harvest for their own use
- a. Volunteers water and tend beds for school use
- b. Summer camp or summer sun program
- c. Beds unused
- d. other (please specify)

29. How is the harvest from the garden used?

- a. Tastings
- b. Served in cafeteria
- c. Donated to local food pantry or families
- d. Cooking workshops/activities
- e. Other

30. Does food from the garden move to the cafeteria?

- a. No, our school district doesn't allow that
- b. No, we haven't had enough to bother trying
- c. No, we produce a lot but have other uses for it
- d. Yes, small amounts have been integrated into their salad bar or dishes (a little bit of lettuce or a few vegetables)
- e. Yes, large amounts (we give it to them)
- f. Yes, large amounts and we sell it to them

31. Who coordinates the maintenance of the garden?

- a. Paid school garden coordinator
- b. School garden committee
- c. Teacher
- d. Parent
- e. School maintenance staff
- f. other

32. Who owns the property where your garden is?

- a. School
- b. Parks Department
- c. Other City/government property
- d. Private land
- e. Church or Nonprofit partner

33. What is the approximate size of the planting area where students help grow food? (please estimate)

- a. fewer than 160 square feet (up to 5 4x8 ft. beds)
- b. 101-300 square feet (up to 10 4x8 ft. beds)
- c. 301-500 square feet (up to 15 4x8 ft beds)
- d. 501 - 1000 square feet (up to 30 4x8 ft. beds)
- e. more than 1000 square feet
- f. other (please specify)

34. Do you compost garden debris on-site? (y/n)

35. Does your school have any of the following:

- a. Native plant area
- b. Rain garden
- c. Nature play area
- d. Other special features

36. Does your garden have any unique events, activities, animals, community usage, partnerships, etc.? Anything else you'd want us to know? (text box)

37. Are there any successes or challenges your garden program has faced that you'd like to share?

38. Can we contact you for a follow-up phone conversation or site visit? If so, what's the best way to contact you? (text box)

39. To thank you for filling out this survey, we'd like to send you a 20% off coupon to Portland Nursery, and to enter your name in a raffle to win 2 \$100 gift cards to Portland Nursery. Where should we send the coupon, and the gift card, if you win?

Follow Up Interview Questions

1. Name:
2. School/ District:
3. Role at the School:
4. Tell us the story of your garden:
5. What brought you to your role as (garden coordinator/other)?
6. Are you paid or unpaid in your garden role?
7. Do you have any background or formal training in garden education? In teaching?
8. What are your school garden program's greatest challenges?
9. What are your school garden program's greatest successes?
10. What's the/your long term vision for the garden at your school?
11. What support do you need from your school administration/district to see your long term vision become a reality?
12. Is there anything else you'd like to tell us about your garden program?
13. Are you on PFGEN? Would you ever be interested in hosting a PFGEN meeting?

List of Schools by District

Portland Public Schools

| School | Garden? | Contact Person | | Position | Email Address |
|--------------------------------|---|------------------|------------------------------|----------------------------|--|
| Abernethy School | YES | Julie/Jennifer | Welsh/Jenson (2017 addition) | Garden Specialist | julie@growing-gardens.org jjdane@msn.com |
| Access @ Rose City Park | YES (shared w/Beverly Cleary, @ Rose City Park) | Jimena | Galvez | earth art ag partner | Earth.art.ag@gmail.com |
| Ainsworth School | NO | Robin | Abadia | | rabadia12@gmail.com |
| Alameda School | YES | Tracy | Muilenberg | parent | tracygracem@gmail.com garden@alamedaschool.org |
| Alliance HS @ Meek | YES | Joe | Ferguson | Natural Resources Teacher | jferguson@pps.net |
| Arleta School | YES | Cilicia/Kevin | Hatch/Crochett | parent | canstead@gmail.com kevinc@pps.net |
| Astor School | YES | Karl/Chris/Maria | Newsome/Hochstatter/Doughty | principal/secretary/NA | principal email: knewsome@pps.net , secretary email: chochsta@pps.net |
| Atkinson School | YES | Kira/Djamila | Edmunds/Moore | PTA contact/Earth Art Ag | kedmunds@earthlink.net djamila@earthartag.org |
| Beach School | YES | Brenda/Aimee | Bokenyi/Kriz | 1st grade teacher/4-H club | bbokenyi@pps.net aimeekriz@gmail.com |
| Beaumont Middle School | NO | | | | |
| Benson High | NO | | | | |
| Beverly Cleary School/Fernwood | YES | Jimena | Galvez | partner org | earth.art.ag@gmail.com |

| | | | | | |
|---------------------------|-----|----------------|-----------------------|---------------------------|--|
| Boise/Eliot School | YES | Kileen/Molly | Parks/Chun | STEM coordinator | kparks@pps.net mollyc@pps.net |
| Bridger School | YES | Amelia/Rebecca | Caldwell/Kennedy | PTA contact | ameliacaldwell@yahoo.com bridgergreenteam@gmail.com |
| Bridlemile School | YES | Kim | Mathews | school secretary | kmathews1@pps.net |
| Buckman School | YES | Diane/Brian | Meisenhelter/Anderson | SUN coordinator | dmeisenhelter@impactnw.org (original contact) banderson@pps.net (2017 contact) |
| Capitol Hill School | YES | Linda | Goldser | PTA contact (grandparent) | Lindaloug@comcast.net |
| Cesar Chavez | YES | Maria | Velez | SUN coordinator | vmaria@latnet.org |
| Chapman School | YES | Molly | Porter | parent volunteer | mollyehporter@yahoo.com |
| Chief Joseph/Ockley Green | YES | Kristen | Moon | STEAM coordinator | Kmoon@pps.net |
| Cleveland High | NO | | | | |
| Creative Science | YES | Melissa | Streng | Earth art ag | melissastreng@gmail.com |
| Creston School | YES | Lisa/Conrad | Kensel/Finnius-Hurdle | PTA president/ | president@crestonschoolpta.org fhurdle@pps.net (2017 additional contact) |
| Da Vinci Middle School | YES | Heather | Stevens | 6th grade science | hstevens@pps.net |
| Duniway School | YES | Dana/Katharina | Visse/Steinmeyer | parent | danavisse@yahoo.com katharina.steinmeyer@yahoo.com |
| Emerson School | NO | | | | |
| Faubion School | NO | Lee | LaShawn | | llee@pps.net |
| Forest Park School | YES | Jaclyn/Tanya | Ford/Ghattas | Kindergarten teacher | jford@pps.net (survey respondent) tghattas@pps.net (2017 additional contact) |
| Franklin High | NO | | | | |
| George Middle | NO | Bob/Michelle | Keefer/York | | bkeefe@pps.net myork@pps.net |

| | | | | | |
|-------------------------|--------------------------|------------------------------|----------------------|--------------------------|--|
| School | | | | | |
| Glencoe School | YES | Claudia/Ewan | Ramos-Tetz/Brawley | asst principal/ | cramostetz@pps.net ebrawley@pps.net |
| Grant High | YES | Megan/Vivian | Hull/Orien | SPED teacher | mhull@pps.net |
| Gray Middle School | YES | Beth | Madison | SUN Coordinator | bmadison@pps.net |
| Grout School | YES | Lisa | Van Clock | 3rd grade teacher | lvancloc@pps.net |
| Harrison Park | YES | Djamila/Adam | Moore/Kohl | Earth Art Ag | Djamila@earthartag.org adam@outgrowinghungrier.org |
| Harvey Scott School | YES | Keli | Dean | PTA parent | kelidean@msn.com |
| Hayhurst School | YES | Nadya | Burchett | parent | burchetten@gmail.com |
| Hosford Middle School | YES | Jennifer | Abbassian | parent | abbassianj@gmail.com |
| Humboldt School(CLOSED) | YES | used as community garden now | | | |
| Irvington School | YES | Gillian | Carson | parent volunteer | gill@mytinyplot.com |
| Jackson Middle School | YES | Sarah/John | Fitch/Ferraro | school secretary/ | sfitch@pps.net (original contact) jferraro@pps.net (2017 addition) |
| James John School | YES | George/Katie/Beth | Caceres/Seiby/Shelby | SUN coordinator/ / | gcaceres@nhpdx.org kdselby@comcast.net bshelby@pps.net |
| Jefferson High | NO | | | | |
| Kelly | YES | Katherine | Grunseth | ELD teacher | |
| King School | YES | Paolina | Toncinich | | kingschoolgarden@gmail.com |
| Lane Middle School | NO (work with PSU @ LGL) | | | | |
| Laurelhurst School | YES | Djamila | Moore | Partner org | Djamila@earthartag.org |
| Lee K-8 | YES | Kirsten | Holstein | parent, paid through the | kholstein67@gmail.com |

| | | | | | |
|-----------------------------|-----|----------------------|-------------------------|----------------------------------|--|
| | | | | nature conservancy | |
| Lent School | YES | Jesse | Hunter | teacher | jhunter@pps.net |
| Lewis School | YES | Kathleen | Witter | garden coordinator | lewisgardenpdx@gmail.com, kgagnonwitter1@pps.net |
| Lincoln High | NO | | | | |
| Llewellyn School | YES | Alexia/Marty | Wellons/Crouser | parent | alexiawellons@yahoo.com (survey respondent) mcrouser@pps.net (2017 additional contact) |
| Madison High | YES | Susan/Rodrigo | Wiencke/Corona | | swiencke@pps.net, rruizcorona@pps.net |
| Maplewood School | YES | Melissa/Virginia/Liz | Thompson/Bowers/Jones | parent | melthompson11@gmail.com vbowers@columbianlandtrust.org lizjones1@gmail.com |
| Markham School | YES | Michelle/Jane/Mist | Martin/Harold/Plock | pta president/ / | markhampta@gmail.com jharold@pps.net mistyplock@yahoo.com |
| Marysville School | NO | | | | |
| Metropolitan Learning Ctr | NO | | | | |
| Mt Tabor Middle School | NO | | | | |
| Ockley Green / Chief Joseph | YES | Kristen | Moon | STEAM coordinator | Kmoon@pps.net |
| Peninsula School | YES | Rebecca/Carlos | Gregor/Galindo | Kindergarten teacher | rgregor@pps.net cgalindo@pps.net |
| Richmond School | YES | Sarah/Bev | DeLuca/Pruitt | | Sarahkdeluca@yahoo.com |
| Rieke School | YES | Zach/Jamie/Sarah | Prichard/Repasky/Lewins | principal's secretary, principal | zprichard@pps.net Jamie.repasky@gmail.com slewins@pps.net |
| Rigler School | YES | Zandy | Gordon | | zgordon@pps.net |
| Roosevelt | NO | | | | |

| | | | | | |
|--------------------------------|-----|----------------------|--------------------|-------------------------------------|--|
| Rosa Parks School | NO | | | | |
| Roseway Heights | YES | Sarah/Kitty | Lewins/Bor yer | principal | slewins@pps.net kboryer@mesd.k12.or.us |
| Sabin School | YES | Julian | Dominic | PTA garden coordinator | sabingardencoordinator@gmail.com |
| Sellwood Middle School | NO | | | | |
| Sitton School | YES | Mandee/ Amy | Bish/Morga n | | mbish@pps.net amorgan@pps.net |
| Skyline School | YES | | | | skylinegreenteam@gmail.com |
| Stephenson School | YES | Jordan/T hu | Leah/Truon g | parent | Jordanleah@gmail.com truong@pps.net |
| Sunnyside Environmental School | YES | Steph | Rooney | | |
| Trillium | YES | Sharon | Mabaet | Receptionist | sharon@trilliumcharterschool.org |
| Vernon School | YES | Lyndsey | Mackenzie | PTA school garden coordinator | lyndsey.mackenzie@gmail.com |
| Vestal School | YES | Melissa/G retchen | Streng/Ro wland | | growland@pps.net |
| West Sylvan Middle School | YES | Brian | Fitzwater | 6th grade science | bfitzwat@pps.net |
| Whitman School | YES | Barbara | Underwood | Teacher | bunderwo@pps.net |
| Wilson High | YES | George | Penk | Science Teacher | gpenk@pps.net |
| Winterhaven School | YES | Fawn | Lengvenis | parent | flengvenis@gmail.com |
| Woodlawn School | YES | Abby | Peterson | Kindergarten Teacher | apeterson@pps.net |
| Woodmere School | YES | Xea | Westcott | | xeandra@gmail.com |
| Woodstock School | NO | | | | |
| | | | | | |

David Douglas

| School | Garden? | Contact Person | | Role at school | Email |
|-------------------------------|---------|-----------------------|---------------|--|---|
| Cherry Park School | Yes | Jess/Heather | Polledri/ | counselor | jesspolledri@gmail.com (survey respondent) Heather: 503-256-6501 |
| Alice Ott Middle School | No | Jennifer | Garcia | SUN coordinator | Jennifer.garcia@portlandoregon.gov |
| Arthur Academy Charter School | NO | | | | |
| Community Transition Program | NO | | | | |
| North Powellhurst | NO | | | | |
| Ron Russell Middle School | NO | Alejandra | Avalos | SUN coordinator | alejandra_avalos@ddouglas.k12.or.us |
| David Douglas High School | YES | Emily/Nelly | Bertram/Evans | SUN coordinator/ | emily_bertram@ddouglas.k12.or.us nelly_evans@ddouglas.k12.or.us |
| Earl Boyles | YES | Becky/SUN Coordinator | Wandell/ | 5th grade teacher | becky_wandell@ddsd40.org (survey respondent) youn_han@ddouglas.k12.or.us (2017 contact) |
| Fir Ridge Campus | YES | Elan | Eichler | Sun Coordinator | elan_eichler@ddsd40.org |
| Floyd Light Middle School | YES | Lauren | Letsinger | JVCNW/Americorps Volunteer with FLMS SUN | lauren_letsinger@ddouglas.k12.or.us (survey respondent) |
| Gilbert Heights | YES | Gradey | Proctor | SUN | 503 234 8996 |
| Gilbert Park | YES | Mandy | Hurley | SUN site manager | mandy_hurley@ddsd40.org |
| Lincoln Park | YES | Jenny | Marable | earth art ag educator | < vreedmarable@gmail.com > |
| Menlo Park | YES | Elizabeth | Archodominion | student teacher | e_archodominion@ddsd40.org |
| Mill Park | YES | Carrie | Cowan | student achievement specialist | carrie_cowan@ddsd40.org |

| | | | | | |
|------------------|-----|-------|---------|-----------------|---------------------|
| Ventura Park | YES | Erika | Levison | SUN coordinator | erikal@irco.org |
| West Powellhurst | YES | Lena | Fox | SUN coordinator | lenaf@metfamily.org |

Centennial

| School | Garden? | Contact Person | | Role at school | Email |
|--------------------------|---------|----------------|--------------|--------------------------------|---|
| ACE Academy | NO | | | | |
| Butler Creek | NO | | | | |
| Centennial High School | NO | | | | |
| Centennial Middle School | NO | | | | |
| Centennial Park | YES | Ajai/Julie | Huja/Mack | Principal/wellness coordinator | ajai_huja@csd28j.org Julie_mack@centennial.k12.or.us (2017 contact) |
| Harold Oliver | NO | | | | |
| Lynch Meadows | NO | | | | |
| Lynch View | YES | Jasmine | Ramos | secretary | Jasmine_ramos@csd28j.org |
| Lynch Wood | YES | Amber/Greta | Moore/Morna | SUN coordinator | MooreA@nayapdx.org (original contact) gretam@metfamily.org |
| Parklane | YES | Vickie | Soli-Compton | counselor | Vickie_soli-compton@csd28j.org |
| Pleasant Valley | YES | David | Scharfenberg | 6th grade teacher | David_scharfenberg@csd28j.org |

Reynolds

| School | Garden? | Contact Person | | Role | Email |
|------------------|---------|------------------|--------------------------------|----------------------------|--|
| Alder Elementary | YES | Nicole/Mars hall | Costello/Gross (2017 addition) | Counselor, SUN Coordinator | ncostello@rsd7.net |
| Arthur Academy | NO | | | | |
| Davis Elementary | YES | Kevin | Donato | SUN Coordinator | kevind@mfs.email , kevindonato@partner.rsd7.net |
| Fairview School | NO | | | | |

| | | | | | |
|-------------------------------|-----|---------|----------|-----------------|--|
| Four Corners | NO | | | | |
| Glenfair | YES | Celia | Flaim | SUN Coordinator | celiaf@metfamily.org |
| Hartley | NO | | | | |
| Hauton B Lee Middle School | YES | Caty | Marshall | SUN | catym@mfs.email or catym@metfamily.org |
| Knova Learning Center | NO | | | | |
| Margaret Scott | YES | Lauren | Marks | family liason | lmarks@rsd7.net |
| Multisensory Learning Academy | NO | | | | |
| Reynolds High School | NO | | | | |
| Reynolds Learning Academy | NO | | | | |
| Reynolds Middle School | YES | Ben | Baldizon | SUN coordinator | bbaldizon@rsd7.net |
| Salish Ponds School | YES | Matt | McMaster | Teacher | mmcmaster@rsd7.net |
| Sweetbriar School | NO | | | | |
| Troutdale School | NO | | | | |
| Walt Morey Middle School | YES | Ian | Fox | SUN coordinator | ianfox@partner.rsd7.net |
| Wilkes School | NO | Krystal | Galarza | SUN coordinator | crystalgalarza@partner.rsd7.net |
| Woodland | YES | Rebecca | Larson | SUN | rebeccala@irco.org |

Parkrose

| School | Garden ? | Contact | Role | Email |
|----------------------|----------|---------|------|-------|
| Parkrose High School | NO | | | |
| Parkrose Middle | NO | | | |

| | | | | | |
|-----------------|-----|------------|-----------------|-----------------|--|
| School | | | | | |
| Prescott | YES | Lonny/Kate | Gandera/Anderly | Parent | LonnyGee@comcast.net kateyonkers@hotmail.com |
| Russell Academy | NO | | | | |
| Sacramento | NO | | | | |
| Shaver | YES | Loni | Blankers | SUN coordinator | blanklon@parkrose.k12.or.us |

Multnomah County Education Service District

| School | Garden? | Contact Person | | Role at school | Email |
|-------------------------|---------|----------------|--------|----------------|--|
| Arata Creek | Yes | Joni | Tolon | Principal | jtolon@mesd.k12.or.us |
| Burlingame Creek | YES | Joni | Tolon | Principal | jtolon@mesd.k12.or.us |
| Donald E. Long | YES | Rima | Green | | rima@growing-gardens.org |
| Helensview | NO | April | Ard | | wkante@mesd.k12.or.us |
| Ocean Dunes High School | No | | | | |
| Three Lakes High School | No | | | | |
| Wheatley School | NO | | | | |
| Wynne Watts | YES | Suzanne | Briggs | counselor | sbriggs@mesd.k12.or.us > |

Profiles of Each School Garden

Abernethy Elementary School

2421 SE Orange Ave, Portland OR 97214

Contact: Julie Welsh, Garden Specialist (survey respondent)

Contact: Kari Brooks-Copony, Chair, School Kitchen Garden Program

Contact: Jennifer Jenson (2017 additional contact)

julie@growing-gardens.org

kbrookscopony@gmail.com

jjdane@msn.com

The school garden at Abernethy Elementary School was established over 10 years ago and occupies 500-1000 ft² of space. The school also has a nature play area and insect/pollinator habitat on-site. The garden is coordinated by teachers, parents, a partner organization, PTA and School Kitchen Garden Program, and teachers and parents make up the garden committee. The garden coordinator is responsible for garden maintenance, scheduling/coordinating with teachers, in-class school day garden education and coordination of the garden committee. Abernethy started an after-school program in 2015 that generates the salary for the daytime garden teacher. 15-20 teachers use the garden for education, bringing approximately 500 students to the garden once a week, where they receive instruction from Growing Gardens and Eat Think Grow curriculums. Students learn about health/nutrition, art, science, math, pollinators, weather/climate, native plants/invasive species, air quality/pollution, water conservation, soil conservation and other ecological systems. Abernethy has an after-school program as well, and 20-50 students take part in after-school and/or summer programming in the garden. Food harvested from the garden is used at family tasting events, tastings in the cafeteria and tastings in class. Small amounts of harvested food have been integrated into the school cafeteria salad bar or other dishes. Abernethy also has a fall harvest festival and spring baby chicken event. The supplies budget is generated through in-kind donations, PTA and fundraising activities organized by the garden committee or garden coordinator.

ACCESS Academy

2334 NE 57th Ave, Portland OR 97212

Contact: Jimena Galvez, Earth Art Ag Partner

earth.art.ag@gmail.com

The school garden at ACCESS Academy was established 2-3 years ago and occupies 300-500 ft² of space. There is a native plant area, insect/pollinator habitat and nature play area on-site as well. The garden is coordinated through a partnership with Outgrowing Hunger/Earth Art Ag, and maintenance is coordinated by parent volunteers and the garden educator. There is also a garden committee composed of administrators and parents. The garden educator coordinates with the cafeteria, handles scheduling/coordination with teachers and works with families/parents. During the school year, 5-10 teachers bring their students to the garden educator, who instructs 70 students/year. The students visit the garden once a month, and the curriculum used during instruction comes from Earth Art Ag, Cornell, Eat Think Grow and School Garden Project. Students receive lessons on health/nutrition, English language development/English as a second language, art, English/language arts/literacy, science, math, pollinators, weather/climate, native plants/invasive species, air quality/pollution, water conservation,

soil conservation, other ecological systems and the history of genetic diversity via heirlooms and seed saving. 50-100 students also use the garden during after-school and/or summer programs. Over the summer, the garden is maintained by volunteers who water and tend to the bed for school use and families who care for the garden and harvest for personal consumption. The garden supply budget comes from in-kind donations, fundraising activities by the garden committee or garden coordinator, grants applied to by the garden committee or garden coordinator, the school budget, PTA and a partnership with Outgrowing Hunger/Earth Art Ag.

Alameda Elementary

2732 NE Fremont St, Portland OR 97212

Contact: Tracy Muilenburg, Parent tracygracem@gmail.com, garden@alamedaschool.org

The school garden at Alameda Elementary was established 4-5 years ago and occupies 500-1000 ft² of space. There is also a native plant area, insect/pollinator habitat and newly-planted pollinator garden. The garden coordinator at Alameda Elementary is a parent working as a volunteer. The garden coordinator is responsible for in-class school day garden education, scheduling/coordination with teachers, garden maintenance, coordinating with the cafeteria, coordination of the garden committee and working with families/parents. The garden committee is comprised of parents. Approximately 15-20 teachers use the garden for instruction during the school year, and about $\frac{2}{3}$ of the classes in the school have beds in the garden. Students visit the garden one or two times a month, and often use the garden with their parent/guardian representative. The school has developed its own curriculum but has taken inspiration from Eat Think Grow and other sources. The garden is used to teach math, science, health/nutrition, soil conservation, water conservation, air quality/pollution, native plants/invasive species, weather/climate, pollinators and other ecological systems. Working with their parent volunteer, each class uses their bed differently and the lessons taught vary greatly from class to class. There is also an after-school program in the garden, reaching 200 or more students/year. Over the summer, the garden beds are unused, but the garden coordinator is developing a summer program in conjunction with The Green Schoolhouse. The hope is to grow food in the summer for harvest in the fall. As it stands now, food harvested from the garden is used for tastings in the cafeteria, served on the lunch line in the cafeteria by cafeteria staff and individual classes hold harvest parties. A supplies budget of \$501-\$2000 is generated through the PTA and fundraising activities organized by the garden coordinator.

Albertina Kerr Subacute/Wynne Watts School

930 NE 162nd Ave, Portland OR 97230

Contact: Suzanne Briggs, Counselor sbriggs@mesd.k12.or.us

The school garden at Albertina Kerr Subacute/Wynne Watts School was established 2-3 years ago and occupies less than 160 ft² of space. There are two garden boxes on-site as part of the playground, and students pass them each day. Albertina Kerr can support up to 24 students at a time, and their average stay is 14 days. The garden coordinator is responsible for planning and maintenance of the garden, and garden season is March through October. A garden educator uses the garden to teach students about health/nutrition, science and the stages of a plant from seed to harvest. Approximately 50-100 students

use the garden, per year, for after-school and/or summer programs. Harvested food is sometimes used for tastings in the garden and the classroom. Over the summer, Albertina Kerr staff maintain the garden with the students. This school is a relatively new contract for Multnomah Education Service District, and in time, the garden education here is expected to gain more programming and become more integrated into the curriculum. As is, the supplies budget for Albertina Kerr Subacute/Wynne Watts comes out of garden coordinator's pocket.

Arata Creek School

2470 Southwest Halsey Street, Troutdale OR 97060

Contact: Joni Tolon, Principal

The school garden at Arata Creek School was established less than one year ago and occupies 300-500 ft² of space. Arata Creek is a school for special needs students, and the principal hails the garden for its ability to calm and soothe students. The Arata Creek garden committee is comprised of administrators, teachers, community members, education assistants and speech/language therapists. The garden is coordinated by teachers, staff, and the Multnomah County Crops Program. The coordinator is responsible for in-class school day garden education, scheduling/coordination with teachers, garden maintenance and coordination of the garden committee. 3-5 teachers use the garden for instruction during the school year, reaching 45 students/year, and using a curriculum developed by the school. Students visit the garden for instruction more than once a week, where they learn math, science, English/language arts/literacy, art, health/nutrition, soil conservation, water conservation, native plants/invasive species, pollinators and other ecological systems. The principal reports that the more students work in the garden, the more they see the tremendous benefits in terms of behavior. Over the summer, volunteers water the beds and tend to the garden for school use. Harvested food is donated to a food pantry or delivered directly to families, as well as being used for tastings in the cafeteria salad bar and other dishes, and the principal hopes to continue cooking the produce the school grows. The supply budget of \$101-\$500 is generated through the school budget, grants applied for by the garden coordinator and via in-kind donations.



Arata Creek School Garden



Atkinson Elementary School
5800 SE Division St, Portland OR 97206

Contact: Kira Edmunds, PTA Contact

Contact: Djamila Moore, Garden Educator/Coordinator

kedmunds@earthlink.net,

djamila@earthartag.org

The school garden at Atkinson Elementary School was established 6-10 years ago and occupies 500-1000 ft² of space. They also have a native plant area, insect/pollinator habitat, outdoor classroom, prairie garden and greenhouse on-site. Parents participate in the school garden committee. The garden coordinator is responsible for in-class school day garden education, scheduling/coordination with teachers, garden maintenance, coordinating with the cafeteria and working with families/parents. During the school year, 5-10 teachers bring their classes to a garden educator, who instructs 450 students/year. The students visit the garden twice a month, and are taught a curriculum created by Eat Think Grow, Earth Art Ag and Life Lab. The students receive lessons in math, science, English/language arts/literacy, health/nutrition, art, soil conservation, water conservation, air quality/pollution, native plants/invasive species, weather/climate, pollinators, other ecological systems, cooking, agricultural history and service learning. Atkinson also hosts unique events, including Community Earth Art Day and large-scale cooking projects (pizza, Lunar New Year salad rolls, student-made salsa and pesto). Over the summer, the garden is cared for and harvested by families for their own use in addition to being used for summer camp or summer SUN programming. In general, food harvested from the garden has been served on the lunch line in the cafeteria by cafeteria staff and used in cooking workshops/activities. The supplies budget of \$100-\$500 is generated through the PTA, in-kind donations and a partnership with Outgrowing Hunger/Earth Art Ag.

Beach Elementary School
1710 N Humboldt St, Portland OR 97217

Contact: Brenda Bokeyni, Teacher (survey respondent)

Contact: Aimee Kriz, 4-H Club (2017 contact)

bbokeyni@pps.net

aimeekriz@gmail.com

The school garden at Beach Elementary School was established over 10 years ago and consists of 101-300 ft² of beds, as well as a native plant area and nature play area. The garden coordinator coordinates with classes during the school day, schedules with teachers, participates in garden maintenance and works with families and parents. This site lacks a formal committee, but a few parents are invested in the garden. Approximately 0-3 teachers use the garden each year, on their own, reaching 50 students per year. In regards to curriculum, the Beach Elementary School garden program develops their own. The curriculum is implemented in science, English/literacy/ language arts, and math, English as a Second Language / English Language Development and health/nutrition. Produce has not been integrated into the cafeteria salad bar, but is currently harvested for cooking workshops/activities. In regards to funding the \$101-\$500 cost of garden supplies, grants are utilized.

Beverly Cleary School - Fernwood Campus
1915 NE 33rd Ave, Portland OR 97212

Contact: Jimena Galvez, Partner Organization

earth.art.ag@gmail.com

The school garden at the Beverly Cleary Fernwood campus was established 4-5 years ago and occupies 101-300 ft² of space, and includes an insect/pollinator habitat. The garden has a garden committee comprised of administrators and parents, who arrange maintenance of the garden with assistance from the garden coordinator and parents. During the school year, 15-20 teachers bring their classes to the garden educator once a month, where they receive lessons derived the school's custom curriculum, plus curriculum material from School Garden Project, Earth Art Ag and Eat Think Grow. Students receive garden-based lessons on math, science, English/language arts/literacy, art, health/nutrition, soil conservation, water conservation, air quality/pollution, native plants/invasive species, weather/climate, pollinators, other ecological systems, ethnobotany, seed heritage and preservation. 200+ students use the garden for after-school and/or summer programs as well. Food harvested in the garden is served on the lunch line by cafeteria staff, used during tastings at family events, donated to food pantries or direct to local families or used in cooking workshops/activities. Over the summer, families care for and harvest the garden for their own use and volunteers water and tend beds for school use. The supplies budget of \$101-\$500 is generated by the PTA, school budget, a partnership with Outgrowing Hunger/Earth Art Ag, grants applied to by the garden coordinator or garden committee, fundraising activities also organized by the garden coordinator or garden committee and in-kind donations.

Bridlemile Elementary School

4300 SW 47th Dr, Portland OR 97221

Contact: Kimberly Mathews, School Secretary

kmathews1@pps.net

The 100-300 ft² school garden at Bridlemile Elementary has unused beds, as well as an insect/pollinator habitat, rain garden and native plant area. As is, the garden has no supply budget, and is generally unused with the exception of an occasional visit from the Girl Scouts. Parents coordinate the garden maintenance and participate in the garden committee. There is no curriculum taught in the garden during the school day or after-school hours, though the coordinator would like to see that change. There is a garden committee composed of parents already in place. Currently, the school maintenance staff is responsible for maintenance of the garden.

Bridger Elementary School

7910 SE Market St, Portland OR 97215

Contact: Amelia Caldwell, Parent (survey respondent)

Contact: Rebecca Kennedy, PTA (2017 contact)

ameliacaldwell@yahoo.com

bridgergreenteam@gmail.com

The school garden at Bridger Elementary School was established 6-10 years ago and consists of 101-300 ft² and a native plant area, rain garden and insect/pollinator habitat. The garden is coordinated through the schools partner's organizations, Portland Earth and the Art and Agriculture Project, who work together to coordinate in-class and after school garden education, scheduling with teachers and the garden committee. The garden committee is composed of teachers, parents and students who coordinate the maintenance of the garden. For garden use, approximately, 3-5 teachers use the garden each year, on their own, reaching 400 students per year. In regards to curriculum, Bridger Elementary

School garden program uses material provided by the Earth, Art and Agriculture. The curriculum is used to teach science, English language development, health/nutrition, soil conservation, native/invasive species, weather/climate and pollinators. Produce is routinely served in the cafeteria, and is also harvested for family event tastings. In regards to funding the garden supplies, the Parent Teacher Association supports the \$101-\$501 budget.

Burlingame Creek School
876 NE 8th St, Gresham OR 97030
Contact: Joni Tolon, Principal

itolon@mesd.k12.or.us

The school garden at Burlingame Creek School was established 2-3 years ago and occupies 300-500 ft² of space. The garden is coordinated by teachers, staff, a partner organization and Multnomah County Crops Program, who together schedule/coordinate with teachers, maintain the garden and coordinate the garden committee. The garden committee is made up of administrators, teachers and community members. During school hours, 3-5 teachers, the garden educator, volunteers and other staff use the garden using their own curriculum to reach 70 students/year. Students visit the garden more than once a week. Using the garden, students are taught health/nutrition, art, English/language arts/literacy, science, math, weather/climate, native plants/invasive species, water conservation, soil conservation and other ecological systems. During the summer, volunteers water and tend to the beds for school use. Food harvested in the garden is donated to a food pantry/directly to families, eaten by students/staff and used in cooking workshops/activities. The supplies budget is \$100 or less and is generated via the school budget. The Burlingame Creek School garden also has a partnership with Outgrowing Hunger/Earth Art Ag and Multnomah County CROPS farm to school program.



Burlingame Creek School Garden

Capitol Hill Elementary School

8401 SW 17th Ave, Portland OR 97219

Contact: Linda Goldster, Garden Coordinator Volunteer

lindaloug@comcast.net

The school garden at Capitol Hill Elementary School was established 0-1 year ago and consists of 101-300 ft² and native plant area. The garden aspires to install a nature play area and insect/pollinator habitat next year. The garden coordinator coordinates with teachers, garden maintenance, garden committee and works with families/parents. The school garden also has a garden committee composed of teachers, parents and students who support the garden and the garden coordinator. Approximately, 15-20 teachers used the garden this year, on their own, reaching 400 students. The school partners with Oregon State University implement garden- based lessons. In regards to curriculum, the Capital Hill Elementary School garden program has not yet created their own material. The curriculum will be implemented in math, science, health/nutrition, soil conservation, native/invasive species, weather/climate and pollinators. Due to the garden being relatively new, produce is not yet served in the cafeteria, but will be harvested for students to take home to families. In regards to funding the garden supplies, grants, in-kind donations, Parent Teacher Association and fundraising activities are utilized to support the \$2001 or more budget.

César Chávez School

5103 N Willis Blvd, Portland OR 97203

Contact: Maria Velez, SUN Site Coordinator

vmaria@latnet.org

The school garden at César Chávez School was established 4-5 years ago and occupies 101-300 ft² of space, with an on-site insect/pollinator habitat. The site is not on school grounds but rather is part of the Portsmouth Community Garden owned by Portland Community Gardens and/or the Parks Department. The garden coordinator is unpaid, and is responsible for in-class, school day garden education, working with families/parents, coordination of garden committee and garden maintenance, coordinating with the cafeteria and teachers and the after-school programming. During the school year, 5-10 teachers use the garden for instruction during the year, reaching 180 students/year, who tend to visit the garden once a month. Together, the teacher and garden coordinator use a curriculum provided by Growing Gardens to educate students on English language development/English as a second language, science, math, English/language arts/literacy, pollinators, weather/climate, native plants/invasive species, water conservation, soil conservation and other ecological systems. After-school education is provided through the SUN program. Over the summer, the garden is used by a summer camp or summer SUN programming, and volunteers water and tend to beds for school use. Approximately 50-100 students use the garden per year in these after-school and/or summer programs. Food harvested from the garden is used in cooking workshops/activities, donated to a food pantry or directly to families, tastings at family events, tastings in the cafeteria and to be served on the lunch line by cafeteria staff. Maintenance of the garden is currently being coordinated by the Growing Gardens educator, but a parent is looking to take on that role for the future. In the fall, the César Chávez School garden holds a Harvest Party and an OMSI Science Night, and in the spring they participate in César Chávez Day. The supplies budget of \$100-\$500 is generated through the budget of a partnership organization.

Chapman Elementary School
1445 NW 26th Ave, Portland OR 97210

Contact: Molly Porter, School Garden Coordinator (Parent Volunteer) molleyhporter@yahoo.com

The school garden at Chapman Elementary School was established more than 6-10 years ago and consists of 300-500 ft² and a native plant area, insect/pollinator habitat and nature play area. The garden program also participates in 3 yearly community clean-ups. The garden coordinator coordinates in-class garden education, garden maintenance, garden committee, schedules with teachers, works with families/parents, and coordinates with the cafeteria. The school garden also has a garden committee composed of teachers and parents who support the garden and the garden coordinator. For garden use, approximately, 10-15 teachers use the garden each year, on their own, reaching 500 students per year. In regards to curriculum, Chapman Elementary School garden program develops their own material, but also utilizes material provided by Eat, Think, Grow and Got Dirt & Veggies. The curriculum is used to teach, science, health/nutrition, native plants/invasive species and pollinators. Produce is routinely served in the cafeteria, but is also harvested for cooking workshops/tastings. In regards to funding the garden supplies, the partner organization budget with Food Front Co-Op and Farm to School Apple as well as grants support the \$101-\$501 budget.



Chapman Elementary School Garden

Cherry Park Elementary School
1930 SE 104th Ave, Portland OR 97216

Contact: Jessi Polledri, School Counselor (survey respondent)
Contact: Heather, SUN Coordinator (2017 contact)

jessipolledri@gmail.com
503-256-6501

The school garden at Cherry Park Elementary School was established 0-1 years ago and consists of less than 160 ft². The Schools Uniting Neighborhoods (SUN) coordinates after-school garden programming, garden maintenance and works with families/parents. For garden use, approximately, 0-3 teachers use the garden each year, on their own, reaching 40 students per year. The garden program partners with MFS SUN to teach garden-based lessons. In regards to curriculum, Cherry Park Elementary School garden program develops their own material. The curriculum is used to teach about pollinators. Due to

the relative newness of the garden, produce is not served or yet harvested, but in the future, will be donated to families or the food pantry. In regards to funding the garden supplies, the Parent Teacher Association supports the \$501-\$2000 budget. Future goals for the garden include: teacher involvement in garden-based lessons, kids engagement and excitement for eating fresh vegetables and family garden cooking classes.



Cherry Park Elementary School Garden

Creative Science School

1231 SE 92nd Ave, Portland OR 97216

Contact: Melissa Streng, Garden Coordinator

melissastreng@gmail.com

The school garden at Creative Science School was established 6-10 years ago and occupies 300-500 ft² of space. There is also a native plant area and insect/pollinator habitat on site, and the garden has a partnership with Outgrowing Hunger/Earth Art Ag. The garden is coordinated by parents and a partnership with Outgrowing Hunger/Earth Art Ag, and is responsible for in-class school day garden education, after-school garden programming, scheduling/coordination with teachers and cafeteria staff and garden maintenance. There is a garden committee too, comprised of parents. 10-15 teachers bring their classes to the garden, where the garden coordinator instructs 300 students/year using a curriculum developed by Earth Art Ag. On average, students visit the garden once a month. The garden is used to teach math, science, English/language arts/literacy, health/nutrition, soil conservation, native plants/invasive species and pollinators. There is also after-school education reaching 20-50 students/year. Over the summer, the garden is used by a summer camp or summer SUN programming, in addition to having families care for the garden and harvest for their own use. Food harvested in the garden is used for cooking workshops/activities and small amounts are served in the cafeteria salad bar and other dishes. The supply budget of \$101-\$500 is generated from the PTA, school budget, partnership organization budget, through grants applied for by the garden coordinator and via in-kind donations.

Davis Elementary School
19501 NE Davis St, Portland OR 97230

Contact: Kevin Donato, SUN Site Coordinator

kevind@mfs.email
kevindonato@partner.rsd7.net

The school garden at Davis Elementary School was established 4-5 years ago and consists of 300-500 ft². The Schools Uniting Neighborhoods (SUN) and Growing Garden program coordinates after-school gardening, the garden committee and works with families and parents. For garden maintenance specifically, the SUN AmeriCorps member handles garden care. Approximately, 3-5 teachers use the garden each year, on their own, reaching 60 students per year. The school partners with the Growing Gardens program to teach and implement garden-based lessons. In regards to curriculum, the Davis Elementary School garden program utilizes material provided by Growing Gardens. The curriculum is implemented in health/nutrition, soil conservation, water conservation, air quality/pollution, native/invasive species, weather/climate, pollinators and other ecological systems. Produce is not served in the cafeteria, but is harvested for cooking workshops/activities, in-class and cafeteria tastings or is donated to the food pantry. In regards to funding the garden supplies, grants, partnership organization budget and in-kind donations are utilized to support the \$101-\$501 budget.

Donald E. Long School
1401 NE 68th Ave, Portland OR 97213

Contact: Rima Green

rima@growing-gardens.org

The school garden at Donald E Long School was established 1 year ago and occupies 101-300 ft² of space. The school garden is located on the grounds of the Donald E. Long Juvenile Detention Center. During school hours, 3-5 teachers use the garden to instruct 50-80 students/year, using a curriculum from Earth Art Ag as well as Oregon Food Bank seed to supper and PBS learning media. Students use the garden once a week together with a teacher, garden educator and security staff, where they are instructed on science, health/nutrition, soil conservation, water conservation, native plants/invasive species, weather/climate, pollinators and growing food. The school and its garden run year round, and food harvested in the garden is used in tasks for the children. The school provides the garden with a supply budget of \$101-\$500.

Earl Boyles Elementary School
10822 SE Bush St, Portland OR 97266

Contact: Becky Wandell, Teacher (survey respondent)

Contact: SUN Program Coordinator (2017 contact)

becky_wandell@ddsd40.org
youn_han@ddouglas.k12.or.us

The school garden at Earl Boyles Elementary was established 6-10 years ago and occupies 101-300 ft² of space. There is also a native plant area on site. The garden is located inside a community garden owned by Portland Parks and Recreation. The garden is coordinated by a teacher and after-school program, responsible for maintenance, working with families/parents and coordination of the garden committee. Teachers and the SUN Coordinator serve as the garden committee. As many as three teachers use the garden during the school day, instructing 15 students/year using a curriculum the

school developed on its own. An additional 20-50 students/year use the garden during after-school and/or summer programs. The SUN program runs the after-school program and partakes in garden maintenance. Using the garden, students are taught science, water conservation, pollinators and other ecological systems. Harvested food from the garden is donated to a food pantry or directly to local families. A supply budget of up to \$100 is provided through a partnership organization's budget.

Floyd Light Middle School

10800 SE Washington St, Portland OR 97216

Contact: Lauren Letsinger, Teacher (survey respondent)

lauren_letsinger@ddouglas.k12.or.us

The school garden at Floyd Light Middle School was established 4-5 years ago and occupies less than 160 ft² of space. The garden is used for after-school education through the SUN program, who coordinates the garden, using curriculum developed by the school in addition to curriculums from Growing Gardens and Life Lab. As coordinators, SUN maintains the garden and works with families/parents. 20-50 students/year use the garden during after-school and summer hours, where they are taught about health/nutrition, weather/climate and other ecological systems. Over the summer, summer camp or SUN programming use the school garden. Food harvested from the garden is used for tastings at family events and is donated to a local food pantry or directly to families. The school organized a Seed to Supper event with assistance from the Oregon Food Bank which the garden coordinator called a success, because it allowed for parent engagement in the garden. Maintenance of the garden is coordinated by the Americorps volunteer with SUN. SUN also provides the supply budget of \$101-\$500.

Gilbert Heights Elementary

12839 SE Holgate Blvd, Portland OR 97236

Contact: Grady Proctor, Garden Educator/Coordinator

503-234-8996

The school garden at Gilbert Heights Elementary was established 4-5 years ago and occupies 101-300 ft² of space. The garden sits on land owned by Portland Community Gardens or Parks Department, and also has a nature play area. During the school day, 15 students/year use the garden once a week. There are after-school and/or summer programs at the garden, where 20-50 students are taught a curriculum developed by the school and run through the SUN program, who also coordinate garden maintenance. The garden is used to teach math, art, health/nutrition, soil conservation, native plants/invasive species, weather/climate, pollinators and other ecological systems. Over the summer, the garden is used by summer camp or summer SUN programming. Food harvested in the garden is used for cooking and other such activities during SUN classes. The school garden budget is generated out of pocket and from in-kind donations from Portland Nursery.

Gilbert Park Elementary School

13132 SE Ramona St, Portland OR 97236

Contact: Mandy Hurley, SUN Site Coordinator

mandy_hurley@ddsd40.org

The school garden at Gilbert Park Elementary School was established 4-5 years ago and consists of 70'-120' courtyard with various edible plants. The garden also contains a native plant area, rain garden, insect/pollinator habitat, nature play area, herb garden, memorial garden and an outdoor classroom.

The native plant area has a theme centralized around, "Industrial Crops of Oregon". These crops would include: grapes, hops and hazelnuts. This area is continually being redesigned and evolved. The after-school garden education program, Schools Uniting Neighborhoods (SUN) coordinates in-class garden education, after school garden programming, garden maintenance, schedules with teachers, and coordinates work, volunteer and community events. For garden use, approximately, 5-10 teachers use the garden each year, on their own, reaching 250 students per year. The garden programs with IRCO to teach garden-based lessons. In regards to curriculum, Gilbert Park Elementary garden program develops their own material. The curriculum is used to teach: math, science, English/language arts/ literacy, art, English language development, health/nutrition, soil conservation, water conservation, native/invasive species, weather/climate, pollinators and other ecological systems. Produce is not routinely served in the cafeteria, but is harvested for cooking workshops/activities, family event or donated to the food pantry. In regards to funding the garden supplies, the Parent Teacher Association, In-kind donations, and the partner organization budget supports the \$1-\$100 budget.



Gilbert Park Elementary School Garden

Glenfair Elementary School
15300 NE Glisan St, Portland OR 97230
Contact: Celia Flaim, SUN Site Manager

celiaf@mfs.email

The school garden at Glenfair Elementary School was established 6-10 years ago of a native plant area and nature play area. The SUN program, Growing Gardens and assistant principal coordinates the school garden program. The Glenfair garden program is also used for after-school garden education through SUN. Approximately, 5-10 teachers use the garden each year, on their own, reaching 200 students per year. The school partners with Growing Gardens to teach and implement garden-based lessons. In regards to curriculum, the Glenfair Elementary School garden program utilizes material from Eat Think Grow and Growing Gardens. The curriculum is implemented in math, science, English/language arts/ literacy, art, English language development, health/nutrition, soil conservation, native/invasive species, air quality/ pollution, weather/climate, pollinators and other ecological systems. Produce is not served in the cafeteria, but is harvested for cooking workshops/activities, tastings at family events or donated

to the food pantry/directly to families. In regards to funding the garden supplies, financial support from SUN and In-Kind donations are utilized to support the \$1-\$200 budget.

Grout Elementary

3119 SE Holgate Blvd, Portland OR 97202

Contact: Lisa Van Clock, Teacher

lvancloc@pps.net

The school garden at Grout was established 4-5 years ago and consists of 100-300ft² of garden beds and a rain garden. The staff and parent teacher association (PTA) coordinate classes during the school day, schedule with teachers, does garden maintenance and organize a garden committee composed of parents and teachers. The school also partners with Earth Art Agriculture to teach garden-based lessons. Approximately, 3-5 teachers use the garden each year, on their own, reaching 25-50 students on a weekly basis. They use their own curriculum and Earth Art Agriculture curriculum to teach math, science, health/nutrition, soil conservation, native plants/invasive species, pollinators, and other ecological systems. There is also an afterschool program through Schools Uniting Neighborhoods (SUN) which involves 50-100 students/year. Produce is served in the cafeteria and in tastings with classes. Grants support a supplies budget of \$500-\$2000.

Harrison Park

2225 SE 87th Ave, Portland OR 97216

Contact: Djamila Moore, Garden Educator/Coordinator (survey respondent)

djamila@earthartag.org

Contact: Adam Kohl (2017 additional contact)

adam@outgrowinghunger.org

The school garden at Harrison Park was established 2-3 years ago and occupies 500-1000 ft² of space. There is also an insect/pollinator habitat, native plant area, mini-farm and community garden on site. The garden is coordinated by an after-school program and Outgrowing Hunger/Earth Art Ag, who are responsible for in-class school day garden education, scheduling/coordination with teachers and cafeteria staff, lesson planning, maintenance, curriculum development, harvesting for school families/community and collaborating with teachers and SUN staff. There is also a garden committee made up of SUN staff and Outgrowing Hunger/Earth Art Ag. A high level of food insecurity and a large, new immigrant population participating in the community garden influences culturally diverse plantings at the Harrison Park school garden. During the day, 10-15 teachers bring their classes to the garden educator, who instructs 325 students/year. The students visit the garden once a month. The curriculum is comprised of existing curriculums from Life Lab, Earth Art Ag and Eat Think Grow, and students are taught health/nutrition, English language development/English as a second language, art, English/languages art/literacy, science, math, soil conservation, water conservation, air quality/pollution, native plants/invasive species, weather/climate, pollinators and other ecological systems. The SUN program also runs an after-school program and summer programming in the garden, reaching 20-50 students/year. Garden maintenance happens with the students. The school also has a partnership with Outgrowing Hunger/Earth Art Ag. Over the summer, the garden is cared for by a summer camp or SUN programming in addition to local families caring for and harvesting the garden for their own use. Food grown in the garden is used in cooking workshops/activities, is donated to a food

pantry or directly to families, served on the lunch line in the cafeteria by cafeteria staff and used in cafeteria tastings. The garden coordinator reports that teachers who bring their students out are enthusiastic, the students love it and the cafeteria staff have been very receptive. The supplies budget is \$101-\$500 and is generated through the school budget, grants applied for by the garden coordinator and in-kind donations.



Harrison Park School Garden

Harvey Scott School

6700 NE Prescott St, Portland OR 97218

Contact: Keli Dean, Volunteer Garden Coordinator

kelidean@msn.com

The school garden at Harvey Scott School was established 0-1 year ago and consists of 101-300 ft² and a rain garden. The garden program also participates in after-school garden education through Schools Uniting Neighborhoods (SUN). The garden coordinator coordinates garden maintenance, schedules with teachers, works with families/parents. The school garden also has a garden committee composed of parents who support the garden and the garden coordinator. For garden use, approximately, 0-3 teachers use the garden each year, on their own, reaching 180 students per year. Due to the relative newness of the garden program, the curriculum is currently being created. When finalized, the curriculum will be used to teach: science, English/language arts/ literacy, art, weather/climate and pollinators. Produce is not currently served in the cafeteria, but is harvested for cooking workshops/activities or donated to the food pantry. In regards to funding the garden supplies, grants and in-kind donations are utilized to support the \$501-\$2000 budget.

Hauton B Lee Middle School

1121 NE 172nd Ave, Portland OR 97230

Contact: Caty Marshall, Sun Site Coordinator

catym@mfs.email

The school garden at Hauton B Lee Middle School consists of 101-300 ft². The Sun Site coordinator coordinates the after- school garden programming and maintenance of the garden. The school partners with Schools Uniting Neighborhoods (SUN) to teach garden-based lessons. In regards to curriculum,

Hauton B Lee Middle School garden program develops their own. The curriculum is implemented in math, native/invasive species, pollinators and weather/climate. Approximately, 0-3 teachers use the garden each year, on their own. The garden is mainly used for after school garden education through SUN. Produce is not served in the cafeteria, but is donated to families and the food pantry. In regards to funding the garden supplies, grants, are utilized to support the \$1-\$100 budget.

Hayhurst School

5037 SW Iowa St, Portland OR 97221

Contact: Nadya Burchett, Parent

burchetten@gmail.com

The school garden at Hayhurst School was established 2-3 years ago and occupies less than 160 ft² of space. There is also a nature play area, native plant area and insect/pollinator habitat on site. Adjacent to the garden is a courtyard enjoyed by families throughout the week around school hours. The garden is coordinated by a parent, who oversees in-class school day garden education, after-school garden programming, working with families/parents, coordination of the garden committee, teachers, staff and the cafeteria, as well as garden maintenance. Administrators and parents sit on the garden committee. During the school year, 5-10 teachers use the garden in conjunction with the garden coordinator, reaching 150-200 students/year. Students visit the garden less than once a month. The school uses a curriculum they developed on their own, plus curriculums from Life Lab, Growing Gardens and Think Eat Grow. The garden is used to teach health/nutrition, art, English/language arts/literacy, science, math, soil conservation, native plants/invasive species, weather/climate, pollinators and life cycles. There is also an after-school program reaching 20-50 students/year. Over the summer, families care for and harvest the garden for their own use and volunteers water and tend to the beds for school use. Food harvested from the garden is donated to a food pantry or directly to families and is served on the lunch line in the cafeteria by cafeteria staff. Small amounts of harvested food have been integrated into the salad bar and other dishes. Through a partnership with The Green Schoolhouse, as well as fundraising activities and grants organized and applied for by the garden coordinator and in-kind donations, the school garden has a supplies budget of \$501-\$2000.

Hosford Middle School

2303 SE 28th Pl, Portland, OR 97214

Contact: Jennifer Abbassian, Parent and Garden Club Leader for After-School Program

abbassianj@gmail.com

The school garden at Hosford Middle School was established 2-3 years ago and has a nature play area, insect/pollinator habitat, rain garden and native plant area. The garden here is unique in that it isn't used to grow food but is still used extensively for instruction. The garden is coordinated by a parent and after-school program, who are responsible for after-school programming, scheduling/coordination with teachers, garden maintenance and working with families/parents. Three or fewer teachers use the garden as a teaching tool, but they instruct 500+ students/year, and the students visit more than once a week. Teachers use the garden to teach about water conservation, native plants/invasive species, weather/climate and pollinators. Classes also gather at the garden during lunch and recess. In addition, there is an after-school program in the garden that reaches 20-50 students/year. Over the summer,

volunteers water and tend to the beds for school use. The supplies budget is \$501-\$2000, and is generated through the PTA and by grants applied to by the garden committee or garden coordinator.

Irvington School

1320 NE Brazee St, Portland OR 97212

Contact: Gillian Carson, Parent

gill@mytinyplot.com

The school garden at Irvington was established more than 10 years ago and consists of 500-1000 ft² of garden beds that also serve as an outdoor classroom. The staff and the PTA coordinate educational classes during the school day, schedule/ coordination with teachers, coordinate the garden committee of parents, teachers and community members as well as, work with families. In total, there is 10-15 teachers that use the garden each year, on their own, reaching 24 students on a weekly basis. Irvington School garden uses their own curriculum to teach math, science, English/language/literacy, art, health/nutrition, soil conservation, water conservation, weather/climate and pollinators. Produce is not served in the cafeteria, but is used for cooking classes, activities or in-class snack time. The use of the garden is divided in half. The parents/staff use half the beds and the community members use the other half. Community members may use the beds to teach lessons or for their own food production. In regards to funding, recently, the PTA received the Whole Foods Foundation Grant which will fund the new outdoor classroom by the garden. Overall, the PTA supports the supplies budget of \$700.00.



Irvington School Garden

Jason Lee School
9038 N E Fremont Portland OR 97220
Contact: Kirsten Holstein, Paid Garden Coordinator

Kholstein67@gmail.com

The school garden at Jason Lee was established 4-5 years ago and consists of 300-500 ft², native plant areas and participates in recess gardening activities. The garden coordinator coordinates with classes during the school day, coordinates after- school gardening, schedules with teachers, participates in garden maintenance and organizes a garden committee composed of parents. The school partners with Schools Uniting Neighborhoods (SUN), IRCO and Nature Conservancy to teach garden- based lessons. Approximately, 10-15 teachers use the garden each year, on their own, reaching 350 students per year. In regards to curriculum, Jason Lee garden program develops their own, but also uses Eat, Think, Grow and Nature Works Everywhere. The curriculum is implemented in science, English/literacy/ language arts, art, health/nutrition, soil conservation, water conservation, native/invasive species, pollinators and system/cycles courses. The garden is also used for after school garden education through SUN. Produce is not served in the cafeteria, but is harvested for cooking workshops/activities and in-class tastings. In regards to funding the garden supplies, grants, fundraising activities and donations are utilized to support the \$101-\$501 budget. Students are also active in getting donations for the garden. Students will write to popular seed companies asking for donations to the garden and will often receive them. And recently, a plan was drafted for the construction of a new storage area and this will be funded by the new Oregon Department of Education grant.



Jason Lee School Garden

Kelly School
9030 SE Cooper St, Portland OR 97266
Contact: Katharine Grunseth, Teacher

kgrunset@pps.net

The school garden at Kelly School was established 2-3 years ago and consists of 300-500 ft², and an insect/pollinator habitat. The school partners and coordinates garden care with Schools Uniting Neighborhoods (SUN), Growing Gardens and Earth Art and Agriculture to integrate garden based lessons in their curriculum. Kelly does not create their own curriculum, but utilizes material from Eat, Think,

Grow, Life Lab and Science Companion Prime. The garden is used to teach: science, English/literacy/ language arts, math, art, English language development/English as a second language, health/nutrition, water conservation, native/invasive species, pollinators, weather/climate, and other ecological development. The garden is also used for after-school gardening programs as well as summer camps with SUN. Approximately, 3-5 teachers use the garden each year, on their own, reaching 100 students per year. In regards to harvesting, produce is used in the cafeteria by the cafeteria staff and is also donated to the food pantry or directly to families. The garden is supported by the Growing Gardens PLC program to sponsor the \$101-\$501 budget.

King Elementary School

4906 NE 6th Ave, Portland OR 97211

Contact: Paolina Toncinich, Parent

kingschoolgarden@gmail.com

The school garden at King Elementary School was established 4-5 years ago and consists of 500-1000 ft² and a native plant area. The garden coordinator and parents involved in the garden committee coordinates, garden maintenance, schedules with teachers, in-class garden education, after-school garden education, budgeting, Parent Teacher Association (PTA) presentations, shopping, reimbursements, fundraising, partnerships and works with families/parents. Approximately, 5-10 teachers use the garden each year, on their own, reaching 200 students per year. In regards to curriculum, King Elementary School garden program utilizes material from Natureworks Everywhere. The curriculum is used to teach math, science, English/language arts/ literacy, art, English language development, health/nutrition, soil conservation, water conservation, native/invasive species, weather/climate, pollinators, food and carbon and other ecological systems. Produce in small quantities is served in the cafeteria and also used for cooking workshops/activities and family event tastings. In regards to funding the garden supplies, grants and in-kind donations support the \$101-\$501 budget.

Laurelhurst Elementary School

840 NE 41st Ave, Portland, OR 97232

Contact: Djamila Moore, Earth Art Ag educator

djamila@earthartag.org

The school garden at Laurelhurst Elementary was established 4-5 years ago and occupies 100-300 ft² of space, and includes an insect/pollinator habitat. The garden is coordinated by parents and Outgrowing Hunger/Earth Art Ag, and is responsible for in-class school day garden education, scheduling/coordination with teachers, garden maintenance and coordinating with the cafeteria. There is also a garden committee made up of teachers and parents. During the school year, 3-5 teachers use the garden for instruction. Together with the garden coordinator, they teach 500 students/year using curriculum developed by Earth Art Ag, Eat Think Grow and Life Lab. Students visit the garden once a month, where they receive instruction on math, science, English/language arts/literacy, art, soil conservation, water conservation, weather/climate, pollinators and other ecological systems. Food harvested from the garden is served on the lunch line in the cafeteria by cafeteria staff, where small amounts have been integrated into the salad bar or other dishes. The garden coordinator reports a high level of enthusiasm for the garden from students and staff alike. The supplies budget of \$101-\$500 is generated by the PTA, in-kind donations and a partnership with Outgrowing Hunger/Earth Art Ag.

Lent School**5105 SE 97th Ave, Portland OR 97266**

Contact: Jesse Hunter, Teacher and Garden Committee Member

jhunter@pps.net

The school garden at Lent School was established 4-5 years ago and consists of 101-300 ft², the site also contains a native plant area, rain garden and insect/pollinator habitat. The garden coordinator coordinates with classes during the school day, coordinates after-school gardening with the paid garden coordinator in the after-school program. The coordinator also schedules with teachers, participates in garden maintenance, coordinates with the cafeteria, works with families and parents, and organizes a garden committee composed of parents, teachers and community members. The school partners with Growing Gardens, IRCO, Oregon State University, and Ecology in Classrooms Outdoors and Schools Uniting Neighborhoods (SUN) to teach garden-based lessons. Approximately, 10-15 teachers use the garden each year, on their own, reaching 350 students per year. In regards to curriculum, Lent School garden program develops their own. The curriculum is implemented in science, English/literacy/language arts, and math, English as a Second Language / English Language Development, health/nutrition, soil conservation, water conservation, native/invasive species, pollinators, weather/climate and other ecological systems. The garden is also used for after school garden education through SUN. Produce is served in the cafeteria, and is also harvested for cooking workshops/activities and in-class, cafeteria and family event tastings. In regards to funding the garden supplies, grants and fundraising activities are utilized to support the \$101-\$501 budget. The Lent School garden program has also been the beneficiary of various rewards. Specifically, The Bronze Award awarded by Michelle Obama for the "Healthier Schools Challenge" and The 2015 Wellness Award from the Department of Education. The Lent Garden has also been chosen as a host site for the East Multnomah Soil & Water Conservation Districts, "Nature-scaped Yard Tour".

Lincoln Park Elementary**13200 SE Lincoln St, Portland OR 97233**

Contact: Jennie Marable, Garden Coordinator/Educator

vreedmarable@gmail.com

The school garden at Lincoln Park Elementary was established 2-3 years ago and occupies less than 160 ft² of space. There is also a native plant garden, insect/pollinator habitat and Hugelkultur installation on site. The garden beds were built by Portland Youth Builders in 2013, and a nutrition-focused SUN garden club was taught beginning in 2014. During school hours, 3-5 teachers use the garden in coordination with the garden educator, and they use a curriculum developed by Earth Art Ag. Over the course of the year, about 300 students visit the garden once a month during the school day. Using the garden, students are taught math, science, English/language arts/literacy, art, English language development, English as a second language, soil conservation, water conservation, air quality/pollution, native plants/invasive species, weather/climate, pollinators, other ecological systems, community building, work experience and other cultures. There is also an afterschool program run by SUN using a curriculum developed by the garden coordinator. The after-school program reaches 200 or more students/year. The garden coordinator noted that Lincoln Park is situated in a very diverse community, where many different languages are spoken. Kids who had no way into the school community, who couldn't speak English, who were having trouble connecting, found their place in the garden. The garden educator has been effective in the garden in ways that were not effective in the

classroom. Everything is kid-grown, started from seed, at the school. Pride for the garden has been a huge success. Over the summer, the garden is used by a summer camp or SUN programming. Food harvested in the garden is donated to a food pantry/directly to families, used in cooking workshops/activities and for tastings at family events. Lincoln Park has a School Multicultural Night, where pesto and chimichurri are made from food in the garden. There is a desire to expand garden programming, develop a connection with the cafeteria and better control the on-site irrigation. The supplies budget at Lincoln Park is \$101-\$500 and is generated by fundraising activities, grants applied for by the garden coordinator and through the budget of partnership organizations Outgrowing Hunger/Earth Art Ag.



Lincoln Park Elementary School Garden

Llewellyn Elementary School
6301 SE 14th Ave, Portland OR 97202

Contact: Alexia Wellons, Parent (survey respondent)
Contact: Marty Crouser (2017 additional contact)

alexiawellons@yahoo.com
mcrouser@pps.net

The school garden at Llewellyn Elementary School was established 4-5 years ago and consists of 300-500ft² of garden beds, native plant areas and a rain garden. The parent teacher association (PTA) coordinates classes during the school day, schedules with teachers, does garden maintenance and organizes a garden committee composed of parents. The school partners with Schools Uniting Neighborhoods (SUN) and the Green School house to teach garden-based lessons. They use their own curriculum and the garden is used to teach: health/nutrition, soil conservation, and native plants/invasive species. There is also an afterschool program as well as a summer camp program through the schools partnership with Schools Uniting Neighborhoods (SUN) which involves 20-50 students/year. Approximately, 0-3 teachers use the garden each year, on their own, reaching on average, 90 students per year. In regards to funding, \$101-\$501 is the amount needed to fund the garden and is supported by the PTA and in-kind donations that include: bark chips, plants, seeds and other garden requirements.

Lynch Wood Elementary School
3615 SE 174TH St, Portland OR 97236

Contact: Amber Moore, SUN Site Manager (survey respondent)
Contact: Greta Moran (2017 contact)

MooreA@nayapdx.org
gretam@metfamily.org

The school garden at Lynch Wood Elementary was established 2-3 years ago and consists of 101-300 ft². The garden committee composed of SUN staff, teachers, parents, community members and staff coordinates with classes during the school day, coordinates after-school gardening, schedules with teachers, participates in garden maintenance. The school partners with Schools Uniting Neighborhoods (SUN) and Growing Gardens to teach garden-based lessons. In regards to curriculum, the Lynch Wood Elementary garden program uses lessons from Growing Garden's core curriculum guide. The educational material is implemented in math, English/literacy/ language arts, English Development/English as a second language and health/nutrition. The garden is also used for after school garden education through SUN. Approximately, 3-5 teachers use the garden each year, on their own, reaching 75-100 students per year. Produce has been integrated into the cafeteria and is also harvested for cooking workshops/activities and family event and cafeteria tastings. In regards to funding the garden supplies, the Parent Teacher Association fund, partner association budget, fundraising and in-kind donations are all utilized to support the \$1-\$100 budget.

Madison High School
2735 NE 82nd Ave, Portland OR 97220

Contact: Rodrigo Corona, Teacher
Contact: Susan Wiencke

rruizcorona@pps.net
swiencke@pps.net

The school garden at Madison was established 4-5 years ago and occupies 500-1000 ft² of space. There is also a native plant garden, insect/pollinator habit, and nature play area on the grounds, and garden debris is composted on site. The garden is coordinated by a teacher, who is responsible for in-class school day garden education, after-school garden programming, garden maintenance, coordination of the garden committee and a summer internship program. Rather uniquely, the garden committee at Madison High is comprised of students. 3-5 teachers use the garden each year, with 20 students using the garden once a week. The school develops their own curriculum, and they use the garden to teach about soil conservation, water conservation, health/nutrition, air quality/pollution, native plants/invasive species, weather/climate, pollinators, food and social justice, and other ecological systems. There is also an afterschool program run by SUN that reaches 20-50 students/year. The school uses a summer internship program to sell the produce they grow at farmer's markets. Other harvested produce is donated to local food pantries and families or in cooking workshops/activities. The school budget, grants and fundraising activities generate a supply budget of \$101-\$500 annually.

Markham Elementary School
10531 SW Capitol Hwy, Portland OR 97219

Contact: Misty Plock, Parent (survey respondent)
Contact: Michelle Martin, PTA president
Contact: Jane Harold (2017 additional contact)

mistyplock@yahoo.com
markhampta@gmail.com
jharold@pps.net

The school garden at Markham Elementary was established 4-5 years ago and consists of 101-300 ft² and a native plant area. The staff and teachers coordinates with classes during the school day, participates in garden maintenance and works with families and parents. Approximately, 3-5 teachers use the garden each year, on their own, reaching 40-50 students per year. In regards to curriculum, the Markham Elementary School garden program develops their own. The curriculum is implemented in math, health/nutrition, soil conservation, native/invasive species and weather/climate. Produce is not served in the cafeteria, but is harvested for family event tastings. In regards to funding the garden supplies, grants are utilized to support the \$1-\$100 budget.

Menlo Park Elementary School
12900 NE Glisan St, Portland OR 97230

Contact: Elizabeth Archodominion, Volunteer Garden Coordinator/ SUN Garden Club Instructor
elight5@yahoo.com

The school garden at Menlo Park Elementary School was established 0-1 years ago and consists of 300-500 ft² and a native plant area, insect/pollinator habitat and a worm bin. The garden coordinator coordinates in-class garden education, after school garden programming, garden maintenance, garden committee, schedules with teachers, works with families/parents and fundraising, grants and garden design. The school garden also has a garden committee composed of administrators and parents who support the garden and the garden coordinator. For garden use, approximately, 10-15 teachers use the garden each year, on their own, reaching 410 students per year. The garden program partners with Campfire and Grow Portland to teach garden-based lessons. In regards to curriculum, Menlo Park Elementary garden program uses various different sources (Oregon Agriculture in the Classroom). The curriculum is used to teach: in math, science, English/language arts/ literacy, health/nutrition, soil conservation, water conservation, native/invasive species, air quality/pollution, pollinators and other ecological systems. Produce is not routinely served in the cafeteria, but is harvested for in-class tastings or donated to the food pantry. In regards to funding the garden supplies, the grants and fundraising activities supports the \$2000 budget.



Menlo Park Elementary School Garden

Mill Park Elementary School
1900 SE 117th Ave, Portland OR 97216

Contact: Carrie Cowan, Student Achievement Specialist

carrie_cowan@ddsd40.org

The school garden at Mill Park Elementary School was established 4-5 years ago and consists of 101-300 ft² and a native plant area. The school staff and Schools Uniting Neighborhoods (SUN) staff coordinates after school garden programming and garden maintenance. For garden use, approximately, 3-5 teachers use the garden each year, on their own, reaching 1-30 students per day. The Mill Park garden program partners with SUN to teach garden-based lessons. In regards to curriculum, Mill Park Elementary School garden program develops their own material. The curriculum is used to teach health/nutrition. Produce is not routinely served in the cafeteria, but is harvested for cooking workshops/activities and cafeteria tastings. In regards to funding the garden supplies, the booster program and in-kind donations support the \$1-\$100 budget.

Ockley Green School
6031 N Montana Ave, Portland OR 97217

Contact: Kristin Moon, Teacher

kmoon@pps.net

The school garden at Ockley Green was established more than 10 years ago and consists of 101-300 ft², and a native plant area. The school partners with Grow Portland and the school staff coordinates with various teachers for in-class garden education. For garden maintenance, the school garden committee is composed of teachers and students who tend to garden care. Ockley Green School develops their own garden-based education material, but also relies on existing garden curriculum provided by Life Lab. The garden is used to teach: science, health/nutrition, water conservation, soil conservation, native/invasive species, pollinators, weather/climate, and other ecological systems. Approximately, 5-10 teachers use the garden each year, on their own, reaching 300 students per year. In regards to harvesting, produce is donated to families. In order to support the \$5,000 garden budget, grants, fundraising and in-kind donations (plants, bark chips and seeds) are utilized. The Parent Teacher Association is also important sponsors of the gardens success.

Park lane Elementary School
15811 SE Main St, Portland OR 97233

Contact: Vickie Soli-Compton, School Staff

vickie_soli-compton@cds28j.org

The school garden at Park lane Elementary School was established 0-1 years ago and consists of 500-1000 ft². The garden coordinator the garden committee composed of teachers and works with families/parents. Currently, the school garden program also partners with Growing Gardens and participates in after-school garden education through Schools Uniting Neighborhoods (SUN). Due to the relative newness of the garden program, it is not currently used for in-class education. In regards to

harvesting, produce is not routinely served in the cafeteria, but is donated directly to families or the food pantry.

Pleasant Valley School

17625 SE Foster Rd, Gresham OR 97080

Contact: David Scharfenberg, Teacher

david_scharfenberg@cds28j.org

The school garden at Pleasant Valley School was established more than 10 years ago and consists of 500-1000 ft² and a native plant area, rain garden, insect/pollinator habitat and ½ mile interpretive trail in a restoration area. The garden coordinator coordinates in-class garden education, garden maintenance, schedules with teachers, works with families/parents, and coordinates with the cafeteria. The school garden also has a garden committee composed of administrators, teachers, parents and students who support the garden and the garden coordinator. Approximately, 3-5 teachers use the garden each year, on their own, reaching 100 students per year. The school partners with Oregon State University, Schools Uniting Neighborhoods (SUN) and two local garden clubs to teach and implement garden-based lessons. In regards to curriculum, the Pleasant Valley School garden program develops their own material, but also utilizes material from the School Garden Project. The curriculum is implemented in math, science, English/language arts/ literacy, art, English language development, health/nutrition, soil conservation, native/invasive species, weather/climate and pollinators. Produce is not yet served in the cafeteria, but is harvested for cooking workshops/activities and in-class tastings. In regards to funding the garden supplies, grants are utilized to support the \$101-\$501 budget.

Prescott Elementary School

10410 NE Prescott St, Portland OR 97220

Contact: Lonny Gandsra, Parent

lonnygee@comcast.net

The school garden at Prescott Elementary School was established 6-10 years ago. The garden is coordinated by parents and other school staff and they work to coordinate after school gardening with Schools Uniting Neighborhoods (SUN), garden maintenance, schedules with teachers and works with families/parents. Approximately, 3-5 teachers use the garden each year, on their own, reaching over 50 students per year. Currently, the garden is limited in its ability to teach and implement garden-based lessons and grow harvest due to funding, but it is something that wants to be done in the future. While the garden faces some challenges, the community hopes to build a kindergarten garden and native plant areas. Currently, the garden program is working towards gaining a certification as a backyard habitat through the Columbia Land Trust.



Prescott Elementary School Garden

Reynolds Middle School

1200 NE 201st Ave, Fairview OR 97024

Contact: Ben Baldizon, SUN Site Manager

bbaldizon@rsd7.net

The school garden at Reynolds Middle School was established 6-10 years ago and consists of 500-1000 ft². The SUN site manager and staff coordinates the garden program and after-school garden education. The school garden also has a garden committee composed of teachers, students and SUN staff who support the garden. And the school maintenance staff maintains garden care. Approximately, 0-3 teachers use the garden each year, on their own, reaching 50 students per year. In regards to curriculum, Reynolds Middle School garden program develops their own material. The curriculum subjects include: soil conservation, water conservation, native/invasive species, weather/climate, pollinators and other ecological systems. Produce is not routinely served in the cafeteria, but is harvested and donated to the food pantry or directly to families. In regards to funding the garden supplies, the school and partner organization budget supports the \$101-\$501 garden costs.

Rigler Elementary School

5401 NE Prescott St, Portland OR 97218

Contact: Zandy Gordon, SUN Site Coordinator

zgordon@pps.net

The school garden at Rigler Elementary School was established over 10 years ago and consists of 2 (20'x 20') community garden plots with raised planters and a native plant habitat area with edibles. The garden also serves as a nature play area, outdoor classroom and school arboretum. The garden coordinator coordinates with classes during the school day, coordinates after-school gardening with the paid garden coordinator in the after-school program, schedules with teachers, participates in garden maintenance, coordinates with the cafeteria, curriculum development, creation of garden design and

training volunteers as well as SUN support staff. This site lacks a formal committee, but a few parents are heavily invested in the garden. The school partners with IRCO and Schools Uniting Neighborhoods (SUN) to teach garden-based lessons. Approximately, 15-20 teachers use the garden each year, on their own, reaching 400 students per year. In regards to curriculum, Rigler School garden program develops their own, but may use curriculum from other sources depending on the subject. The curriculum is implemented in science, English/literacy/ language arts, and math, English as a Second Language / English Language Development, health/nutrition, native/invasive species, weather/climate and executive function and cognitive skills. The space is also used for as a calming space for children with behavioral issues/ restorative justice or community service. The garden is also used for after school garden education through SUN. Produce has recently been integrated into the cafeteria salad bar, and is also harvested for cooking workshops/activities, donated directly to families or the food pantry and is also used during in-class and family event tastings. In regards to funding the garden supplies, SUN and the partner organization budget are utilized to support the budget.



Rigler Elementary School Garden

Robert Gray Middle School

5505 SW 23rd Ave, Portland, OR 97239

Contact: Beth Madison, Principal

bmadison@pps.net

The school garden at Robert Gray Middle School was established 6-10 years ago and occupies 300-500 ft² of space. There is also a native plant area on site. Over the summer, SUN school waters the garden. The supply budget is \$501-\$2000, and is generated through grants and a partnership with Fuel Up to Play 60.

Sabin School

4013 NE 18th Ave, Portland OR 97212

Contact: Julian Dominic, PTA Garden Coordinator

sabingardencoordinator@gmail.com

The school garden at Sabin school was established about 7 years ago and occupies 500-1000 ft² of space. There is also a native plant area, rain garden, insect/pollinator habitat and nature play area on site. A parent and partner organization are responsible for garden coordination, which includes in-class school day garden education, after-school garden programming, scheduling/coordination with teachers and the garden committee of parents, garden maintenance and working with families/parents. 15-20 teachers use the garden for instruction during the school year, and in conjunction with the garden educator they reach 300 students/year. The school develops its own curriculum to teach science, art, English/language arts/literacy, health/nutrition, soil conservation, water conservation, air quality/pollution, native plants/invasive species, weather/climate, pollinators and other ecological systems. After-school education also occurs in the garden, through the SUN program, reaching 100-200 students/year. The garden coordinator praises the garden for being a hotbed for pollinators while also serving as a safe place troubled students to participate and feel accepted. He hopes to one day have every single student involved with the garden. Over the summer, the gardens are cared for by families and harvested for their own use, tended to by volunteers, used by a summer camp or summer SUN programming or just unused altogether. Food harvested from the garden is used for tastings at family events, donated to a food pantry or directly to families, and used in cooking workshops/activities. Harvested vegetables are served in the cafeteria, free box food program and in-school instruction. The garden supply budget is up to \$100 and comes from in-kind donations.



Sabin School Garden



Shaver Elementary

3701 NE 131st Pl, Portland, OR 97230

Contact: Loni Blankers, SUN Coordinator

blanklon@parkrose.k12.or.us

The school garden at Shaver Elementary occupies less than 160 ft² of space, and is maintained only by the SUN Site Manager and her students. The beds on the property are under an awning, providing a rain/sun challenge, but there is also a brick wall that reflects heat and acts as a thermal mass. The SUN Site Manager is hoping to expand the garden space in the future. As many as three teachers use the garden for instruction, using their own curriculum focused on basic planting, reaching 20 students/year. These students visit the garden two times a month to receive instruction in health/nutrition, English language development/English as a second language and science. There is also after-school education through the SUN program that reaches 20-50 students/year. Over the summer, the garden beds might be unused or they might be used by summer camp or summer SUN

programming. The garden coordinator is new and isn't sure about the summer protocol yet. Shaver has multiple pieces of the school fabric involved in gardening. A life skills class planted mint and strawberries last year, and a cooking class later harvested the mint. The garden is also used by students who "need a break" during the day. The school garden hasn't generated enough of a harvest to do anything noteworthy with it as of yet.



Shaver Elementary School Garden

Sitton Elementary School
9930 N Smith St, Portland OR 97203

Contact: Mandee Bish, Teacher (survey respondent)
Contact: Amy Morgan (2017 additional contact)

mbish@pps.net
amorgan@pps.net

The school garden at Sitton Elementary was established 4-5 years ago and occupies 300-500 ft² of space. There is also an on-site native plant area and insect/pollinator habitat. The garden is coordinated by teachers, parents, school staff and after-school programs. These coordinators are responsible for after-school garden programming, scheduling/coordination with teachers, garden maintenance, coordination with the cafeteria and garden committee and finally working with families/parents. The garden committee at Sitton is made up of teachers, parents and community members. 5-10 teachers use the garden to instruct 200 students/year, and the students visit once a month. Using a curriculum from Eat, Think, Grow, students are taught math, science, English language development/English as a second language, health/nutrition, water conservation, native plants/invasive species, weather/climate and pollinators. Students also use the garden with teachers and assistants as a de-escalation space. Sitton has after-school and summer programs, administered through the SUN program, reaching 20-50 students/year. Food harvested from the garden is used for tastings in the cafeteria, served on the lunch line in the cafeteria by cafeteria staff, donated to a food pantry or directly to families and used in cooking workshops/activities. The supplies budget of \$500-\$2000 is generated from a variety of sources, including the PTA, school budget, grants applied to by the garden committee or garden coordinator, fundraising activities organized by the garden committee or garden coordinator and in-kind donations.

Sunnyside Environmental School
3421 SE Salmon St, Portland OR 97214

Contact: Steph Rooney, Paid Garden Coordinator

sunnysidesustainability@gmail.com

The school garden at Sunnyside Environmental School was established more than 10 years ago and consists of 500-1000 ft² and a native plant area, rain garden, insect/pollinator habitat, nature play area, Culinary herb beds and a Fairy garden. The garden also hosts Garden days (2x a year), Harvest Fair, Iron Chef and Lavender Lot. The garden coordinator coordinates in-class garden education, after school garden programming, garden maintenance, schedules with teachers, works with families/parents, and coordinates with the cafeteria. The garden coordinator also develops curriculum, coordinates summer maintenance, volunteers, outreach and all garden-based education programming. The school garden also has a garden committee composed of administrators, teachers, parents and students who support the garden and the garden coordinator. Approximately, 5-10 teachers use the garden each year, on their own, reaching 580 students per year. In regards to curriculum, Sunnyside Environmental School garden program develops their own material. The curriculum is implemented in math, science, English/language arts/ literacy, art, English language development, health/nutrition, soil conservation, water conservation, native/invasive species, weather/climate, pollinators and other ecological systems. Produce is not routinely served in the cafeteria, but is harvested for cooking workshops/activities, in-class, family event and cafeteria tastings or donated to the food pantry. In regards to funding the garden supplies, the Parent Teacher Association supports the \$501-\$2000 budget. Currently, the garden is an important part of the school culture and there is a movement to create a multi-cultural garden program.



Sunnyside Environmental School Garden

Trillium Charter School
5420 N Interstate Ave, Portland OR 97217
Contact: Sharon Mabaet, Receptionist

sharon@trilliumcharterschool.org

The school garden at Trillium Charter School was established 8 years ago and consists of more than 1000 ft² as well as, a native plant area and an insect/ pollinator habitat. The AmeriCorps Garden Coordinator coordinates after- school gardening, in-class garden education, scheduling/coordination with teachers, garden maintenance, and coordination with the cafeteria and works with families/parents. The garden committee and works with families and parents. Approximately, 3-5 teachers use the garden each year, on their own, reaching 365 students per year. The school partners with the Confluence Environmental Center AmeriCorps Program to teach and implement garden- based lessons. In regards to curriculum, the Trillium Charter School garden program develops their own, but also utilizes NYC Edible Schoolyard, Eat Think Grow and Life Lab material. Curriculum is implemented in math, science, English/language arts. Literacy, art, health/nutrition, soil conservation, water conservation, native/invasive species, weather/climate pollinators, food waste, decomposition and other ecological systems. Produce is served in the cafeteria, and is also harvested for cooking workshops/activities and tastings in garden class. The school garden program is also a participant in the Kenton's farmers market where vegetables from the garden are sold at a low price. Overall, the garden at Trillium is very well received within the school community and parents. In regards to funding the garden supplies, school budget, grants, in-kind donations are utilized to support the \$2001 or more budget. The school garden program was also a receipt of the SPACE GRANT through the East Multnomah Soil and Water Conservation District in 2015. This grant was used to plant the pollinator garden. The program also received the Community Watershed Stewardship Program and this enabled the program to purchase native plants for a planting project with the Middle School Science classes.



Trillium Charter School Garden

Ventura Park
145 SE 17th Ave, Portland OR 97216
Contact: Erika Levinson, SUN Site Manager

erikal@irco.org

The school garden at Ventura Park was established 6-10 years ago and occupies 101-300 ft² of space. There is also a large greenhouse in a courtyard on the school property that was built with grant

money about ten years ago. There is an after-school garden education program coordinated by SUN, who developed a curriculum to teach about pollinators and soil conservation. It reaches 20-50 students/year. A community service group uses the garden during the day. They have grown plant starts in the on-site greenhouse as part of a plant sale. Over the summer, volunteer groups tend to the beds for use by the school, and/or summer camps or summer SUN programming use the garden. The school hopes to expand the number of garden beds and perhaps add an outdoor learning lab in the future. The supplies budget is \$101-\$500 and is made up of in-kind donations and through a partnership with IRCO.



Ventura Park School Garden

Vernon School

2044 NE Killingsworth St, Portland OR 97211

Contact: Lyndsey Mackenzie, Paid Garden Coordinator

vernonschoolgarden@gmail.com

The school garden at Vernon School was established 6-10 years ago and consists of more than 1000 ft² of planting area. The garden also consists of a native plant area, nature play area and insect/pollinator habitat. The garden coordinator coordinates in-class garden education, after school garden programming, garden maintenance, schedules with teachers, works with families/parents, and coordinates with the cafeteria. For garden use, approximately, 15-20 teachers use the garden each year, on their own, reaching 300 students per year. The program also partners with Growing Gardens and Self-Enhancement Inc. to teach garden-based lessons. In regards to curriculum, Vernon School garden program develops their own material, but also utilizes material provided by Growing Gardens. The curriculum is used to teach math, science, English/language arts/ literacy, art, English language development, health/nutrition, pollinators, plant lifecycles, weather/climate, native plants/invasive species, air quality/pollution, water conservation, soil conservation and other ecological systems. Produce is routinely served in the cafeteria and also harvested for cooking workshops/activities, in-class, family event and cafeteria tastings or in-class lessons. In regards to funding the garden supplies, the Parent Teacher Association and SUN school supports the \$501-\$2000 budget.



Vernon School Garden

Walt Morey Middle School
2801 SW Lucas Ave, Troutdale OR 97060

Contact: Ian Fox, SUN Site Manager (IRCO SUN)

ianf@irco.org

The school garden at Walt Morey Middle School was established 4-5 years ago and includes an on-site rain garden and native plant area. As many as three teachers use the garden for instruction each year, bringing students to the garden educator less than once a month for lessons. The school has developed its own curriculum and teaches science, weather/climate, native plants/invasive species, water conservation, soil conservation, air quality/pollution and other ecological systems. The garden is used for after-school education as well, through the SUN program, reaching 20-50 students/year. Over the summer, the garden beds are either unused or used by summer camp or summer SUN programming. The school garden has a partnership with IRCO, who provides the supply budget of \$101-\$500.

West Powellhurst Elementary School
2921 SE 116th Ave, Portland OR 97266

Contact: Lena Fox, SUN Site Manager

lenaf@mfs.email

The school garden at West Powellhurst Elementary School was established 6-10 years ago and consists of less than 160 ft² (5 4x8 ft beds) and a native plant area, insect/pollinator habitat and nature play area. The garden coordinator coordinates after school garden programming and garden maintenance. For garden use, approximately, 0-3 teachers use the garden each year, on their own, reaching an unspecified amount of students per year. In regards to curriculum, West Powellhurst Elementary School garden program develops their own material. The curriculum is used to teach: science, art, native/invasive species, pollinators and other ecological systems. Produce is not routinely served in the cafeteria, but is harvested for cooking workshops/activities, family event tastings or donated to the food pantry. In regards to funding the garden supplies, Schools Uniting Neighborhoods (SUN) supports the \$101-\$501 budget.

West Sylvan Middle School
8111 SW West Slope Dr, Portland, OR 97225

Contact: Bryan Fitzwater, Teacher

bfitzwat@pps.net

The school garden at West Sylvan Middle School was established 6-10 years ago and occupies 101-300 ft² of space. The garden is located in a courtyard on the grounds, contained within and surrounded on all sides by classrooms. The garden coordinator, a teacher, describes it as being like the fishbowl of the school. Consequently, it has been difficult for the school to partner with the community and share the garden space. Teachers bring their classes to the garden for reading and studying, but only the garden coordinator currently teaches using the garden. The curriculum used was developed by the school, in addition to curriculums from School Garden Project, Eat Think Grow and Growing Gardens. The garden is used to teach science, English/language arts/literacy, art, soil conservation, water conservation, air quality/pollution, native plants/invasive species, pollinators and other ecological systems. Including visits from teachers and their classes, 400-500 students/year use the garden, and students who visit the garden to receive lessons do so about once a week. 200 or more students use the garden during after-school hours and/or summer programs, though there is no after-school education being offered and summer maintenance is handled by volunteers. 150 students enrolled in science classes comprise the bulk of the volunteers involved in garden maintenance. As is, food harvested from the garden is only used for tasting at family events, but the garden coordinator would like to incorporate the harvest into the school cafeteria as well. He is finding that the district is resisting that effort. West Sylvan has earned Green School Status through a partnership with PPS Sustainability. They have also worked with Friends of Trees and City of Portland Parks and Recreation in the past. The garden coordinator is proud of the school's work in adding edible plants to the landscape, reducing waste in the cafeteria, planting trees around the school and raising awareness of general garden and ecological issues. There is no official or set supply budget for the garden at West Sylvan, so any money put in comes directly out of the garden coordinator's pocket and the PTA.

Winterhaven School
3830 SE 14th Ave, Portland, OR 97202

Contact: Fawn Lengvenis, Parent

flengvenis@gmail.com

The school garden at Winterhaven School was established 4-5 years ago and occupies 300-500 ft² of space. There is also an insect/pollinator habitat, native plant area and permaculture installation on site. During the school day, 5-10 teachers and the garden coordinator instruct 350 students/year using a curriculum they developed on their own. The students visit the garden more than once a week. The garden is used to teach math, science, art, English language development/English as a second language, weather/climate, native plants/invasive species, air quality/pollution, water conservation, soil conservation, permaculture, pollinators and other ecological systems. Over the summer, volunteers water and tend the beds for school use, and families care for and harvest food for their own use. Food harvested from the garden is used in cooking workshops/activities, tastings at family events and small amounts are incorporated into the cafeteria salad bar and other dishes. Fundraising activities, PTA and in-kind donations generate a supply budget of \$501-\$2000.

Woodland Elementary School
21607 NE Glisan St, Fairview OR 97024

Contact: Rebecca Larson, Previous SUN Site Manager

rebeccala@irco.org

The school garden at Woodland Elementary School was established 4-5 years ago and consists of 101-300 ft² and a native plant area. The garden program also hosts a garden revitalization event with the Portland Timbers each year. In regards to partnerships, currently, the garden is going through a transition from the SUN network to the Latino Network (LatNet). The garden coordinator coordinates after school garden programming and garden maintenance with the school maintenance staff and parents. Approximately, 0-3 teachers use the garden each year, on their own, reaching 30 students per year. In regards to curriculum, Woodland Elementary School garden program develops their own material. The garden is used to teach, science, art, health/nutrition, soil conservation, water conservation, native/invasive species, pollinators and other ecological systems. Produce is not served in the cafeteria, but is harvested directly for families or donated to the food pantry. In regards to funding the garden supplies, the Parent Teacher Association, fundraising activities and the SUN budget supports the \$101-\$501 budget.



Woodland Elementary School Garden

Woodlawn Elementary School
7200 NE 11th Ave, Portland, OR 97211

Contact: Abby Peterson, Kindergarten Teacher

apeterson@pps.net

The school garden at Woodlawn Elementary has been established for 6-10 years and occupies less than 160 ft² of space. The garden coordinator, a teacher, along with the help of a colleague, is responsible for in-class school day garden education, garden maintenance, working with families/parents and anything in general that needs to get done in the garden. There is a garden committee of parents and community members who assist with special projects. Up to three teachers use the garden during the school year, and on their own they instruct 60 students/year using a curriculum the school developed on its own. These students visit the garden more than once a week. The garden coordinator reports that students with high behavior needs, in particular, have taken a vested interest in the garden. They look

forward to their garden time and work to earn it. There is also after-school education through the SUN program reaching 20-50 students/year. Food harvested from the garden is donated to a local food pantry or directly to families. The garden is on school property but next to a community garden, and the garden coordinator reports that the community garden users have been incredibly helpful. The supply budget is only generated out of pocket from two teachers who have spearheaded the garden program at Woodlawn Elementary. The garden is not supported by the school in any way.

Woodmere Elementary School
7900 SE Duke St, Portland, OR 97206

Contact: Xea Westcott, Parent

xeandra@gmail.com

The school garden at Woodmere Elementary was established 4-5 years ago and occupies 100-300 ft² of space. There is also a native plant area on site at Woodmere. The garden is coordinated by a parent who is responsible for in-class school day garden education, after-school garden programming, scheduling/coordination with teachers and garden committee, garden maintenance and planning and the purchase of supplies. There is a garden committee at Woodmere too, comprised of teachers and parents. 3-5 teachers use the garden for instruction during the school year, with the help of a parent volunteer, using a curriculum developed by the school that reaches about 40 students/year. Students visit the garden less than once a month, but might also spend time there during garden club. The school garden is used to teach math, soil conservation, water conservation, native plants/invasive species, weather/climate, pollinators and other ecological systems. In addition, the kindergarten has its own garden where those students spend time. There is also after-school education through the SUN program, reaching 20-50 students/year. Over the summer, families care for and harvest the garden for their own use, and volunteers water and tend to the beds; different years have had different routines. Generally, food that is harvested from the garden is eaten by students in the garden or donated to a food pantry or directly to families. A supply budget of \$501-\$2000 is generated through fundraising activities organized by the garden committee or garden coordinator and grants applied for by the garden committee or garden coordinator.