

# A School Garden Case Study:

## Powell GT Magnet Elementary Courtyard Renovation

written by Laura Miller for Community Food Lab  
July, 2014



Community Food Lab wrote this Case Study to show how one school built and uses their school garden. We wanted to highlight the successes and future opportunities for this garden and outline the original plan and timeline that went into this project. Our hope is that this Case Study will serve as an example of what can happen when schools involve their community in all aspects of developing a school garden.

Community Food Lab is a design and consulting firm building healthy local food systems. We are designers, collaborators, and systems thinkers working for healthy, inclusive, and equitable food systems. We are always looking for opportunities to add new value to the health, economy, and sustainability of communities.

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### Keys to success

1. Multiple stakeholders in design and development
2. Administrative champions
3. Creative integration with curriculum
4. Realistic budget and phased construction
5. Diverse community participation



Images of the Powell courtyard

Twenty years ago Alice Waters asserted that “good food is not a privilege, it’s a right.” In order to combat the inadequacies in food supplies endemic in many communities, Waters advocated for the addition of edible gardens in schools. These gardens provide academic opportunities and serve as a hub for community activities. In 2012, an elementary school in Raleigh, North Carolina designed and built their own school garden with a similar focus to Waters.

This paper discusses the origins, timeline, and outcomes of the Powell GT Magnet Elementary School’s garden. This garden’s success comes through the involvement of community groups, strong curricular links, and the forward thinking by dedicated Powell staff.

The stakeholders of this project include teachers, administrators, parents, students, and neighbors, all of whom have been involved at various points in the project. Principal Charles Miller and staff member Cristen (Cris) Laurens are two leading forces behind the project. Principal Miller is a strong supporter and champion of the project and Cris serves as the overall caretaker and backbone of the garden. She oversees the connection between garden initiatives and classroom instruction and team-teaches with various staff members to support instruction. Her hard work keeps the progress moving forward and uses of the garden increasing.

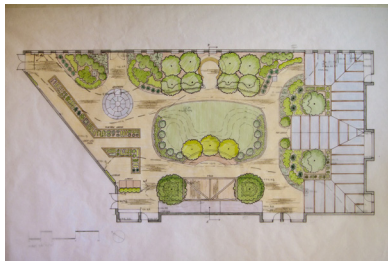
With the help and enthusiasm of Miller and Laurens, many of the staff at Powell have jumped on board the renovation of the schools’ unused courtyard into an edible garden to achieve a set of goals that benefit students and the community. These goals include:

1. *New environmental education electives*
2. *A healthier local food system*
3. *Community service*
4. *Use of the garden development as an educational tool*

The first goal is rooted in Powell’s mission to embrace the gifts and talents of each child in order to inspire lifelong learners. Powell offers a wide range of electives to engage students via project-

“The only way any project like this is possible is with a core group of dedicated stake-holders. The staff and parents at Powell fueled this project and continue to do so...,ultimately the success or failure of these spaces lie solely with the people whom they are supposed to serve. Powell is a shining example of success.”

-Gerardo Serrano, Sixth Sun

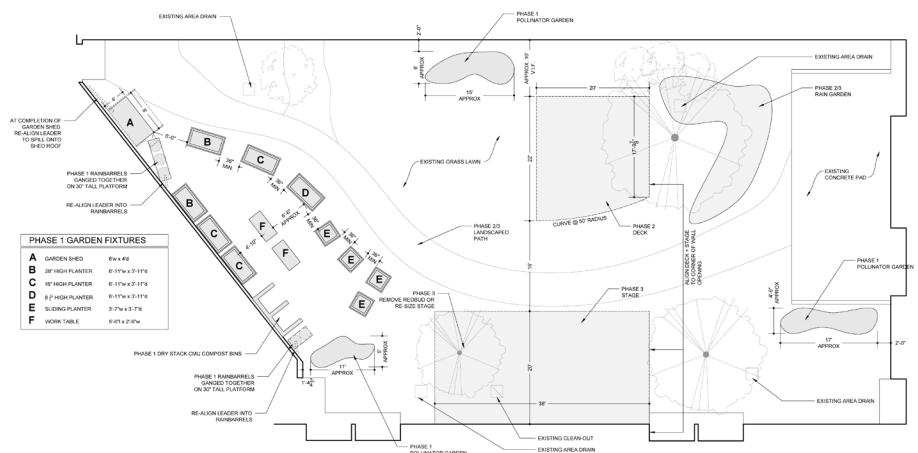


NCSU student designs for the courtyard

based learning. The garden lends itself to a host of new academic opportunities and creative spaces where students can learn to contribute to and interact with their food sources. The second and third goals serve as opportunities for the school to have beneficial impacts on their community. The school itself is located in a “food desert”, which means affordable and nutritious food can be hard to obtain. By growing on site, Powell helps alleviate food insecurity within their community. Produce grown in the garden goes home with students in need to provide nourishment to families. The fourth goal, using the garden as an educational tool, is important to Powell to ensure that all aspects of the garden implementation serve to teach students. Students were given the opportunity to lend a hand in the design and construction of the courtyard to enhance their exposure to real world work and experiential learning.

The project began in earnest in the spring of 2012 when Powell began working with Landscape Design graduate students from North Carolina State University (NCSU), Sixth Sun (a community organization), and a designer, Erin White. The three teams worked systematically and collaboratively to design and develop plans and construct the renovation.

NCSU graduate students & professors began the design process with a design charrette for Powell students to learn about students’ visions, dreams, and goals for the courtyard renovation. The graduate students used the comments and ideas gathered at the charrette to influence their own design plans. Working from the graduate student plans, White then synthesized the designs and comments to develop a master plan. The master plan is broken into phases to allow for changes



## 1 COURTYARD PLAN

SCALE: 3/16" = 1'-0"

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OUTDOOR CLASSROOM PROJECT  
POWELL GT MAGNET ELEMENTARY SCHOOL  
1100 MARLBOROUGH RD  
RALEIGH NC 27610

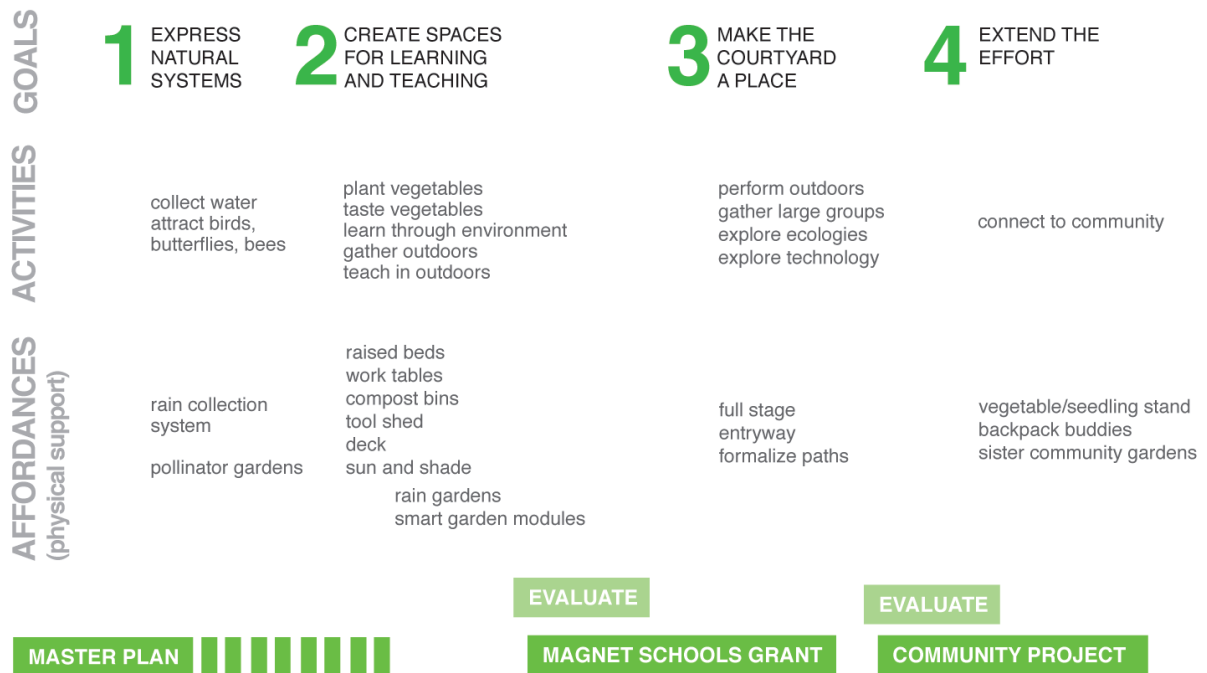
MAY 17, 2012



Erin White's courtyard plan. This drawing is the synthesis of the above five designs from NCSU students

in outcomes and flexibility tied to the needs of the school. To date two of the four phases have been completed.

With a master plan in place, Powell Elementary called on members of the school community to help build and install pollinator gardens, rain collection system, raised beds, work tables, compost bins and prepare the garden lawn. On each of three work days, a number of volunteers joined in to help build different parts of the project. Using this “garden mob” model for construction allowed for the exchange of expertise from within the community and provided the sheer volume of people needed to get the work done in one day. To date, there have been three garden mobs (over the span of two school years). Sixth Sun organized, sourced materials and aided in finding funding for the mobs. They also made documentary videos of the mobs, which have been used to bring attention to the garden and to help additional grant applications.



*Phased project sequence plan by  
Erin White*

The Powell community continues to see benefits from the installment of the garden, some expected and some unexpected. Powell expected the garden to support electives by creating stimulating food-focused learning environments and this has been achieved. New electives allow students hands-on education as they work in the vegetable beds and on the cutting boards. Students connect with the land by getting their hands dirty and being outside and active. Powell also anticipated garden electives teaching about the importance of environmental stewardship, sustainability, individual responsibility and impact. Current electives including: Nature & Ecology, Blooming Botany, Green Thumb, It's for the Birds, Computer Critters, Buzz on Bees, Garden Design, Insect Study, Night Creatures, and Animals, Animals.

### **Garden Mob #1:**

Date: 8/18/12

Attending: 9 Staff, 10 Families & Sixth Sun

Community partners: NC Toxic Free, Logan's (donations)

Work: cleared cinder blocks; mulched veggie area; dug 3 pollinator beds & planted butterfly bushes, lantana (donated from Logan's); set up composting area; built 2 raised bed planters; filled one planter with soil; planted veggie starters after mob day (donated by Logan's)

### **Garden Mob #2:**

Date: 03/02/2013

Attending: 8 Staff, 10 Families & Sixth Sun

Community Partners: Kohl's Cares, PTA (funded \$1500)

Work: build 2 raised planters, install water barrel catchment system, weed, spread mulch, fill soil, pick up trash, plant pollinators.

### **Garden Mob #3:**

Date: 04/26/14

Attending: 7 Staff & 18 Families

Community Partners: Maurice Small & son, Katie Murray, Erin White, Whole Kids Foundation (grant \$2000)

Work: build 3 raised planters, 2 work tables, weed, spread mulch, fill soil, pick up trash, edge pollinator beds.



*Powell Garden Mobs*

Some of the unexpected benefits from the use of the garden are improved student behavior and new ways for community members to contribute to the school. In order to participate in after school garden activities, students must behave well all day in other courses. Teachers from Powell have noted that a few students who struggle with behavioral issues are motivated to follow rules on garden elective days, ensuring they can get outside and work in the garden. This improved behavior benefits students, teachers, and the whole school community.

While the garden was designed to engage with and contribute to the Powell community, it was not expected that community members would reach out to Powell Elementary to voluntarily get involved to the extent that they have. Katie Murray is a shining example of one such community member. With several years experience in farming and garden educating, Katie carved out 2 hours per week, on top of her full time job, to teach nutritional education. At Powell, she created lesson plans, purchased supplies and provided students with the skills needed to make healthy food choices. The impacts of her lessons were easy to observe. Each week more children were willing to try new foods and share stories about how they informed family members and friends about what to eat and not eat.

Murray isn't the only community member to reach out to Powell and share their expertise. Maurice Small, local vermiculture and urban agriculture expert has donated his time by working in one of the garden mobs and is currently brainstorming future garden ideas with teachers.

The pulse and momentum of the garden is palpable. In two short years, the garden has branched out into new opportunities allowing the scope, future plans, and potential benefits for the garden to continue to grow. During the 2013-2014 school year the ecology elective saw a need for a garden club to make the garden more sustainable. An afterschool garden club, the Garden Ecology Club Organization (GECO), was established to support the large interest in participating in the garden, even in students' free time. An average of 16 students work each week in the garden with GECO and the club was one of 13 national finalist in the 2014 Siemens We Can Change the World Challenge. In the summer of 2014 the garden will add live chickens, granting students opportunities to learn about animal husbandry.

Work continues to find funding to complete the final phases of the garden. To date, the school has been a finalist in two separate grant competitions. Additional funding is needed to build a shed to house tools and build an outdoor stage. The stage will allow for the addition of dramatic art electives and more opportunities for students to get outside and interact with their surroundings. Another hope is that student and community participation in the school garden will inspire new neighborhood community gardens, more home gardens, Powell gardening workshops, increased demand for local produce among their families, and increased sense of unity within the community.



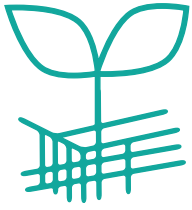
*Current images of the Powell Courtyard.*

Powell elementary is one example of how a school funded, designed, built, and uses an edible school garden. In two short years, Powell has seen many benefits and looks forward to many more in years to come. Principal Miller has noted, “...(the garden are) currently an addition to our instructional routines, but we’re moving toward the courtyard being a backbone of our instructional routines.” Edible gardens deserve to be in all schools, not only for their educational opportunities, but because all communities and students deserve good food.

Community Food Lab feels that the model used to develop the Powell Courtyard renovation is an excellent one, suitable for a wide variety of conditions. Upon reflection, we have identified a few areas of opportunity to improve the model’s resiliency, impact, and reach. The first opportunity would be to have several key champions, instead of a single keystone figure. It was clear to us that Cris Laurens bears most of the responsibility for the garden’s management and use. Although she does a wonderful job, we see value in having multiple “garden managers” to ensure that the success of the garden doesn’t rely solely on one person.

Another area of opportunity is to set up a system of metrics to evaluate the garden beginning at inception. We imagine each garden developing a set of measurable indicators around social process, educational outcomes, and food system impacts. Each program would build its own metrics, but the long term importance of defining and measuring these terms of success can’t be over stated.

Finally, while the Powell project set a good example of involving graduate students, professional designers, and younger students, the full impact of the opportunity may not have been realized. We suggest exploring ways to build more points of contact among these groups that support learning objectives for all students. We also see value in creating ways to measure impacts of these innovative relationships.



“Powell’s garden is a great example of how collaboration, vision, and dedication enrich student opportunities through creative spaces. The garden at Powell is an inspiration to any school interested in starting their own garden, and is an incredible starting point for Powell as they explore the connections between education, food, and health for their whole community.”

-Erin White, Community Food Lab

