

REDEFINING THE EDUCATIONAL LANDSCAPE: MOUNT GLEASON MIDDLE SCHOOL FARM



FARMING

PARTNERSHIPS



VISUAL ID



SENIOR PROJECT

LANDSCAPE ARCHITECTURE DEPARTMENT

UNIVERSITY OF CALIFORNIA DAVIS



A Requirement for the

DEGREE OF BACHELOR OF SCIENCE

LANDSCAPE ARCHITECTURE

ACCEPTED AND APPROVED

by

Claire Napawan _____
Senior Projector Advisor

Patsy Owens _____
Faculty Committee Member

Jennifer Ivanovich _____
Committee Member

Monica Perrone _____
Committee Member

UNIVERSITY OF CALIFORNIA DAVIS

College of Environmental Sciences and Agriculture

Department of Environmental Design

LANDSCAPE ARCHITECTURE 2011

REDEFINING THE EDUCATIONAL LANDSCAPE: MOUNT GLEASON MIDDLE SCHOOL FARM

ACKNOWLEDGEMENTS:

THIS IS FOR THOSE WHO HELPED

THANK YOU

Robyn Waxman, Erin Gardner, David Stevens, Pasty Owens, Jennifer Ivanovich, Monica Perrone, La Familia Marquez, Claire Napawan, Gayle Totton, and especially to my fellow graduating classmates.

and

To my family, without them this could not have been possible. I am forever appreciative for your love and support. From the deepest part of my being, thank you.

Richard Ohle, Bianca Ohle, Krysta Ohle, Leonora Somers, Evan Somers, Bert Somers, Paul Berghaust, Virginia Mullen, and to all those who have passed on in the Ohle and Somers families.

Sincerely,

Kevin Ohle



ABSTRACT:

REDEFINING THE EDUCATIONAL LANDSCAPE **MOUNT GLEASON MIDDLE SCHOOL FARM**

Sunland, CA

I have been asked by Mount Gleason Middle School to create a design for a prolific year-round vegetable garden in an existing part of the school's campus, a site that includes adequate infrastructure for the production of vegetables and fruits. Mount Gleason Middle School is a community located in the most northeastern most corner of Los Angeles county in Southern California. Previously, there was a functioning campus farm. However, the program lost funding and most of the current staff have never heard of vegetables being grown on campus. With that being said there used to be a fully functioning, student/faculty-ran farm that failed due to budget cuts and organizational errors. As a part of my senior project for the Landscape Architecture program at UC Davis I have chosen to act as principal designer of the Mount Gleason Middle School Farm Project in order to facilitate its rehabilitation and further success.

As a designer I aim to solve challenging problems with equal weight in function and beauty. My main goal for the Farm at Mount Gleason has been and continues to be the success of a highly functional vegetable garden with an aesthetic personality that articulates the legitimacy of farming to educate and empower people in urban and suburban environments. The concept is that through the education and inherent partnership that the students have with the garden they are able to learn outside while exercising, reduce their carbon footprint, and grow their own healthy food.

In order to see this project succeed I have identified the marriage of three elements necessary for the success of the Mount Gleason Middle School Farm; growth, community, and identity. Growth literally meaning the growth of fruits and vegetables, that is the knowledge necessary to grow produce from seed to harvest. Community constitutes the partnerships the Farm has within the school and in the local neighborhood that support funding and contribute to the necessary labor. Thirdly, the visual identity of the farm is what will conclusively gain people's respect and interest necessary to perceive it as legitimate. Giving the farm a name, a look, and a feel, thus, an identity is, what will allow people to refer to it and remember it with clarity.

I have researched and synthesized an adequate design packet that can initiate the revival of a Farm at Mount Gleason Middle School.

LIST OF ILLUSTRATIONS

IMAGE ORDERING

1.1 - 1.2 Illustrations by Kevin Ohle

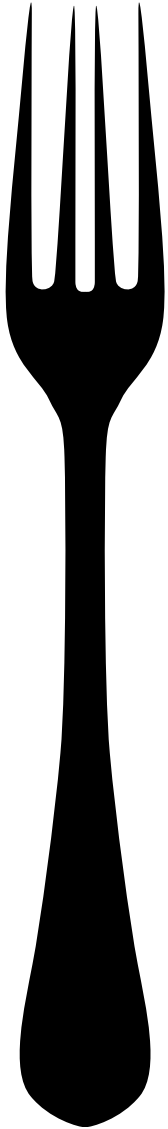
1.3 - 4.9 Photos by Kevin Ohle

5.0 - 5.3 Illustrations by Kevin Ohle

5.4 - 7.1 Photos by Kevin Ohle

7.2 Illustration by Kevin Ohle

TABLE OF CONTENTS



METHODOLOGY

00 - 01

CONTEXT

02 - 07

CASE STUDIES

08 - 23

FARMING

24 - 27

PARTNERSHIPS

28 - 33

VISUAL ID

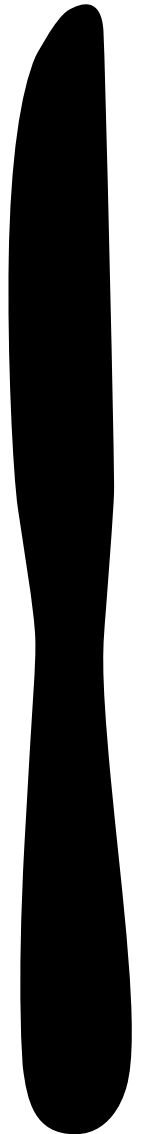
34 - 39

CONCLUSION

40 - 43

REFERENCES

44 - 45



METHODOLOGY

APPROACH

My making methodology proved to be more rewarding than I had estimated. Had I not begun growing my own crops in tandem with designing and building prototypes for vegetal structures I would not have learned so many indispensable lessons nor would I have had as much fun making this project.

Additionally, I must note that in conjunction with making I was also visible during a portion of my senior project. The first prototype installation took place in a clearing I made in a weedy patch of my front yard. I used both front and backyard as my laboratory, a place to experiment. However, the front yard unlike the backyard became a social platform; a place to demonstrate to the public that a front yard can be more than a water consumptive lawn. The front yard can be a place to grow food.

From the moment that I amended the soil and built the structure, to this very day where my tomatoes and watermelon have begun to grow, I have been approached by neighbors, pedestrians, and bicyclists who have all questioned the reasoning for my project. Every single one of the conversations I had were with people I had never met and were genuinely interested in the purpose of the garden; enthused, they all encouraged me to develop my project further.

The excitement generated from the making process and public exposure made this project fun. Because I had fun while designing, building, and writing for the Mount Gleason Middle School Farm I never hesitated to work on it. Never seeing my senior project as a chore prompted my eagerness to work on it frequently. If it was not for all the fun I had I would not have cared, worked as hard on this project.

I cannot start speaking about this project before I mention the learning methods, or informative processes that helped guide me through the design development of Mount Gleason Middle School's Farm. Initially misinformed I feigned to make my project applicable to the urban agriculture school of thought. However, my site, Mount Gleason, is located in a suburban/peri-urban landscape. Mentally and physically irrelevant to any realm of urbanism I began to realize the answers I sought to find may not be found in the books I was reading. Frustrated as my computer and sketchbook lay stagnant, I wondered why I failed to make progress.

Remembering an inherent property of agriculture--soil--I wondered why I was not covered in it. To come up with genuine solutions for the revival of Mount Gleason's Farm I knew I would have to learn with my hands. To learn how to grow fruits and vegetables I would have to do it myself; thus, I grew fruits and vegetables myself. The actual process of making is incredibly informative and has led me through this project. Furthermore, it is critically important to accept failure and make subsequent refinements based on what did not work.

Once I began germinating seeds, transplanting the seedlings outdoors, gathering manure and compost, amending the soil, making crop rows, planting crops I had grown for three months, and exercising a daily irrigation regime did I begin to know what would make the Farm at Mount Gleason succeed.

CONTEXT:

RELEVANT ISSUES



2010 POPULATION: 9,862,049

**INEVITABLE
POPULATION INCREASE**

2020 POPULATION: 11,501,884

Southern California has already experienced vast suburban sprawling. The development scouring the coastline of rare sagebrush communities and the hills of ubiquitous oak woodland. Now the area is not only facing the loss of what little natural landscape remains, but also must compete for scarce resources coupled with certain population increase.

Mount Gleason Middle School has the existing infrastructure for produce production. No retrofitting needed. The site is home to a barren farm-scape that is fertile for revival. With development and population always on the rise, it is glaringly obvious that this stagnant farm deserves a make-over.

CONTEXT:

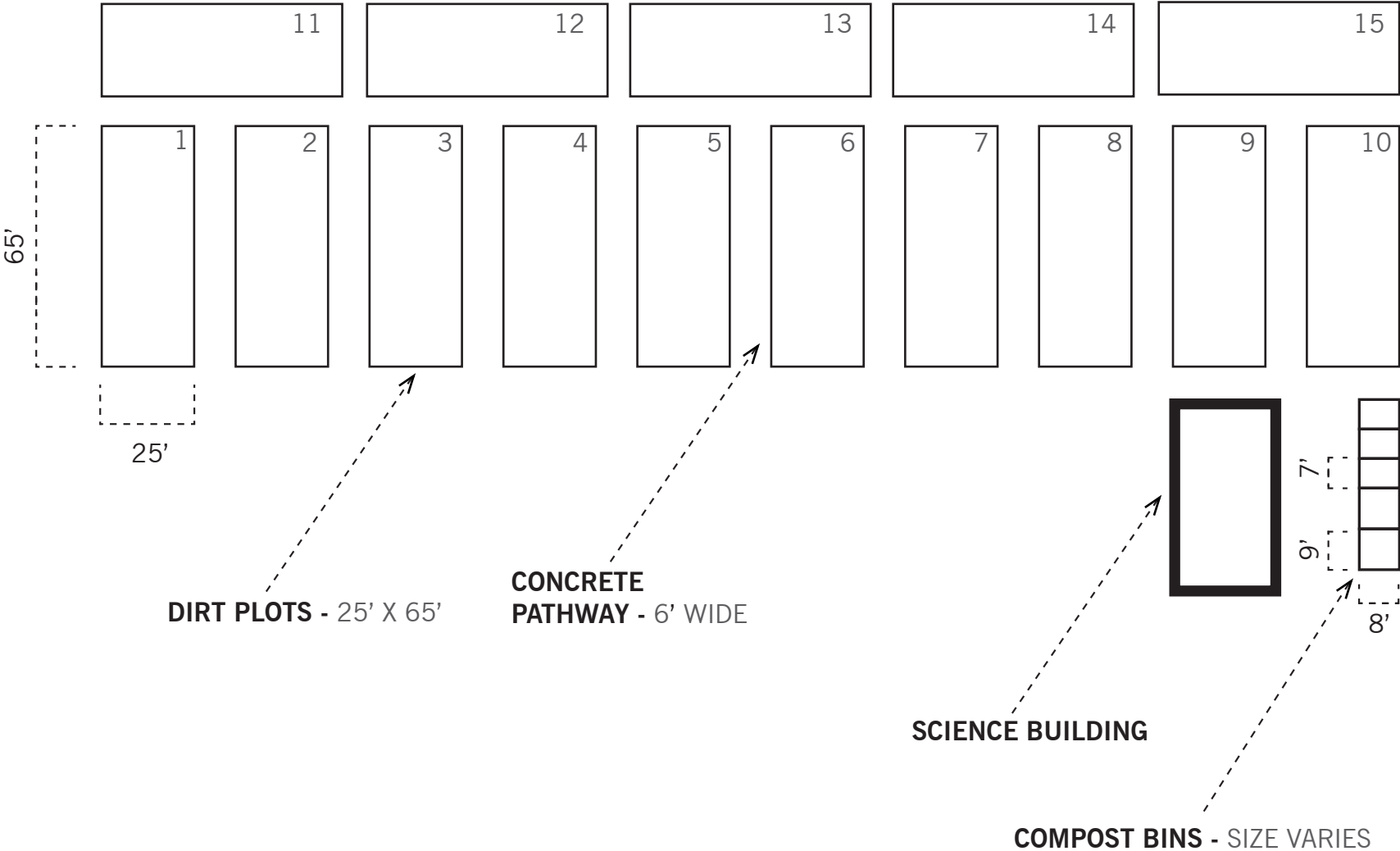
RELEVANT ISSUES

Mount Gleason middle school is part of the Los Angeles Unified School District (LAUSD), the 2nd largest public school district in the United States. LAUSD is typically underfunded and overpopulated. I attended LAUSD schools K-12 and can attest first hand to the districts' financial disability. Keeping my personal experience in mind, coupled with inevitable population increase has lead me to confirm that Mount Gleason will benefit from a school farm.

California agricultural productivity and sprawling development has sheared much of its' landscape. Implementing suburban and peri-urban farms in existing developments helps lessen human expansion. Equipping younger generations with the skills to farm organically is a powerful tool. Teaching our future generations the environmental skills that come along with farming allows this knowledge to transcend the span of our lives.

CONTEXT:

EXISTING SITE PLAN





1.3



1.4



1.5



1.6



1.7



1.8

SITE ANALYSIS:

MOUNT GLEASON MIDDLE SCHOOL Sunland, CA



OPPORTUNITIES: PHYSICAL

PLANTERS: Qty 14 - 25'X65'

SOIL: 3" Layer of Cow Manure (Weeds need to be removed.)

COMPOST: Qty 4 - 9'X9' Compost Bins

IRRIGATION: Each planter is equipped with a working valve.

SOLAR ORIENTATION: Southwest

CONSTRAINTS: SOCIAL

LABOR: Grounds Grew - lacks meaningful partnerships.

Putting all labor responsibilities on the grounds crew prohibits students from working the farm .

FUNDING: School Budget - If the school assumes primary fiscal responsibility it becomes unable to develop partnerships. Mutually beneficial relationships are unborn.

HEAD GARDENER: Non-existent

STUDENT INVOLVEMENT: A critical element, yet to be addressed by the school.

EXISTING VEGETATION: Weeds, 2 small lemon trees, and one mature Elm tree need to be removed.



CASE STUDIES

PRECEDENT EXAMPLES

For me, the process of meeting and interviewing all of the gardeners who have made the following edible gardens succeed was an extremely informative experience. If it were not for the field visits and numerous talks I had under the light of the sun and on the surface of the soil where these gardeners grow their food, this project would not have been possible. Informal talks with experts produced some of the most salient data for this project. I have realized that discourse, informal or formal, is a powerful learning method. Through inquiry and curiosity I have learned more about fruit and vegetable production than I ever would have using traditional research methods.

CASE STUDY 1:

GRANT HIGH SCHOOL Sacramento, CA



Upon arrival at The Grant High campus in North Sacramento there were vagabonds cackling, rummaging through trash on the street whilst a red-nosed pitbull ran on campus. As I wandered on campus with a colleague of mine a group of high school students screamed obscenities at us while we were looking for the vegetable garden. Briefly after that Ann Marie, science teacher and garden coordinator, met us halfway down the sun-bleached sidewalk with a smile.

Ann Marie began narrating the story of the Grant High garden from inception to its' current manifestation (10 year history). Apparently, the garden struggled for years because of a lack of people involved with the project. It takes meticulous weeding, a consistent irrigation regime, regular compost turning, seed propagation, planting, and harvesting to make a vegetable garden of this size succeed; therefore, necessitating participation on a significant scale.

What subsequently enabled Grant High's vegetable garden to succeed was the attainment of internal curricular partnerships as well as community partnerships. The school first wove the horticultural lessons of a native pollinator garden (beneficial insects, xerophytic plants, etc) into the fabric of their curriculum. Later the school created a vegetable cultivation class in which groups of students were delegated plots where their grades were dependent upon the success of the group's harvest.

ANN MARIE KENNEDY - TEACHER

2.7



CASE STUDY 1:

GRANT HIGH SCHOOL Sacramento, CA

In tandem with growing their own vegetables the school also started a cooking class to show students how to cook healthy, delicious food that they grew. Lastly, Grant High School developed a business management class where students learn the skills necessary to catalogue materials lists, calculate costs, delegate tasks, etc.

While Ann Marie says that making the garden a part of Grant High's curriculum was beneficial, she notes that another relationship of equal importance was between the school and the community. Once Grant High opened up its gate to the community for free vegetable plots it really began to succeed according to Ann Marie. People from the local community who grow food for themselves here are a cornerstone in the survival of this garden as they weed, water, dig, plant, and harvest when the students cannot. Whatever scale fruits and vegetables are grown at, especially organic, it takes a lot of attention to have a worthwhile yield. To have a bounty of organic urban produce in a struggling neighborhood that teaches high school students horticulture, crop science, and business management is worthwhile and successful based on a mutually beneficial relationship with the community of North Sacramento.

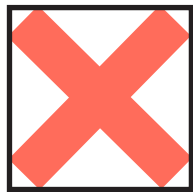
CASE STUDY 1 FINDINGS:

GRANT HIGH SCHOOL Sacramento, CA



Successes:

PARTNERSHIPS - Grant High's learning garden exhibits the strength and necessity of partnerships within the school and out in the community. Partnerships inside Grant High manifest as curriculum based learning for students studying design and horticulture. In addition students are able to taking cooking classes to learn how ways to cook healthy flavorful meals from fresh produce. External partnerships manifest as funds accrued from obesity programs ran through Kaiser Permanente. Additionally, a portion of the garden plots are left open, free of charge in order to enable low-income community members to grow their own food. Grant High's partnerships account for a significant portion of the funding and manual **labor** required for the ongoing progress of the garden's success.



Flaws:

BERMUDA GRASS - Failure to completely remove bermuda grass from the learning garden when it was initially constructed has been a recurrent problem. As a result of student participation and community participation the bermuda grass is frequently weeded out of the crop plots.

CASE STUDY 2:

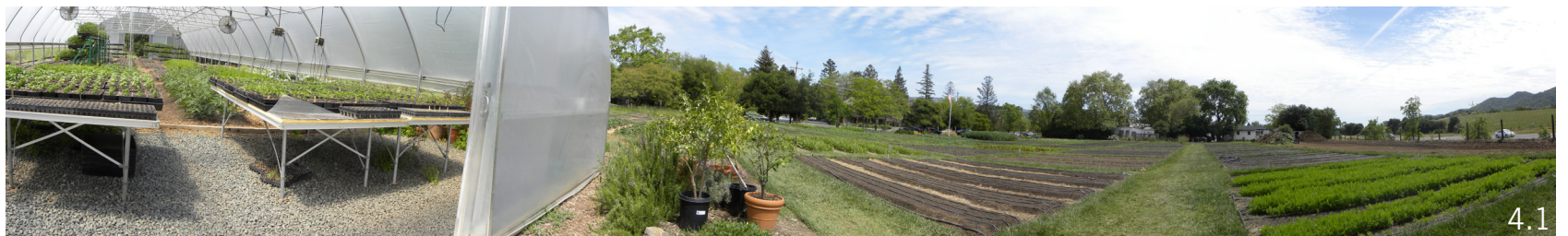
THE FRENCH LAUNDRY Yountville, CA



Going from North Sacramento to Yountville is a contrasting experience to say the least. Situated in the Napa Valley, Yountville is a small wealthy town supported by a strong economy of wine. With wine comes fine dining and in Yountville one of the most extolled restaurants is the French Laundry. The French Laundry has a small farm across the street where organic fruits and vegetables are grown for dishes served at the restaurant.

I was able to set up a meeting with the Master Gardener of the culinary farm, Tucker Taylor. The first thing that Tucker told me was that first and foremost he is a soil farmer. He is concerned with the ongoing fertility of the soil and because of that his culinary farm practices composting, uses organic fertilizers, uses cover crops, and checkerboards all of the crops so that no one plant is in the same crop row the next year. I found Tucker's soil creed to be interesting but I could not understand why he laid out the entire farm on a grid of Bermuda grass. The grass pathways are intentional and designed this way to invite patrons of the French Laundry to see where their food is grown. I appreciate the concept of familiarizing people with their food sources but not a weedy, water consumptive, grass pathway. Luckily, Tucker has a small farm crew that works under him because they are constantly edging and trimming back the Bermuda grass from the crop rows.

TUCKER TAYLOR - MASTER GARDENER



CASE STUDY 2:

THE FRENCH LAUNDRY Yountville, CA

This culinary garden thrives upon a cap-less budget and Tuckers' farming experience. When constructing the garden Tucker was able to purchase one of the best pre-fab greenhouses on the market, several yards of compost, rare seeds from an organic seed bank, and a crew of maintenance guys. Tucker has managed organic farms from Oregon to the Eastern US, gaining years of experience. The maintenance crew at the French Laundry Culinary Garden has taken the place of community partnerships. The money used to pay the crew keeps the farm in shape. Playing the role of professional master gardener, Tucker Taylor is not a volunteer, he is paid to exercise his thorough understanding of organic agriculture. In conclusion, this culinary garden excels because of its substantial budget which replaces volunteer requirements. Tucker's experience in organic farming allows the operation to pay him as a professional to manage the land.

CASE STUDY 2 FINDINGS:

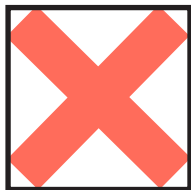
THE FRENCH LAUNDRY Yountville, CA



Successes:

EXPERIENCE - Master Gardener, Tucker Taylor, has attained years of valuable farming experience practicing organic farming. Without an expert, this prolific culinary garden could not exist.

FUNDING - Budget covers all garden expenses including worker salaries.



Flaws:

BERMUDA GRASS - Failure to completely remove bermuda grass from the learning garden when it was initially constructed has been a recurrent problem. Impart to student participation and community participation the bermuda grass stays out of the garden plots due to the high level of weeding these internal/external groups do.

PARTNERSHIPS - Non-existent because of financial backing.

CASE STUDY 3:

K STREET FARM Davis, CA



Coincidentally, I live a few house down from the K Street Farm which was founded by Robyn Waxman; graphic designer and teacher. Two years ago Robyn did her Masters thesis at CCA in San Francisco. Robyn's thesis was based on how a designer can give back to the next generation.

Adjacent to the CCA campus is a 25' by 6 mile long strip of toxic soil. Robyn wanted to implement urban agriculture as a means of bio-remediation as well as giving back to the community. She did it, she made it all happen. Her project was a success, she received several grants. Subsequently, Robyn gave a lecture on TED.org; had an exhibition in the San Francisco MOMA; was featured in several press articles; and had her thesis published. The Farm next the CCA campus was such a success that when Robyn, her husband Bill, and their daughter Sophia moved back to Davis they started a front yard farm 1.5 years ago.

The K Street Farm donates half of its yield to a homeless shelter on Olive Drive in Davis, CA. Last year the farm produced 1,000 pounds of food! Before Robyn's yard was a small farm it was a weedy lawn that used over 1,000 gallons of water during the summer. Now her water bill is lower too (\$150 every 2 months).

ROBYN WAXMAN - GRAPHIC DESIGNER/TEACHER

4.2



CASE STUDY 3:

K STREET FARM Davis, CA

Robyn is a graphic designer by trade, not a farmer. After the success of the CCA farm, Robyn was well versed in organizing people. At first she posted flyers at the local CO-OP and that was all it took. Robyn has regulars from the local community that come every other Saturday to her front yard farm to help work. There are a variety of people that come from different backgrounds to the K Street farm. There are never a lack of people at the K Street Farm because it feels good learning how to grow vegetables outside in your neighborhood and giving them to homeless people in need of healthy produce.

I recently developed a close relationship with Robyn and her family as I have been regularly helping them with the front yard farm and receiving great information for this project from Robyn. She was excited about my project when I told her about. Actually, when I started building Prototype 1 in my front yard the whole neighborhood was swept up in a grow-your-own-vegetable spell. While I was tying the rebar for “The Food Web” scores of neighbors and strangers asked me what I was doing and told me that they liked it. The excitement and enthusiasm generated from the K Street Farm and my own front yard experiment was amazing. Being seen is important. Being seen by your own community is more important but having the whole community involved in a greater good is true power.

CASE STUDY 3 FINDINGS:

K STREET FARM Davis, CA



Successes:

PARTNERSHIPS - In its' first year the K Street Farm harvested 1,000 pounds of food and is on track to pass last years record. This medium sized front yard is able to produce a prolific bounty exclusively because of its' volunteers. Community partnerships are often necessary and tend to lead to the strongest most beneficial relationships.

DONATIONS - K Street Farms' purpose is to reclaim the iconic front yard lawn for vegetable production and to donate half of the harvest to a homeless shelter on Olive Drive in Davis, California.



Flaws:

DELIMITATIONS - The size of the front yard is the only thing that hampers the K Street Farm from expanding and in hopes to produce more food.

CASE STUDY FINDINGS:



REMEMBER WHAT WORKS

FARMING



PARTNERSHIPS



VISUAL ID

- Appropriate crop selection for Mount Gleason

- Important organic farming concepts

Combine these essentials into info graphics that are digestible and informative

Playing the role of designer, create graphics that stimulate a gift economy, as well as student and community partnerships.

Use knowledge of imagery and typography to create desired response in poster form.

- Create visual aesthetics for the farm. Identity infers disposition and personality. An attractive identity elicits positive responses.

Design structures in the farmscape that address the issues of visual identity. Structures developed for climbing and trailing crops must perform a function and look good too.

FARMING

CROP CONCEPTS

CROP SELECTION

[5.0]

BEST CHOICES



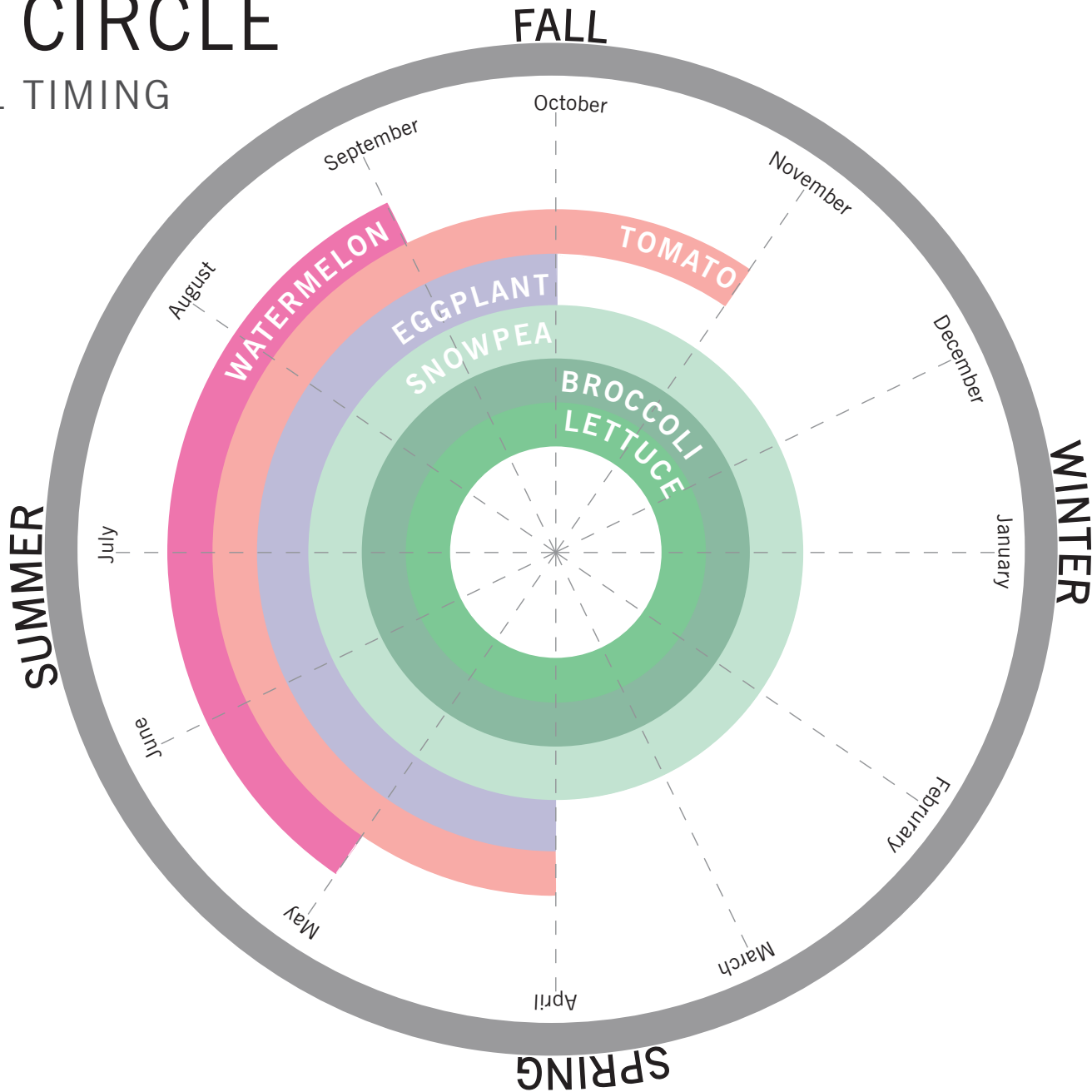
These crops are not very hard to grow. The warm season crops selected do very well in sunny Southern California and these cool season crops thrive in the Southern part of the state because there is almost never a winter freeze.

(Madigan, 58, 65-67, 71, 72, 77, 78)

CROP CIRCLE

SEASONAL TIMING

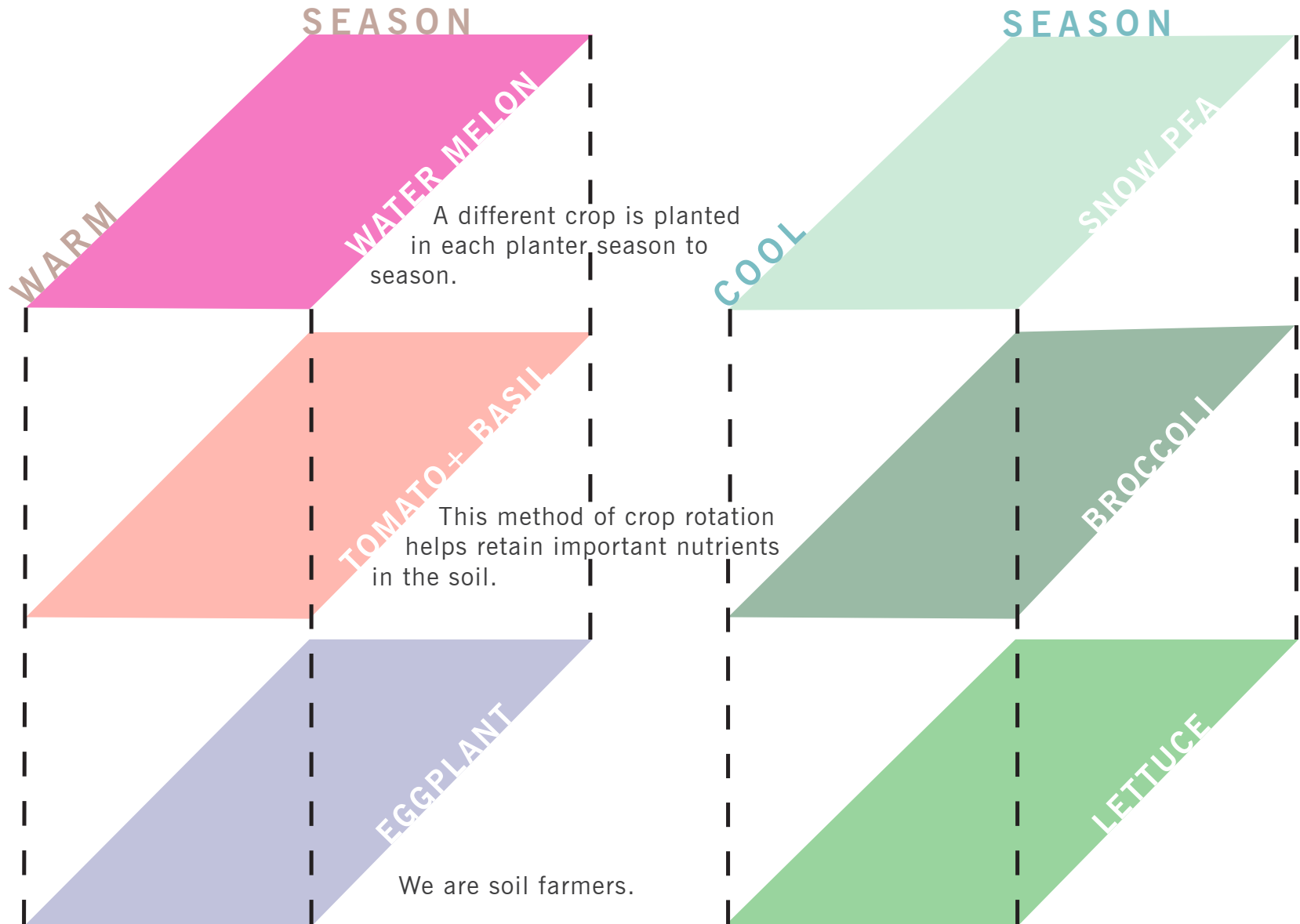
[5.1]



CROP ROTATION

[5.2]

ROTATING FOR NUTRIENTS



PARTNERSHIPS

RELATIONSHIPS OF SUCCESS

If the Mount Gleason Middle School Farm is to succeed, establishing relationships with the student body and the local community are necessary. Playing the role of designer often requires interdisciplinary skills; thus I have had to exercise my knowledge of imagery and graphic design as a tool to provoke said necessary partnerships in poster form.

I am recommending that the farm operate under a gift economy.

“What this means is that the relationship between commodities (a thing with value determined by the market) of exchange is not the emphasis, as it is in modern culture. In a gift economy, the commodity or object is incidental. It is about the relationships established between people or subjects as a result of the exchange. The gift exchange establishes a personal qualitative relationship between people, while the commodity exchange establishes objective quantitative relationships between the objects.” (Waxman, 50)

The first poster I designed aims to plant the seed for a gift economy. I cannot force meaningful relationships to occur but I can design the initial steps needed to start a gift economy. Furthermore, I have made other poster that initiate the steps needed for student and community partnerships.

FARM SUPPLIES



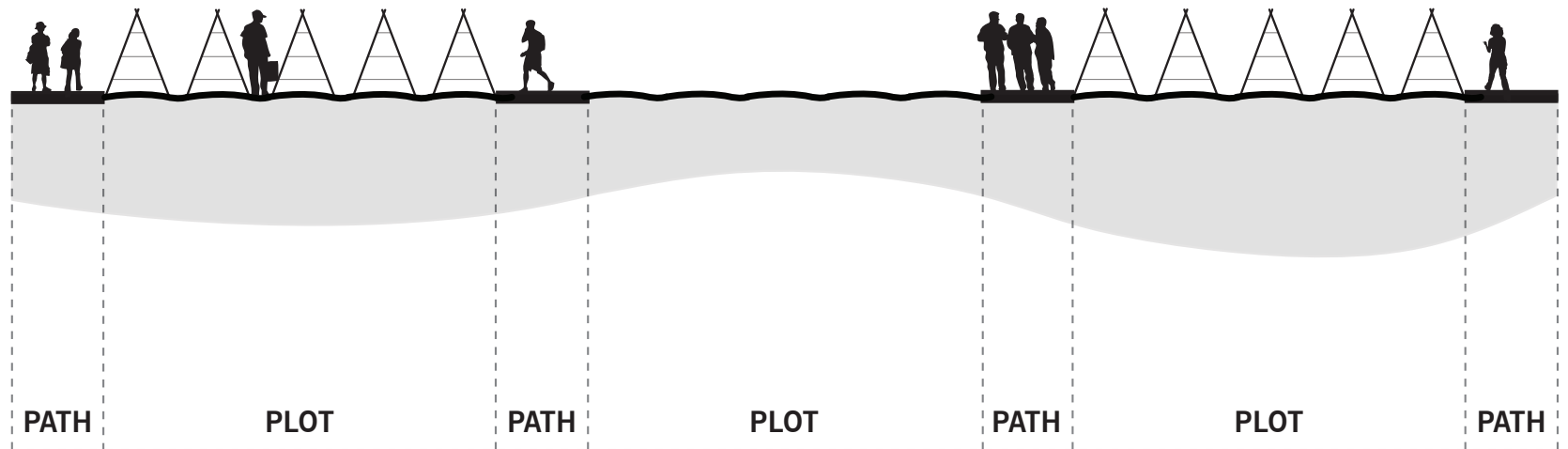
We need tools.
If you and your family can donate **any tools**
please mark a tally in the box and bring them to homeroom.

FARM COMMUNITY



We need students.
If you want to **earn class credit** and learn how to **grow food**
donate your time at the school farm. Come to the science room, **bring friends.**

FARM COMMUNITY



We need you!
Mount Gleason Middle School is offering 4,875' sq ft of **free** space to grow **fruits and vegetables**. Come to 10965 Mount Gleason Ave to get your plot.

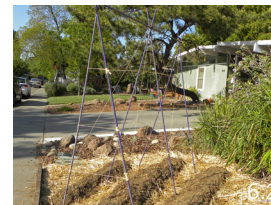
VISUAL IDENTITY

LOOK GOOD FEEL GOOD

Developing a visual appeal to the farm is critical in creating a sense of place. Unique features in the landscape offer distinctive views thus defining the landscape; thus, I have designed and constructed the following prototypes.

PROTOTYPE 1:

VEGETAL STRUCTURE “Food Web” AKA “Tomato Triangle”



Materials: 5/8" Rebar 1/4" Hemp Twine Tie Wire
Quantity: Rebar - 50' Twine - roll Tie Wire - roll

I was initially inspired by strong geometries, articulated by structurally sound shapes (X's and Triangles.) Many structures that are used to grow tomatoes on are very weak, like the tomato cone which is sold at every garden center in America. I wanted to design a structure that was strong, gave a contemporary aesthetic to the farmscape, was easy to construct, and was made out of recycled materials; and I did.

The plot of land I constructed the “Food Web” in was densely covered in invasive weeds. I spent a whole after scouring the weeds from the dirt with a pick. I also watered the soil for about two weeks to flush out as many weeds as possible. Next, I went to Russell Ranch where I sifted through horse bedding for free horse manure which I then amended my dry clay field soil with. I formed three crop rows oriented toward SW. The tomatoes grow in the middle row out of the food web structure which creates shade on one side where cilantro will be grown, while the other row remains sunny for growing basil. Additionally the twine pattern in the structure is very tensile and where it forms an “X” the weight of the tomato will pull the string taught, allowing it to bear significant weight.

PROTOTYPE 2:

VEGETAL STRUCTURE “Vegetable Curtain”



Materials: 5/8” Rebar 1/4” Hemp Twine Tie Wire
Quantity: Rebar - 30’ Twine - 1 roll Tie Wire - 1 roll

I created the “Vegetable Curtain” as a variation from the previous prototype as a means of saving space and material, while continuing to experiment with the strength of different patterns weaved with twine. This prototype differs in that it is made for snow pea vines.

PROTOTYPE 3:

VEGETAL STRUCTURE “Steel Tomato”



Materials: 5/8" Rebar - 18" Tie Wire
Quantity: Rebar - 27.5' Tie Wire - roll

This prototype was designed as a way to plant individual tomato plants in areas of differing shade and light quality where crop rows are not appropriate. Furthermore, this structure was inspired by typically weak tomato ring stands sold at home and garden centers.

CONCLUSION

THE END

CONCLUSION

THE END

I have never learned as many important lessons on any other project than I have while working on my senior project. I have absolutely no farming background, yet when implementing learning methods that allow me to work intuitively and naturally prove to be the most informative, successful, and fun. Throughout my academic career there have been times when I have been stuck on projects, unaware of how to push them further; however, I have now found ways to circumvent the mental blockades I faced when designing, building, writing, and illustrating in the past. From inception to completion, the design of Mount Gleasons' Middle School Farm has been a very meaningful experience to me. I consider *Redefining The Educational Landscape* to be an important stage in my life, now knowing that learning needs to be fun to be produce successful data. I consider this entire document to be a design package. An example of how education should be fun, this package articulates methodology, research, experience, design, and concept as an entire solution for Mount Gleason Middle School.



7.2

FARM!

REFERENCES

DOCUMENTATION

REFERENCES

DOCUMENTATION

Coyne, Kelly, and Erik Knutzen. *The Urban Homestead: Your Guide to Self-sufficient Living in the Heart of the City*. Port Townsend, WA: Process Media, 2010. Print.

Kennedy, Ann Marie. "Grant High School." Personal interview. 4 May 2011.

Madigan, Carleen. *The Backyard Homestead*. North Adams, MA: Storey Pub., 2009. Print.

Taylor, Tucker. "The French Laundry." Personal interview. 4 May 2011.

Waxman, Robyn. *Rethinking Protest: A Designer's Role in the Next Generation of Collective Action*. Thesis. San Francisco/ California College of the Arts, 2009. San Francisco: CCA, 2009. Print.

Waxman, Robyn. "K Street Farm." Personal interview. 20 Apr. 2011.

United States. U.S. Census Bureau. U.S. Department of Commerce. www.census.gov. U.S. Department of Commerce, 30 Dec. 2010. Web. 28 May 2011. <www.census.gov>.

REDEFINING THE EDUCATIONAL LANDSCAPE: MOUNT GLEASON MIDDLE SCHOOL FARM

kevinohle@gmail.com