

Community Service: The Versatility of Aquaponics
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Stonehurst Elementary Garden Work Day:

Date: 10-20-12

Location: Stonehurst Elementary school (9851 Stonehurst Ave., Sun Valley, CA, 91352)

Description: We planned a day at Stonehurst Elementary for the purpose of refurbishing their already existing butterfly garden. We taught the children, along with their parents, about aquaponics and its benefits to society. Once we finished our introduction, we then proceeded to garden and care for the already existing plants. Raffle prizes were also given out and a raffle was performed every hour, from 9:00 am- 1:00 pm.

Benefit to community: This event brought together a community and beautified the school. Plants were saved and because of that, butterflies were drawn back to the school. The money that we raised was/will be used for the school's needs and the aquaponics garden we plan to build on the site of the school.

of people reached: Approximately 160 people attended the garden day, but the school beautification has a positive affects on the many people who inhabit the surrounding area.

Relationship to school: Mrs. Kay Benitez, our teacher, and team leader, has two young daughters that attend Stonehurst Elementary.

Surprises/ outcome: We raised over 100 dollars selling raffle tickets and everyone, students and teachers, worked extremely hard to take care of the school.

Autry Farmers Markets:

Date: 11-17-13, 11-24-12, 12-1-12, 12-8-12, 12-15-12, 12-22-12, 12-29-12, 1-5-13, 1-12-13, 1-19-13, 1-19-13, 1-26-13, and 2-2-13

Location: The Autry National Center of The American West (4700 Western Heritage way, Los Angeles, CA, 90027)

Description: Our team organizes a booth at the Autry museum to inform the public of our team, the Quikscience program, and most importantly, aquaponics. We set up a running aquaponics system and created posters with information, statistics, and pictures outlining our problem, solution, and the in-between workings of our project. We also sold miniature aquaponics systems for \$5 each. It consisted the nitrogenous gravel, a minnow or goldfish, filtered water, and pothos leaves.

Benefits to community: We informed the public of the troubles with fish farming and taught them about how aquaponics works and why it works as a relevant solution to fish farming.

of people reached: 400+ (40+ people per event)

Relationship to school: Our school, the NHHS Zoo Magnet, is directly next to the Autry Museum. The Autry Museum holds a farmers market every Saturday from 8:00am – 1:00pm.

Surprises/ Outcome: The general public, for the most part, had no knowledge of aquaponics, but were very interested in the idea of it. Many people learned the pros and

cons of both aquaponics and fish farming. The children really loved seeing our aquaponics set up with the fish. Some customers also still drop by to inform us of their system and ask questions. We have built relationships with the community and established ties through business and information.

Stonehurst Elementary Garden Lunch:

Date: 1-1-24-13, 1-31-13, 2-7-13

Location: Stonehurst Elementary (9851 Stonehurst Ave., Sun Valley, CA, 91352)

Description: With the lettuce grown in the Stonehurst Elementary aquaponics garden, the parents put together a chicken and salad lunch for the students. The parents harvest the lettuce on Tuesdays, bring it home, and then prepare it on Thursdays for lunch. Before the aquaponics garden, the students would only receive a dry chicken breast every Thursday; now, they still get a chicken breast, but there is a small side salad that comes with it.

Benefits to Community: This new garden lunch allows for a healthier option for the students of Stonehurst Elementary. It promotes healthy eating and sets an example for other schools to follow.

of people reached: 300+

Relationship to School: Mrs. Kay Benitez, our teacher, and team leader, has two young daughters that attend Stonehurst Elementary.

Surprises/outcomes: The students really enjoy their new healthy lunch option. They accepted the aquaponics garden and the lunches that come with it.

Noho Auditorium talk:

Date: 11-28-12

Location: North Hollywood High School (5231 Colfax Ave, North Hollywood, CA, 91601)

Description: Our team spoke to our peers, the students of the entire NHHS Zoo Magnet. We talked to them about what we plan to do, how we plan to do it, and then explained and outlined the functions and purposes of aquaponics. We advertised our workshops, Autry market days, Zen hydroponics, and Sunland hydroponics. We also used our time to talk as an opportunity to ask if anyone wants to help. Because of this, the Zoo Magnet student body agreed to increase the price of tickets to our dance to help fund our team.

Benefits to community: We taught our fellow classmates about aquaponics and gave them a different view of fish farming, along with traditional farming. We handed out the 2012 list of fish that are beneficial and harmful to eat, along with coupons that are valid at the Autry farmers markets.

of people reached: 300+

Relationship to school: The Zoo Magnet is a part of North Hollywood High School

Surprises/ Outcome: Most people were extremely interested, and because of this assembly, one student (who has his own aquaponics system) stepped forward to help us.

Sunland Water Gardens

Date: 12-13-12

Location: Sunland Water Gardens (9948 Sunland Boulevard Sunland, CA 91040)

Description: We went to talk to the manager, Jeff Kite. We discussed our goals of acquiring aquaponics systems at our school, and at Stonehurst Elementary School. We also received permission to site them on our website.

Benefits to community: This meeting opened up more resources for other schools to create aquaponics systems on their campuses that teach valuable lessons on alternative ways to raise plants and fish. This would not only reach the students at numerous schools, but also their families, the school's faculty, and the surrounding community

of people reached: 10+

Relationship to school: Mrs. Kay Benitez, a teacher at our school, has two children that attend Stonehurst Elementary. The surrounding community informed her of Sunland Water Gardens because of the close proximity to the Stonehurst campus.

Surprises/ outcome: This meeting brought us closer to our goals and gave us a better perspective on the items we need to set up the aquaponics system at our school and at Stonehurst Elementary.

Sunland Hydroponics

Date: 11-15-12

Location: Sunland Hydroponics (8300 Foothill Blvd. Sunland, CA 91040)

Description: Our team went to talk to the manager and owner about possible discounts and/or sponsorship that they could offer us. We also received permission to include their website link on our website.

Benefits to community: This meeting opened up new ties and useful resources that we can use to better our school, the NHHS Zoo Magnet, and Stonehurst Elementary School.

of people reached: 10+

Relationship to school: Mrs. Kay Benitez' children attend Stonehurst Elementary, and one of the other Stonhurst parents owns Sunland Aquaponics.

Surprises/ outcome: We were offered incredibly helpful discounts on items that we purchase from the store.

Zen Hydroponics

Date: 1-3-12

Location: Zen Hydroponics (1801 Victory Blvd. Glendale , CA 91201)

Description: This shop is right down the road from our school and we went to see if they would be willing to help us with our project. They are also building their own running aquaponics system, so we can trade information and supply tips.

Benefits to community: Establishing new relationships with other enterprises to purchase and build our systems helps us reach out to more people and utilize new relationships to further develop our systems.

of people reached: 10+

Relationship to school: This store is just a little way down the road from our school, so many of our team members pass it on their way home, or on their way to school in the morning.

Surprises/ outcome: We were surprised to learn that they were planning on building their own aquaponics system and they were willing to help us with our project, by donating supplies, offering information regarding system conditions, and assisting in some difficult parts of system set-up.

Team Meetings

Date: Every Friday since 10-26-12

Location: NHHS Zoo Magnet

Description: We meet every Friday and during winter break, we met on Thursdays. We met to discuss our project and connect with different businesses and people who expressed interest in aquaponics and who are also interested in helping us.

Benefits to community: We will eventually create multiple aquaponics systems where students can learn about fish farm pollutants and the components and of aquaponics systems.

of people reached: 7+

Relationship to school: We are one of the schools QuikSCience teams and we attend the school, and therefore we have earned the privilege of utilizing the campus during the semester and break.

Surprises/ outcome: We complete a lot during every meeting and always come up with new ways to accomplish our project and/or new ideas.

Donors Choose

Date: 1-23-13

Location: Online (donorschoose.org)

Description: We created up a page on Donors Choose, a site that allows people from all around the world, to donate to us through the internet. Many companies who are looking to sponsor projects will donate and supply the needed money and/or items.

Benefits to community: We should over time receive enough money to follow through with our plans and this allows internet browsers the chance to see our project. This reaches out to the people who see our posting to look into what we are doing.

of people reached: undefined

Relationship to school: This site helps schools fund the projects for many schools, including ours. One of our team members' mother: a teacher at Victory Elementary, a school in North Hollywood that constantly utilizes this site to help fundraisers and teacher supplies. This mother also assisted the teachers of Zoo Magnet in setting up their own page for funding.

Surprises/Outcome:

Dance for a Cause

Date: 12-14-12

Location: Los Angeles Zoo and Botanical Gardens (5333 Zoo Drive Los Angeles, CA 90027)

Description: Before selling tickets for the winter ball (dance for a cause), our team asked “zoo crew” (our student counsel) if we could add \$2 on to the normal \$20 price. They agreed, so for every ticket sold, we raised \$2 for our projects. Winter ball is a school dance for all Zoo Magnet students and NHHS HGM students. Zoo Crew rented out a gallery in the L.A. Zoo, served food, and hired a DJ. There were tree branch decorations for team T.R.E.E., and blue walls and decorations for our team, Team Aquaponics. When Zoo Crew voted, it was unanimous to raise the price because the money given to the teams would benefit the school and help archive ecological efficiency on campus.

Benefits to community: We raised money to get supplies for the Autry markets, and the aquaponics systems. This allows us to reach out to the community and talk to them about aquaponics. By raising the price of the tickets, the students were drawn to ask questions about the price change, which led them to learn about aquaponics and team aquaponics.

of people reached: 300+ (students and chaperones)

Relationship to school: Zoo Magnet students and parents created the dance, and it is hosted at the LA Zoo annually.

Surprises/Outcome: We raised \$300+ in all, which was a pretty amazing turnout seeing as the price had been raised. This shows our willingness to help their school and our team.

Autry Market Selling

Date: 1-19-13; 1-26-13; 2-2-13; ect (every Saturday)

Location: The Autry National Center of The American West (4700 Western Heritage way, Los Angeles, CA, 90027)

Description: Our team purchased supplies for miniature aquaponics systems that we sell at the Autry Farmers Market. We bought pebbles, vases, fish, and plants (pothos to be exact). The components are/were laid out so that the customers could choose their gravel color, plants, and fish. We are charging \$5 for a single system, while showing our customers signs for each component and its function in their system.

Benefits to community: Gets a younger generation introduced and interested in aquaponics and teaches them, and their parents about it by offering them knowledge, if they express interest.

of people reached: 200+

Relationship to school: The Autry is right down the street from the Zoo Magnet. The Autry Museum holds a farmers market every Saturday from 8:00am – 1:00pm.

Surprises/Outcome: Many people are interested in the little systems we are selling. On average we make \$65, which is enough money to fund most parts of our projects. Mostly people with children bought them, but some people bought them just for themselves.

Keeping Los Angeles Beautiful Grant

Date: 11-30-12

Location: undefined

Description: We applied for a 5,000 dollar grant to purchase a greenhouse, 2 tier shelves, a louver window, 2 roof windows, a base and a greenhouse solar light ,and cooling system. We wanted these items for our school, so we could build a system that none of the students could tamper with. (out application is included)

Benefits to community: If we had received the grant, it would have aided us in building our medium aquaponics garden the Zoo Magnet.

of people reached: 0

Relationship to school: This system would have been built at our school, the NHHS Zoo Magnet.

Surprises/Outcome: We did not receive the grant.

Stonehurst Elementary Aquaponics System

Date: 1-16-13

Location: Stonehurst Elementary School (9851 Stonehurst Ave., Sun Valley, CA, 91352)

Description: Our team assisted Zen Hydroponics in the building of a large-scale aquaponics system at Stonehurst Elementary School. It was built in the school's preexisting green house, and contains floating gardens above the fish water. All of the components were donated to us by Zen Hydroponics.

Benefits to community:

of people reached: 300+

Relationship to school: Mrs. Kay Benitez, our teacher, and team leader, has two young daughters that attend Stonehurst Elementary. She is also a member of the PTA and therefore is very interested in benefitting the school and helping them accomplish their ecological endeavors.

Surprises/Outcome:

Zoo Magnet Aquaponics System

Date: 1-31-13

Location: NHHS Zoo Magnet School (5336 Crystal Springs Drive, Los Angeles, CA 90027)

Description: We put together an aquaponics system at our school with the materials we purchased with the money from the dance, the farmers markets, and raffles. Workers from Zen Hydroponics have volunteered to help us assemble and make it functional. It will be an ornamental garden with small mosquito fish and gold fish. We have flowers and other plants that are not meant to be harvested and eaten, but rather to beautify the campus. We employed the help of the freshman class and other students for the refurbishment of the pond's structure.

Benefits to community: We will be setting an example for other people to follow. We are showing a safer, healthier version of both hydroponics and aquaculture that has fewer pollutants. We will also be selling our healthily grown produce at future Autry Markets.

of people reached: 300+

Relationship to school: This is the system being built at our school, the NHHS Zoo Magnet. The pond was originally built for the zoology class taught by Mr. Robert, but over time it decayed at rotted.

Surprises/Outcome: Many students were interested in helping us assemble the system.

Stonehurst Workshop

Date: 1-28-13 and 1-30-13

Location: Stonehurst Elementary School (9851 Stonehurst Ave., Sun Valley, CA, 91352)

Description: During our 3rd period class (10:00 am- 12:00 pm), Ms. Benitez brought us over to Stonehurst Elementary. We presented our lesson there and helped each child assemble their very own miniature aquaponics system. We had 3 different stations for the building process. At each station, they were asked multiple questions regarding the habitat, and were not allowed to proceed to the next station until they answered the questions. At the first station their bottles were cut open and they were given gravel. At the second station they received water for their habitats, and then they could pick out and catch their own goldfish, and the third station, was for plant distribution and system care instructions. (They were also provided with pamphlets on their system and how it works, so their parent(s) could help them maintain a healthy system.)

Benefits to community: We helped a younger generation understand aquaponics and the problems with fish farming. They each now have their own system and because of their excitement surrounding our project, they will use the system to show their parents what they learned.

of people reached: approximately 150 (25 per class- 6 classes)

Relationship to school: Mrs. Kay Benitez, our teacher, and team leader, has two young daughters that attend Stonehurst Elementary.

Surprises/Outcome: It went very smoothly and the children understood more than we expected. They were also very excited to see their own self-constructed aquaponics system. They were able to answer almost every question asked at the stations and in the brief explanation before hand. Their excitement was almost tangible because they could have their own fish and plant, all within a little bottle.

Zoo Magnet Raffle

Date: 1-10-13 – 2-10-13

Location: Zoo Magnet

Description: We collected a variety of items, ranging from antique posters of Alice in Wonderland, to action figures of Spiderman and Venom. Most of these items were very valuable, so we charged \$3 per raffle ticket. Many of Ms. Benitez' students sold tickets to their peers and family members. We made at least \$150 that will be used to fund the building of necessary supplies for the Farmers Markets.

Benefits to community: Everyone who sold tickets explained aquaponics to who they sold the tickets to, and most of those people came back to us to help sell tickets themselves. The word continued to spread, and now almost everyone at Zoo Magnet knows about aquaponics and our team.

of people reached: 300+

Relationship to school: The tickets were sold to and by students of Zoo Magnet.

Surprises/Outcome: We made more money than we expected, and more people wanted to sell the tickets than we initially anticipated.

FUTURE PLANS

Garden Classes/ Afterschool Workshops

Date: unknown/ future event

Location: Stonehurst Elementary School (9851 Stonehurst Ave., Sun Valley, CA, 91352)

Description: Stonehurst Elementary will be holding garden classes for the students of the school, and the surrounding community. They will teach about gardening, and the benefits of aquaponics. They will help us garden and take care of the aquaponics system, while learning about how it works. These classes will cost money, but the money will go to Stonehurst Elementary and the various projects they want to complete for the school.

Benefits to community: The community will learn about gardening and the benefits of aquaponics over hydroponics. The individuals who come to the garden classes will possibly and probably share their experience with friends and family.

of people reached: -

Relationship to school: Mrs. Kay Benitez, our teacher, and team leader, has two young daughters that attend Stonehurst Elementary.

Surprises/Outcome: Future event

Farmers Markets at Stonehurst

Date: unknown/ future event

Location: Stonehurst Elementary School (9851 Stonehurst Ave., Sun Valley, CA, 91352)

Description: Students and volunteers will help sell the fruits and vegetables that were grown in their aquaponics systems. We will advertise the market on our website, the Zoo Magnet website, and the Stonehurst Elementary website. We will harvest the food items from the system before the market, and sell them throughout the day from the school's campus. All proceeds will go to Stonehurst Elementary and whatever projects they are planning, and it will also go to fixing and maintaining the aquaponics system within the Zoo Magnet campus. Mini systems will also be sold at these events.

Benefits to community: We will be selling people there healthily grown produce and teaching them about the schools aquaponics system. We will promote healthy fish and vegetables to eat at an affordable price.

of people reached: -

Relationship to school: Mrs. Kay Benitez, our teacher, and team leader, has two young daughters that attend Stonehurst Elementary.

Surprises/Outcome: future event

City of Claremont Earth Day Event

Date: 4-26-13

Location: Claremont; 2nd street and Indian hill blvd.

Description: We were asked to set up our booth at the Claremont earth day event. We will be selling miniature aquaponics systems at our booth and educating the visitors and customers about what we did for our project, what aquaponics is, and why it is good.

Benefits to community: We will be sharing our knowledge of aquaponics with multiple people around the market. It will be the passing of information from our team to the uninformed community.

of people reached: -

Relationship to school: None. We were asked by the city of Claremont to participate after our continuous Autry Market selling days.

Surprises/Outcome: future event