



# SEED TO BELLY

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Learning about seeds

Seed to Belly was an interactive outdoor/ indoor environmental program developed by Schweitzer Fellows Thomas Azwell , Sona Bekmezian, Patricia Foo, Karen Phung, and Tanner Zane in collaboration with Lindsay Bare, Dylan Bigby, Ryan Carney, Tara Christian and Nicholas LaBounty, members of G-Rock Certified, an environmental consulting group in the Bay Area. Seed to Belly was inspired by a desire to utilize the educational resources available at the newly created Rooftop Garden at Glide Memorial Church, which is located in the Tenderloin district of San Francisco, a neighborhood notorious for its high poverty rate. The goal was to teach K-5 children in the Glide Afterschool Program where their food comes from and how it affects their health and the health of their environment.

The event took place on Friday, February 27, 2009. Children from the Glide Memorial Afterschool Program were pre-registered and filled out permission slips, photo waivers and food allergy waivers in advance. The 2-hour program was divided between outdoor and indoor activities; the first half was out on the Rooftop Garden and the second half took place downstairs on the 4<sup>th</sup> floor of the Glide building.

Upon arrival at the Garden, we introduced the children to the program, took group photographs, and divided them into two smaller groups (named Fruits and Vegetables) for ease in handling. The groups were alternately rotated through four different stations: Seed Propagation and Planting, Harvesting, Pest Control and Composting. The children spent about 20 minutes at each station, engaging in educational instruction and hands-on activities. For example, at the Seed Propagation and Planting station, the children were exposed to the different types of seeds and how they are dispersed in nature. They then had a chance to plant their own seeds in small planters with soil and worm castings, which they could then take home with them to care for and cultivate.

In the Harvesting station, the children learned about the nutrients plants need to grow and the threats that they encounter. They had the opportunity to pull out weeds around the garden crops (which they then composted!) and then individually harvested leaves of Swiss chard. In the Pest Control station, they were taught about common garden pests and the toxicity of many common chemical pesticides.

They then had the opportunity to spray the plants in the garden with soap nut spray, an organic pesticide. In the Composting station, the children learned about the importance of composting in waste reduction and plant fertilization. They were able to handle the earthworms in the vermicompost bins and were also given a baggie of worm castings to take home and use as fertilizer.



Soil secrets



Planting the seeds



Adding worm casings

At the culmination of the Seed portion of the program, we took the children downstairs for the Belly portion. After making sure all the children had washed their hands, we rotated them between the Green Smoothie activity and the Fruit Bar activity, which were designed to expose the children to easy-to-make, nutritious, all-natural and readily available alternative snack food options. At the Green Smoothie station, the children helped mix together kiwis, bananas, apples, pears and, to their initial chagrin but later delight, spinach leaves and the Swiss chard they harvested in the Garden. The fruits and greens were then blended with ice and water and voila! green smoothies. At the Fruit Bar station, the children learned that processed snacks are high in sugar and fat but not vitamins and nutrients. They then had the opportunity to make all-natural, delicious fruit bars using dried fruits, nuts and seeds. All food and paper wastes were added to the vermicompost bins at the completion of the event. At the end of the day, these two activities were the favorites.

Because we also aimed to inspire the children to go green in their use of materials and their management of organic wastes, we distributed reusable cloth napkins, courtesy of G-Rock volunteer Tara Christian. We also provided the children with fabric markers to decorate their napkins with Seed to Belly-themed images. Finally, the children were given reusable Whole Foods grocery bags to hold all the goodies they had received for the day as well as a packet of Seed to Belly formulas for making natural pesticides and recipes for fruit bar and green smoothie combinations to take home to practice and enjoy!

The children and Afterschool program coordinators reacted very positively to the event. The children did begin to show signs of restlessness towards the completion of the Seed portion of the program, but the Belly activities rejuvenated them and re-ignited their interest. The program curriculum has been submitted to the directors of the youth programs at Glide for future use. This is an easily sustainable program as it can be reproduced either in its entirety or in its individual components to groups of K-5 children and we believe strongly that it can help change the way children and families think about their lifestyle and diet choices.



Worm tea fertilizer



Harvesting Swiss chard



Pest control station



Composting station



Clean Hands



Green Smoothies



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