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Agricultural Science

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Project Summary: ***Growing Greener: Food Education for Philadelphia Youth***

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Introduction

Overweight children and adolescents are more likely to become overweight or obese adults. Even more disturbing, current eating patterns are leading many children towards an unhealthy adolescence and early adulthood.

There are many reasons why children's diets are as poor as they are: 1) family eating habits; 2) little understanding of nutrition; 3) low or little availability of healthy, affordable food and 4) a great disconnect between growing food and knowing where it comes from.

In order to address the issue of poor nutrition and childhood obesity among youth in Philadelphia, the Philadelphia County Cooperative Extension developed a comprehensive, after-school food education program. Building upon Extensions' experience in Urban Horticulture, Nutrition Education and 4-H youth development, the comprehensive curriculum teaches urban children from diverse backgrounds about agriculture in an interesting, hands-on and interactive manner in after-school settings. To date, 125 students have participated in the program.

Program development and implementation

Initial program development began in 2004 with first implementation taking place in 2005. This initial pilot used a classroom-based model, delivering the program for the entire school year (October through May) during a 5th grade science class. As a result of the success of this collaboration, in May, 2005 the team received West Chester University's 3e Institutes' *Special Educator 500 Award* for Educational Excellence and Entrepreneurship. This award is presented to educators across the Southeast Region and was presented during public presentation in Center City Philadelphia

Implementation beginning in 2006 occurred in partnership with after-school programs. In spring 2006, a 5-month mini-project was conducted at Tabor Lutheran Church with 3rd through 5th graders. As a result of the success of this mini-project, the program was implemented weekly from October, 2006 through May, 2007 at two sites, *Tabor Lutheran Church* and *Kelly School* after school programs. Each weekly session focused on either entrepreneurship, nutrition or horticulture.

Also during 2006, we were able to hire a consultant to assist in formalizing the curriculum. *Growing Greener* consists of components from Extension curricula including 4-H *Mini-Society*, *Professor Popcorn* youth nutrition education, and various youth horticulture curriculum resources.

As the program continues to be refined, for 2007-2008 we increased the student participant grade level to middle-schoolers, grades 5 – 8. As the curriculum is very hands-on including working with soil and preparing food, we identified these aspects to

be a challenge for younger students. We also incorporated the development of writing and computer skills by having the students create items including logos, marketing flyers, plant care cards, and market signs using computer software.

Program implementation occurred at two sites, *Harambe Institute Charter School* and *Wister Elementary School*, from February through May. Unlike past programs, each weekly 1.5 hour session included a horticulture, entrepreneurship and curriculum component. Earth Boxes were introduced as the medium for the students to grow the food for their markets.

Objectives and Evaluation

The objectives of the program are to assist students in:

- *Understanding how to grow plants and food production through the development of a school garden*
- *Learning how to prepare healthy meals and snacks*
- *Consuming more fruits, vegetables, whole grains and water and reducing their consumption of sugary drinks and high fat foods.*
- *Increasing the school community's access to fresh produce by creating a school market from the garden's harvest.*

Evaluation methods include pre/post surveys, journal writing, and direct observation.

Impacts

For the 2006-2007 program, pre/post survey results for the 20 student participants showed the following impacts:

- 70% of the students increased their understanding of what it means to be an entrepreneur including organizing and operating a business, and assuming risk for their business.
- 70% of the students increased their ability to identify healthy choices in the MyPyramid food groups
- 30% of the students increased their knowledge of what plants need to grow.

For collecting additional impact information, weekly journaling is required. Journal entries and Educator observations identified that youth participants developed skills including critical thinking, decision making, written expression and teamwork. Participants also realized that in an urban setting they can grow and prepare their own healthy foods and contribute to their community.

The following journal entries represent some of the anecdotal information gathered:

- *We're beginning to learn about entrepreneurship. Now I know what my grandmom does when she goes to work at her business. We just made advertisements (flyers). It's so great! If you were here you'd have a great, fantastic time!*
- *Today we looked at the baby seed and it was big and strong. I realize this grows into vegetables we can eat.*
- *Today we went over what protein, calcium and nutrients do for our body.*
- *I can eat healthy food if I want to and can be a great man of the earth.*

Submitted by Leona Joseph, 5/28/08