

# Kindergarten Initiative Evaluation Report

February, 2007

Prepared by: **The Food Trust**



Special thanks to the Claniel Foundation and the USDA's Food Stamp Nutrition Education Program for their support. Additional support in preparation of this document by Xuan-Shi Lim and Caitlin O'Brady is acknowledged.

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## The Kindergarten Initiative: Promoting Healthy, Local Food Choices

*“I had a child who was overweight and the program directly impacted him...He looks and feels great and this is totally linked to the program!” –Kindergarten teacher, Philadelphia*

To help children build healthy bodies and attain their full educational potential, The Food Trust has created the Kindergarten Initiative (KI) to teach young children how to make healthier food choices. This initiative works with kindergarteners and their parents in Philadelphia area public schools to increase awareness of nutrition, the food system, and the value of local farms. The initiative has developed a model program of local food and nutrition education that can be easily incorporated into any curriculum used in classrooms today.

The Kindergarten Initiative aims to improve children’s eating habits from a young age, helping them set healthy eating patterns that will last a lifetime. It is well documented that children are not getting the food they need to grow up healthy and strong, and the health implications of poor nutrition are staggering. Less than 20% of school-age children consume the recommended five daily servings of fruits and vegetables and over a third of teenagers consume more than three servings of soda every day.<sup>1</sup> Inadequate nutrition is known to contribute to increased rates of obesity, diabetes, heart disease, and even some forms of cancer.<sup>2</sup> Further, children who do not have a healthy diet do not learn as well in school. The KI works to combat this problem at an early age, in kindergarten, in order to lay the foundation for a lifetime of healthy eating.

In addition, the KI works to educate children and their parents about the local food system, which includes the network of smaller farmers and growers working in rural areas to provide us with our food. Local farmers are important to our region’s economic and environmental health. Emphasizing local foods benefits eaters, who will likely consume fresher, less processed foods, and supports the local economy and local growers who regularly compete with larger, national and international companies.

In order to improve children’s diets and bring about changes in their dietary habits that would be of significant benefit to their health and well-being, The Food Trust adopted a multi-pronged strategy to promote healthy eating. Through classroom education, parental involvement, and increased access to locally grown fruits and vegetables, the initiative strives to provide children

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<sup>1</sup> “The Learning Connection: The Value of Improving Nutrition and Physical Activity in our Schools.” Action for Healthy Kids. October 2004. [www.actionforhealthykids.org](http://www.actionforhealthykids.org)

<sup>2</sup> IBID

<sup>8</sup> In addition to the six study schools, the initiative was also carried out in eight other Philadelphia area schools during the 2005-2006 school year. These eight schools included the 2004-2005 pilot schools and, in part because many students in these schools had already received nutrition and local food education, they were excluded from the core randomized study. However, in order to provide a richer, more comprehensive picture of the ways in which the initiative has impacted all parties involved, some qualitative data from these eight schools is included in the results.

with the skills, social support, and environmental reinforcement needed to select healthier food options.

Drawing on The Food Trust's own work in more than 100 Philadelphia area schools, and from studying the best practices in nutrition education implemented by other states, the initiative has succeeded in developing an array of lessons, themes, and strategies to help teachers integrate nutrition and agriculture education in their curricula.

The overarching objective of classroom lessons is to encourage the consumption of local and healthy foods. To achieve this end, young children learn how to read food labels and are introduced to the concept of a healthy diet as presented in MyPyramid, a set of dietary recommendations developed by the US Department of Agriculture.

The curriculum also incorporates experiential learning activities that include sampling healthy snacks provided by Pennsylvania farmers and seasonal field trips to local farms to help kindergarten students understand the importance of locally grown food.

As parents play a major role in influencing the eating habits of their children, the initiative also includes a strong parent education component. Specifically, parents learn about the actions they may take to provide their children with the healthiest food and beverage selections available, and about the distinction between locally grown and imported food. The value of healthy snacks is reinforced in parents and caregivers to ensure that young children will receive adequate nutrition, which in turn helps to maximize the child's ability to learn in school.

In summary, the goals of the Kindergarten Initiative are as follows:

- **To increase the consumption of nutritious food** by teaching children and parents to make healthier food choices.
- **To increase student and parent awareness of locally grown food**, and enlist the support of parents to help increase children's consumption of local products.

Aligned with these goals, the program strives to affect changes through the following objectives:

- Children and their parents will understand key concepts of MyPyramid, know how to read food labels, and understand the importance of locally grown food.
- Children will develop a liking for fruits and vegetables, and parents will support this preference. Children will also come to appreciate the value of farms and the work of farmers while parents will believe that local farms and the food they provide are important.
- Children will consume locally grown, nutritious foods and choose healthy food over snacks that are high in fat, sugar, and salt. Parents will change the way they shop and prepare meals, as well as provide children with healthier snack options.

Goals and objectives of the Kindergarten Initiative are implemented through the following program components:

1. **Nutrition Education:** Improve children’s understanding of basic nutrition concepts
2. **Local Food Education:** Improve children’s understanding of the food system and the benefits of local foods
3. **Parental Involvement:** Include parents in their child’s process of learning about nutritious and local foods
4. **Teacher Training:** Help teachers to integrate nutrition and local food education into their normal curricula
5. **Behavioral Change:** Improve children’s daily eating habits and consequently their physical health
6. **Nutrition and Academic Achievement:** Examine the link between children’s health and their academic success.

A logic model of the Kindergarten Initiative is included in Appendix A.

## Evaluation of the Kindergarten Initiative: 2005-2006 School Year Study

*“[This program] totally changed the eating habits of my students...even parents noticed a difference.” --Kindergarten teacher, Philadelphia*

After a successful year-long pilot in four Philadelphia schools during the 2004-2005 school-year, The Food Trust collaborated with six new schools during the following 2005-2006 school year to extend and evaluate the Kindergarten Initiative. To measure the KI’s effectiveness in promoting change in children’s dietary patterns, schools were selected using a randomized design and the program goals were expanded to include specific measurable objectives. Pre and post assessments were completed using six “outcome measures” and the results and responses of the assessments were compared.

### Methods

To be eligible to participate in the study, schools met the following three requirements:

- Have kindergarten students
- Have not previously received any special nutrition programming
- Have at least 51% of students eligible for free and reduced meals

Eligible schools were ranked in order based on a random number assignment and systematically approached until six agreed to participate. Thereafter, three schools were randomly assigned to receive the KI intervention (“experimental schools”) while the remaining three schools served as controls (“control schools”). In return for their participation, control schools received the same intervention the following academic year. All research was approved by the Internal Review Board of the University of Pennsylvania.<sup>8</sup>

Across the six study schools, a total of 241 kindergarten students out of a possible 360 consented to participate in the initiative (consent form provided in Appendix E). The mean age of students was 5.7 years and mean weight was 22 kilograms. There were slightly more female (56%) than male students. Prior to the intervention, 63% of the entire sample was of normal weight and 35% of students were either at risk of being overweight or already overweight.

The outcome measures used were:

### **Nutrition and Food System Knowledge Assessment (Appendix B)**

In every participating school, kindergarten students were assessed in the beginning and at the end of the school year to evaluate change in nutrition knowledge. Children were asked a total of 24 closed and open-ended questions, in addition to completing a task that involved arranging five cards in the correct sequence to depict the route food takes from the farm to the dining table. A scoring system was used to tally the number of correct responses from every child, where one point was given to each correct answer.

### **Body Mass Index (BMI)**

Height and weight measurements were taken pre- and post- intervention to monitor changes in children's BMI. All six schools measured weight using a balance beam scale (Detecto 6855 digital scales) and height using a stadiometer (Hite-Rite Stadiometer). Students removed their shoes and were dressed in light indoor clothing. Measurements were made by study staff.

### **Literacy**

Results from the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) were used to track changes in children's literacy over the school year. Specifically, the DIBELS assesses children's phonological awareness, their understanding of the alphabetic principle, as well as their knowledge of letter-sound correspondence.<sup>9</sup> The test, which is conducted in Philadelphia schools three times a year, is also used to identify children at risk for reading difficulties. Data was collected at the classroom level.

### **Parental Report of Child Dietary Intake (Appendix C)**

The Multifactor Screener developed by the National Cancer Institute (NCI)<sup>10</sup> was adapted for parents to respond about children's dietary habits. This measure includes 16 questions inquiring about fruit, vegetable, and milk consumption. A question was added to inquire about "screen time," the amount of time a child spends watching television, or using video games and computers. Parents completed the survey both before and after the initiative to measure changes in eating habits over the school year. Because nutrient data is not available from the NCI for children with the Multifactor Screener, data looks at raw differences in responses and not shifts in nutrients.

### **Parental Reactions and Involvement Evaluation (Appendix D)**

At the end of the 2004-2005 pilot program, parents completed a brief survey about their experience with the initiative. The findings from this survey provide valuable insights into

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<sup>9</sup> For more information, please visit <http://dibels.uoregon.edu/measures/kindergarten.php>

<sup>10</sup> For more information please visit <http://appliedresearch.cancer.gov/surveys/nhis/multifactor/>

whether and how nutrition education might have benefited parents. Parents were asked if they felt they have changed the way they shop, cook, or talk to their children about food since the start of the program. Other questions inquire about changes in parent awareness with regard to providing healthier snack options for their children and having children eat more fresh fruits and vegetables. Note, these responses are only from the 2004-2005 pilot study, and not the 2005-2006 randomized study.

### **Teacher Training Evaluation (Appendix F)**

Teachers were surveyed about their experiences with curriculum integration, snack foods, farm trips, and other aspects of the program after both the 2004-2005 pilot study and the 2005-2006 randomized study. Teachers had the opportunity to give feedback on and suggestions for improving the training session, and reflect on the impacts the KI had on their students. Survey results are presented from both the pilot program and the randomized 2005-2006 study.

### **Results**

The program goals of the Kindergarten Initiative are explored here along with the results of their measurable objectives.

- ▶ **GOAL 1.** To increase the consumption of nutritious food by teaching children and parents to make healthier food choices.

### **NUTRITION EDUCATION**

In order to change children's eating habits, the Kindergarten Initiative helps children gain more knowledge about nutrition. The KI specifically focused on teaching children about principles of the USDA's MyPyramid, including proportionality and moderation, and on how to read nutrition information on food labels. Children were assessed before and after the nutrition education program using a 25 question nutrition knowledge assessment.<sup>11</sup>

#### **Objective 1: Increase children's knowledge about a healthy diet**

To assess whether students have acquired key concepts of the USDA's MyPyramid, they were asked to point out the position of food groups such as fruits and vegetables on the pyramid. After the receipt of nutrition education, the proportion of students who could correctly identify the location of fruits increased from 27% to 47%. In contrast, there was a slight decrease in the number of students in control schools who possess this knowledge. Other food groups showed similar gains. For example, when asked to locate where grains are represented on MyPyramid, the percentage of students in experimental schools who knew the right location increased twofold from 16% to 34%, compared to a mere 6% increase in control schools.

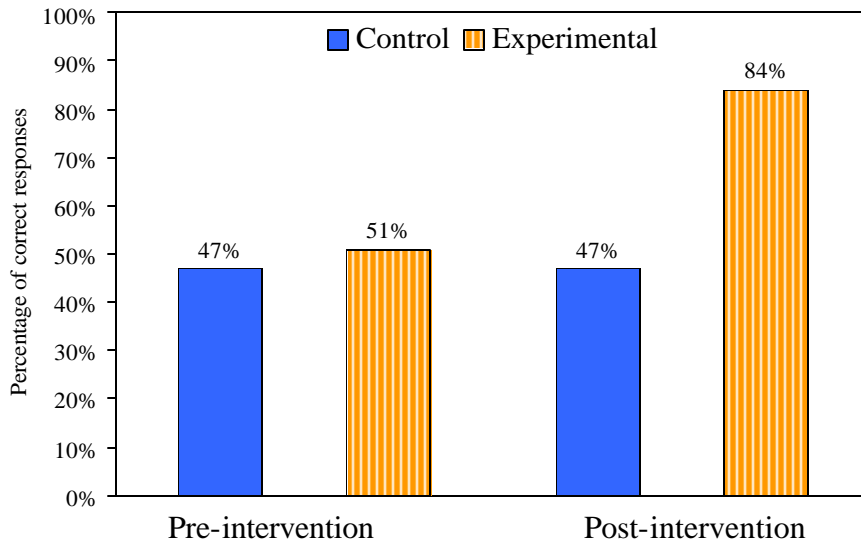
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<sup>11</sup> A summary of nutrition knowledge assessment questions and responses is provided in the Appendix

<sup>13</sup> <http://appliedresearch.cancer.gov/surveys/nhis/multifactor/>

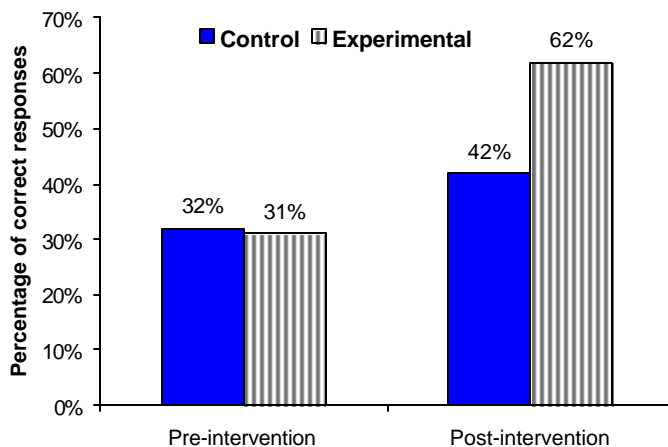
A similar question asked students the recommended number of daily servings of fruits and vegetables. As shown in Figure 1, knowledge is unchanged in the control group over time, but improves substantially among students engaged in the initiative.

**Figure 1. Change in Children's Knowledge of Recommended Number of Daily Servings for Fruits and Vegetables**



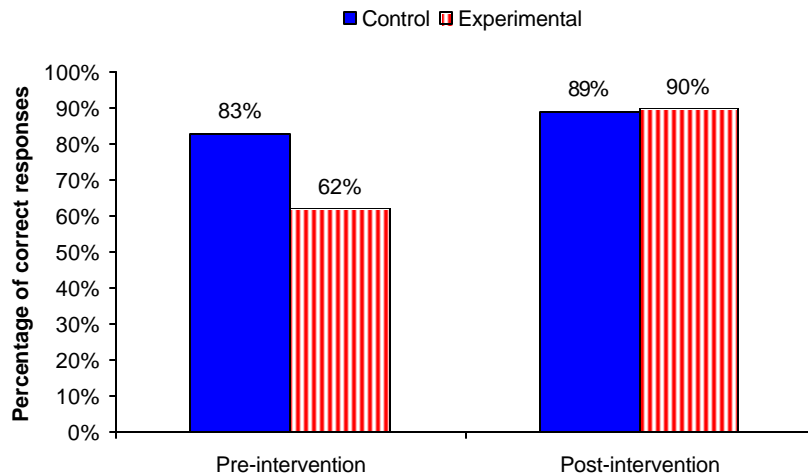
Questions also assessed whether kindergarten students understood the concept of proportionality: or the amounts of each food group that a person should eat. For example, one question asked children to identify the food that is good to eat anytime. In schools that offered nutrition education, the percentage of children who could identify food that they should only eat occasionally increased twofold from 31% to 62%, when compared to a 10% increase in correct responses from students in control schools (see Figure 2).

**Figure 2. Change in Children's Knowledge of Proportionality**



Children were also assessed on their understanding of the principle of moderation: eating fewer foods with solid fats and added sugars and more foods without solid fats and added sugars. When students were asked to point to the food that would be a healthier option to buy at a supermarket, the percentage of students who received nutrition education that responded correctly increased from 62% to 90% compared to a smaller change in the control group from 83% to 89% (see Figure 3). A similar increase was observed for a question that requires children to identify food that are beneficial to their health.

**Figure 3. Change in Children’s Knowledge of Moderation**

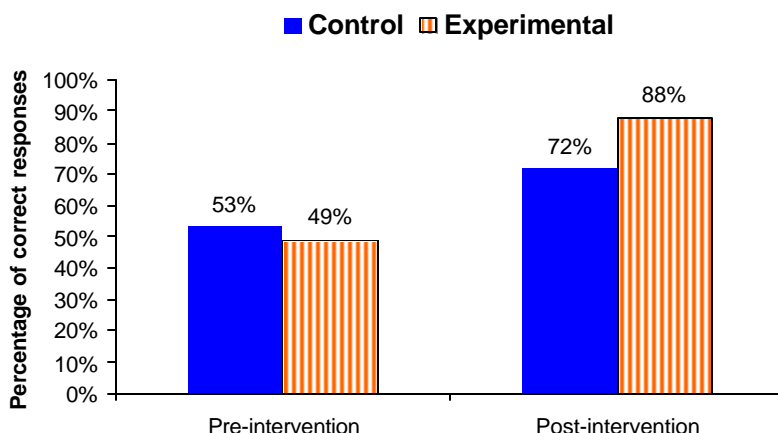


**Objective 2: Increase young children’s ability to read food labels**

Improvement in children’s knowledge of food labels with nutrition education was seen but was not notably different in many cases than increases seen over time in control skills. In the schools receiving the intervention and in those in control schools, children demonstrated an increased ability to read and understand food labels.

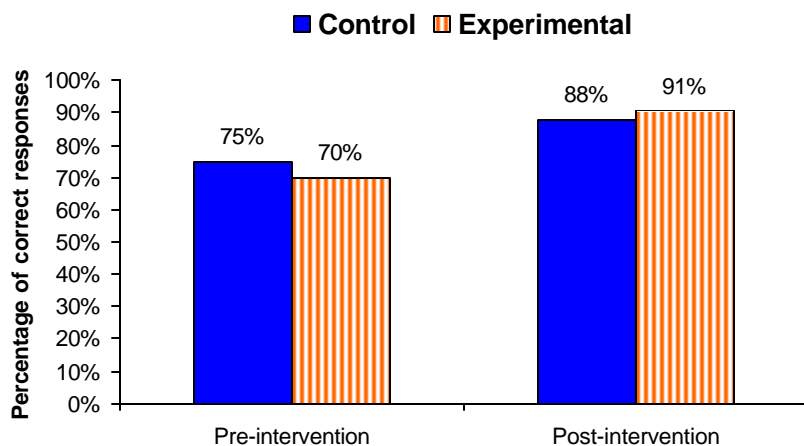
Despite parity between control and experimental groups on several questions regarding food labels, shifts in children’s ability to identify high sugar foods from the food label were noted. Before the intervention was implemented, approximately one out of every two students in both experimental and control schools correctly chose the food label that shows the product contains a large amount of sugar. After the intervention, however, 88% of children who received nutrition education could identify a high-sugar product based on its food label, when compared to 72% of children in control schools. See Figure 4.

**Figure 4. Change in Children’s Knowledge about High Sugar Foods**



As part of instruction on food labels, children also received guidance on how to identify healthy beverages. When presented with several options and asked to pick a drink that is better for their health, slightly more than 90% of students picked the correct beverage after the receipt of nutrition education, when compared to 70% who answered correctly prior to the intervention. In control schools, there was a smaller increase in the percentage of correct responses from 75% to 88%. See Figure 5.

**Figure 5. Change in Children’s Knowledge of Healthy Beverages**



## PARENT INVOLVEMENT

Reinforcing messages about healthy eating at home is an important part of creating lifelong healthy habits for children. Parents have been a key part of the success of the Kindergarten Initiative. Parent involvement works in two important ways. In order to reinforce what the children are learning and experiencing in school, the KI reaches out to parents by providing opportunities for them to have fun and learn with their children. Also, by inspiring children, we’ve been able to change some of the ways that parents think, act and shop. The parent

responses from the 2004-2005 pilot study are included below, and show the KI's success in impacting parents' attitudes and actions.

### **Objective 1: Increase parents' understanding of key dietary concepts**

Survey findings from the pilot program indicated that 78% of parents reported an increased awareness for their children's consumption of more fruits and vegetables after the initiative. More than 90% of kindergarten parents felt that they had changed the way they shop for groceries, prepare meals, or talk to their children about food.

### **Objective 2: Encourage parents to read food labels and make healthier food choices**

More than 80% of parents surveyed in 2004-2005 believed that their level of awareness around providing healthier snack options for their children increased as a result of the program. In addition to receiving a monthly nutrition focused newsletter, parents of kindergarten students were given a variety of opportunities to learn about nutrition concepts and healthier food options. One such event, *What's Cooking in the Classroom*, was held in the spring of 2005-2006. Staff from The Food Trust implemented this school-family partnership project in which approximately 200 parents or grandparents participated. Under the direction of a chef, courtesy of the Women's Culinary Guild, parents and their children made three different healthy snacks and received recipes and nutrition information to take home.

### **BEHAVIORAL CHANGE**

Ultimately, the goal of the Kindergarten Initiative is to encourage children and their parents to consume more healthy local foods. While measures of changes in attitude and knowledge inform this outcome, documenting changes in behavior like consumption patterns generates highly relevant and unique information about outcomes.

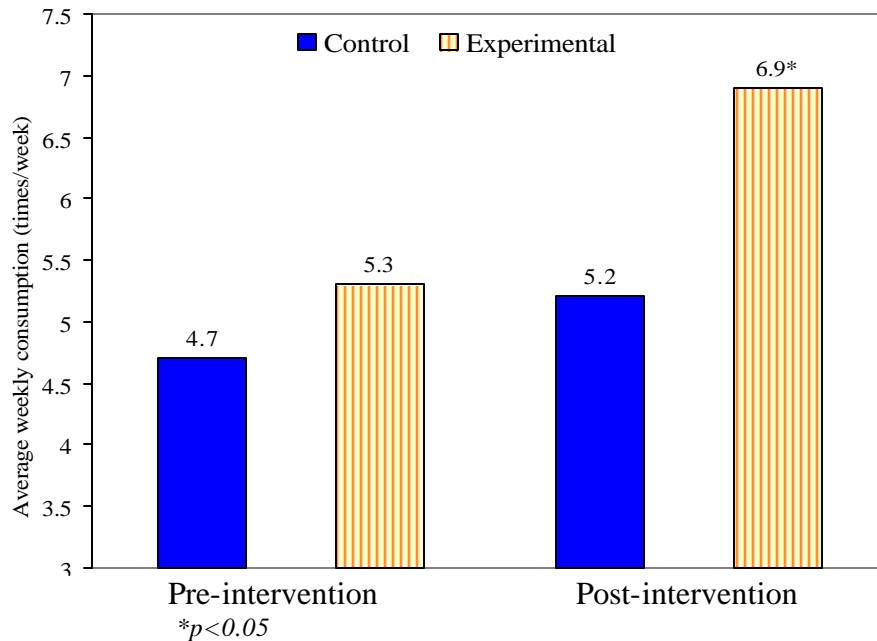
### **Objective 1: Dietary change**

Parents reported on the dietary consumption of their children using a modified version of the National Cancer Institute's Multifactor Screener. Surveys were administered to parents from the control and experimental schools in early fall 2005 and late spring 2006. A total of 168 control and 151 experimental surveys were collected.<sup>13</sup>

Children enrolled in the initiative were found to consume fruits and nuts more frequently than children in control schools. The mean weekly fruit consumption for the experimental group was 7 times, while the control group's average was 6 times (see Figure 6). At pre-test, there was no significant difference in the average weekly consumption of fruits by children in experimental and control schools. After the intervention, mean nut consumption by children in experimental schools was 2 times/week, compared to children in control schools who had nuts less than one time/week ( $p < .05$ ). Although kindergarten students who received the intervention were eating nuts twice as frequently (1.4 times/week) at the beginning of the initiative, their nut consumption increased at post-test while that of control students remained unchanged. We suspect that the reason for the shift in nut consumption is largely founded in the problem of food access. Nuts are a product typically stocked in local corner stores in communities, while fresh vegetables are less

easily purchased in neighborhood stores. Children in experimental and control schools did not differ on other measured dietary items.

**Figure 6. Changes in Weekly Average Fruit Consumption**



## **Objective 2: Improve physical health**

The Body Mass Index (BMI) measure is used to evaluate whether the program contributed to any weight gains or losses. Heights and weights were collected at two points during the study at early fall 2005 and late spring 2006. Among the 241 kindergarten students who consented to participate in the BMI testing birth date information was missing for 17 children, and an administrative error resulted in missing data for 31 children. The final sample included 193 kindergarteners.

Statistical analyses revealed that in experimental schools, children who are overweight or at risk of becoming overweight did not experience any significant decreases in BMI as a result of the intervention. Also, experimental and control schools did not differ significantly in the proportion of normal weight students who transition into the at-risk category or at-risk children who become overweight during the duration of the initiative.

When considering these findings, it is important to note that the promotion of healthy eating behaviors, rather than weight loss, was the primary objective of the Kindergarten Initiative. Also, a nine month period may not be sufficient to bring about a significant decrease in BMI.

Although children who received the intervention did not register any significant decreases in BMI, anecdotal evidence indicated that the present program was successful in conveying to students the importance of healthy eating and exercise.

According to one teacher, “I had a child who was overweight and the program directly impacted him. He told his mom he wanted only anytime [healthy] snacks and started bringing more nutritious lunches to school. He lost so much weight that his mom called me. She realized how wonderful this was, as he is playing basketball now and running around more. He looks and feels great and this is totally linked to the program!”

Another teacher shared that her students “have learned a lot about healthy foods and why it is so important to eat right and exercise.” A third teacher was “absolutely certain” that her students “are much more aware of choosing healthier foods since they will discuss this of their own volition on non-Food Trust snack days.”

### *Screen Time*

An additional question was added to the Multifactor Screener to measure changes in children’s “screen time,” the amount of time children spend watching television or using video games and computers. Before the intervention, children in experimental schools were spending more time using screen media (2.7 hrs) than did their peers in control schools (2.2 hrs). At the end of the program, students in experimental (2.5 hrs) and control schools (2.4 hrs) did not differ significantly in the average number of hours they spent in front of a screen watching television, playing video games, or using the computer. Notably, in experimental schools, the amount of screen time decreased by 0.2 hours per day, which adds up to 1.4 hours per week, while control schools showed modest increases of the same amount.

Changing the knowledge and attitudes of children and parents about nutritious eating are important steps which hopefully lead to healthy behavioral change. The KI was created with the intention of improving the food children eat and reducing the occurrence of physical problems in children. Over the 2005-2006 KI period, parents noted changes in their children’s diets, particularly in increased consumption of fruit and nuts. Although no significant change was seen in children’s weight, nine months is likely too short a time period to see any great changes.

## **NUTRITION AND ACADEMIC ACHIEVEMENT**

It is documented that children with poor nutrition habits not only have health problems, but perform less well in school than their counterparts with more nutritious diets. The Kindergarten Initiative aims to improve academic achievement by changing children’s eating patterns. Children’s literacy scores were compared over time between schools receiving nutrition education, with those schools that did not receive the education. Preliminary evidence suggests that there may be significant academic improvement seen as a result of improved nutrition.

The DIBELS assessment is conducted in the school district of Philadelphia among kindergarten students three times a year during the fall, winter, and spring. The data in this report is based on the assessment of 354 children (166 experimental, 188 control) clustered at the classroom level. At the kindergarten level, the DIBELS consists of four literacy measures: initial sounds fluency, phenome segmentation fluency, nonsense word fluency, and letter naming fluency.<sup>14</sup>

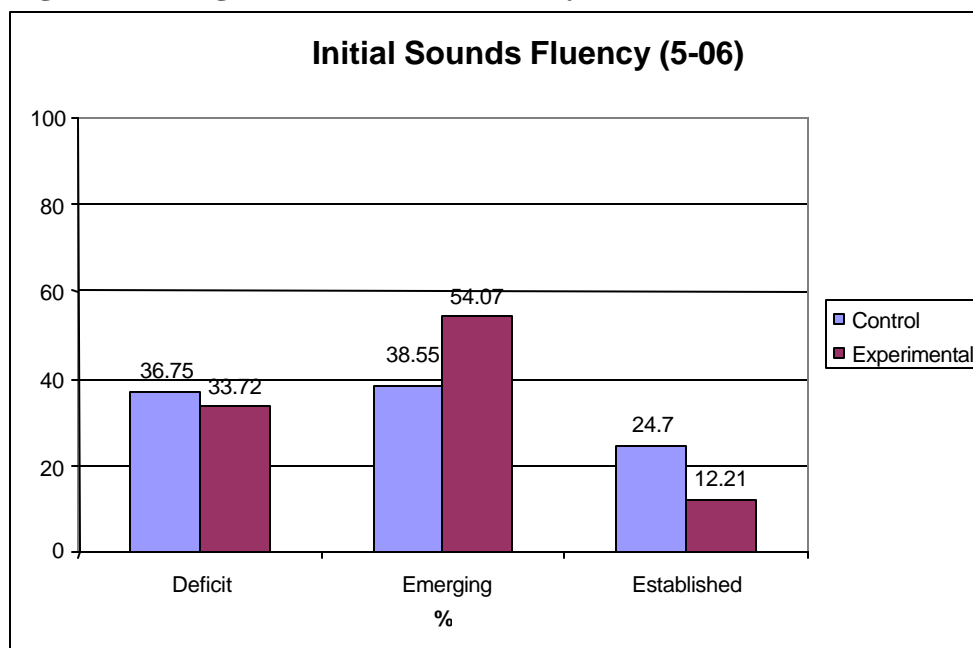
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<sup>14</sup> Descriptions of literacy measures can be found at <http://dibels.uoregon.edu/measures.php>

Improvement in academic achievement over time was demonstrated in experimental schools with the initial sounds fluency measure. The initial sounds fluency is a measure that assesses children’s ability to identify and produce the beginning sound in a spoken word. The final score for this test is the number of initial sounds for which the child was able to recognize and produce correctly in one minute.

Statistical analyses showed that children in experimental and control schools did not differ in their performance on the initial sounds fluency measure when it was first administered in winter 2006. However, a significant difference in performance was found between students in experimental and control when they were tested again in spring 2006 (see Figure 6).

**Figure 6. Change in Initial Sound Fluency**



The other three DIBELS measures showed no significant change over time between the experimental and control schools. The phoneme segmentation fluency measure was administered in the winter and spring of 2006. Kindergarten students in experimental and control schools did not differ in their performance on this assessment. There were also no differences found for the letter naming fluency measure which was administered in the fall and winter. For nonsense word fluency, a statistically significant difference was found between control and experimental schools at both waves of assessments in the fall and winter respectively. Because the data was at the classroom level, limitations on data analysis procedures were encountered. These analyses were unable to control for prior achievement.

## TEACHER TRAINING

The Kindergarten Initiative staff provided support for teachers by visiting classrooms, teaching lessons, providing additional teaching resources, meeting with teachers on a regular basis, and encouraging participation in special projects. Teacher evaluations of the study indicated that nutrition education was well integrated into teachers' current curriculum. Further, the trainings and other support provided by the KI staff for teachers were deemed a success both during the pilot study, and the randomized study.

A total of 32 teachers from 11 schools taught nutrition education in their classrooms as part of the 2005-2006 Kindergarten Initiative. In experimental schools alone, eight teachers received training and assistance from staff at The Food Trust to provide lessons on nutrition and local food in their classrooms. On average, teachers spent 65 hours per year teaching their students about nutrition and local food. This is significant given that research recommends at least 50 hours for dietary change.<sup>15</sup>

Teachers who participated in the 2004-2005 pilot program reported that the initiative was easy to implement. A majority of teachers (78%) found that it was "easy" or "very easy" to integrate nutrition education concepts into their regular curriculum, and none found it to be "too hard." All teachers believed that they received sufficient support from The Food Trust staff in helping find ways to integrate nutrition education. Teachers also noted the usefulness of the *Teacher Resource Binder* containing nutrition education materials and lessons, and the availability, flexibility, and creativity of staff.

Teachers in experimental schools expressed similar sentiments the following year. When asked to share what they found most helpful in the early stages, one teacher found the program "easy to implement with what we already have to teach," and another commented that "The binder is extremely well-organized and easy to follow." Overall, teachers in experimental schools did not experience any difficulty trying to incorporate nutrition education into the curriculum.

When asked to rate the overall helpfulness of the training session, all teachers in experimental schools reported that they found the training to be "most helpful." Six out of eight teachers felt that the opportunity to sit and plan lessons that integrate nutrition education was "most helpful," two found that it was very helpful, and none felt that it was an unproductive session. Teachers were also asked to comment on segments of the training that they found to be least helpful. Teachers were generally satisfied with the present structure, and one teacher commented, "I felt every segment was informative and I wouldn't like to see any part deleted."

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<sup>15</sup> Leslie A. Lytle, Nutrition Education for School-aged Children. *Journal of Nutrition Education*, 27(6) (November-December 1995):306.

▶ **GOAL #2:** To increase student and parent awareness of locally grown food, and enlist the support of parents to help increase children’s consumption of local products.

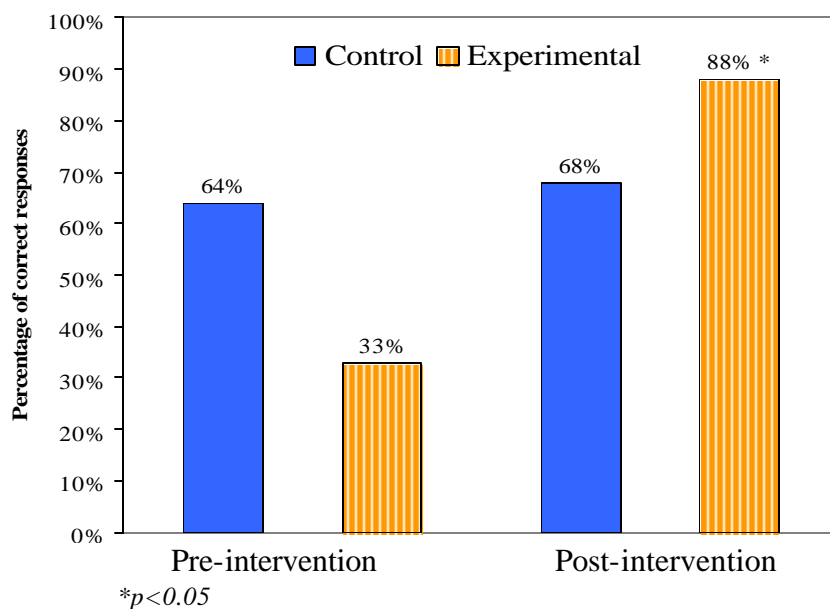
### LOCAL FOOD EDUCATION

By teaching children that their food comes from farms rather than simply from the grocery store, the Kindergarten Initiative is helping to reconnect children to the source of food. Through KI, we have seen that children are just as excited about strawberries, apples, even roasted squash, as they are about candy and chips.

#### Objective 1: Increase student knowledge of local food and farming

As a result of farm trips and classroom education conducted to raise awareness about local food production, the proportion of kindergarten students in the intervention group who know where food is grown has more than doubled from 33% to 88%, as control students’ knowledge remained stable (see Figure 7). Overall, fewer kindergarten students in control schools responded correctly to questions that assess their basic understanding of food production. There is an approximate 20% difference in the percentage of correct responses to questions that assess children’s knowledge of where food is grown between control schools and experimental schools.

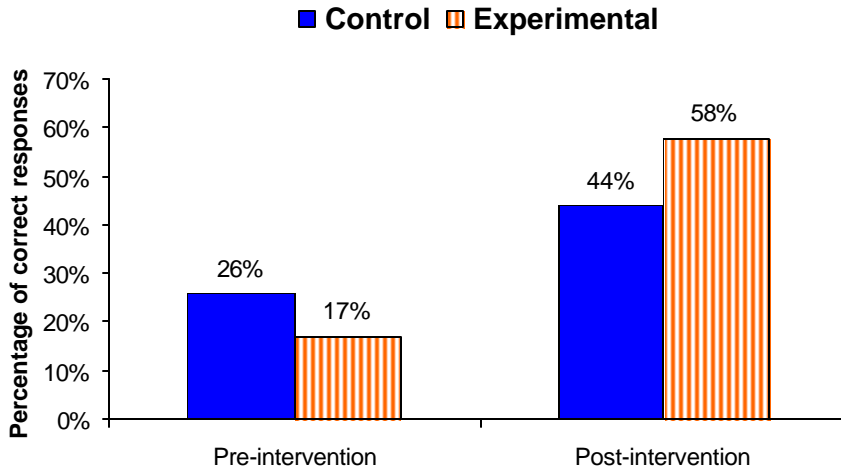
**Figure 7. Changes in Children's Knowledge about the Source of their Food**



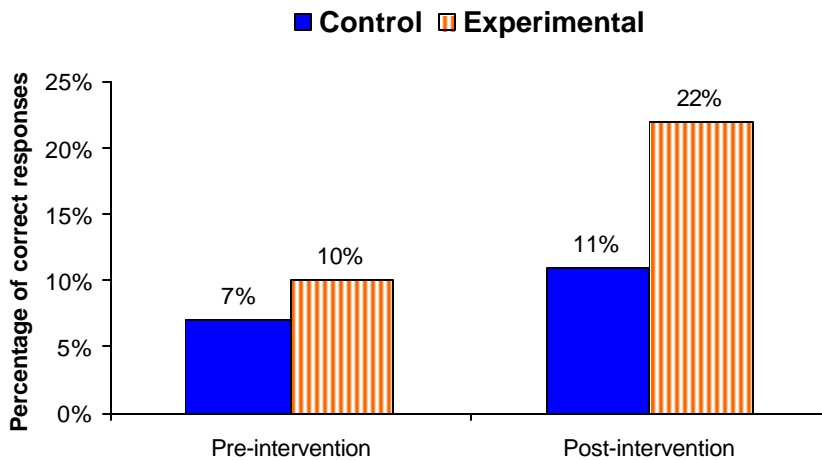
Kindergarten students were further evaluated on their ability to differentiate between locally grown fruits and fruits that are grown out of the region. When asked to point to the picture of a fruit that might be grown in Pennsylvania, more than three times as many students gave the correct response after receiving local food education. In control schools, the percentage increase was only slightly more than half the baseline figure (See Figure 8). When asked to identify a fruit that grows somewhere far from where they live, notable improvements in performance were also observed in experimental schools, where more than twice as many students answered the

question correctly during post-test assessment (See Figure 9). For both questions, schools that provided local food education performed better than control schools.

**Figure 8 . Change in Children’s Knowledge of Fruits Grown in Pennsylvania**

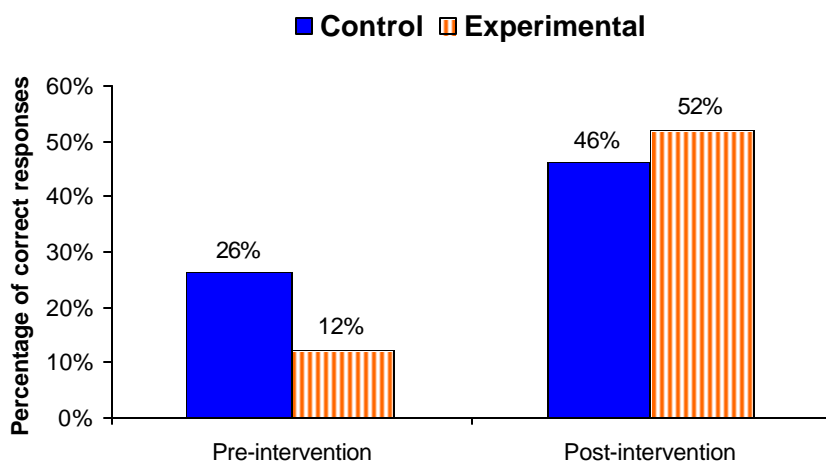


**Figure 9. Change in Children's Knowledge of Fruit Grown Outside Pennsylvania**



Finally, the intervention was effective in increasing students’ knowledge of how food gets from farm to table. When asked to order several cards in the correct sequence to depict the journey of food, only 12% of students in experimental schools could complete the task successfully during pre-test. At post-test, however, 52% of students understood the chain of events leading to the availability of food in their homes. Students in control schools improved less over time, from 26% to 46%. See Figure 10. On the whole, the initiative helped increased children’s awareness about the vital role that local farms play in providing fresh fruits and vegetables, as well as the nutritional value of locally grown food.

**Figure 10. Change in Children's Knowledge in the Farm to Plate Process**



**Objective 2: Cultivate preference for nutritious, local foods over snacks that are high in fat, sugar, and salt**

Through the Kindergarten Initiative, healthy snacks<sup>16</sup> were provided to students three times a week. In the 2005-2006 school year, approximately 70,500 healthy snacks were served to 940 children. Sixty percent of all fruits and vegetables purchased for the initiative were from local farms. Children tasted a variety of different snacks, including sliced apples with yogurt dip, local melons, peaches, apple raisin salad, squash pudding, spinach salad, grape tomatoes, asparagus with dip, peach butter with wheat crackers, sweet potato biscuits with apple butter, cheese sticks with wheat thins, local zucchini bread, pumpkin muffins, and tomato salsa with veggie chips.

Staff from The Food Trust asked teachers in different schools if they felt the healthy snacks provided through the initiative impacted their students and helped children learn to make healthy food choices. One teacher commented, “The children looked forward to the snacks and enjoyed them much more than I thought they would. It changed a lot of how they thought and changed what they brought to school for lunch.” Another shared that the opportunity to sample healthy snacks “totally changed the eating habits of my students” and “even the parents noticed a difference.” A teacher believed that the initiative achieved its goals of helping children make healthier food choices and increasing their awareness of local food because “my students loved learning about healthy eating and trying different fruits and vegetables. They would ask me almost everyday if we were having our healthy snack today!”

<sup>16</sup> The snacks contained no more than seven grams of fat and 15 grams of added sugar.

## **PARENT INVOLVEMENT**

### **Objective 1: Increase children's consumption of nutritious, locally grown foods**

In order to encourage families to eat more local fruit and vegetables, staff from The Food Trust organized Kindergarten Farm Store events which connect parents with produce from local farmers. The events have been a success. During the winter 2005 event, more than 60 parents ordered approximately 500 lbs of local produce. In spring 2006, nine out of 11 schools participated in the Spring Farm Store event. Again over 500 lbs of produce was purchased from local farms with close to 70 parents participating. This program, increasing in popularity both with parents and teachers, has brought a wide variety of vegetables into home menus and has provided parents with knowledge about how to properly store and cook them. Each order is packed with nutrition information, recipes and parent incentives such as a coupon for their local farmers' market to encourage parents to continue their purchase of locally grown foods .

### **Objective 2: Increase parents' awareness of locally grown food**

Kindergarten parents in the pilot program were asked to respond to two questions about parent or caregiver activities. Survey findings showed that parents were interested in attending field trips to local farms. When asked about their participation in activities organized that year, farm trips had a higher participation rate than adult-only cooking sessions and classroom activities. More than 100 parents accompanied their children on farm trips organized in the 2004-2005 school year. After one year of participation in the initiative, 97% of parents believed that buying locally grown food is "important" or "somewhat important". In the 2005-06 school year, over 300 parents attended farm trips with their children. Teachers noted that parents loved the farm trips and learned a great deal about the importance of local food.

## Conclusions & Next Steps

Findings demonstrate a range of benefits resulting from the Kindergarten Initiative. From parent outreach to support for local farmers the program educates youth about the benefits of healthy food while providing them with experiential learning opportunities at local farms and in the classroom.

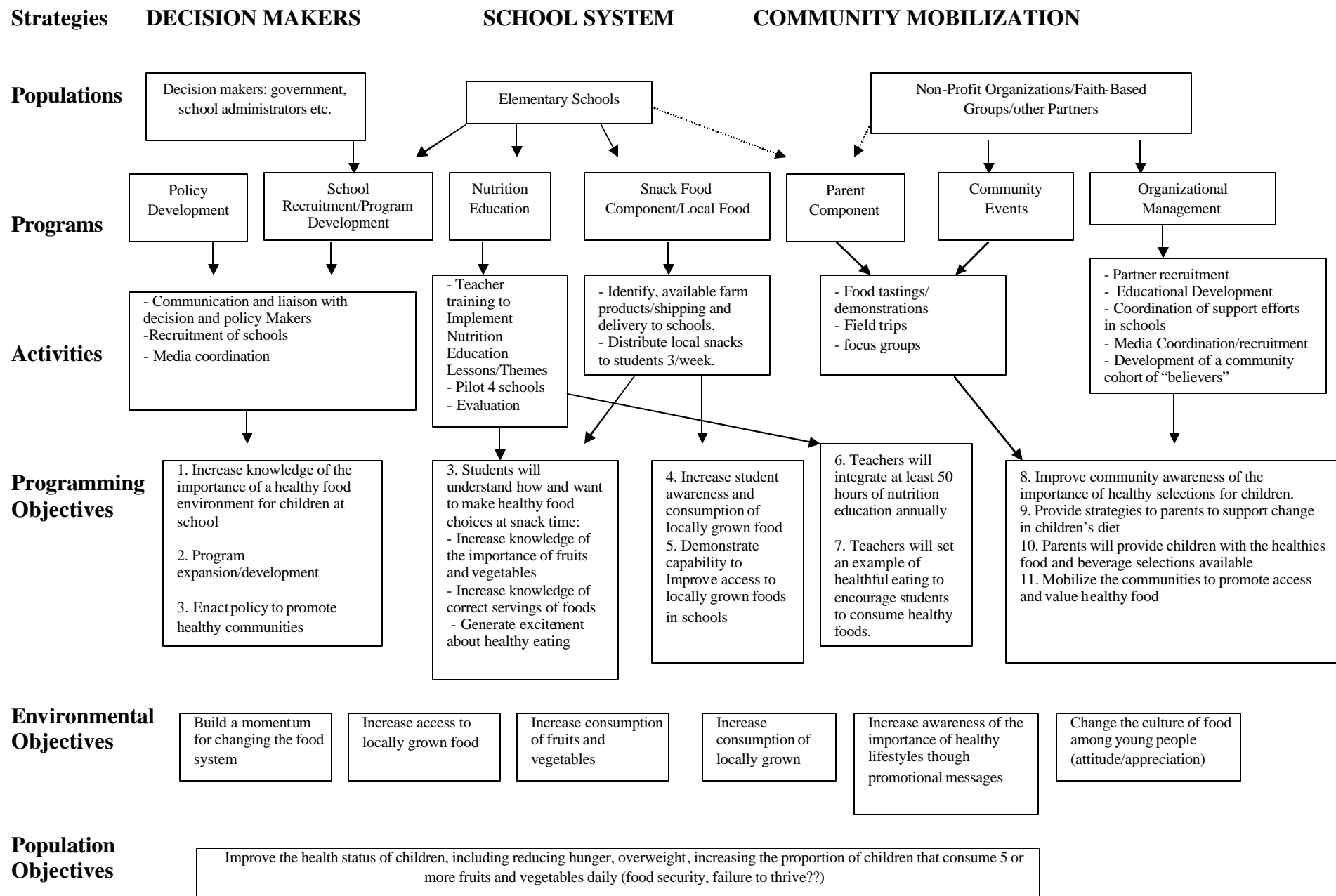
Signed into law in November, 2006, the Healthy Farms/Healthy Schools act builds upon the successes of the program in Philadelphia and makes it available to classrooms across the state. Policies like these across the nation would facilitate the development of similar programs, furthering the benefits for youth.

The Healthy Farms/Healthy Schools Act signs into law a program that authorizes grants to school districts, charter schools and nonpublic schools to initiate programs for kindergarten students that integrate agriculture and nutrition education within the curriculum. The act allows funding to be used to provide for family and community involvement in related education activities as well as field trips to local farms for school children. Funds are limited to 75% of the total costs of implementing the program, not to exceed \$15,000 annually per school. School programming is set to begin in July 2007. A copy of the legislation is provided in Appendix H.

While this initiative has made significant strides in linking local foods with nutrition education more is possible. Programs that provide regular sources of local fresh food, including offerings in the lunchroom are few. Furthermore, as the number of local farms continues to dwindle education about where food comes from should remain a priority.



## Appendix A: Logic Model



## Appendix B: Summary Student Survey Data

A summary of student responses for each question are provided in the chart below. Students in the experimental schools made notable shifts in awareness beyond those in the control schools on questions such as where food is grown, who grows food, the number of fruits and vegetables a person should eat each day to be healthy, and which foods a student would choose for a snack.

<b>Question</b>		<b><u>Control Schools</u> % of correct responses</b>	<b><u>Experimental Schools</u> % of correct responses</b>
1. Point to the picture of the food that you would choose for a snack.	Pre-test	61.70%	35.00%
	Post-test	63.00%	75.80%
2. Point to the shape of the MyPyramid.	Pre-test	42.00%	42.50%
	Post-test	67.90%	65.80%
3. Point to the picture that shows something that helps us make healthy food choices.	Pre-test	24.70%	30.80%
	Post-test	71.60%	92.50%
4. Point to the part of the MyPyramid that shows where fruits go.	Pre-test	35.80%	26.70%
	Post-test	34.60%	46.70%
5. Point to the part of the MyPyramid that shows where vegetables go.	Pre-test	22.20%	35.80%
	Post-test	40.70%	55.00%
6. Point to the number that tells how many fruits and vegetables you should eat each day to be healthy.	Pre-test	46.90%	50.80%
	Post-test	46.90%	84.20%
7. Point to the part of the MyPyramid that shows where grains like cereal and bread go.	Pre-test	18.50%	15.80%
	Post-test	24.70%	34.20%
8. Point to the drink that is healthier for you.	Pre-test	75.30%	70.00%
	Post-test	87.70%	90.80%
9. Point to the food that helps you grow strong and healthy.	Pre-test	82.70%	61.70%
	Post-test	93.80%	92.50%

<b>Question (cont.)</b>		<b><u>Control Schools</u></b>	<b><u>Experimental Schools</u></b>
10. Point to where you can find "fat" on the food label.	Pre-test	27.20%	21.70%
	Post-test	54.30%	60.00%
11. Point to the food label that shows the food that has a lot of fat.	Pre-test	38.30%	39.20%
	Post-test	76.50%	69.20%
12. Point to the food that would be a healthier choice to buy at a supermarket.	Pre-test	82.70%	61.70%
	Post-test	88.90%	90.00%
13. Point to where you would find "sugar" on the food label.	Pre-test	12.30%	14.20%
	Post-test	32.10%	29.20%
14. Point to the food label that shows the food that has a lot of sugar.	Pre-test	53.10%	49.20%
	Post-test	71.60%	87.50%
15. Point to the food that you should only eat sometimes.	Pre-test	32.10%	30.80%
	Post-test	42.00%	61.70%
16. Point to the food that is good to eat anytime.	Pre-test	65.40%	60.80%
	Post-test	87.70%	84.20%
17. Where is food grown? (Write response)	Pre-test	64.20%	33.30%
	Post-test	67.90%	87.50%
18. Point to the picture that shows where food is grown.	Pre-test	50.00%	45.00%
	Post-test	70.40%	89.20%
19. What do we call a person who grows food? (Write response)	Pre-test	37.00%	32.50%
	Post-test	66.70%	66.70%

20. Point to the picture of the person who grows food.	Pre-test	54.30%	38.30%
	Post-test	71.60%	87.50%
21. Point to the picture of a fruit that might be grown on a farm here in Pennsylvania.	Pre-test	25.90%	16.70%
	Post-test	44.40%	58.30%
22. Point to the picture of a fruit that grows somewhere far from where you live.	Pre-test	7.40%	10.00%
	Post-test	11.10%	21.70%
23. Can you name a fruit?	Pre-test	88.90%	84.20%
	Post-test	95.10%	98.30%
24. Can you name a vegetable?	Pre-test	64.20%	61.70%
	Post-test	76.50%	84.20%
25. Corn sequence story	Pre-test	25.90%	11.80%
	Post-test	45.70%	51.70%

## Appendix C: Adopted Multifactor Screener

**Child's name:** \_\_\_\_\_ **School:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Please think about what your child usually ate or drank during the past month, that is, the past 30 days. Please read each question carefully and:

- Report how many times per day, week or month your child ate each food.
- Choose the best answer for each question.
- Mark only one response for each question

1. How many times per **day, week** or **month** did your child usually eat **cold cereals**?

?	?	?	?	?	?	?	?	?
NEVER	1-3 times last month	1-2 times per week	3-4 times per week	5-6 times per week	1 time per day	2 times per day	3 times per day	4 or more times per day

2. How many times per **day, week** or **month** did your child use **milk**, either to drink or on cereal?

?	?	?	?	?	?	?	?	?
NEVER	1-3 times last month	1-2 times per week	3-4 times per week	5-6 times per week	1 time per day	2 times per day	3 times per day	4 or more times per day

2a. What kind of milk does your child usually use? (Pick the one you used most often).

1. Whole milk
2. 2% fat
3. 1% fat
4. ½ % fat
5. Non-fat or Skim
6. DID NOT DRINK MILK IN PAST MONTH

3. How many times per **day, week** or **month** did your child **usually** eat **bacon** or **sausage**, not including low fat light or turkey varieties?

?	?	?	?	?	?	?	?	?
NEVER	1-3 times last month	1-2 times per week	3-4 times per week	5-6 times per week	1 time per day	2 times per day	3 times per day	4 or more times per day

4. How often did your child eat **hot dogs** made of beef or pork?

?	?	?	?	?	?	?	?	?
NEVER	1-3 times last month	1-2 times per week	3-4 times per week	5-6 times per week	1 time per day	2 times per day	3 times per day	4 or more times per day

5. How often did your child eat **whole grain bread** including toast, rolls and in sandwiches? Whole grain breads include whole wheat, rye, oatmeal, and pumpernickel.

?	?	?	?	?	?	?	?	?
NEVER	1-3 times last month	1-2 times per week	3-4 times per week	5-6 times per week	1 time per day	2 times per day	3 times per day	4 or more times per day

6. How often did your child drink **100% fruit juice** such as orange, grapefruit, apple and grape juices? Do not count fruit drinks such as Kool-Aid, lemonade, cranberry juice cocktail, Hi-C and Tang.

?	?	?	?	?	?	?	?	?
NEVER	1-3 times last month	1-2 times per week	3-4 times per week	5-6 times per week	1 time per day	2 times per day	3 times per day	4 or more times per day

7. How often did your child eat **fruit**? Count fresh, frozen, or canned fruit. **Do not count** juices.

?	?	?	?	?	?	?	?	?
NEVER	1-3 times last month	1-2 times per week	3-4 times per week	5-6 times per week	1 time per day	2 times per day	3 times per day	4 or more times per day

8. How often did your child use **regular fat salad dressing or mayonnaise**, including on salad and sandwiches? Do **not** include low-fat, light or diet dressings.

?	?	?	?	?	?	?	?	?
NEVER	1-3 times last	1-2 times per	3-4 times per	5-6 times per	1 time per day	2 times per day	3 times per day	4 or more times

	month	week	week	week				per day
--	-------	------	------	------	--	--	--	---------

9. How often did your child eat **lettuce or green leafy salad**, with or without other vegetables?

?	?	?	?	?	?	?	?	?
NEVER	1-3 times last month	1-2 times per week	3-4 times per week	5-6 times per week	1 time per day	2 times per day	3 times per day	4 or more times per day

10. How often did your child eat **French fries, home fries or hash brown potatoes**?

?	?	?	?	?	?	?	?	?
NEVER	1-3 times last month	1-2 times per week	3-4 times per week	5-6 times per week	1 time per day	2 times per day	3 times per day	4 or more times per day

11. How often did your child eat **other white potatoes? Count** baked potatoes, boiled potatoes, mashed potatoes, and potato salad. Do not include yams or sweet potatoes.

?	?	?	?	?	?	?	?	?
NEVER	1-3 times last month	1-2 times per week	3-4 times per week	5-6 times per week	1 time per day	2 times per day	3 times per day	4 or more times per day

12. How often did your child eat **cooked dried beans**, such as refried beans, baked beans, bean soup and pork and beans?

?	?	?	?	?	?	?	?	?
NEVER	1-3 times last month	1-2 times per week	3-4 times per week	5-6 times per week	1 time per day	2 times per day	3 times per day	4 or more times per day

13. How often did your child **usually** eat **other vegetables**?

**COUNT:** Any form of vegetable – raw, cooked, canned or frozen.

**DO NOT COUNT:** Lettuce salads  
White potatoes  
Cooked dried beans

Rice

?	?	?	?	?	?	?	?	?
NEVER	1-3 times last month	1-2 times per week	3-4 times per week	5-6 times per week	1 time per day	2 times per day	3 times per day	4 or more times per day

14. How many times per **day, week** or **month** did your child **usually** eat **any kind of pasta**? Count spaghetti, noodles, macaroni and cheese, pasta salad, rice noodles, soba and any other kind of pasta.

?	?	?	?	?	?	?	?	?
NEVER	1-3 times last month	1-2 times per week	3-4 times per week	5-6 times per week	1 time per day	2 times per day	3 times per day	4 or more times per day

15. How often did your child eat **peanuts, walnuts, seeds or other nuts**? Do **not** include peanut butter.

?	?	?	?	?	?	?	?	?
NEVER	1-3 times last month	1-2 times per week	3-4 times per week	5-6 times per week	1 time per day	2 times per day	3 times per day	4 or more times per day

16. How often did your child eat **regular fat potato chips, tortilla chips, or corn chips**? Do **not** include low-fat chips.

?	?	?	?	?	?	?	?	?
NEVER	1-3 times last month	1-2 times per week	3-4 times per week	5-6 times per week	1 time per day	2 times per day	3 times per day	4 or more times per day

17. How many hours a day does your child spend on computer/TV/video games?

\_\_\_\_\_

## Appendix D: Kindergarten Parent End of Year Survey

School: \_\_\_\_\_ Child's Teacher: \_\_\_\_\_ Date: \_\_\_\_\_

We would like your thoughts about the Kindergarten Initiative, a program of The Food Trust that your child participated in this year. We have appreciated your participation in the past and hope that you and your student have enjoyed the program.

1. I am familiar with the Kindergarten Initiative.
  - a. Yes
  - b. No
  
2. What is the best way the Kindergarten Initiative can help parents learn more about a healthy lifestyle? (you may circle more than one)
  - a. A newsletter
  - b. A Field Trip
  - c. Homework activities with my child(ren)
  - d. Parent child cooking session
  - e. Other:  
\_\_\_\_\_
  
3. This year I (circle all that apply):
  - a. Received a monthly packet of information about the Kindergarten program (including recipes, updates etc.)
  - b. Participated in a field trip : \_\_\_\_\_
  - c. Participated in parent/child cooking sessions
  - d. Participated in adult only cooking sessions
  - e. Received the special Valentine's Day apple bundt cake
  - f. Participated in classroom nutrition activities
  - g. None of the above
  
4. My level of awareness about having my child eat more fruits and vegetables has:
  - a. Increased since the beginning of the school year
  - b. Decreased since the beginning of the school year
  - c. Not changed since the beginning of the school year
  
5. My level of awareness about providing healthier snack options for my child has:
  - a. Increased since the beginning of the school year
  - b. Decreased since the beginning of the school year
  - c. Not changed since the beginning of the school year
  
6. Since the beginning of the school year, I have changed the way I shop, cook or talk to my children about food.
  - a. Very True
  - b. Somewhat True
  - c. Somewhat False
  - d. Very False
  
7. Buying food that is grown in our region is:
  - a. Important
  - b. Somewhat important
  - c. Somewhat unimportant
  - d. Not important at all
  
8. Other Comments or Ideas?

## Appendix E: Consent Form

### Consent Form The Food Trust Kindergarten Nutrition Initiative

During this school year, XXX SCHOOL will be participating in an exciting project called The Kindergarten Initiative to promote healthy snacking among kindergarten children in the school. The Kindergarten Initiative is coordinated by a non-profit organization called The Food Trust.

The Food Trust will be working together with the school, parents/guardians and with the community on this project. Everyone will be working together to develop activities and provide snacks that encourage and support children in making healthy choices.

The Kindergarten Initiative has asked Dr. Allison Karpyn, Director of Research and Evaluation at The Food Trust to research the effects of this program on the consumption of nutritious snacks and locally grown foods on kindergarten students. The purpose of this form is to ask permission of your child's teacher to complete the following tests with your child 2 times during the 2004-2005 school year:

1. Questionnaires. Questionnaires will be used to obtain information on what children know about healthy eating, and their attitudes toward healthy foods.
2. Snack Food Preferences. Checklists of the snack food items that students most prefer will be completed by teachers or program staff. Two times during the year children will be provided with two healthy and two not so healthy snack options at snack time, as teachers or program staff document selections.

No discomfort or risks are anticipated with this evaluation. Collecting this information will help The Food Trust to assess the benefits of the program and allow us to share our successes with other schools. All of the information collected about your child will be kept in locked filing cabinets to protect confidentiality and code numbers will be assigned to each child.

In the future, the results of the project could be shared with others, through publication and presentations. In no publication or presentation, however, will it be possible to personally identify any student. In addition, the results will not be published or presented publicly without their first being reviewed and approved by a committee consisting of the Principal, and representatives of school staff, parents/guardians.

If you have any questions, please call Bonnie Hallam, (215) 568-0830 x122, Education Coordinator, Principal XXXat , or Dr. Allison Karpyn at (215) 568-0830 x119. Please take this opportunity to ask questions about this study. By signing this consent, you affirm that you have been given the opportunity to ask questions about this study and are satisfied with the answers to any questions you had.

You have the right to withdraw your child from this evaluation at any time, and may do so by contacting Bonnie, the principal or Dr. Karpyn.

We request permission for your child's (children's) participation in the evaluation of the Kindergarten Initiative by allowing Dr. Karpyn, of The Food Trust to measure the eating patterns of your child (children) at snack time as well as their knowledge and attitudes about nutrition, and healthy foods. To give your permission, please sign this form and return it to your child's teacher by XXX.

A copy of this consent form has been included for your records.

\_\_\_\_\_  
Child's (Children's) Name

\_\_\_\_\_  
Name of Parent/Guardian

\_\_\_\_\_  
Signature of Parent/Guardian

\_\_\_\_\_  
Date

\_\_\_\_\_  
Allison Karpyn, Ph.D.

\_\_\_\_\_  
Signature of Allison Karpyn, Ph.D

\_\_\_\_\_  
Date

Bonnie Hallam Coordinator "Kindergarten Initiative" The Food Trust 1201 Chestnut Street, 4 <sup>th</sup> Floor Philadelphia, PA 19094 (215) 568-0830 x122	Allison Karpyn, Ph.D. Principal Investigator "Kindergarten Initiative" The Food Trust 1201 Chestnut Street, 4 <sup>th</sup> Floor Philadelphia, PA 19094 (215) 568-0830 x119
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## Appendix F: Teacher End of Year Survey

Please respond to the following questions as fully and honestly as you can. Your feedback throughout the year was extremely helpful in refining the program as we went along and the information you provide in this evaluation will make this an even stronger, more effective and more teacher-friendly program next year!

### Curriculum Integration

1. Please indicate on a scale of 1-5 how easy or difficult it was for you to integrate the nutrition education concepts into your regular curriculum. (1 = very easy, 5 = very hard)

1                      2                      3                      4                      5

2. Did you receive sufficient support from the Food Trust Staff in helping you to find ways to integrate the nutrition concepts into your regular curriculum? Please explain your response

3. Please assign a rough % of time you feel you taught nutrition concepts through integration in other subject areas and a % of time you did direct teaching of nutrition concepts.

\_\_\_\_\_ % integrated with other subjects

\_\_\_\_\_ % direct nutrition teaching

4. On a scale from 1 to 5 please indicate how useful you found the Monthly calendars and lesson packets. (1 = very useful, 5 = not useful at all)

1                      2                      3                      4                      5

5. Please give any general remarks about curriculum integration that you would like to share with us.

### Snacks

1. On a scale from 1 to 5, please indicate how pleased you were with the quality of the snacks that were provided during the year. (1 = very pleased, 5 = not pleased at all)

1                      2                      3                      4                      5

2. On a scale from 1 to 5, please indicate how much you feel your children enjoyed the snacks provided. ( 1 = most of the time enjoyed very much, 5 = most of the time did not enjoy)

1                      2                      3                      4                      5

3. How responsive do you feel the Food Trust Staff was to your needs and concerns about snacks? (1= very responsive, 5 = not very responsive)

1                      2                      3                      4                      5

4. What particular concerns do you have about snacks that you hope are improved next year?

5. Do you think the snacks impacted your students and helped to get across the goals of the program (to make healthy choices and to understand and appreciate your food source)? Please explain.

## **Farm Trips**

1. Please give general feedback about the farm trips that we have taken this year.
2. Do you think the farm trips impacted your students and helped to get across the goals of the program (to make healthy choices and to understand and appreciate your food source)? Please explain.

## **Teacher/Food Trust Interface**

1. On a scale from 1-5, please indicate how you feel about the level of communication from the Food Trust Staff. (1 = more than sufficient, 5 = not nearly enough)

1

2

3

4

5

2. Do you feel that information was given to you in a timely fashion? Please explain and give examples if possible.
  
3. Did you feel that the Food Trust Staff visited you enough? Please explain.
  
4. Did you have concerns that you feel were not addressed by Food Trust Staff?
  
5. In general, please make any comments you would like to share about the quality of the support that you received from Food Trust Staff during the year.

**General Feedback:**

In general, do you feel that this program as implemented this year fulfills the goals of the project (to help children make healthier food choices and to understand the source of their food). Please explain and give examples if possible.

**Please use this space to address any concerns or give any feedback that you were not able to share under the above headings. Please remember that we love to hear both positive and negative feedback that will help us make this program better for all. Thanks.**

# Appendix G: Healthy Farms/Healthy Schools Act

PRIOR PRINTER'S NO. 1769

PRINTER'S NO. 2047

## THE GENERAL ASSEMBLY OF PENNSYLVANIA

### SENATE BILL

## No. 1209 Session of 2006

INTRODUCED BY WAUGH, KITCHEN, WENGER, FUMO, MADIGAN, REGOLA,  
TARTAGLIONE, BOSCOLA, MUSTO, O'PAKE, ERICKSON, RAFFERTY,  
SCARNATI, RHOADES, FONTANA, PILEGGI, COSTA, PUNT, ORIE,  
LEMMOND, CORMAN, GORDNER, GREENLEAF, BROWNE, C. WILLIAMS,  
WASHINGTON, STOUT, A. WILLIAMS, LOGAN AND HUGHES,  
APRIL 27, 2006

SENATOR WENGER, APPROPRIATIONS, RE-REPORTED AS AMENDED,  
SEPTEMBER 19, 2006

#### AN ACT

1 Providing for the Healthy Farms and Healthy Schools Program.

2 The General Assembly of the Commonwealth of Pennsylvania  
3 hereby enacts as follows:

4 Section 1. Short title.

5 This act shall be known and may be cited as the Healthy Farms  
6 and Healthy Schools Act.

7 Section 2. Findings and declarations.

8 The General Assembly finds and declares as follows:

9 (1) An alarming percentage of our school-aged children  
10 have an unhealthy weight. In large part, this is due to poor  
11 eating habits. Pilot programs have shown that focused  
12 nutritional education in the early school years coupled with  
13 exposure to a variety of healthy foods can initiate a long-  
14 term increase in healthy eating habits as children mature.

15 (2) Agriculture is this Commonwealth's most successful

1 economic engine. Unfortunately, the percentage of our  
2 population directly involved in agriculture has decreased  
3 dramatically over the last several decades. Knowledge about  
4 the sources of our food and agriculture in Pennsylvania is  
5 not widespread in our communities, particularly in less  
6 affluent areas. Educational programs for young children  
7 providing hands-on experience with agriculture increases an  
8 awareness of what constitutes a healthy diet. Thus, it is  
9 vital to inform the future citizens of this Commonwealth  
10 about good eating habits, while demonstrating the importance  
11 of the role of local farms in achieving this crucial goal.

12 (3) An initiative accomplishing this two-fold purpose is  
13 decisive in ensuring the citizenry of this Commonwealth will

14 be healthy in the coming years. The purposes of this program  
15 are to educate kindergartners and their families about the  
16 importance of choosing healthy, locally produced foods and  
17 increase awareness of Pennsylvania agriculture. Furthermore,  
18 the initiative should aid Pennsylvania farmers in gaining  
19 access to new markets within this Commonwealth. Consequently,  
20 the Commonwealth should institute a program including:

21 (i) Nutrition education involving student  
22 participation which is integrated into regular subjects  
23 in the curriculum of primary and secondary education  
24 institutions.

25 (ii) Focusing on locally grown foods provided from  
26 Pennsylvania farms.

27 (iii) Equipping teachers and other educators to  
28 incorporate nutrition and agriculture education into  
29 their instruction.

30 (iv) Providing for new direct marketing

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1 opportunities for Pennsylvania farmers.

2 (v) Providing for family and community involvement,  
3 including parent, caregiver and community group  
4 participation in education activities.

5 (vi) Visits to nearby farms for school children so  
6 they may understand and learn more about the sources of  
7 their food.

8 Section 3. Definitions.

9 The following words and phrases when used in this act shall  
10 have the meanings given to them in this section unless the  
11 context clearly indicates otherwise:

12 "Department." The Department of Agriculture of the  
13 Commonwealth.

14 "Program." The Healthy Farms and Healthy Schools Program  
15 established under this act.

16 "Secretary." The Secretary of Agriculture of the  
17 Commonwealth.

18 Section 4. Grant program.

19 (a) Authorization.--The department, in consultation with the  
20 Department of Education and the Department of Health, is  
21 authorized to establish a program to award grants for the  
22 purpose of developing the Healthy Farms and Healthy Schools  
23 Program in kindergarten classes in this Commonwealth.

24 (b) Eligibility.--Any public SCHOOL DISTRICT, CHARTER SCHOOL <--  
25 or private school with a kindergarten program may submit an  
26 application to the department for funding.

27 (c) Program requirements.--The program shall contain the  
28 following elements:

29 (1) A list of Pennsylvania farmers who have agreed to  
30 supply food products from Pennsylvania farms, verifiable by

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1 the department.

2 (2) Nutrition and agriculture education, including  
3 integration into regular classroom subjects.

4 (3) Training of teachers and other educational staff on  
5 nutrition and agriculture education.

6 (4) The inclusion of parents, caregivers and community  
7 groups in educational activities.

8 (5) Field trips to Pennsylvania farms or other direct  
9 agricultural educational experiences which teach children

10 about sources of food and Pennsylvania agriculture.  
11 Section 5. Limitation on grants.  
12 (a) Matching.--Grant amounts shall be limited to 75% of the  
13 amount necessary to develop the program, not to exceed \$15,000  
14 annually, per school. Applicants may use in-kind support to  
15 match the amount granted.  
16 (b) Conditions.--The secretary may approve a grant in an  
17 amount less than the requested amount. The secretary may also  
18 impose restrictions or special conditions upon issuance of the  
19 grant.  
20 Section 6. Applications and review of applications.  
21 (a) Submission.--Applications for grants shall be submitted  
22 in a manner and form as prescribed by the secretary.  
23 (b) Evaluation.--When reviewing applications, the secretary  
24 shall evaluate applications annually on the basis of all of the  
25 following:  
26 (1) The ability of the applicant to complete the  
27 program.  
28 (2) The ability of the applicant to incorporate all of  
29 the program requirements.  
30 (3) The location of the school in an area where a high  
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1 percentage of the children receive free or reduced-price  
2 school meals.  
3 (4) The potential of the program to increase knowledge  
4 about nutrition and healthy eating habits for the children,  
5 their caregivers and the community.  
6 (5) The potential of the program to increase knowledge  
7 about Pennsylvania agriculture for the children, their  
8 caregivers and the community.  
9 (6) The ability of the applicant to procure locally  
10 grown foods for their program.  
11 (7) The potential of the program to increase markets for  
12 local agricultural producers.  
13 (8) The number of people who will be served by the  
14 program.  
15 (9) The ability of the applicant to sustain the program.  
16 (10) The overall performance of the applicant if a grant  
17 was received in a previous year.  
18 Section 7. Disposition of grants.  
19 (a) Written agreement.--The department may require a written  
20 agreement describing the terms and conditions of the grant.  
21 (b) Verification.--The department may require verification  
22 of grant expenditures.  
23 (c) Criteria.--The department may establish criteria under  
24 which the secretary may demand the return of all or a portion of  
25 the grant funds.  
26 Section 8. Administration and contracting.  
27 Funds appropriated for this program may be used for  
28 administrative purposes which execute the program, including  
29 contracting with one or more entities to carry out the  
30 provisions of this act.  
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1 Section 9. Regulations.  
2 The department shall promulgate regulations as it deems  
3 necessary to carry out the purposes of this act.  
4 Section 10. Funding.  
5 Grants shall be awarded to the extent funds are made

6 available by the General Assembly.

7 Section 11. Effective date.

8 This act shall take effect in 60 days.

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9 THIS ACT SHALL TAKE EFFECT JULY 1, 2007.

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