# Beyond the Garden: Impacts of a School Garden Program on 3rd and 4th Graders

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Seeds of Solidarity
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"Gardens are so so cool. You can eat any of it and eat it when you want to and you can have a very very healthy piknick with your friends." 3rd grader

"The garden is a great tool to connect kids to the outside world and how they are involved in it. It teaches responsibility, achievement, accomplishment, and gives them something to look forward to." 4th grade teacher

## Sowing Seeds of Solidarity: Project Background

Seeds of Solidarity Education Center is a non profit organization in Orange Massachusetts that that provides people of all ages with the inspiration and practical tools to use renewable energy and grow food in their communities. As part of their mission to "Grow Food Everywhere," Seeds of Solidarity partners with seven schools in the North Quabbin region of Western Central Massachusetts to implement school gardens, greenhouses, and related classroom curricula.

In order to assess the impact of this programming, a research project was undertaken from March through June 2007 with one of the schools. The research was designed to gain insight into whether the Seeds of Solidarity garden-based programs enhance children's understandings of food, nutrition, and local farms. The research also aimed to explore whether the students' experiences of the program extend to other aspects of their lives in school or at home, as well as to gather affective experiences that emerge through participation in school gardens.

This paper proceeds with a brief context for school gardens, then describes the research process and key questions, discusses findings with an emphasis on student and teacher voice, and offers recommendations for program improvement and considerations for other school garden oriented programs and organizations.

## Why School Gardens: Context and Rationale

School gardens are a component of the current "Farm to School" discourse, an international movement that aims to "connect schools with local farms with the objectives of serving healthy meals in school cafeterias, improving student nutrition, providing health and nutrition education opportunities that will last a lifetime, and supporting local small farmers." [i] This objective of connection making is met in a number of ways. For example, many food service directors

across the nation are making an effort to buy locally grown food for their school food menus. Teachers are including nutrition-based education within the curriculum, as well as providing students with experiential opportunities through farm visits, gardening and recycling programs. And farmers are making their expertise and food products available to schools and cooperating with communities to educate children about local food and sustainable agriculture.

While many new initiatives are sprouting, school gardens have long been understood as gateways to understanding, appreciation and stewardship of the natural world. John Dewey, an educational theorist circa early 1900's, wrote often of the importance of a school garden. Dewey believed that gardens provide students with experience with the natural world and in the field of geography "in the widest sense." [ii] He believed that student involvement with a school garden provided connection that might otherwise be missing from traditional education.

We are facing different challenges within the United States than from Dewey's days. For the first time in history, the current generation of children in the United States have a lower life expectancy than the preceding generation. According to the Centers for Disease Control and Prevention (CDC), obesity rates within the United States have increased sharply for both children and adults since 1970. CDC research suggests that among adults aged 20-74 the prevalence of obesity increased from 15% (in the 1976–1980 survey) to 32.9% (in the 2003–2004 survey). Perhaps even more alarming are the statistical increases in overweight children and teens. For children aged 2–5 years, the prevalence of overweight increased from 5.0% to 13.9%; for those aged 6–11 years, from 6.5% to 18.8%; and for those aged 12–19 years, prevalence increased from 5.0% to 17.4%. According to the CDC, "These increasing rates raise concern because of their implications for Americans' health. Being overweight or obese increases the risk of many diseases and health conditions." [iii]

In addition to the health challenges our children face, writers and educators such as Richard Louv are coming up against an equally alarming trend regarding the increasing disconnection of our children to the natural world. "I like to play indoors better 'cause that's where all the electrical outlets are," [iv] reports a fourth grader as documented in Louv's bestselling book, *Last Child in the Woods*. In his research Louv has found that an increasing number of children prefer and are encouraged by parents or guardians concerned about safety to play inside.

While the realities of childhood obesity and a house arrested generation come to fruition, so too does a fertile field of hopeful research, which supports the work of school garden advocacy around the globe. While this field of research is still in its infancy, findings suggest that being involved with school gardens may increase children's stewardship of the natural world, decrease obesity rates, increase student achievement and may improve student's attitudes towards healthy foods.

Among these compelling findings:

- Childhood consumption of fruits and vegetables is an important predictor of higher fruit and vegetable consumptions as adults.[v]
- In Tucson Arizona, children who participated in their school garden improved attitudes towards healthy foods.[vi]
- Third, fourth, and fifth grade students that participated in school gardening activities scored significantly higher on science achievement tests compared to students that did not experience any garden-based learning activities, according to a Texas A & M study.[vii]
- Another Texas A & M study demonstrated that fifth, sixth, and seventh grade students developed better interpersonal relationship skills after participating in a gardening program.[viii]
- Students in a fifth grade engaged in the "GrowLab Curriculum" scored significantly higher than control classes in both "concern for the environment" and "confidence in the ability to do science".[ix]

**Impact of a School Garden on Third and Fourth Graders: Process and Participants**

The research and finding described in this report is based upon a school garden program at a public elementary school located in Orange, a rural mill town with a primarily white, working class population of just over 7,000. The town's three elementary schools serve approximately 850 children. The gardening program profiled in this research consisted of five one-hour lessons taught by Seeds of Solidarity staff, bi-weekly over a 10-week period from March through June. Students and teachers in three third grade and one fourth grade class participated in this program and the related research in the Spring of 2007. Two of these classes serve children with special needs, with an inclusion approach. While Seeds of Solidarity's garden programs span K-12 in a number or schools, third and fourth graders were chosen due to their ability to use writing as a medium to reflect on their experiences coupled with a developmental period that signals a gateway to abstract thinking.

The research process was co-designed by Dr. Deb Habib, the organization's Executive Director in cooperation with Kaitlin Doherty, as part of a graduate student internship at Seeds of Solidarity. Kaitlin also developed and implemented the five-part garden lesson sequence. The school district superintendent and school principal approved the research, as per district policy. The scope of the research was modest and designed to enhance the curriculum while gathering data. The methodology was primarily qualitative. Each teacher administered a one-page pre-program and post-program survey to all participating students, totalling approximately 60 participants. *See Appendix for Pre and Post Surveys.* In addition, each student was provided with a school garden journal containing one question to be answered per week, as follow-up to each garden lesson. The goal of the garden journals was to provide a tool that would enable students to reflect on their experience, linking to academic curriculum goals of reading, writing, drawing and reflection while serving as a means of gathering qualitative data for the study. *See Appendix for Garden Journal Questions.* The teachers of each of the classes participated in short "exit interviews," following the completion of the project, with their insights serving as contribution to the research.

**Research Questions and Data Gathering**

The primary research question was, 'Do the Seeds of Solidarity garden programs enhance children's understanding of food, nutrition, and local farms?' Specifically,

- What affective experiences emerge through participation in school gardens?
- Do the garden programs impact their food choices at school?
- Does what they learn through the gardening lessons and experiences spread to other aspects of their lives (in school or at home?)

The surveys and journal questions were designed to assess cognitive, behavioral and affective experiences and changes. The findings related to each of these elements are explored and illuminated through participant quotes in the next section.

**Do the Seeds of Solidarity garden programs enhance children's understanding of food, nutrition, and local farms?**
Cognitive understanding was gathered through a journal entry in which students were asked to describe knowledge about plants and soil, and new concepts they had learned while participating in the school garden program. Another journal question asked students to plan a menu for a meal with friends using only ingredients from local farms. On the pre and post survey, students were asked to list local farms.

**What affective experiences emerge through participation in school gardens?**
Affective experiences were gathered through a journal entry whereby students were asked the question "How do you feel when you are in the garden?" Quotes will be shared in response to this question in the findings.

**Do the garden programs impact their food choices at school?**
Data relating to food choice behavior changes was measured through a question on the pre and post program evaluation asking if how likely the students were to choose to eat from the "5-a-day bar." The 5-a-day bar is a fresh fruit and vegetable bar that all students have access to during breakfast and lunch.

**Does what they learn through the gardening lessons and experiences spread to other aspects of their lives (in school or at home?)**
In order to learn whether the students' school garden learning and experience to spread to other aspects of their lives, a journal question inquired as to whether students had told anyone what was happening in the school garden program and what they told them.

**Lessons Learned: Findings**

The pre and post program surveys and journals served as the primary tools of data gathering. The pre and post surveys were analyzed by comparing matching surveys and tallied denoting increases, decreases or no change. The school

garden journal responses were gathered, read and entered into spreadsheets to elicit themes and quotes. Student names were changed and spelling and grammar was not edited in the quotes to maintain authentic voice.

*Affective*

The affective experiences described by students in their school garden journals demonstrate that student involvement in school gardens both nurtures a profound emotional connection to the natural world and provides a "safe" place for many students.

Overwhelmingly students report that the school garden is a place where they feel, in their words, happy, relaxed, calm and safe. This is an important point due to the fact that not all children both in this particular demographic and across the world have the opportunity to live in safe and peaceful homes. Poverty and war are creating less and less places where children feel secure in the world. John notes, "When I am in the garden I am very happy and calm. I like the sound and feel of nature. Planting is very fun to me. I feel relaxed by the small of the flowers. I have a lot of fun in the garden." Similarly Sara says, "When I am in the garden I feel special. I love gardening and it is a hobbie. I feel safe and calm. It is always beautiful and pretty. I feel great in gardens." Jennifer says, "When I'm in the garden I feel good!!! When I'm planting it makes me feel colm. It is nice feeling colm." Katie shares, "…When I am in the garden I think about life. I am happy when I am in the garden."

In addition to feeling personally contented in the garden, many students share that the garden enables a connection to the wider natural world. Susan writes, "I feel happy when I'm gardening because gardening makes me feel like I'm taking care of the earth. I love gardening." Julia shares, "I feel that we are bringing life into the world." Tomas describes, "When I going a garden I fel as free as a flower. When I step in a garden I feel as free as a beautiful pransing raindeer. I feel as free as a cut and cudduly little squirl."

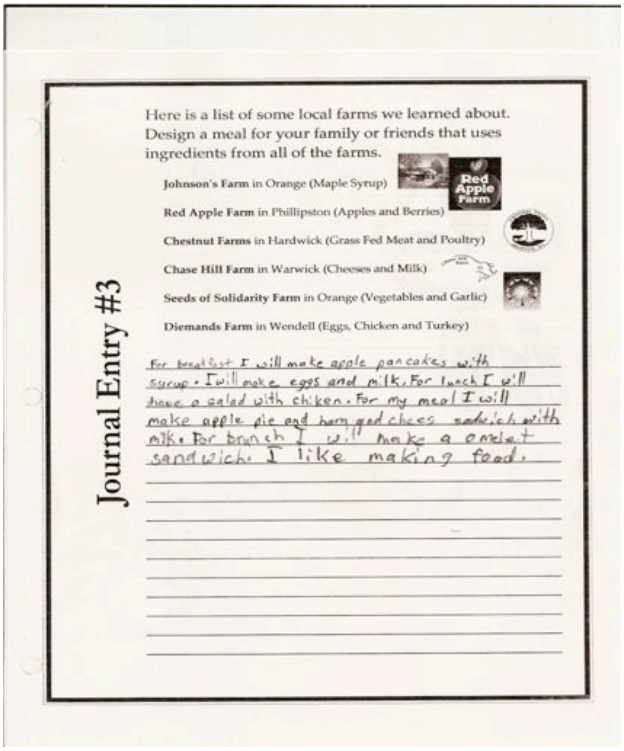
Interestingly, a few students note that they "don't feel anything" in regards to their participation with the school garden." One student was confused by their lack of connection, "I don't feel anything and I don't know why." Peter reports, "I feel kind of funny when I'm in a garden because I haven't been in a garden since I was little. And it was a flower garden. Not a vegetable garden." This quote may be part of larger trend suggesting that being outside in the dirt is a new experience for some students. Known as cognitive dissonance, new experiences often trigger cognitive tensions as we attempt to reconcile what we already know with new insights that accompany new experiences.

Perhaps most poignant with the affective body of research is the overwhelming association of the school garden as a 'safe place' which promotes feelings of 'calm' and 'happiness.' This is significant because as noted previously, not all children have the opportunity to grow up in an environment that is safe and calm and full of happiness. The garden as a calm place is also an important consideration in a time of an increasing number of diagnoses of ADHD and other attentional issues as well as students with learning challenges. These affective insights suggest that the garden acts as a sanctuary for children from many different situations.

*Cognitive*

When asked in their garden journal, 93% of students were able to describe at least one thing they had learned that they didn't already know following a lesson in the garden, illustrating that the garden is fertile ground for developing new science knowledge.

Students also demonstrate an ability to learn what food is available locally and apply what they learn in a creative journal question. Students were asked to compose a meal using ingredients from local farms. 81% of students were able to plan a local menu.




An important theme should be noted from qualitative data gathered from the school garden journals. Many students demonstrate curiosity about things learned during the lesson and are able to formulate meaningful questions. For example, Emma noted, "I never new that plants wilted. I wonder what it's like to wilt. What happens while the plant wilts. Does it shrivel up and turn brown. I don't know at all. That is really neat." Another inquiring student wrote, "I never knew seed[s] are so small. Do seeds grow fast or slow? How many see are in one plant? How many types of plants are there on the earth." Following a planting day where she had discovered earth worms in the compost, Sheila inquired, "I learned that plants have sugar in them and bees make honey at of polen. I never knew that werms were important to plants. I never nowy that werms mike up the sowl. Ware do weres come from."

In Bernice McCarthy's book *About Teaching: 4MAT in the Classroom,* she describes that learning moves from direct

experience to reflection to abstract conceptualization. In her book this stage of learning, abstract conceptualization, is characterized as "we stand back, examine, narrow our focus. We name it, conceptualize it, attempt to understand it." [x] These curious students are demonstrating engagement with conceptualization as they begin to make meaning and try to fit what they have learned into their current schema of understanding. "I wonder what it is like to wilt?" demonstrates that students are engaging with the material beyond their direct experiences, which is an important step in deepening understanding.

The next phase of McCarthy's model is action whereby students act upon their new knowledge to make meaning with it in their own way. "We must try it, tinker with it, play with it, watch it, and make it work." [xi] The final stage of learning according to McCarthy is integration; students make meaning by personalizing the content. "We place it in our world, we transfer it to where we live. We adapt it, making something new of it." [xii] McCarthy believes that students' meaning making is where learning occurs. "This making of meaning, which is learning itself, is in and out, into the self and out to the world, over and over again. We need to relate anew continuously to make meaning." [xiii]

While students demonstrate interaction with the material beyond their direct experience, it is possible that the relatively short duration of the programming and research limited the students' engagement in both the action and integration components of the learning cycle. The next section will discuss the shifts in behavior.

*Behavioral*

On a pre-program and post-program survey, students where asked how often they choose fruits and vegetables from the school Five-a-day-bar. The research inquired exclusively about school food choices because this food is equally available to all students. In addition the researchers did not want any question to imply that we were making judgements on students' eating habits at home, especially since food choices and access may vary depending on culture or socio-economic background.

The pre and post program survey found that while most respondents checked sometimes or often, there was no significant increase noted before and after the program when students were asked how frequently they were choosing fruits and vegetables from the Five-a-day bar.

There are a few possible reasons for this. The Food Service director in this district has actively included fresh fruits and vegetables as a part of school food for many years. Fruits and vegetables were already a part of the culture of the school and thus not a "new choice to be made" which could account for not seeing dramatic shifts in the eating habits of the garden participants.

Also, the short-term nature of the research and garden experience may not have provided enough time for significant behavior shifts to occur. What we don't know is whether a child encouraged a family member to go the local farmers'

market or choose a local apple in the supermarket beyond the scope of, or perhaps as a result of the program.

Other school garden research supports that exposure to school gardens can improve students' attitudes towards vegetables.[xiv] The logic goes that if students are involved in growing food themselves, they are more likely to try the vegetables. This phenomenon became evident in the culminating Final Feast, the final lesson of the five-part Seeds of Solidarity school garden sequence where students worked together to prepare and share a salad from their school garden. Most students tried this salad with enthusiasm and many asked for seconds compared to very few who chose not to try the salad at all.

Student quotes from the school garden journals demonstrate an increase in the connection between gardening and eating. Paul reports, "When I'm in a garden I feel dirty and hungry for vegetables." Joe similarly reports, "I feel hungry in the garden." Chris echoes, "I feel like eating. I feel good." Holly states, "I feel happy because I like vegetables and fruit and also learning." Cindy reports, "What I feel when I'm in the garden is very good. I love being in the sun and it is good to make a food garden because you don't have to spend your money on food you can just pick the food and you will have food for a week or two weeks. Gardens are so so cool. You can eat any of it and eat it when you want to and you can have a very very healthy piknick with your friends."

The shift towards integration of the school garden curriculum into the students' lives outside of school is an important finding. When the students were asked if they had told anyone about what they were learning through their school garden lesson 68% of the students reported that they had told someone. One student reported, "I told my Dad how to plant and harvest food that you are growing."

In his book, *The Myth of Progress*, Tom Wessels explains a natural phenomenon known as the *butterfly effect*, whereby a butterfly's wings in Asia creates minor air movements, initiating a long string of events which eventually results in a powerful storm in the United States. This illustrates the principle that small-scale events can have the potential to cause widespread change. It is significant that 68% of the students shared what they were learning with family and friends un-associated with the school garden program in regards to the potential for their experience to ripple outward.

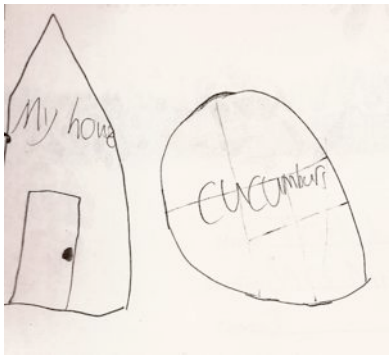
> A students writes, "I have told my Mom, and my brothers. I told them how much fun I have. I also tell them that what we are doing. I love gardening. You should too!!"

Additional quotes extracted from the school garden journals suggest that through participation in the school garden program students have found a new interest.

> Stephanie writes, "When I am in the garden I feel special. I love gardening and it is a hobbie. I also feel safe and calm. It is always buteaful and pretty. I feel great in gardens."

> Another student, Pauline, reflects of her time in the garden, "When I am out in the garden I feel joyful. I like working in the [garden] it is relaxing to me. Working in the garden makes me want to wrok in it all the time. Working in the garden is for me. That is what I like about being in the garden."

Though the impact of the small-scale event spreading to a larger impact is difficult to measure, it is hopeful that students are inspired to continue to garden and to spread their knowledge and interest in gardening with family and friends as the findings suggest.



**Teachers Voices: Curriculum Integration**

After the completion of the program, teachers were interviewed to elicit their experiences and reflections. Two strong themes emerged from these interviews specifically, the inherent cross-disciplinary nature of the school garden as well as the diversity in reasons why the garden is a powerful teaching tool.

The school garden program coincided with the spring administering of the MCAS, Massachusetts State testing. In an effort to drive home the test concepts, some of the participating teachers chimed in to explain how a math concept, such as parallel lines could be applied beyond math class. Students were engaged with the importance of parallel lines to ensure that their lettuce mix grew in straight lines in their raised beds just as it does in farmers fields. In her interview Cindy Reilly reported “I use the garden very often as an integrating concept for my curriculum.” She explained that beyond the Seeds of Solidarity programming she used the garden concept in many classes such as math, writing and reading.

Participating teachers also noted their belief in the value of school garden programming for a variety of different reasons. Carla Chilton, a fourth grade teacher said that the “garden is a great tool to connect kids to the outside world and how they are involved in it. It teaches responsibility, achievement,

accomplishment, and gives them something to look forward to." Another teacher of a special needs class reported that through the program "kids learned a lot about composting, planting and where their food comes from – not just Hannafords [the supermarket]." Janet Mitchell teaches an inclusion class including students with special needs explained that hands-on activities are very effective for her. "I would absolutely recommend the school garden program. It's a great experience and hands-on. I would tell anybody to go for it."

**Summary of Key Findings**

- The school garden supports student inquiry, connection to the natural world, and engages students in the process of formulating meaningful questions.
- Reflective practice is an important step in students transforming knowledge to understanding. A school garden journal is a successful tool enabling students to reflect upon their direct experiences, thereby deepening their understanding.
- School gardens enable fertile ground for reinforcing science concepts and also provide an opportunity for curriculum integration, enabling teachers to involve a variety of subjects within a garden lesson.
- The school garden may act as a 'safe place' for students. Students overwhelmingly reported that they felt 'calm,' 'safe,' 'happy' and 'relaxed' in the school garden.
- Involvement with school gardens teaches responsibility, achievement and provides a sense of accomplishment for participants.
- Students are very likely to share their experiences with others outside of the program contributing the spread of positive change.
- A school food culture including the consistent availability of quality fresh fruit and vegetables may compliment school garden curriculum and support healthy food choices amongst students.

**Recommendations**

Based on the findings and experiences of the research this section offers considerations for other school garden oriented programs to strengthen the behavioral, cognitive and affective aspects of a school garden program.

**Provide structured and formalized opportunities for students to reflect upon their direct experiences in the garden.**

A school garden journal is an important tool in gathering student's experiences and in enabling students to engage with the material beyond their direct experience. Providing ample time for reflection is critical as well as inviting students to ask inquiry-oriented questions. Students need to be given the opportunity to apply what they have learned in new situations to integrate their knowledge into a personal understanding.

**Nurture inquiry stemming from the garden by encouraging students to formulate questions and find answers.**

Involvement with school garden programs invites inquiry for participating students. It is important to encourage students to ask questions and give them

the tools to answer their questions. Only through challenging their existing knowledge they will deepen their understanding.

**Provide opportunities for participants to share their involvement in growing food within the community.**
The findings suggest that students are likely to share their experiences in the school garden with their friends and family. Therefore, providing structured ways for the participants to interact with the community may encourage the spread of positive change. For example, students may choose to organize a seedling sale, write a letter to the local newspaper, sell zucchini bread at the farmers market to raise funds for the school garden next year, or grow enough salad for a lunch in the school cafeteria.

**Use the school garden as a tool to support the academic curriculum and bring all subjects to life.**
Participating teachers recognized the opportunity for school garden lessons to incorporate a variety of subjects and reinforce difficult classroom concepts. From measuring lines for rows of vegetables, to painting the garden through the seasons, the school garden's connection to life "in the widest sense" makes for fertile ground for student learning.

**Work with school administrators and food service directors to create a healthy food culture in the school.**
The benefits of schools adopting an implicit and explicit healthy and fresh food curriculum cannot be understated. Just as the Farm to School movement brings together farmers, school food service providers, teachers and administrators – schools benefit from similar cooperation by putting food from local farms in the cafeteria, engaging students in growing food and making an effort to promote healthy eating within the schools.

**Carry out research; it enhances learning and program validity.**
The research process enhances the learning and garners important findings.

Let us dig in.

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[i] Farm to School, "About the National Farm to School Program" http://www.farmtoschool.org/about.htm

[ii] John Dewey, The School and Society (Chicago: The University of Chicago Press, 1920)

[iii] Centers for Disease Control and Prevention, Department of Health and Human Services, Overweight and Obesity, http://www.cdc.gov/nccdphp/dnpa/obesity/

[iv] Richard Louv, Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder, (Algonquin Books of Chapel Hill, 2005)

[v] Heimendinger, J. and Van Duyn, M. (1995). Dietary behavior change: the challenge of recasting the role of fruit and vegetables in the American diet. *American Journal of Clinical Nutrition,Journal of Nutrition Education.* 27: 235-249.

[vi] Cavaliere, D. (1987). How Zucchini Won Fifth-Grade Hearts. *Children Today*, 16(3), 18-21.

[vii] Klemmer, C.D., Waliczek, T.M. and Zajicek, J.M. (2005). Growing Minds: The Effect of a School Gardening Program on the Science Achievement of Elementary Students. *HortTechnology.* 15(3): 448-452.

[viii] (Waliczek, T. and Zajicek, J.M. (1998). The Effect of a School Garden Program on Self-Esteem and Interpersonal Relationships of Children and Adolescents. *Hort Technology* (submitted).

[ix] National Gardening Association

[x] Bernice McCarthy About Teaching: 4MAT in the Classroom (Wauconda, IL: About Learning, Inc., 2000) 10

[xi] About Teaching,, 11

[xii] About Teaching, 11

[xiii] About Teaching, 11

***Appendix.***
***Pre Program Survey***
*Your Name*_____

*Kaitlin Doherty from Seeds of Solidarity is so excited to come and garden with your class this spring. Please tell us what you know about gardens, food and farms!* (use the back of the page if you need more room)

1) Have you ever gardened? If so, what do you like about gardening?

2) What is something you know about seeds or plants?

3) Do you like to eat fruits and vegetables from the 5 a day bar at school? *Circle One:*

Yes No Sometimes

If you circled 'Yes' or 'Sometimes,' which fruits and vegetables do you choose from the 5 a day bar?

4) Write down any farms you know of in Orange or Athol or nearby. If you don't know the name of the farm, just describe what they grow or produce.

***Appendix.***
***Post Program Survey***
*Your Name*_____

*Kaitlin Doherty from Seeds of Solidarity has really enjoyed gardening with your class this spring. Please tell us what you've learned about gardens, food and farms!* (use the back of the page if you need more room)

1) What did you like best about the gardening program?

2) What is something new you learned?

3) What was your least favorite thing about the gardening program?

4) Do you like to eat fruits and vegetables from the 5 a day bar at school? *Circle One:*

Yes No Sometimes

If you circled 'Yes' or 'Sometimes,' which fruits and vegetables do you choose from the 5 a day bar?

4) Write down any farms you know of in Orange or Athol or nearby. If you don't know the name of the farm, just describe what they grow or produce.

5) What is something you can do to teach others what you have learned about gardening, or food from local farms?

**Appendix.**

**Bi-weekly Journal Questions**

Our students were provided with a visually pleasing journal with pages that included the following questions. Journals were kept at school, and then taken home at the end of the program period.

1) Write about a favorite memory in your life that involved food – for example, a family holiday, a picnic or learning to cook a recipe, or anything else about food that comes to mind. What makes this a special memory for you?
2) What is something you have learned about plants, seeds or soil that you never knew before?
3) Here is a list of some local farms we learned about. Design a meal for your family or friends that uses ingredients from all of the farms.
    - ✓ Johnson's Farm in Orange (Maple Syrup)
    - ✓ Red Apple Farm in Phillipston (Apples and Berries)
    - ✓ Chestnut Farms in Hardwick (Grass Fed Meat and Poultry)
    - ✓ Chase Hill Farm in Warwick (Cheese and Milk)
    - ✓ Seeds of Solidarity Farm in Orange (Vegetables and Garlic)
    - ✓ Diemands Farm in Wendell (Eggs, Chicken and Turkey)
4) What do you feel when you are in the garden?
5) Have you told anyone at school or at home – like a teacher, friend, or relative – about something you learned from the gardening program? Who did you tell and what did you tell them?
6) In words and a drawing, describe your ideal garden. What would you grow? How would it be shaped? Where would it be located?