

Local Food and the Cornwall Elementary School

*A Middlebury College ES 401 Project
Spring 2005*

By

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Introduction

Local foods, having traveled shorter distances, contain less or no preservatives, and, as a result, are fresher and healthier. By buying local, a face and, most often, a friendship is behind every food purchase. It's much easier to trust a local farmer's beef rather than beef coming from a mass-produced factory in the Midwest. These mega-corporations are not concerned with developing close consumer relationships—profit is their number one priority.

Educating consumers is critical to pushing the local food movement forward. If consumers are aware of the benefits of local food as well as local food's availability, then consumers could start to create a demand for local food, forcing many distributors to look to their neighbors for buying options instead of distant food production and processing facilities. Consumers are the center of the local food movement, therefore educating consumers is a high priority. For this reason and many others, schools are important stakeholders in the local food movement. Further, studies show that children and adolescents are becoming increasingly overweight, and, with obesity comes a deluge of negative health implications. These sad facts also stress the need for local food education in our schools.

The school eating experience tends to be separated from educational process. Local food education has the potential to marry these two experiences. With food education, children have the opportunity to learn about nutrition and develop good eating habits that will lead to an enduring healthy lifestyle. By combining the cafeteria with the classroom, children can learn about the origin of their food, the food production process, agriculture, and ecology. Local food education gets students out into the community and breaths life into the children's eating experience. Through local food education, children can experience, hands on, the benefits of local food. Students can taste the difference, establish relationships in the community through food, and learn about the environmental benefits. This education experience will create a generation of socially responsible consumer to push the local food movement past its tipping point into a food revolution.

Yet, this is not the only reason schools are a focal point for the local food movement. Schools have the potential to create a large demand for local food. In 2001-2002, Vermont had about 101,000 students attending school up to 12th grade. About 17%

of these students ate school breakfast (Grubinger, 2004). Approximately 51% of these children ate school lunch (Grubinger, 2004). In the same year, \$30,193,910 was the total cost of school meals, 44% was the food itself (Grubinger, 2004). If only a portion of each school meal was local, it would significantly boost the local economy. Jim Douglas, Vermont's Governor stated that if everyone in Vermont about 10% locally, it would add one hundred million dollars to the local economy each year.

Project Description

With these compelling facts in mind, our environmental studies senior seminar project worked with the Cornwall Elementary School (grades K-6) to introduce local foods into the cafeteria as well as to teach students about local food. Our first step was to meet with our community partners and the experts on the subject, the Vermont Food Education Every Day (VT-FEED) representatives. We met with Abbie Nelson, who works with the Northeast Organic Farming Association of Vermont (NOFA-VT) and helps source ingredients for VT-FEED, and Dana Hudson from Shelburne Farms who coordinates VT-FEED. To date, VT-FEED has introduced local foods in about thirty schools statewide. VT-FEED focuses all of their effort on combining the three C's, classroom, community, and cafeteria, and our project used VT-FEED's model. It was recommended that we choose one item on the school lunch menu to make with all local ingredients. Once this item was picked, we would source all these ingredients within Vermont and coordinate a taste test day in which the entire school tries the new local food item. Before this taste test day, the FEED model recommends spending a day getting the school excited about this local food item by providing a sample of the local item to all of the classrooms. Our project was centered on local food education, and this 'pump up' day provided the perfect opportunity to share information about local food with the Cornwall School. FEED also provided us with a survey to quantify the response to the new local food item.

The most important advice we received from these seasoned veterans was a strategy in which to approach the project. Usually there's at least one teacher that's really excited about the project, and it's best to pick his or her class to serve as ambassadors for the project. This means that this group should be involved in the project

as much as possible; make the local food item, present the benefits of local food to the school, survey the school on taste test day, and make graphs of the survey results. The more that the kids are involved in the project, the more invested in it they become, and they are more likely to remember the important messages. This rings true for all stakeholders within the project including the school principal, parents, and kitchen director. Dana advised that we approach the kitchen director with positive inquiries. For example, we asked the kitchen director ‘tell me about...’ questions rather than ‘why don’t you...’ questions. This makes the kitchen director feel like the project is positive group effort. VT-FEED also cautioned us about putting the students into the kitchen on the taste test day. The kitchen is the cook’s domain, and the cook should determine how this step is going to work. Open communication with the kitchen director is crucial.

The next step was to meet with Cornwall Elementary School’s kitchen director, Peg Powers. This meeting was one of three to coordinate the project. Here, we got a sense for Peg’s goals, her stance on local food, and the school food system. Peg runs a one-woman operation where she feeds lunch to approximately seventy kids each day. She also provides the mid-morning snacks which consist mostly of boxed and packaged items from Costco. According to government regulations, each lunch needs to include two servings of bread, two ounces of meat or dairy, three-fourths of a cup of fruits or vegetables, and eight ounces of milk. Peg designs her own menu to meet these stipulations.

Peg buys her food from a handful of sources. The Cornwall School, like most schools around the country, receives surplus food from around the country, otherwise known as government commodities, donated to them from the government. Each year, Peg has a government commodity budget that she has to fulfill, and, if she doesn’t, her budget is decreased. Peg gets canned fruit, tomato sauce, cheese, flour, spaghetti and ground beef from government commodities to name just a few items. The rest of her ingredients come from Burlington Food Service, a food distributor, and her stock is occasionally supplemented by a trip to Shaw’s Grocery Store in Middlebury.

When asked about local food in her cafeteria, Peg answered that she doesn’t know what’s out there and how to get it. Burlington Food Service has some local items, but Peg wasn’t sure what exact items. Jane Wallace of Orwell donates local apples to the

Cornwall School in the fall. This elementary school used to get local milk delivered to them from Monument Farms in Weybridge, VT. Yet, because of container issues, Monument Farms now delivers Hood milk to the school instead of their own fresh milk. Interestingly enough, the students have noticed a difference. Milk sales have significantly decreased, and the children frequently ask for the Monument farms milk saying they hate the taste of Hood milk.

A Local Pizza

It turns out Peg's famous menu item and biggest seller is her pizza. Her pizza is so good that a student wanted to come to school on a snow day just to have it for lunch. Frequently parents come into school begging for her pizza recipe. Because of its popularity, we choose the pizza as our local food item. This could have been a potentially disastrous move because, if there were any drastic changes in the pizza's taste, the kids could hate it too. But, we had faith in the local food's taste and decided to press on. We sourced all the ingredients from within Vermont, and Lucille Farms in Swanton even donated 15 lbs of mozzarella cheese to the Cornwall School (see Appendix 1). Before going into the classrooms, we wrote a letter to the parents about our project inviting them to become involved (see appendix 2 for letter).

Peg's husband is a farmer who works at Over the Hill's butchery in Benson, VT. This personal connection to local food and its associated benefits proved invaluable to the project and also provided us with an interesting perspective. Peg criticized the government for its poor treatment of farmers, lack of health benefits, and low wages. She thinks the government should create a 'no farmer left behind' policy. Peg's excitement for the project stemmed from this belief. Peg was so invested in this project that she ended up finding local honey and local meat for our local pizza.

We then went into the kindergarten, fourth grade, and sixth grade classrooms with a focus on local food education. Our lesson plans stressed the benefits of local food with particular attention to its freshness, environmental benefits, and benefits to the local community (see Appendices 3-6 for lesson plans). We figured out the distance our local pizza's ingredients traveled and calculated how many trees would need to be planted to offset the carbon dioxide emitted from travel (see Appendix 7 for worksheet and

appendix 8 for worksheet answers). We brought in everyday packaged food items to determine their origin and the distance the item traveled. Students brainstormed about pizza ingredients or their favorite food, and we determined whether that food was local or not. We discussed the general meaning of “local” and discovered that one’s backyard garden is the most local one can get. Especially with the kindergarten students, we focused on the process of making a pizza. We let the kindergarteners touch, smell, and draw pictures of all of our local ingredients.

The sixth grade class became the ambassadors for the local pizza, and they were involved with every step of the local pizza process. Everyone in the classroom was involved in making the pizza. The class also surveyed the entire school after the local pizza taste test day (see Appendix 9 for pizza making and surveying sign-up sheet).

Our project, along with the local pizza taste test day, was an overall huge success. Every one of the students, except one, liked the local pizza better. The local pizza generated much excitement throughout the school. On the next pizza day, Peg said that many students were asking if the pizza was local. One parent said that his child came home raving about the local pizza and told him all about local food. These students will hopefully keep asking if their food is local and continue spreading the word about local food’s benefits. These two examples show education’s power to create change. Our project has added, and will keep adding, momentum to the local food movement. Throughout the course of our interactions, we developed a close relationship with Peg, whose enthusiasm and assistance was invaluable. After one meeting, Peg even gave us three loaves of bread and the leftover local pizza from the taste test day. These gifts indicated the project’s success in weaving our class into the local community to foster important relationships.

The Future

We discovered many challenges to implementing local foods in schools, mainly due to the higher cost and difficulty with acquiring the food item (see Appendix 10 for Peg Powers’ Local Pizza Cost Analysis). Although the local pizza was popular and successful, making it a sustainable item on the menu is much more complicated and takes long-term commitment. Further, the local pizza we were able to make was not a

completely sustainable recipe. Currently, the sauce and cheese were simply too difficult to get, too high in labor costs, and too expensive. However, the pizza can be partially local. The meat can come from Peg's husband and his work as butcher at Over the Hill Farms in Benson, the Gleason's wheat flour from Bridport is easy to acquire at the Middlebury Natural Foods Co-Op in town, and Lucille Farms cheese from Swanton will sometimes come through the commodity program.

The future of local foods at the Cornwall Elementary School depends on parent and staff commitment. The most important people involved will be Rich Isenburg, the school principal, and Peg Powers, the kitchen director. Fortunately, both Rich and Peg are enthusiastic about incorporating more local foods into their menu. Furthermore, there is an energetic group of parents involved, including Larry Knowles and Amy Trubek. A great deal of information for the future of local foods came from a parent meeting on May 10th at the Cornwall Elementary School. At this meeting, there were about ten parents present along with Peg and Rich. We received the impression that the parent group did see the pizza experience as very positive and something that they would like to continue in the future.

As alternatives to the local pizza, the parents decided to focus their efforts on a few items that they can get locally. Their plan is to start small and slowly increase the number of local items. They decided that beef may be one of their first priorities. Beef is local, not seasonal, and there are definite health benefits by avoiding factory beef, according to Amy Trubek, Director of the Vermont Fresh Network. Eggs seemed to be a good possibility because there is a large supply of local eggs from individuals in Cornwall, however the lack of health inspection is a clear barrier. Maple Meadow Eggs in Salisbury will be health inspected in the future, therefore, local eggs are a strong possibility in the future. Apples are also a definite possibility due to the large number of orchards in the area. A challenge to local carrots would be the added labor needs of peeling the carrots. Other options could be to become members of a local community supported agriculture (CSA) farm, or try other recipes of all local meals.

Accessibility to local foods is a barrier. Peg, as the only person involved in the food program, does not have time to drive to farms to pick up specific items. A possible solution for this would be to join with other elementary schools in the area, such as

Weybridge and Salisbury, to provide a larger market for certain farms. With a school cooperative, farmers might be more willing to deliver their product to the schools. Peg feels that her greatest need is someone who sources the local food that she would need on her menu. A possibility mentioned was to try to form a partnership with the Middlebury Natural Foods Co-Op to enable the school to purchase their items in bulk from the Co-Op. Peg plans to meet with Amy Trubek in the future to discuss local food, and the parents plan on tackling the issue at the parent meetings to come.

The parents felt that the easiest barrier to overcome is the extra cost of local foods. Since a current goal of the Cornwall Elementary School is to not raise the school lunch price currently, parents will need to investigate the many possibilities for fundraising throughout the year. Flatbread has donated pizzas for fundraising similar causes, and this is an option that needs to be explored. Parents felt that people would be keen to donate with such a tangible goal, such as saying, “We need X amount of money to have all our beef local.” It is important to them that the fundraising is sustainable. Another option of how to use raised funds is to put it towards purchasing a freezer for the kitchen to increase storage, a crucial element to keeping food fresh longer and eating non-seasonal items that are local, such as strawberries in the winter. According to Abbie Nelson, of NOFA-VT, the best way for schools to make local food meals possible is to have local food and commodity food together. This way, the higher expense of the local foods can be counteracted by the free food from government commodities.

Finally, support of parents, community, and the school is a must. The parents felt that visibility at the board level would be crucial in this process. The parents wanted to serve local pizza at their next board meeting as a way to increase participation. Overall, at the parent meeting, none of the barriers we encountered, nor future barriers seemed too large and intimidating. The parents were enthusiastic and creative with their ideas. Rich Isenburg, the school principal, stated that the commitment to local foods was, “as much philosophical as practical,” which provides foundation to Cornwall Elementary School’s support for local food. With the strong leadership among the parents, administrators, teachers, staff, and the community, we feel positive about the future of local foods at the Cornwall Elementary School.

References:

Grunbinger, Vern. 2004. *Overview of School Food in Vermont*. University of Vermont Extension and Center for Sustainable Agriculture.

VT-FEED website (<http://www.nofavt.org/programs/vtfeed.php>)

Acknowledgements:

We would like to thank Peg Powers, Rich Isenburg, and the teachers and students of the Cornwall Elementary School who were so welcoming and supportive of our pilot project. Thanks to Abbie Nelson, Dana Hudson, Amy Trubek, Nan Jenks-Jay, and Diane Munroe for their guidance and assistance with our project. We are appreciative of all of the local farms that provided the ingredients for the local pizza, specifically Lucille Farms for their donation of mozzarella cheese. And lastly, thanks to Larry Knowles, Amy Trubek, and the other parents of Cornwall Elementary School students for their enthusiasm and interest in continuing to work to bring more local foods to their children's school meals.

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For access to event photos:

A CD of photos from the classroom exercises and the local pizza taste test was provided to Rich Isenburg and Peg Powers at the Cornwall Elementary School. Additional CD's can be obtained by contacting Diane Munroe, Middlebury College Environmental Studies Program, at (802) 443-5925 or at dmunroe@middlebury.edu

Appendix 1 – Local Pizza Ingredients

FLOUR – King Arthur, Norwich, VT

WHEAT – Gleason’s Organic Farm, Bridport, VT

CHEESE – Lucille Farms, Swanton, VT

BACON & SAUSAGE – Over the Hill Farms, Benson, VT

TOMATO SAUCE – Two Rivers Cooperative, Montpelier, VT

Appendix 2 – Parent’s Letter



MIDDLEBURY COLLEGE
Middlebury, VT 05753
(802) 443-5710

Program in Environmental Studies

April 7, 2005

Dear Parents,

We are a group of Middlebury College students working to integrate local foods into the Cornwall school as part of the Environmental Studies senior seminar on “local foods” this semester. This project is part of an initiative by VT-FEED (Food Education Every Day) with whom we are partnering. As part of our senior seminar, we have researched the benefits of eating locally. Eating local products supports the local economy and builds healthy bonds within a community. There are also environmental benefits because food travels shorter distances and tends to support sustainable agriculture. Furthermore, due to its freshness, local food is healthier and tastes better.

Vermont has a great variety of fantastic local products, and we would like to introduce them to your children, both in the classroom and in the lunchroom. On Tuesday, April 12 we will be visiting classes to talk about what it means to eat locally. We are working with Peg Powers, the food service manager at Cornwall school, local farmers and distributors to develop a recipe for a local pizza with flour, wheat, cheese, and sauce from local sources. The organic wheat flour comes from the Gleason farm in Bridport, the mozzarella from Lucille Farms in Swanton, the Two Rivers tomato sauce from Montpelier, and the meat from Over the Hill Farms in Benson. On Tuesday there will be a mini taste-test and on Thursday the local pizza will be served in the lunchroom with a full taste-test, conducted by the students.

We welcome any parent interest and involvement. If you have questions, comments, concerns or simply just want more information on this project, feel free to contact any one of us using the information provided below. More information can also be found on the VT-FEED website (<http://www.nofavt.org/programs/vtfeed.php>). We hope that you’re as excited about this project as we are!

Sincerely,

Allie Beck (abeck@middlebury.edu; 443-6028)
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Appendix 3 – Lesson Plan: Cornwall Local Pizza and the 6th Grade

When:

- April 12th, 10:45 – 11:45

Goal:

- To teach about the benefits on eating local foods
- To use mapping skills
- Create awareness about where their food comes from
- To create enthusiasm and curiosity for the pilot local pizza on Thursday April 14th
- To organize their involvement with the local pizza project on the 14th

Materials:

- 20 photocopies of local VT map
- Blank paper
- Pens, pencils, pencil crayons
- Blackboard
- Poster boards
- Taster
- Our own paper to organize them into groups
- A bunch of packaged random foods
- World map to identify visually where items come from
- Parent's letter

The Lesson:

- Introduction: 7 min.
 - Write favorite foods on the board as students call them out and then discuss what is local
 - Here, some talk about seasonality may arise – can put a square around those items
 - Introduce ourselves, our project, the pizza. Explain that we want to explore with them some details about the pizza, why local foods are good, and their special role as ambassadors (mention Thursday event and parent meeting in May)
- The Pizza: 10 min.
 - Identify the ingredients that go into a pizza
 - Get students into small groups – draw the pizza ingredients from farm to table
 - While doing this, prepare for next section
 - Present small group drawings to larger group
- Labeling: 7 min.
 - Divide into groups and provide a few packaged food items to each group
 - Get groups to share where their foods items are from
 - Show the location on world map
 - Discuss how far it seems

- Maps: 13 min.
 - Have ingredients and cities where they come from already on the board
 - Introduce local pizza ingredients and show where they are from
 - Split into groups, distribute maps and worksheets
 - Come back together to:
 - Compare distances
 - Discuss distance if ingredient wasn't local
 - Discuss impact of shorter travel distance (environment, CO2 emissions, freshness)
- Benefits: 13 min.
 - Discuss overall benefits of local foods, aided by poster board
 - Freshness – taste and health
 - Environment – transportation, sustainable farming
 - Local Economies and Communities – relationship building, money stays within community (ask students if they know any farmers)
- Have a taste of sample pizza!: 5 min.
- Give letter to take home to parents
- Organize logistics for Thursday taste test
 - Sign up for cooking slots
 - 6 volunteers for surveying
- Conclusion: 5 min.
 - Review reasons why to eat local foods
 - If extra time, can split into groups and do a play – students play the role of a food item (either local or not)

Reflections

- Need to provide the students better tools for map work
 - Better scale, rulers, review how best to take measurements (either with ruler or matching with piece of paper)
- Good to mention garden as best thing
- Have an average distance of processed food ingredients we brought in to compare local ingredient distances to
- Math sequence was really good – all in terms of trees
- Good comparing pounds of CO2 to a person

Appendix 4 – Lesson Plan: Cornwall Local Pizza and the 4th Grade

When:

- April 12th, 1:15 – 2:15

Goal:

- To teach about the benefits on eating local foods
- To use mapping skills
- Create awareness about where their food comes from
- To create enthusiasm and curiosity for the pilot local pizza on Thursday April 14th

Materials:

- 20 photocopies of local VT map
- Blank paper
- Pens, pencils, pencil crayons
- Blackboard
- Poster boards
- Taster
- Parent's letter

The Lesson:

- Introduction: 7 min.
 - Write favorite foods on the board as students call them out and then discuss what is local
 - Here, some talk about seasonality may arise – can put a square around those items
 - Introduce ourselves, our project, the pizza. Explain that we want to explore with them some details about the pizza and why local foods are good (mention Thursday event and parent meeting in May)
- The Pizza: 10 min.
 - Identify the ingredients that go into a pizza
 - Get students into small groups – draw the pizza ingredients from farm to table
 - While doing this, prepare for next section
 - Present small group drawings to larger group
- Maps: 20 min.
 - Have pizza ingredients and cities where they come from already on the board
 - Introduce local pizza ingredients and show where they are from
 - Split into groups, distribute maps and worksheets
 - Allow time to answer questions – locate and calculate
 - Come back together to:
 - Compare distances
 - Discuss distance if ingredient wasn't local
 - Discuss impact of shorter travel distance (environment, CO2 emissions, freshness)

- Benefits: 13 min.
 - Discuss overall benefits of local foods, aided by poster board
 - Freshness – taste and health
 - Environment – transportation, sustainable farming
 - Local Economies and Communities – relationship building, money stays within community (ask students if they know any farmers)
- Have a taste of sample pizza!: 5 min.
- Give letter to take home to parents
- Conclusion: 5 min.
 - Review reasons why to eat local foods
 - If extra time, can split into groups and do a play – students play the role of a food item (either local or not)

Reflections

- The drawing sequence was really good – give more time to do that so students don't have to rush
- Need to provide the students better tools for map work
 - Better scale, rulers, review how best to take measurements (either with ruler or matching with piece of paper)
- Good to mention garden as best thing
- Have an average distance of processed food ingredients we brought in to compare local ingredient distances to

Appendix 5 – Lesson Plan: Cornwall Local Pizza and Kindergarten

When:

- April 14th, 8:30 – 9:30

Goal:

- To teach about the benefits on eating local foods
- To create enthusiasm and curiosity for the pilot local pizza on Thursday April 14th
- To understand a bit that we have choice about the food we eat
- To learn more about food

Materials:

- Poster boards with VT map, benefits of local foods, and pizza-making process
- Ingredients – flour/wheat, cheese, tomatoes, tomato sauce – make sure that students can plan with ingredients

The Lesson:

- What goes into a pizza?
 - Call out, break down items a bit
 - Review what was said and pass around ingredients
 - Encourage students to touch and smell
 - How do you make a pizza?
 - Go through process
 - Put ingredients on floor in sequences
 - Dough, sauce, cheese, toppings
 - These come from plants – connection of grass to cows to cheese, etc.
 - Something special about THIS pizza!
 - From Vermont
 - Point on map where ingredients are from
 - Can emphasize the letter it starts with
 - Comment on distance – close / far
 - What does “local” mean?
 - Normally food comes from all over the place
 - Give example that you can’t do a local fruit salad in VT in the winter or spring, but you can do a pizza (in summer it’s different because things can’t grow in the winter)
 - Look at labels
 - Benefits of local foods
 - Give students time to think
 - Fresher – healthier, better taste, normally chemicals in tomatoes to keep them fresh
 - Community / Neighbors / Friends
 - Less pollution

Reflections

- Pointing things out on map was good, but need to make map bigger so that all can see
- Connecting all different kinds of food to the sun
- Need to smell / touch ingredients
- Share backyard garden idea

Appendix 6 – Lesson Plan: Cornwall Local Pizza and pop-ins

When:

- April 12th, 9:30 – 10:45
- Grades 1,2, and 4

Goal:

- To teach about the benefits on eating local foods
- To create enthusiasm and curiosity for the pilot local pizza on Thursday April 14th

Materials:

- Blackboard
- Poster boards with benefits of local foods, VT map, process of making local pizza
- Pizza tastes
- Parent’s letter

The Lesson:

- Introduction
 - Write favorite foods on the board as students call them out and then discuss what is local
 - Here, some talk about seasonality may arise – can put a square around those items
 - Introduce ourselves, our project, the pizza. Explain that we want to explore with them some details about the pizza and why local foods are good
- The Pizza:
 - Identify the ingredients that go into a pizza
 - Have volunteers draw ingredients on the board
- Maps:
 - Have pizza ingredients and cities where they come from already on the board
 - Introduce local pizza ingredients and show where they are from
 - Have volunteers show on poster map
 - Discuss total distance
- Benefits:
 - Discuss overall benefits of local foods, aided by poster board
 - Freshness – taste and health
 - Environment – transportation, sustainable farming
 - Local Economies and Communities – relationship building, money stays within community (ask students if they know any farmers)
- Have a taste of sample pizza!
- Give letter to take home to parents
- Conclusion
 - Remind them of local pizza taste test on Thursday
 - Review reasons why to eat local foods
 - If extra time, can split into groups and do a play – students play the role of a food item (either local or not)

Reflections

- Students may already know a little or a lot, go with the flow

Appendix 7 – Local Pizza Distance Worksheet

LOCAL PIZZA DISTANCE WORKSHEET

How many miles did each item travel from its farm to Cornwall School?

Flour: _____
Wheat: _____
Cheese: _____
Tomato Sauce: _____
Sausage: _____

Which item traveled the shortest distance? _____

Which item traveled the longest distance? _____

What is the total distance traveled for all of the items for the local pizza to get to Cornwall School today? _____

Trucks travel approximately 5.5 miles per gallon of gas. If 19.5 pounds of Carbon Dioxide (CO₂) are produced per gallon, how much CO₂ was emitted for all of these items to get here? _____

Total pounds of CO₂ / 2000 = _____ tons of CO₂

If 3 trees should be planted for every ton of CO₂ emitted, how many trees would need to be planted after the ingredients for one pizza arrive at the Cornwall School? _____

Appendix 8 – Local Pizza Distance Worksheet Answer Key

LOCAL PIZZA DISTANCE WORKSHEET (Answers)

How many miles did each item travel from its farm to Cornwall School?

Flour:	45
Wheat:	7
Cheese:	75
Tomato Sauce:	40
Sausage:	12

Which item traveled the shortest distance? **wheat**

Which item traveled the longest distance? **cheese**

What is the total distance traveled for all of the items for the local pizza to get to Cornwall School today? **179**

Trucks travel approximately 5.5 miles per gallon of gas. If 19.5 pounds of Carbon Dioxide (CO₂) are produced per gallon, how much CO₂ was emitted for all of these items to get here? **32.5 gallons of gas, 634.6 pounds of CO₂**

Total pounds of CO₂ / 2000 = **0.32** tons of CO₂

If 3 trees should be planted for every ton of CO₂ emitted, how many trees would need to be planted after the ingredients for one pizza arrive at the Cornwall School? **0.96**

Appendix 9 – Sign-up Sheet for Volunteer Cooks and Surveyors

MAKING THE PIZZA

- 9:30
 - Helping make the dough
 - _____

- 10:00
 - Roll out and put together
 - _____
 - Sauce
 - _____
 - _____
 - Cheese
 - _____
 - _____
 - _____
 - _____
 - Pepperoni
 - _____
 - _____
 - Sausage
 - _____

- 11:00 pizza in the oven
- 3 servers
 - _____ (cheese)
 - _____ (pepperoni)
 - _____ (sausage)

SURVEYING

- _____ (guests / teachers)
- _____ (grade 1)
- _____ (grade 2)
- _____ (grade 3)
- _____ (grade 4)
- _____ (grade 5)
- _____ (grade 6)

Appendix 10 – Local Pizza Cost Analysis

Peg Powers' Local Pizza Cost Analysis

Local pizza with full price cheese: \$15.40 each sheet pan

Local pizza with factory price cheese: \$8.20 each sheet pan

Peg's pizza, full price: \$5.05 each sheet pan

Peg's pizza, commodity process: \$0.72 each sheet pan

Note: I only priced the ingredients that we could buy locally, all other ingredients will cost the same, so they are not included in the price. Also, these prices do not reflect any labor. The cheese at the factory cost does not include traveling to get it!