VERMONT
FARM TO SCHOOL

A Guide for Using Local Foods in Schools

INSIDE:

- Step-by-step process for starting local purchasing in your school
- Success stories about farm-to-cafeteria relationships
- Seasonal recipes and menu ideas

Vermont FEED: Food Education Every Day
a partnership of Food Works, Northeast Organic Farming Association of Vermont (NOFA-VT), and Shelburne Farms

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Purpose of the Guide

The Vermont FEED (Food Education Every Day) partners are excited to offer you this guide, designed to help schools, and particularly food service, reconnect with local food systems through their school food programs. Known as the "Farm to Cafeteria" or "Farm to School" movement, this nationwide trend in school food purchasing is directly changing the way children eat at school while supporting and strengthening local agriculture. Vermont FEED is proud to be part of this movement.

> "Teach children about food – where it comes from, what it is, and how to cook it – and they will have a much healthier attitude about food and eating. They will know what real food tastes like, will refuse to settle for less, and will stop demanding junk food as daily fare."
>
> Marion Nestle, What to Eat
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This manual is intended for school food service directors, managers, and staff who are interested in making — or are already making — changes to the food students eat at school. This manual can also be used by farmers, teachers, school administrators, and parents as a resource for farm to school projects.

Farm to School is a strategy for making school food system change. School food systems entail more than the food being served in the cafeteria by the school food service. It includes food sold through vending, school stores, fundraisers, and food provided for school celebrations. This manual will deal primarily with the school food program and will show how it is an integral part of the school.

Every school, every school food service, is unique and, therefore, the application and relevancy of the information in this guide will vary from school to school. Our intent is to present aspects of local purchasing and stories of successful implementation and challenges to get you started on your own path to reconnecting your school food to your local food system.

In many schools in the United States, students spend very little time in the cafeteria. It is a place where students eat quickly so that they can return to the classroom, where the "learning" happens. But we at VT FEED believe that the cafeteria is also a place of learning and discovery, an undervalued and underutilized resource for schools and communities where

children can learn to eat well and enjoy nutritious food. The cafeteria can be the heart of a school. May this manual help you make it happen.

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Vermont FEED is a partnership of Food Works, The Northeast Organic Farming Association of Vermont (NOFA-VT), and Shelburne Farms.

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Food Works was founded in 1988 to address the crisis of childhood hunger in Vermont. The initial aim was to provide teachers and students with prevention-based skills and knowledge of food through school gardening and nutrition education. Over the years, we have found students hungry for real connection to nature and their local community and have since developed ecological literacy and cultural literacy programs.

NOFA-VT

Northeast Organic Farming Association of Vermont

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NOFA-VT is a nonprofit organization of farmers, gardeners, and consumers working to promote an economically viable and ecologically sound Vermont food system for the benefit of current and future generations.

Shelburne Farms

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Shelburne Farms is a membership-supported, nonprofit environmental education center, 1,400-acre working farm, and National Historic Landmark in Shelburne, Vermont. The farm serves as an educational resource by practicing a rural land use that is environmentally, economically, and culturally sustainable. Its mission is to cultivate a conservation ethic.

VT FEED: Who, What and Why We Are

In Vermont, 50,000 children line up for school lunch every day, and 17,000 for breakfast, making school food service an annual business of $31 million. For many of these children, the cafeteria food they consume equates to 10 meals a week and half of their daily nutritional intake in a school week. Twenty-six percent of Vermont children are at risk of being overweight or are overweight, and yet very few — only 2% of the children and youth in our nation as a whole — meet Food Guide Pyramid recommendations for consuming all five major food groups in a day. Yes, it's true; despite an abundance of food and a continuing rise in obesity nationwide, children and youth are still undernourished and underfed. Homemade meals have been replaced by fast convenience foods, and even though fresh, local foods are being grown next door to schools and are readily available statewide, they are not being widely used in our cafeterias. In addition, Vermont agriculture is in decline, and the farmer share of every food dollar spent has dropped drastically from 40% in 1950 to 10% today. In other words, for each dollar spent in the grocery store, only 10¢ goes to the farmers who produce the food; the rest is eaten up by manufacturers, distributors, marketers, and middlemen.

VT FEED works to raise school and community awareness about healthy food, Vermont farms and farmers, and good nutrition. We act as a catalyst to rebuild healthy local food systems by cultivating links among classrooms, cafeterias, local farms, and communities.

Meanwhile, school food service is challenged to feed well-balanced meals to students who have an appetite for high fat, high salt, and high sugar foods. They are stretched to meet budgets and be self-supporting. VT FEED (Food Education Every Day) works with schools and communities to raise awareness about healthy food, the role of Vermont farms and farmers, and good nutrition. We act as a catalyst to rebuild healthy local food systems by cultivating links between classrooms, cafeterias, local farms, and communities, so that no child in Vermont will go undernourished.

At VT FEED, we believe that all members of our communities — including children — should have access to safe, affordable, healthy, nutritious

foods. Studies show that healthy diets positively and directly impact students' academic performance. School food policy must change to make local, healthy nutritious foods available to students, for their sake and for the sake of our communities and the planet. Local agriculture is important historically and for the future, and connecting children with local farms ensures local agriculture's longevity, keeping more of our food dollars right here in Vermont. Children also learn to make healthier food choices, gain confidence, and develop critical thinking skills through growing, harvesting, and preparing foods as part of their school curriculum. Food-literate children then impact and change family purchasing, cooking, and eating patterns.

3 C's Approach to Food in Vermont Schools

VT FEED was designed to help school-age children make well-informed food choices, improve their diets, and recognize the role local farms play in communities. VT FEED achieves this by focusing on the three C's: Classroom, Cafeteria, and Community.

Classroom – providing standards-based farm, food, and nutrition curriculum and professional development for teachers

Cafeteria – incorporating local and seasonal produce as well as professional development for school food personnel.

Community – developing community forums and committees of farmers, partners and other community members.

Together the three C's support healthy children, healthy agriculture and healthy communities.

VERMONT FEED:

- strives to increase direct marketing opportunities for locally produced foods and improve the eating patterns of school-aged children by developing local purchasing contracts with schools and offering professional development to school food personnel
- works to increase student and teacher knowledge of food, farms, and nutrition by developing and testing replicable curriculum that meets the Vermont Framework for Standards and Learning
- engages communities in active support of their local school and community food system

Local Purchasing:
From the Farm to the Cafeteria Tray

"Over the years things have changed tremendously. When I started working for the food service 16 years ago, students would go through the line and go straight to the garbage cans and completely dump the full lunch. Now they have such a wide variety of options that there's so many things that they will find something that they like. And it makes me happy to see the kids eat, to see that they're getting their nutrition -the things that they need to do."

Sue Thompson, Food Service Manager
Edmunds Elementary and Middle School

Local Purchasing:
From the Farm to the Cafeteria Tray

In Vermont, school food authorities purchase 86% of food from major food distributors, the same type of distributors who serve restaurants and supermarkets. Fourteen percent of food is provided through the USDA Commodities Program as part of the National School Lunch Program; these foods are staples, which include flour, cheese, rice, meat, and limited types of fruits and vegetables. Only 5% of total food purchases are made directly with local farmers, food producers, and retailers. Many fresh foods purchased through traditional wholesale vendors come from distant states and countries and may have been stored for as long as seven to fourteen days before arriving at the food service loading dock. This fact reflects a larger trend toward the centralization of the food system in the United States; indeed, the average food item — eaten at school, at home or at your favorite restaurant — travels between 1,500 and 2,500 miles before reaching the table, according to a 2002 Worldwatch Institute study. The average fruit and vegetable travels 2,500 to 4,000 miles by refrigerated truck or plane before we consume these perishables. The impact of transporting food such large distances is significant, effecting quality and price as well as the environment. Crops are grown to travel, not to taste delicious, and money is wasted on food that arrives wilted and damaged.

$31,184,183 was expended by Vermont School Food Programs in the 2002-03 school year.

45% of the total was for food.

The Average Lunch cost **$2.28** to provide. Students were charged an average of **$1.60.**

The Average Breakfast cost **$1.58** to provide. Students were charged an average of **$0.86.**

Source: VT DoE Child Nutrition Programs 2004-2005 Fact Sheet

Meanwhile, farms that produce foods for local markets grow and harvest varieties based on flavor, and harvest when produce is fully ripe, often within 24 hours of delivery. Fewer fossil fuels — like gasoline and oil — are needed to transport the food from field to school. Keeping food dollars here in Vermont helps create a vital local economy, keeps farms and small distributors in business, and preserves our agricultural heritage. Local foods also tend to be fresher, more flavorful, less processed and therefore more nutritious.

However, persuading children to eat nutritious food is not always an easy task. Consider the money food companies spend to advertise less-than-healthy food products — according to mediachannel.org, this total tops

"The focus on an 'obesity epidemic' has led to a series of interventions, particularly focused on food available in vending machines and student stores. Most interventions, however, have focused on what not to eat or drink rather than what healthy or healthier alternatives might be available. At the same time, students, divorced from any direct experience with food growing and preparation, have lost any deeper and richer understanding of food issues. That in turn tends to further remove nutrition education from any direct, real world experience."

Center for Food and Justice, report on Los Angeles Unified School District Pilot Project bringing local produce into classrooms, 8 February 2004.
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$2 billion a year — compared with your attempt to serve salad, hearty chili, or fresh fruit in your cafeteria. Now that's competition! But we have an essential job at hand: starting children along the path to enjoying healthy foods from an early age. By nourishing children in school cafeterias with wholesome, nutritious food, food service supports their physical and mental development, educates them about healthy food choices and helps protect the planet they will inherit.

Farm to School efforts create systems of sourcing local food from regional farms to benefit school food service programs, students, farmers, and community health. By bringing local agriculture back into the school food system, children are given the opportunity to eat healthy, nutritious foods that support regional farming businesses.

School Nutrition Association Newsletter, June 2006

Several recent studies, including those of the U.S. General Accounting Office and Dr. Alice Jo Rainville of Eastern Michigan University, found that the National School Lunch Program (NSLP) provides children with twice the servings of fruits and vegetables and greater amounts of grains and dairy than children who eat lunch brought from home or who leave school to eat lunch. Dr. Rainville's study concluded that students who eat school lunches consume less calories from fat and twice as many servings of fruits and vegetables than students who eat a bag lunch.

In a letter to Members of Congress marking the anniversary of the National School Lunch Act, SNA President Ruth Jonen, SFNS wrote, "When President Truman signed the NSLP into law on June 4, 1946, it was to address the under nutrition of children. Now, the program is on the front lines in the fight against obesity. Today's school lunches meet federal nutrition requirements that limit calories from fat and saturated fat, while providing the fruits, vegetables, dairy, protein and grains that children need to achieve and maintain a healthy weight."

The nutritious school meals of 2006 include entrée salads, shaker salads and salad bars that may feature locally grown produce; yogurt parfaits and multigrain rolls; reduced fat versions of old favorites; healthy cooking techniques like baking; cafeteria and classroom nutrition education; and much more. This year SNA members will continue to play leadership roles in the development of local school wellness policies that promote nutritious foods and beverages on the entire school campus, not just in the lunchroom. While school nutrition professionals face both new challenges like over-nutrition and ones similar to those of 1946, like under-nutrition, they remain passionate and dedicated to advancing good nutrition for all children.

The School Nutrition Association (formerly ASFSA) is a national, nonprofit professional organization representing more than 55,000 members who provide high-quality, low-cost meals to students across the country. The Association and its members are dedicated to feeding children safe and nutritious meals. Founded in 1946, SNA is the only association devoted exclusively to protecting and enhancing children's health and well being through school meals and sound nutrition education. For more information visit: www.schoolnutrition.org

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School Food Distribution:
What It Is & What It Could Be

How does the USDA's commodity food program work?

This publication is available at: http://www.uvm.edu/~susagctr/schoolfood.pdf

Vern Grubinger, UVM Extension, Overview of School Food in Vermont, 2004. Excerpted and updated. Used with permission.

Almost all Vermont public schools participate in the USDA's Schools/Child Nutrition Commodity Program. The goal of these programs is to "help American agricultural producers by providing cash reimbursements for meals served in schools, but also by providing nutritious, USDA-purchased food for the National School Lunch Program, Child and Adult Care Food Program, and the Summer Food Service Program." While some beneficiaries, such as childcare centers, can opt out of the program and take cash in lieu of commodity foods, schools cannot. The National School Lunch Act requires at least 12% of school lunch assistance to be commodity foods.

There are a wide range of commodity foods offered to states for their schools. The list is pared down for Vermont, so not all subsidized foods are available here. Group A is the surplus removal type of food that is seasonal and perishable, including fruits, vegetables, poultry, fish, and meats. Group B is the food that relates to price support programs including dairy, cereal, grains, peanut products, and vegetable oils. States choose what percentage of their entitlement they want to receive as Group A or B commodities for the entire year. Bonus foods sometimes offered to states on a fair share basis are not counted against their entitlement, and are brought into the state as available if the coordinator of the Donated Foods Services feels that Vermont schools will want them.

USDA commodity food is free of charge to schools, except for storage and transportation cost. A school's entitlement to free commodity food is based on the number of lunches served the previous year, multiplied by the current commodity rate, which was $0.1675 in 2006. Vermont's total commodity foods entitlement was about $1.75 million in 2001-2002.

Vermont' s Donated Food Coordinator manages the process that offers all schools the same commodity choices. She collates the school orders for delivery to a central warehouse that is contracted through a bidding process. Schools must make their own monthly delivery arrangements from the central warehouse, often using their regular commercial food distributor for this transportation along with their conventionally-purchased food and supplies. Meats, pasta products, flour, peanut butter, canned fruits, and vegetables are popular commodity items.

A unique arrangement exists between USDA and the Department of Defense (DoD) to supply fresh produce to schools. The Defense Supply Center in Philadelphia (DSCP) Produce Business Unit buys and distributes fruits and vegetables to states using the USDA's federal school food commodity entitlement funds. The idea is to take advantage of large scale buying power to support Child Nutrition Programs. The program began as a pilot in 1994 with eight test states. At least 42 states now participate.

Vermont is served by a DoD office located in Avon, MA, which develops the contracts for supplying fresh produce to New England states. According to the director of that office they deal only with vendors and the state commodity coordinators, not directly with schools. About 50 vendors have contracts in New England to provide fruit and vegetables, 5 or 6 of these vendors serve Vermont. They deliver to the central warehouse, as with other commodity foods. Just in 2005, Vermont apple growers organized and sent their apples to New York to be sliced and bagged and then distributed back to Vermont schools through the DoD Fresh program.

Farm to School Programs Across the U.S.

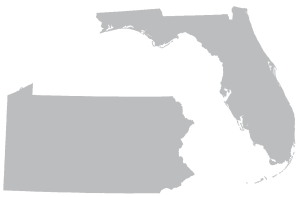
Food services across the nation are increasingly incorporating Farm to School initiatives into their operations as a way to meet the demand for high quality foods. Because these programs have the potential to provide increased access to fresh foods away from home, they also can have a significant impact on public health, including the prevention of obesity and diet-related diseases.

Exciting, innovative, and place-based programs are popping up across the country. For more information about Farm to School programs, visit: www.farmtoschool.org.

According to the National Farm to School Program, nearly 1,000 school districts in the United States purchase foods from local farmers. As they describe, "Through farm to cafeteria projects, students are more inclined to eat fresh fruits and vegetables, adopt healthier eating habits in general, and, as adults, become supportive consumers of local, family farms." Programs range from providing technical assistance to farmers through workshops and other methods to help them connect to schools, to helping school districts develop business plans for transitioning to Farm to School meal plans. At least 32 states — from California to Oklahoma to Massachusetts — currently have school districts with Farm to School programs. Here are some examples:

In **New Mexico**, the New Mexico Department of Education connects with New Mexico farmers, using the Department of Defense's complex distribution system to deliver fresh, local produce to schools and school districts. Apples, watermelon, potatoes, green chilies, and tomatoes are a few of the locally produced foods that are supplied to New Mexico schools in this way. All schools in the state are eligible for the program.

In **New Hampshire**, the Get Smart Eat Local program is working to connect the state's schools with farms. Currently, over 200 schools throughout the state are involved in some way. Many schools are buying local apples and apple cider, while some are sourcing more local foods or participating in educational programs about the ecological, social, and health benefits of eating locally.



In northern **Florida**, farmers have founded a cooperative to help them distribute collard greens, strawberries, and other produce to schools, while high schools in **Pennsylvania** have started a program where students create and operate farmers' markets as a way to learn about food marketing, nutrition, and food's role in their communities.

The Vermont School Food System

So why do Vermont food service professionals join the movement toward a more local food system? Though the answers can be complex, we have an opportunity to significantly impact the health of the students we feed. When we serve students farm fresh, skillfully prepared foods from local farmers — and combine it with hands on cooking, baking and nutrition education — we may find a measurable increase in participation rates for our lunch programs, as well as a greater number of foods students will try and enjoy. Students become connected to their food, aware of the places from which it comes and invested in this connection. Incorporating healthy, locally based meals into the school food system takes a systemic approach and creativity given Vermont's short growing season and limited school budgets. This change is a long-term effort that requires teachers, parents, food service staff, students, school administrators, farmers, and community members to embrace schoolwide food system change.

5 reasons to purchase local food

1. To provide high quality, healthy meals for growing children and to increase their consumption of fresh fruits and vegetables.
2. To support public health and help prevent diet related diseases.
3. To support Vermont agriculture by directing local dollars to local farmers.
4. To increase school lunch participation by offering fresh, flavorful foods as a promotional magnet.
5. To provide high quality product. Less travel distance means fresher products and longer shelf life.

Nonetheless, Farm to School efforts in Vermont are ahead of the curve nationally. Being a small state with a significant rural farm economy, Vermonters rely on the relationships of small rural schools and local farms to make significant changes in individual communities. And although any change is hard, these relationships have allowed a sharp increase in the number of schools and communities developing farm to school programs. Schools throughout Vermont are developing different ways of incorporating and celebrating local foods in their cafeterias. These unique farm to cafeteria connections are being made throughout the state and are steadily shifting the kinds of foods served at school meals.

TYPES OF FOOD SERVICE IN VERMONT

Two basic models of food service operate within Vermont. They are Self-Operated Food Services, which are run by the school or school district, and Privately Managed Food Services, which are operated by corporations through contracts with schools. Each has its own unique advantages and challenges, though it is possible under either system to begin incorporating local food into daily meals.

Self-Operated Food Services

Food services that are operated by the school or the district are called *self-operated*. These food services follow the purchasing policies of the school, and the food service directors usually have the independent authority to enter into purchasing contracts on their own.

Just over half of Vermont students eat in schools with independent meal sites staffed by school district employees. About 12 percent, mostly those attending school in larger districts, eat food prepared in a centralized facility in the district (often the high school) and delivered to individual schools.

Self-operated food services often enter into yearly or multiyear purchasing contracts with vendors for supplies and food. Many schools choose to purchase the majority of their foods from one or two major vendors to reduce contract and billing paperwork. In Vermont, over 100 schools belong to the Food Service Directors' Buying Group. Every three years companies bid for this collective contract. Schools that enroll in this group are obligated to purchase 90% of their food and supplies through the vendor who wins the contract. However, there is a clause in that contract allowing priority to be given to products that can be delivered within 24 hours of harvesting. While this applies primarily to produce, it does give food service directors more flexibility when considering local purchasing.

Privately Managed Food Services

These food services are often operated by corporate companies that provide contracted food services to schools and other institutions, such as hospitals and colleges. Their food service operations are often bound to company contracts, and individual food service managers at each school are restricted in what they can purchase outside of this contract.

One-third of all Vermont students receive meals from companies contracted to manage the school food service program on behalf of the district. The three largest firms are Sodexho-Marriott, of Gaithersburg, MD (31% of service contracts based on student enrollment), The Abbey Group of Enosburg Falls, VT (30%) and Café Services of Londonderry, NH (27%).

These companies, particularly in Vermont, have shown interest in purchasing local foods if the school food service manager is interested in working with local product. Schools often have multiyear contracts with these companies and can write in the contract that the company agrees to purchase local foods whenever possible.

VERMONT FARM TO SCHOOL LEGISLATION

In the short history of Vermont Farm to School efforts, many individuals, businesses, and organizations have been paying attention to its momentum. Vermont's accessible citizen legislature has enabled local and state politicians to witness in their own communities the impacts of Farm to School programs. Many politicians work in the schools or are farmers themselves and experience firsthand the effects on their youth, their farms, and their community engagement in making changes in their school food system.

Vermont passed the Farm to School Act (Act 145) in the 2006 legislative session, encouraging the growth of Farm to School programs throughout the state. This legislation came one year after the state created the Wellness Act (Act 161). Following federal mandate for school wellness policies, Vermont provided incentives and support to schools as they formulated their wellness plans. Many of the wellness plans included the move toward farm to school. Therefore, the Farm to School Act was a perfect partner to the Wellness Act. On the following page is a December 2005 article from the Vermont Press Bureau about the Farm to School bill as it was introduced to the House of Representatives.

Statehouse Democrats push for healthier school lunches

December 14, 2005 - By Darren M. Allen, Vermont Press Bureau

MONTPELIER — Vermont exports millions of dollars worth of food every year to legions of eager consumers all over the country willing to plunk down serious cash for a little taste of the Green Mountains. But that's not the case in the state's own 300-plus school cafeterias, where the majority of the food is processed, packaged and shipped from hundreds — if not thousands — of miles away.

A duo of rural legislators on Tuesday kicked off their campaign to get more locally grown food into the stomachs of the state's students, a move that they insist will lead to better health, more successful farms and a lifetime of good eating habits. "This initiative will help bring local food to our schoolchildren, teach children in a hands-on, fun way about nutrition, better food choices and where food comes from, while at the same time supporting sustainable agriculture in Vermont," said Rep. Rosemary McLaughlin, D-Royalton. "The goal is to engage Vermont youth in becoming lifelong consumers of fresh, nutritious foods."

McLaughlin and Rep. Mitzi Johnson, D-South Hero, introduced a bill last year that would provide $400,000 in grants and training programs to encourage the use of locally grown and produced food in the state's schools. On Tuesday, flanked by representatives of the Vermont Food Education Every Day program, the two lawmakers renewed their efforts to give students healthier choices in their school lunches. "We want to establish patterns that provide lifelong benefits for your body," Johnson said. "This can also be healthy for the state's farmers, the state's economy and its overall health."

According to the lawmakers, more than $140 million a year is spent to treat health conditions related to poor eating habits. And since almost 100,000 students routinely rely on their school meals for about half of their daily nutritional needs, making school food lines a haven of fresh, local foods could lessen the incidence of obesity and other indicators of poor nutrition. "This is all about healthy kids and healthy farms," said Joseph Kiefer, director of Food Works, one of the organizations involved in the Vermont FEED program. "You can get kids to eat almost anything."

And that, of course, has been the problem, particularly when students can buy processed foods like pizza, french fries and hamburgers — not to mention snacks like potato chips and candy — any time they want. Kiefer and the bill's supporters said that if children are given the choice of healthier food, and they understand it and actually taste it, they'll choose it. And they'll be healthier.

More than 35 Vermont schools — including those in Montpelier, Barre Town, Middlebury, Brattleboro and Randolph — already buy locally, but that only accounts for about 5 percent of the nearly $13 million worth of food bought by schools every year statewide.

The bill would encourage local schools, cafeteria managers and farmers to work together in formulating new menus. "Recent farm-to-school efforts in Vermont have demonstrated that when children and food service personnel have relationships with local farmers and producers, they are more likely to try new foods, and use fresh and less-processed foods," the bill says. Another benefit to encouraging more locally produced food is a potential drop in transportation costs at a time when fuel costs are increasing, McLaughlin said.

"When Vermont is spending $141 million annually on health conditions that can be traced back to poor nutrition, and the price of gasoline and the impending shortage of fossil fuels looms over us, and our agricultural is threatened by sprawl, we should not hesitate to invest in the simple concept of bringing local, nutritious food to the school cafeteria," she said.

The bill will come up for debate in the House Agriculture Committee early next month, then it will have to be considered in both the Appropriations and Education committees, Johnson said.

Gov. James Douglas is generally supportive of any program that would boost student health, said his spokesman, Jason Gibbs. "Creating a culture of health in Vermont is one way to reduce health care costs over the long term, and we are open to looking at this legislation," Gibbs said. "The idea of promoting fitness and nutrition among young people in Vermont is an idea the governor has long championed."

P.S. Vermont passed the bill and appropriated the money in June 2006!

Creating the Vermont School Meal

So how does a school get started incorporating Vermont foods into its school food program? Schools who have accomplished this advise starting slowly, with a few doable steps. VT FEED has compiled 14 beginning steps below. You can choose a few!

14 Ways to Begin Incorporating Vermont Foods into School Lunch

1. Identify 5 to 10 food products (vegetables, cheese, meats, and bread) you use most by volume. Could some of these items be sourced locally? Could local items be substituted on a trial basis?

2. Discover which working farms are located around you, and visit or call to request product samples. Set up meetings with local farmers to discuss whether they could serve your school. Ask your food distributor if he or she works with local growers and request local produce from them.

3. Commit to buying one local food product each month. It is important to develop a process for purchasing local food; products can then be interchanged.

4. Invite local farmers, food producers, your legislators, and school board members to eat lunch at your school. This will build community relationships and highlight the good work you are doing.

5. Design your menu to take advantage of fluctuations in the local and seasonal food supply. Seek seasonal recipes and workshops on using fresh, local, and seasonal products. Create menus around foods that are in season or surplus vegetables that could be available at a reduced price.

6. Select Vermont food products that are available in winter! Root crops, meats, cheeses, and maple syrup are available during the cold school months. There are also season extension methods that can make vegetables and fruits available in early spring through the late fall. Ask farmers and distributors about these methods.

7. Involve interested teachers, administrators, parents, and the community in your plans. Approach your school's administration,

school board, PTO, or local businesses to help supplement the costs of purchasing locally. Some school boards are earmarking funds from the school budget specifically for purchasing local foods.

8. Encourage classroom involvement. Identify eager teachers, staff, and parents to link food education in classrooms with your cafeteria plans. Involve teachers and administration in developing and promoting new menu items. Enlist students to think up creative names for dishes you are trying. A name like "Confetti Salad" featuring cabbage, apples, and vinaigrette sounds more appealing than "Cole Slaw." Utilize students and community members to help with local food preparation.

9. Share and exchange menu ideas with other food service staff, teachers, farmers, and local culinary professionals. Ask interested parents with culinary or food service backgrounds to take part in your changes. Many culinary professionals are personally invested in school food nutrition and are happy to volunteer. Bring them on board!

10. Create a long-term strategy to gradually introduce new items in small batches along with regular menu items over a long period of menu cycles. Introduce each new menu item six to eight times before judging the item's success; people young and old often have to try a new food multiple times before liking it.

11. Increase participation in local food menus by offering classrooms samples to taste and discuss. Taste testing new menu items in classrooms warms students to new foods before they appear in the cafeteria. Make a small batch of a new item to try in a classroom(s) or in little cups in the lunch line. Have teachers or students collect feedback using a survey. (Data collection is part of the Math curriculum!)

12. Shower praise and recognition on students, staff, teachers, and community members who are helping to implement local food programs. Use newsletters and school bulletin boards to highlight this work.

13. Add pizzazz to your program by picking a day, a week, or month to highlight new foods. Attach your efforts to a school theme or create your own. Or hold local food lunches once a month or once a quarter to correspond with a theme. This will generate excitement about your food program.

14. Share your stories with your community through the school newsletter or local paper. Invite the media to your "local food" events.

School Lunch Menu Randolph, VT, 2004

SEPTEMBER MENU
- Garden Gazpacho
- Turkey-Salad Pita Pockets
- Cucumber and Carrot Sticks with Herbed Yogurt Dip
- Chocolate Beet Cake

OCTOBER MENU
- Pasta Primavera
- Fresh Salad Greens with Marinated Beans (or Lentils)
- Herbed Garlic Toast
- Italian Ice

NOVEMBER MENU
- Chicken Pot Pie
- Waldorf Salad with Fennel and Celeriac
- Parsnips and Carrots
- Pumpkins Bars

NOTE: See Appendix 1, p.79, "Vermont Produce Availability Calendar for the School Year" for more seasonal ideas.

Sample Local School Lunch Menu

At left is a sample of one Vermont school district's monthly local lunch menus, created for the fall and served in all four of the district's schools. These menus provide a great look into the innovative and easy ways local, healthy, kid-friendly food can be incorporated into the school menu. All the food used was as local as possible — even the meat! A local organization (Randolph Area Family Farms) found the farms that sold the local product. The high school food service director compiled the food orders from the three other schools and was the central delivery point for the farmers and distributor.

Talking Points for School Food Service Staff

- ☑ Local produce is fresher which means there will be less waste and a longer shelf life
- ☑ Cost of product is often comparable to what other vendors charge.
- ☑ Students can gain environmental and nutritional education through local sourcing.
- ☑ Small market farmers often raise varieties of produce that taste better than conventional varieties and can cater to a local market.
- ☑ Buying locally supports the local community.
- ☑ Schools can protect the environment by reducing the distance a box of product must travel.
- ☑ Schools develop rewarding relationships with the farmers in their school community.

What About Winter? Menu Planning Around Vermont's Seasons

When our Vermont ancestors were school children, they couldn't have imagined eating fresh tomatoes in the dead of winter or feasting on strawberries after the leaves fell. But the centralization and subsidization of the global food system have made just about any food product available at any time of year.

What are the drawbacks to this system?

1. **Price**: Tomatoes in February are priced liked gold. You will always find better prices when foods are in season and abundant.
2. **Taste**: Ever try a strawberry in February? It relates to a strawberry in name only.
3. **Missing out**: When we eat food from far away, we miss out on fantastic local foods especially available in the fall and winter, like leafy greens and root crops.

Living in a northern climate can be a challenge when it comes to serving lunch, but our seasons don't have to be a barrier. Vermont's abundant harvest also includes dairy products, grains, meats, eggs, honey, and maple syrup, which store well or are available fresh year round. Creatively working with the harvest of Vermont's agricultural region includes tapping into the wide range of food products available throughout the year.

The myth of the baby carrot — They don't grow that way!

Baby carrots are produced from carrots that are bred to be long and thin. To turn them into the short "baby" carrots sold in small plastic bags, the full-sized carrot is cut into 2" lengths, shot down through a tube of water and pushed through a massive peeler that turns them into uniform shapes.

Cooking with the Seasons

The local harvest can be connected to school food purchasing with a little effort and a wave of rewards — if you cook with the seasons. Seasonal cooking means taking advantage of fruits and vegetables when they are ripe. It means passing up tomatoes and cucumbers in the winter months and purchasing root crops and leafy greens instead. Like our ancestors, we can eat well by storing and processing local foods. However, students have not had much exposure to winter and root crops. To use local produce, in the winter particularly, (such as beets, parsnips, winter squash), school recipes need to be flexible and foods introduced gradually through taste tests and repeated presentations. Also, with some freezer space, fall vegetables can be lightly processed and frozen to be used later.

NOTE : See Appendix 1, p. 79, "Vermont Produce Availability Calendar for the School Year."

Is Local Food Safe? Yes!

Food safety considerations are a serious part of any farm business operation, small or large. Safe handling practices are to be taken seriously, and local farmers do just that or they will be out of business. School food service staff and the farmers they partner with should work together to ensure food is handled according to regulations.

Beliefs about Food Safety

from "Linking Farms with Schools" by the Community Food Security Coalition. Used with permission.

At times, the assumption is made that produce from local and smaller farms is less safe than the same items produced on an industrial scale and transported long distances. This is in part due to the belief that the smaller operations do not have the infrastructure or resources to provide safe handling practices.

However, this assumption is based on misconceptions. Basic food safety considerations and practices are generally in place on small as well as larger scale farms. Basic knowledge and commitment to good practices are what it takes. Remember, good food safety practices mean staying in business for farmers, just like food service. Farmers take food growing very seriously. Generally farms interested in selling to schools are experienced growers. Many are accustomed to selling to top-notch restaurants or farmer's markets, and they are very conscious of having a clean, safe, and healthy product.

Keep in mind that products originating from large-scale operations generally move through large processing, distribution, and storage facilities and usually require long distance transportation, often for thousands of miles. These products run an increased risk of contamination due to a breakdown somewhere in the chain of food safety management. Most conventional products today change hands (and responsibility) several times. Although food safety practices in our food system have markedly improved in the last several decades, the trend toward larger and larger operations in itself is associated with an inherent increase in food safety risk. Many family farmers are hands-on and see their produce through the entire process (and eat it themselves).

Stories of Success and Challenge

Cooking with local farm products can be an inspiration to food service staff, but even stronger inspiration comes from receiving support from teachers, administration, the school nurse, parents, school board, and students. It is difficult to implement a Farm to School program unless all these school system stakeholders are on board.

Change takes time. Building school food relationships can be an exercise in patience, but food freshness, quality and flavor, and the health of the local community is at stake.

Vermont school districts have taken on the issue of sourcing, serving, and preparing local food in different ways. Here are some of their solutions — maybe one will resonate with your school!

SERVING GREAT MEALS AT BREWSTER PIERCE ELEMENTARY SCHOOL

Case Study 1

Alison Forrest, kitchen manager and school cook at Brewster Pierce Elementary School in Huntington, has created a lunch program to which area food service professionals, administrators, and teachers are paying attention. She serves homemade, nutritious meals that are renowned in the district for their quality and deliciousness. The lunches have enticed faculty and parents to buy lunch at the school with regularity, which in turn, increases the program's profits. Here's what Alison does:

- She limits her use of processed, frozen foods to approximately once per month and carefully chooses which commodity items she will use so she can combine them with local food products.
- She spends about half of her food budget on fresh produce and local dairy products. She buys what she can from an organic vegetable farm located a few miles from the school and then requests local produce from her main distributor.
- Once a week, Alison goes into selected classrooms to let students taste new foods before introducing them at lunchtime. By teaming taste tests with food served in the cafeteria, Alison and the teachers at Brewster Pierce reinforce food literacy. The result? Students are familiar with and can enjoy snow peas, leafy greens, parsnips, and squash when they are served. Alison feels the classroom taste tests have significantly

influenced the eating habits of the students she feeds. "Classroom nutrition lessons do have an impact at lunch," explains Alison. "Lots of kids have discovered they like foods they wouldn't have eaten at lunchtime. It's a great place for tasting."

Case Study 2

THE VERMONT MORNING MUFFIN TURNS INTO ZUCCHINI CARROT BREAD AT BURLINGTON SCHOOLS

In Burlington, Vermont, Bonnie, a parent and member of the school food committee, put her concerns about the food choices in her daughter's middle school into action. She had carrots donated from a local farm and set some college students to work with middle school students developing a healthy muffin recipe. Many versions were tried and, finally, an acceptable muffin — lower in fat and sugar, higher in fiber — was born.

"When you look at the farm to school concept from outside the box, it's a no-brainer. If the product is grown here in Vermont, why are we bringing it in from 4,000 miles away? The reality is that Oregon and Washington and California grow amazing products, and I'm not saying they're bad. But if we have the opportunity to source something locally, we should at least explore it."

Doug Davis
Food Service Director
for Burlington Schools

Since Bonnie had done all this work through the school food committee, the food service director knew the muffin would be ready for a taste test by the whole school. Students joined the food service staff, and made enough muffins (400) to test with the rest of the student body. Other students conducted a survey: "Did you try the muffin? Did you like it? Would you eat it again?" Results from the K-8 customers indicated that over 75% said they would eat the muffin again. Why, then, when it was served for breakfast the next day, was it refused?

Lessons learned:

- What is OK for a free taste test is not necessarily OK for a meal.
- Students like to please and answer a survey positively.
- The students who created the recipe could have done the PR to explain the recipe, ingredients, and how they came to the blend of ingredients.
- A new food requires 8-14 presentations before it is accepted.
- When students actually make a new food, they are more likely to eat it and like it, and students who don't are very cautious.
- For a student to choose a lesser-known food item, she can't have another choice of a very processed, typical food (such as honey nut cereal).

In other situations, certain recipes or products failed for reasons other than customer preference. For example, squash soup, roasted squash and roasted potatoes, while made almost completely from local produce, were

not accepted by the students, were too labor intensive, or not repeatable with the current cafeteria equipment.

In the end, a kitchen manager reworked a banana bread recipe and incorporated local shredded carrots and zucchini. This breakfast bread has been a hit. (See Appendix 2, p.108 for the recipe.)

AN ASSORTMENT OF SCHOOLS, A VARIETY OF SOLUTIONS

Case Study 3

At **Robinson Elementary School** in Starksboro, the two school cooks replaced California iceberg lettuce with local red and green leaf lettuce from a neighboring farm. They noticed increased student interest in the lettuce at lunch and found they had to discard fewer wilted and spoiled outer leaves that were damaged in travel, a cost savings for the school. This began a relationship with a local farm that continues five years later.

At **Alburgh Community School**, the food service director successfully conducts taste tests for classes based on the food groups in the USDA's food pyramid. For the vegetable group, for example, students sample red and green cabbage, broccoli and cauliflower, and then those vegetables are featured during lunch.

The **Westminster Central School** has a healthy snack program in two multiage K-4 classrooms where children prepare healthy foods and grow some of their own vegetables in a large garden with the help of a neighboring organic vegetable farmer. Teacher Irene Canaris developed this program and has successfully integrated it into classroom curriculum for the past 15 years. Parents pay a small monthly fee ($5) to cover the cost, and one classroom has a fully equipped kitchen. It has helped many students expand their diet to include healthy items they would not otherwise have tried.

At **Essex Town,** the Director of the School Nutrition Program, Bonnie Szarkowski reports: "In order to increase the nutrient density of school meals, keep them student friendly, appetizing, and appealing for our community, we slowly started changing our recipes two years ago. First, I included our dedicated staff in the decision making and changes. We

were all part of the solution. Our first effort was to adapt our baked goods to include more whole grains. Our chocolate chip cookies were changed so gradually, for example, that no one noticed the sugar content decreased and the fiber content increased with whole wheat pastry flour.

"We also started purchasing local foods because it is great to partner with local people and support our local economy. We get fresher product because what I get on Monday morning was picked that morning. It is also cost effective and takes no more labor to cut up a local cucumber because we are serving more of our vegetables fresh. Currently we are using local maple syrup, apples, and fresh fall vegetables.

"The transition has been easy because every one on my staff is treated as a professional and as part of the decision making team."

At **Montpelier High School** in central Vermont, with the aid of a small grant in 2003, a science teacher worked to integrate the concept of "sustainability" across the curriculum, and to make the school a model of sustainability. One of the ideas was to reduce the ecological footprint by having students grow their own food. After 8 months of planning and fundraising, a solar greenhouse was built in Summer 2004. Some students even earned math credit as part of the design and building process. After a successful trial run in Spring 2005, production in the greenhouse began in earnest at the start of the 2005-2006 school year.

During the first year, students grew 150 pounds of lettuce that was sold to the school food program for expanded salad bar and deli bar programs. Salad is offered every day in the high school cafeteria and the 25-item salad bar is offered twice a week. Though communication between production and kitchen, as well as changes in the cafeteria line structure were initial challenges, the salad bar meal sales went up 65% in the first year alone.

Sharon Elementary School began its journey toward school food change during the 2004-2005 school year. The principal, several teachers, and the new food service director set up the purchase of a variety of produce from the local farm through a CSA format (see Local Purchasing Options on following page). Field trips to that farm, a harvest festival, and monthly taste tests were established to highlight the connection between the school and local farms.

Building Relationships with Farmers for Local Food Purchasing

Making changes in any system is all about relationships and communication. Farmers and food service directors can be partners in farm to school efforts when they trust one another and understand each others' motivations, needs, and constraints. What follows are some ideas and steps to begin this process.

Mechanisms for Purchasing Food Locally

School Food Service programs in Vermont are expanding their local purchasing through a variety of arrangements outlined below. Whatever option is selected, every school food service must comply with a strict food safety program based on the Hazard Analysis and Critical Control Point (HACCP) principles. Temperature control of fresh and cooked products is very important. Therefore, arrange for proper refrigeration of merchandise during storage and distribution.

WHOLESALE DISTRIBUTORS

Distributors are the link to virtually every institutional food service operation in Vermont and a true resource for farms that do not have transportation or storage infrastructure. Vermont is fortunate to have a number of distributors who look for and showcase local products. When purchasing from a distributor, whether you have a contract or purchase occasional items, ask how much of the food they distribute is locally produced, and don't hesitate to ask if they can increase that amount. Request local food products whenever possible, and the names of the farms they purchase from — it makes the distributors more aware of customer demand.

DIRECT PURCHASING

Some schools purchase bulk food products at wholesale prices directly from a farmer. Food service staff call farmers directly, or a farmer may contact food services. Working with individual farmers can take some getting used to, especially if you're accustomed to one distributor supplying everything from food to cleaning supplies. Working with several local

DELIVERY ARRANGEMENTS are often a unique collaboration between farms and schools. Some options to consider are:

- **Farmers may choose to work with a school district that utilizes a central food service facility in order to deliver to one site rather than to multiple schools.**
- **Growers may add destinations to an established delivery route. For example, a farmer may be able to deliver to schools on the same day she goes to the farmers' market or delivers to restaurants.**
- **If several farms are delivering to a school district, they could collaborate by bringing their products to one farm and have that farmer do the deliveries for all of them.**

Doug Davis, the Burlington School Food Service Director, has been sourcing vegetables from a variety of local farms with great results. He includes five local products in the high school, middle school, and upper elementary school sandwich bars. He established growing contracts with four farmers for vegetables that are lightly processed and frozen during the summer months. Shredded kale, swiss chard, zucchini, and basil are being used in recipes year-round.

farmers means multiple ordering and invoices (unless you have another payment arrangement). While at first this may appear like too much additional paperwork, with time, the extra step can fit in with other administrative tasks. Here are some direct purchasing options:

CSA (Community Supported Agriculture)

CSA subscribers receive weekly shares of a farm's harvest, after paying farmers up front for operating costs. If it's a good harvest, subscribers benefit. If the harvest is slow, subscribers may not receive as much product. As a subscriber, a school can be a part of a farm harvest, which is an opportunity for classroom education. CSAs are a good alternative for smaller schools that can work with a rotating array of farm products. CSA shares can also supplement produce for harvest dinners and classroom taste testing. Many farms offer summer, fall, and winter CSA shares and work with schools on the payment. Parents and businesses also can donate CSA shares to schools.

IDEA!

Community members, parents, and PTAs can donate CSA shares for classroom taste tests or the food service

CONTRACT GROWING

In some school districts farmers and school food service staff sit down together each spring to identify foods the food service can use for the coming school year. Both sides agree on a price for a given amount of product. Contract growing can save your program money because if farmers can secure a market for their products ahead of time, you can negotiate a better cost per pound. Like the purchase of CSA shares, contract growing requires discussion and planning between food service staff and farmers, and each party assumes a little risk.

MARKETING COOPERATIVE

Some farmers work together to share in the distribution, marketing, processing, selling, or billing of their products. The benefit of buying from a cooperative like this is that it's easier for farmers to get their products to your kitchen and easier for you to call just one number. In Vermont, Deep Root Organic is an example of a regional marketing cooperative. In Central Vermont, "Farm to Table" is a cooperative program for schools, senior centers, and daycares (see p.32). And in Randolph, Randolph Area Family Farms (RAFF) coordinates the ordering, purchasing and delivery of local produce for four area schools.

DISTRICT PURCHASING COOPERATIVE

School districts can achieve significant savings by hiring or finding a part-time purchasing director/coordinator (such as a motivated parent with business experience) to arrange for sale prices on behalf of the school. This idea has been explored in Vermont and has worked in communities throughout the U.S. Several districts can share the cost of hiring a purchasing director who can then be a central broker and schedule orders, deliveries, or trainings for food service professionals shifting to local food.

DONATED & SCHOOL-GROWN FOOD

Grow a Row: Innovative teachers and food service staff have experimented with "grow a row for the school kitchen." Students plant a particular crop at a farm they visit in the spring. The following fall, the class harvests the crop and brings it to the school to be stored or processed and frozen for later use. To date, carrot and pumpkin crops have been tried, but why not corn, onions, and potatoes?

Grow a Row — At Home: Innovative food service staff have instituted "grow a row for the school kitchen" so that they receive produce donations all fall from local families. Family food donations to schools were the foundation of school lunches prior to the start of the USDA program.

School Gardens: School gardens are a good way of providing vegetables and herbs for school kitchens, classroom taste tests, and ongoing nutrition education. School gardens allow teachers, students, and community members to directly influence the food students have access to. In many communities, school gardens have also become a part of the curriculum in science, history, math, health, and literacy classes. Schools with gardens can actively tie in learning about soil and the way plants grow while benefiting the cafeteria. Even without a summer garden, schools with fall and spring gardens can grow early greens and storage crops for the school food service.

Case Study 4

FOOD WORKS' FARM-TO-TABLE PROGRAM CONNECTS FARMERS TO SENIORS & CHILDREN

The Farm-to-Table Program's mission is to make available to *all* members of our society food that is fresh, healthy, grown sustainably, and good for the local economy, connecting us to our neighbors and to the soil itself. In 2005, the program delivered over $45,000 worth of produce from local farms (purchased at fair market value) to senior centers, assisted living facilities, nursing homes, hospitals, community mental health programs, schools, early childhood centers, the Vermont Foodbank and local food pantries. Fifteen local farmers now serve 36 meal sites and food pantries.

The school program operates as a CSA: for a fee of $1,900 for an elementary school or $3,000 for a high school, it coordinates weekly purchasing and distribution of fresh and value-added produce to food service coordinators. Schools have the option to pay as they go. In the spring and fall schools can choose from a long list of fresh seasonal vegetables, from broccoli to zucchini. In the off-season storage crops such as potatoes, onions, winter squash, and apples are available along with two value-added products: an exclusive cut and peeled carrots and tomato sauce are both made using local ingredients at the Vermont Foodbank in Barre.

Each fall, an annual retreat is held where food service staff cook up seasonal recipes using local foods to serve to participating area growers. After lunch, farmers and food service staff develop planting schedules in coordination with the dietary guidelines and menu plans of the congregate meal sites and school lunch programs.

The result is a win-win situation for everyone. Seniors, children, and others dining at participating agencies and schools enjoy the nutritional (and gustatory) benefits of fresh vegetables. Local farmers boost sales as a new market opens to them. Workshops and networking opportunities provide food service directors with the resources and encouragement they need to utilize fresh produce and "cook with the seasons." A community begins to be recreated: people of all ages, and all social and economic backgrounds, connected by food grown and eaten *here*. As one elderly woman put it as she watched a box of particularly beautiful broccoli being unloaded at her assisted living facility: "This is why we still eat." And the wide eyes of the children at preschool as they watch the watermelons arrive from the farm down the road tell the whole story.

Tips for Working with Farmers

1. Set up business appointments with farmers. Try contacting them in the morning or evening, since many farmers are in their fields or marketing their crops during the day. During Vermont's fruit and vegetable growing season, connect with farmers at farmers' markets, roadside stands, U-pick farms, and even with neighbors who may plant more than they need. Follow-up on these connections.

2. Visit farmers at their farms. Observing local farm businesses in action will give you a better idea about availability, pricing, and challenges and will demonstrate to the growers your sincere interest in their product. Farm visits also give you the chance to speak directly to a farmer about what you want and need in the unique context of your farm-to-school relationship. You can then develop menus that accommodate what grows seasonally in your region.

3. Request free samples. When you meet a farmer interested in working with you, ask if he or she can provide a free sample of his or her product so that you can see if it will meet your school's needs and requirements.

4. Start small and have partners. Farmers can work with you and your school parent group or faculty to advertise the use of local foods or raise money for processing equipment.

5. Develop a purchasing strategy that offers a variety of ways farmers can accommodate you. Make sure you consider the labor costs and product costs to ensure your program is sustainable in the long run. Not all farmers have experience packing for school clients, so be sure to communicate how you like products packed and what size they should be so that farmers can meet your needs. To develop a reputation as a reliable customer, commit to a realistic purchasing volume and develop a realistic delivery schedule that suits your and the growers' needs.

6. Be aware of farm liability insurance coverage. Although this is less of a concern when buying fresh produce, you may require that your vendors carry liability insurance. Check with farmers to see if they do before entering into contracts that may require it.

7. Look for products that are difficult to obtain from long-distance shippers, such as highly perishable fruits, or small quantities of certain products.

8. Talk to farmers as early as possible so that they can plant vegetables accordingly. Hold winter meetings when farmers are less busy, and plan what products you want to use with the growers so that they have some notice and can plant what you want to buy. Consider storage crops. The growing season might be short, but many farmers grow and store winter vegetables.

9. Invite local farmers to have lunch at your school and sample the foods you prepare. Seeing what you are doing may inspire them to participate in your program.

continued

Tips for Working with Farmers *continued*

10. Work with the growers to devise a system for arranging supply replacements, such as putting "local fresh seasonal vegetable" on the menu to accommodate the ebb and flow of seasonal vegetables. Because you have to plan your meals so far in advance, having a little leeway with the vegetables you use will make it easier for farmers to accommodate you.

11. Compile a list, by school season, of about how much product you order and when. If you let farmers know what you need months in advance, they can produce it with your order in mind, saving planning time and money.

12. Clearly establish a payment schedule plan. Farmers costs are upfront and they are often accustomed to presenting an invoice and receiving payment upon delivery. School districts often have a payment cycle of 30-90 days and even longer. This difference in operation needs to be worked out between a school district and the farmer.

13. Look for growers who show a real willingness to work with you — and be willing to work with them. The school food procurement system does not naturally lend itself to buying directly from farmers. In developing a system that works for farmers and schools, both sides will have issues and concerns. Being open to dialogue and negotiation is the first step toward building lasting, viable partnerships.

14. Ask farmers to develop a weekly availability sheet. Having up to date information about availability, the size of food items, quality descriptions, estimated quantity, and price per unit will make it easier for you to make good purchasing decisions.

15. Keep talking. As you develop your farm-to-school relationship and school food committee, keep farmers in the communication loop with notice of meetings and content. Invite them to take part in the process.

Adapted from "Farm to School, a Guide for Food Service Professionals" by Alison Harmon at the Pennsylvania State University and others affiliated with the National Farm to School Program, 2002. Used with permission.

A Purchasing Agreement with a Farmer should include:

- ☑ The total estimated volume of each item to be delivered.
- ☑ Amount and price of standing order items.
- ☑ Delivery schedule: time of day, frequency, and location.
- ☑ Packing requirements: standard box, grade, loose pack, bulk, etc.
- ☑ Post-harvest handling practices; is the product pre-cooled? How clean should the product be?
- ☑ Cost per unit, payment terms, payment process.
- ☑ Names and phone numbers of the contact people for ordering and billing.

Economics: Affording Local Food

So does local cost more? The general answer, as perhaps it always has been, is "it depends." Distribution schemes, seasonality, availability through commodities, relationships between farmers and food service, and additional food preparation time to clean and process local produce are all factors to consider. Buying in season can drive prices down dramatically (for example, buying local salad ingredients in the fall). Also, some schools buy peak or slightly damaged produce and process it to freeze and use later. Schools are acquiring food processors or similar equipment and with these tools are better equipped to assume more preparation requirements.

Lessons learned from other programs and experiences across the state and the country have shown that there are successful methods to support a shift to local purchasing. Some schools have saved costs in other areas, such as reducing solid waste costs by composting or implementing smaller portion size or self-service mechanisms, to help support the shift to purchasing and processing fresh and local food.

Healthy Lunches Offer Value Beyond Dollars:
Does your allotted food service budget reflect your school district's commitment to student health? The most important 'savings' from improved school meal programs accrue in the form of healthier students with increased attendance and improved academic performance and attitudes, going on to become healthy, productive adults.

The Center for Ecoliteracy
USED WITH PERMISSION

Other programs have made use of volunteers to reduce or save on labor costs, allowing for a more flexible budget and increased food costs. It is clear that these programs require the support of parents and communities to raise awareness and generate enthusiasm in order to sustain a shift to local purchasing and seasonal foods. Active fundraising can do just that, while also supplementing local purchasing funds.

Motivations and Barriers to Purchasing Local Foods

What motivates school food service directors to buy local foods? VT FEED interviewed 14 food service directors, from large to small schools, to ask this question. Their answers were consistent with national studies and were mostly based on perceptions and some misperceptions of purchasing foods locally.

The most common **motivations** for local purchasing included:

- Expectations that local food is higher quality
- Desire to support local markets
- Assumptions that local is fresher
- Perception that local food is likely to be organic and they want to support organic food
- Students, parents, and/or school community members are requesting the school food program purchase locally.

The most common **issues** or **barriers** to local purchasing included:

- Variety and availability can be limited; seasonal limitations
- Higher transportation costs affect distributors availability and willingness to deliver, especially for small rural schools.
- Difficulty communicating with farms to arrange transactions
- Higher cost of local items, especially meats and cheeses
- Lack of knowledge of accessing local food sources—where are they?
- Belief that there is community support for "ultra-local" (in same town) but perhaps not the support for statewide "local"

School food service directors also identified **what is needed** to prepare more fresh or local food:

- Training for specific skills (eg., cutting efficiently)
- Awareness of where food is grown locally and under what conditions
- New recipes or new ways to use produce that don't require intensive prep times
- More preparation areas and/or more storage space
- Household appliances (salad spinner, vegetable steamer, potato cutter to make oven baked fries, mixer)
- Industrial machines to peel, shred and slice large quantities of produce
- More human power or volunteers to clean and prepare fresh produce

Overall, it is important to note that the food service directors in this study group were proud of and positive about the local food purchasing that they had already done. Many cited that they had either received positive responses and appreciation from the school community or had strong personal convictions about supporting local farmers. Most seemed amenable to increasing local purchasing, though many also felt they lacked knowledge of local growers with adequate supply, delivery mechanisms or time to coordinate and organize an increase. Because this study

group already had experience with VT FEED and were perhaps already supportive of local purchasing, it would be hard to ascertain the level of statewide support at the school food service level without a greater statewide survey. However, anecdotal evidence suggests awareness and support is increasing as the awareness of healthy food in schools rises.

Analysis of School Food and Local Purchasing in Vermont

From: Analysis of School Food and Local Purchasing in Vermont Schools, 2003-2004, and "Impact Assessment of Vermont Farm 2 School Program," April 2006, both by Vermont FEED.

VT FEED has conducted two economic analyses to understand the current situation and better identify potential opportunities. A 2003-04 school-year study involved in-depth interviews and purchasing analyses of 14 schools. A 2006 study assessed the impact of Farm to School programs statewide.

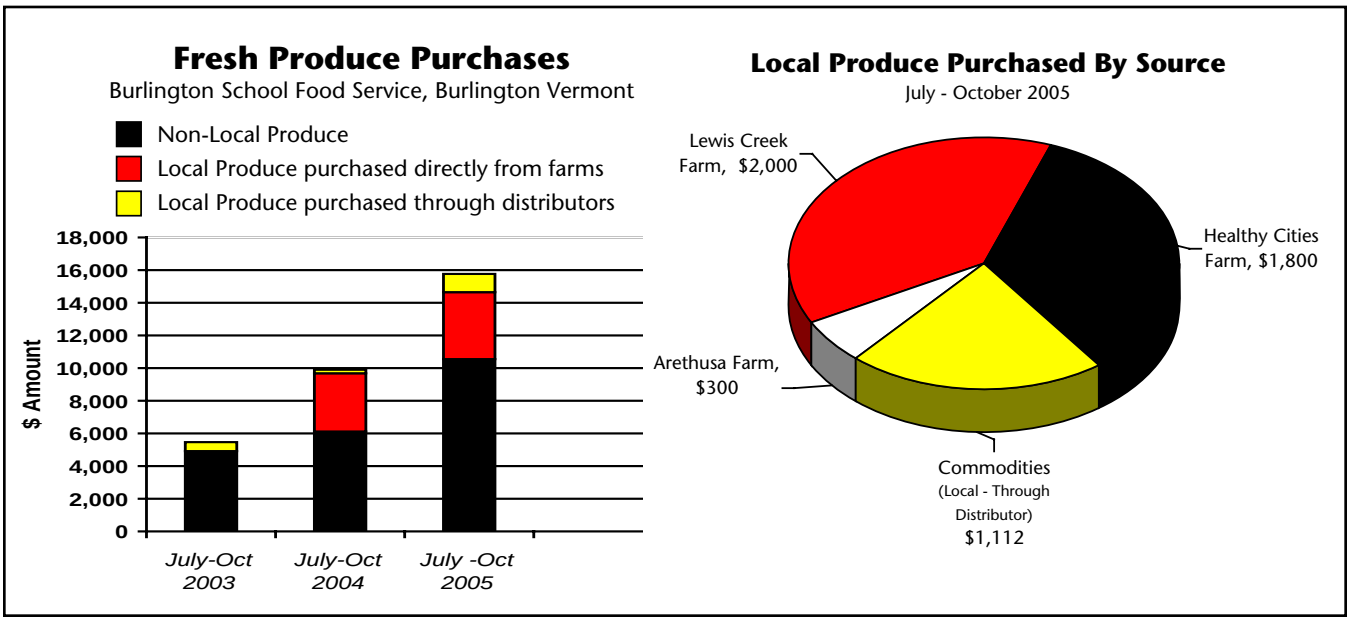
What is the current situation in our schools?

- In 2006, school food purchases represented less than 0.5 percent of the total sales of fresh fruits and vegetables grown by Vermont farmers.
- Vermont cheese and other dairy products purchased by schools account for only 0.03 percent of overall sales of these Vermont products.
- Even the state's significant purchase of milk and dairy products other than cheese accounts for only about 1.2 percent of overall sales for these Vermont-made products.

What is working in schools that are trying Farm to School programs?

- Schools working with Vermont FEED or other Farm to School projects have increased their fresh and local produce purchases 10%-54%.
- Schools are able to subsidize any additional costs of fresh and local produce by using recipes that capitalize on the use of commodity food items. Overall the total cost of the ingredients for these recipes are equivalent to similar recipes not using commodity and local product.
- The school district of Vermont's largest community, Burlington, has doubled its purchasing of fresh fruit and vegetables and increased its budget for local products by over $10,000 in the past 3 years (see graphs on next page).
- Research showed that prices of crops vary widely, especially due to the seasonality of crops, but evidence in 2003 did not suggest that local produce cost more than nonlocal in most cases.

In the short-term, the school food system's capacity to increase purchases of Vermont products is limited. But by addressing infrastructure, behavior,



NOTE: The purchase of fresh produce did not significantly increase the overall food service budget because savings were found elsewhere.

and costs, that capacity will increase. At whatever level of purchase, the value of buying fresh local food is greatly enhanced by the direct connection of healthy eating with a place-based nutritional and agricultural curriculum. Local school food purchases alone will not change basic nutritional values nor will it secure the future of local Vermont agriculture. The driving goal in the farm to school initiative is to promote healthier children and a healthier Vermont food system. Buying more local product should be seen as a means to achieving those goals.

Affording Local Food: Ideas from Experience

Common themes emerge when discussing the costs of school food. It is critical to account for actual food costs in relation to labor and benefit costs, participation rates, and reimbursements. In addition, budgeting becomes an important tool to plan for changes in purchasing. Hidden costs and benefits can be left out of a pure economic analysis, but must be considered when documenting or planning for changes in purchasing in an actual school food program. Ease or difficulty in ordering, distribution costs, preparation time, and complexities of procurement and distribution strategies are often perceived costs with local purchasing. Reduced packaging and shipping costs, reduced environmental costs, potential for positive marketing and community relations are often cited as benefits (though less tangible) of local purchasing. Perhaps most importantly, a new school culture develops that emphasizes experimentation with fresh foods and healthy, conscientious eating. When local food becomes a treasured part of the school environment, it is simply invaluable. Countless

experiences nationwide demonstrate that connecting schools with local farms and sourcing more food locally contribute to this positive shift. Serving fresh, healthy meals on a tight budget is the universal mission of food service staff. With school food program budgets expected to break even or generate a profit, the task is particularly challenging. So how do schools purchase locally when local food products can be more expensive?

Start slowly. Begin sourcing a few products you know your program can afford. One Vermont school purchased local carrots from September through March in their first-year VT FEED program. The carrots stored well, were affordable, and the school liked using them. This began a relationship with a local farm that is still evolving. Taking baby steps is key!

Look for competitively priced foods. While local products sometimes cost more, you may be surprised to find that many locally produced foods are competitively priced. Compare costs for storage crops like potatoes, carrots, and squash and see what the price differences are. Often there is less waste from local produce because it is fresher, which saves money.

Bring community members into local food plans. Identify local stakeholders: local farmers, restaurants, interested parents, school board members, the school nurse, and the physical education teacher. Involve them so they can understand the costs and benefits of shifting to locally based menus. Some schools have held fundraisers and benefit dinners; others have had PTAs dedicate annual funds to purchasing local. There are lots of unique ways to raise money for your lunch program.

Use commodities to your advantage. Combining local foods with commodity allotments has worked well in some schools. One school district's breakfast program features a carrot muffin that contains local carrots and syrup, along with USDA commodity flour, oats, eggs, and dried milk, or you can make a rice pilaf with seasonal produce (even squash can be cubed and used with other vegetables along with a mix of white commodity rice and brown rice). For a list of USDA commodities available in Vermont, contact the Donated Food Coordinator. For recipes using seasonal produce, see Appendix 2, p.92.

Dollars Spent on Local Food Represents the True Cost of Producing Food

The U.S. food industry is heavily reliant on a consolidated food system where foods are transported long distances from centralized growing points with help from government subsidies. While this system produces inexpensive food, it does not benefit small family farms. When you buy from a local farmer you are paying the true cost of growing, harvesting, and distributing fresh food. Your money goes directly to a community member who lives and spends money within your community.

Try Storage. Purchasing, processing, and storing food in bulk at the height of the growing season will save money because all produce is priced to move then. Decades ago every school had a root cellar and used it well. If you have storage room, take advantage of that space. Local foods can be stored, frozen, or processed for future use, or your local farmer may be able to store it for you. Root crops can last through the winter if kept in a cool, dark place.

Take advantage of low prices on bumper crops. During the harvest season, farmers and gardeners often have tomatoes, zucchini, and corn up to their ears! With a little community help in processing the product, you can save money and have vegetables for later in the year. One school had bushels of fresh sweet corn delivered one day. One of its classes peeled the corn for lunch, and then volunteers came in after school to cut the corn off the cobs of the remaining ears, and froze it for later use.

Get Volunteer Food Prep Help. Fresh fruits and vegetables take labor to clean and prepare. Ask for classroom volunteers, parents, seniors, and community members to help. Put an ad in your school newsletter, town paper, or at the grocery store requesting kitchen volunteers to prep, serve, or clean up. Do high school or college students need to earn extra credit or perform community service? Post a sign in student areas looking for kitchen volunteers. Is there a culinary vo-tech program at your school? Involve those students, too. Try to work with a few teachers who are interested in bringing their students into the kitchen on a regular basis.

IDEA!

Consider upgrading or increasing the school's freezer storage space – savings from procuring mass quantities of local food in season can offset the expense of a chest freezer.

Buy Seconds. Ask a local vegetable farmer if they sell "seconds" (which means the produce has a blemish or is dented or broken) at reduced prices or discounts. Food that is going to be cut up and cooked doesn't need to be picture perfect (like apples for apple crisp or broccoli for a stir fry).

Entice Teachers and Staff to Buy Adult Meals. If you sell more adult meals, you will have more money in your program. Try offering a free lunch one day to entice teachers to try the new foods you are serving. Conduct a teacher survey with choices of dishes they can request, or provide teachers with a little something extra with their meals, such as a side dish of soup or a new recipe.

Marketing Your Lunch:
Bringing Kids to the Table

Marketing is used to sell kids everything from shoes to soda. So why shouldn't it be used to sell healthy, local foods, too? When you buy foods locally, label them on the lunch line so kids can see the farms that grow their food. Some products may even be from a student's family farm! Promoting and marketing local food at school works best if it is a schoolwide effort reinforced by teachers, administration, parents, and food service staff.

Promoting Local Foods to the School and Community

Serving fresh, local foods can attract students and staff to your program. Advertise these efforts to increase the number of students, teachers, and staff that purchase meals. Offer a "free school lunch" coupon to staff for the first week of school, or make teachers a weekly quiche or sandwich wrap and baby green salad as a special lunch option. (Free lunches cannot be offered using federal school food service program funds, however.)

Getting the Word Out!

When marketing your local lunch program, keep in mind that the best way to publicize your work is through word of mouth. Students, parents, and teachers can help build support when you let them in on your plans, so reach out to all these groups via school newsletters, announcements, teachers, and signs on the lunch line.

- Invite high school newspapers to cover the story of your local purchasing.
- Invite reporters from community newspapers to cover the story as well. Also, when you're publicizing your changes, it's helpful to think about the messages you want to relay to the media, parents, students, and teachers about the program.
- Hold harvest dinners for the community and invite media to see your program changes. Invite

Marketing Ideas:

- ☑ Place an erasable board next to the lunch line to advertise what's for lunch and what is local.
- ☑ Ask the farmers you work with to provide their logo for the lunch line. One Vermont farmer brought in her farm-grown flowers at the start of the school year and placed a sign next to it: "Welcome back to school – from our farm."
- ☑ Ask teachers to talk to their students about what's for lunch and where the food comes from.
- ☑ Advertise and market the changes you make on your menu – no matter how small that change is.
- ☑ Publish new menus and regular kitchen happenings in school newsletters.

the farmers with whom you work to come promote the program and answer questions about their products.
- Make sure you continue to communicate information about your lunch program after changes are in place.
- Launch a quarterly school food newspaper with teachers and students. Students can produce the articles so that the school and community can learn more about your lunch program.
- Highlight the annual National School Lunch Week by serving local foods and/or trying new recipes.

The idea of improving children's nutrition and supporting local farms is easy to "sell" as a local media story. News outlets like covering "feel good" stories and school food is one. If you contact them, chances are they'll at least follow up and print information. Contacting local media can go a long way when trying to bring the community in to your program. The more positive media coverage a project receives, the more support it will generate from the school administration, school board, parents, teachers, food service staff, and local community. By collaborating with teachers, administrators, farmers and community members, different aspects of your work can be supported and developed by the appropriate individual and organization.

How to Contact the Media

- ☑ To begin building relationships to help you publicize your school, call your local newspapers and radio or TV stations and ask for a reporter who covers health, education, or agriculture. Tell the reporter who you are and what the school lunch program is trying to accomplish.
- ☑ Keep in touch with your contacts. Tell them of newsworthy items about your lunch program.
- ☑ Fax or email a press release to your contacts when you hold a local food event.
- ☑ Follow-up by phone whenever you send a release. Simply ask the reporter if he/she received the release and plans to cover the event.

Adapted from The Food Trust, Philadelphia, Pennsylvania
Used with permission.

When contacting the media, be sure to follow up with phone calls. Even if you sent them several notices or invitations, call them the day before events to remind them to attend. Keep all newspaper clippings and articles relating to your school; you can use them later to show your school's relevance in the community. Invite the media for events large and small. Inviting the mayor for a local lunch? Make a press release! Taste testing locally sourced zucchini muffins? Invite the newspaper! It is important that your community knows about the fun and important things happening in your school's cafeteria. Be creative! For example, send a local apple along with your press release.

On the following pages are sample press releases to reference when advertising a community event.

Name of Your School Here

N E W S R E L E A S E

FOR IMMEDIATE RELEASE
Insert Date Here

Contact: Your Name Here
Your Phone Number

NAME OF EVENT HERE

Your Town, VT - On February 19, about [number and grade of students] students from [name of your school] in [name of your town] will participate in a taste test sponsored by the [school or district] food service department and [anyone else involved]. The students will be offered samples of [type of dish] and [type of dish] that will be prepared by [grade level] students and Food Service staff. [Grade level] students will also conduct surveys with participants to determine whether or not the new food should be incorporated into the school's lunch menu.

Results will then be tabulated by [whoever will do the tabulating]. Events like this one have been occurring [how often] for [how long] at [your school] with great results. Since the beginning of the taste test program [these food items] have been incorporated into the school lunch menu, with a particular emphasis on locally grown, healthy food choices.

YOUR SCHOOL'S ADDRESS HERE

Name of Your School Here

N E W S R E L E A S E

FOR IMMEDIATE RELEASE
Insert Date Here

Contact: Your Name Here
Your Phone Number

Your Town, VT – Friday, November 26 [school's name] School hosted its annual Harvest Festival. The school was bustling with excited students and friendly community faces. The lunch time event featured food harvested from local farms, as well as music performed and art made by the students themselves. Students participated in the planning, making and serving of the food, helping to create the menu and cooking alongside Food Service staff. They also decorated the cafeteria with beautifully drawn harvest scenes. A Bountiful Harvest mural, to remain on permanent display outside the cafeteria, was unveiled.

The feast included [enter foods eaten here]. [Grade level] students conducted surveys throughout the feast, and in this way, the Food Service received a bounty of positive feedback about this year's event. [Quote from student or food service worker]

Other activities included [these]. [School's name] School is a [what kind of school] in [town]. This is the [number] year of the Harvest Festival. For more information, please contact [contact information].

YOUR SCHOOL'S ADDRESS HERE

Creative Local Food Fundraising

There are a number of innovative ways schools can raise funds to purchase and prepare local foods while building community relationships. Some ideas have the benefit of providing opportunities for physical activity for students, while others promote community service, and some even do both! Listed here is a handful of VT FEED's favorite ideas, plus a few tried and true local fundraising methods.

When planning any fundraising event, be sure to check with your local authorities regarding any rules or regulations with games of chance or sale of other goods.

1. Cookbook: Create a school cafeteria cookbook and sell it as part of a yearly fundraiser. Can an English class and art class team up and make a cookbook as an assignment?

2. Harvest Dinner: Hold a Farm Harvest dinner benefit to raise money for the school to purchase from local farms.

3. Sled-a-thon: Each student can seek pledges for each trip down the hill. One school held this event and raised over $2,000. A potluck was held afterward for the participants and their families.

4. Spring Yard Work: One soccer team offered to rake yards and spread compost at a bargain rate. They had 10 players working 3 half days each, and each boy made $240.00. Customers were asked to give a donation for the work, and everyone exceeded expectations.

Local Restaurant Raises Funds for School Lunch

As part of the theme of bringing local foods to schools, American Flatbread held a "Benefit Bake" at its Middlebury restaurant. This tradition started six years ago at Flatbread's Waitsfield restaurant where money has been raised annually for the Washington West School District.

Each flatbread purchased during the designated weekend contributed $8 to school food funds. The idea of this annual fundraising weekend is to help schools buy more local and organic foods.

Jen Moffroid, Marketing Director for American Flatbread, met with parents, nurses, principals, and the food service departments of schools in the Addison Central Supervisory Union to introduce the idea for a Flatbread Benefit Bake and generate support.

"I was impressed that committees already existed in many of these schools working toward getting more local, healthful and organic food in the schools," she said. "This is a real movement for school food change."

The event in Middlebury was a success! Each of the eight schools received an equal share of the $1600 raised.

5. "Chuck a Puck at the Rink": A hockey team plays this game between the 2nd and 3rd periods of the hockey game. Each puck is numbered and sold for $1. Everyone throws them on the ice and the one closest to the center gets half of the money sold. In one season, they raised $24,000. You could adapt this game to basketball games using numbered bean bags.

6. Administrative Fun: Have money jars available into which students and staff place spare change. The school secretary can count the amount in the jars on a daily basis and post the total. At set increments (for example, $100, $200, $500), the principal and/or vice-principal has to do stunts such as dress as a cheerleader, do cheers, act out a scene from a play, etc. One school earned over $3,300 in one year.

7. G.S.T. auction (goods, services, and talents): Solicit local businesses (or parents or groups of school children) to donate anything they can offer. One school had a number of items available for auction, including a week at a time share (airfare not included), a week at a cottage, hair care services, a lawn tractor, furniture, food and restaurant gift certificates. This school raised $20,000.

8. "Halloween Insurance": One organization sold insurance for $1 and guaranteed to clean up any soaped windows, cars, etc. the day after Halloween. They had six clean-up calls and everyone tipped them, despite purchasing the insurance. A group of seven members made over $1,000.

9. Plant sale: Ask parents to donate plants for a sale. They can divide their perennials and share them with other families. A garden club makes about $1,000–$2,000 each year from a sale like this one.

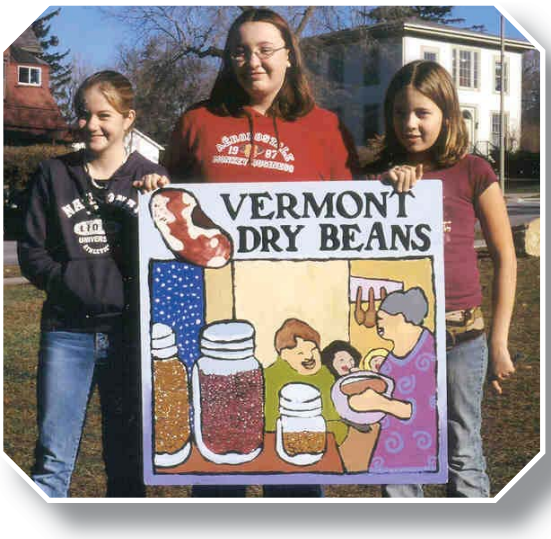
10. "Count boxes" of potatoes sale: These are 50-pound boxes of uniformly sized, washed, baking potatoes that are generally only available to the restaurant trade. This activity is well supported in schools in New Brunswick, Canada.

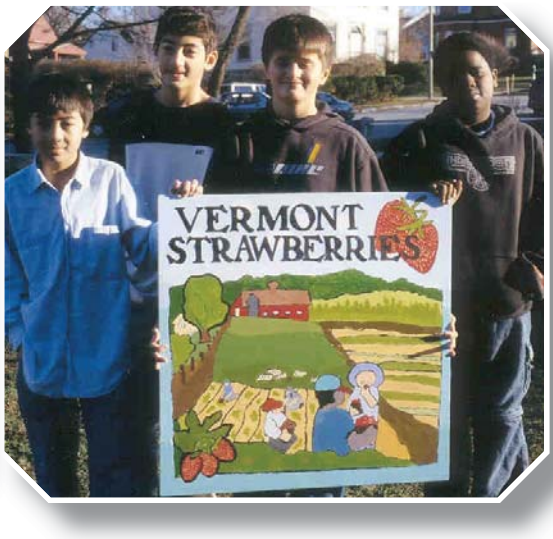
Modifying Cafeteria Spaces with Art: Why Food-Related Art Matters

Bonnie Acker, Burlington artist and parent

THE ROLE OF ARTWORK

In the Edmunds cafeteria, the food-related artwork complements the food-tasting discoveries. Art, viewing art, and creating art plays a key role in strengthening what is being learned through hands-on prep and sampling. The message of food educators — that schools could be serving more whole, fresh, and local food — can resonate from images that mirror those ideals about food. And if this artwork is produced by students themselves, the sensory experience of creating those images will strengthen other ways of learning about new foods.





THE VALUE OF CAFETERIA ART

High energy is abundant in the Edmunds Cafeteria, where 800 K-8 students eat every day surrounded by colorful and beautiful farm- and food-related artwork — artwork that they have created.

Twenty-four large panels depicting Vermont milk, mesclun, strawberries, squash, and more were painted by 70 6th, 7th and 8th graders in a cooperative fashion. Many of the artists sampled raw carrots and whole grain carrot cake. Students who enjoyed the brushing on of colors as well as the chewing of the carrots may now look at the art with a deeper appreciation of what local, great tasting food really means.

Ten additional Vermont food panels were created by 90 elementary students who also had the chance to taste local carrots and carrot cake. Exploring so many interrelated senses, simultaneously, enabled those students to come away with an experience more memorable than art or food sampling alone.

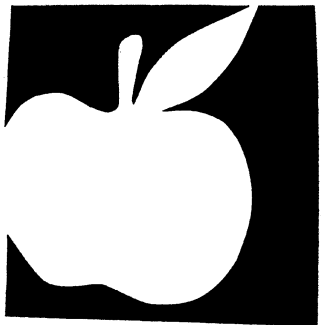
An abundance of shiny and bright tiles in one of the cafeteria entranceways were shaped by 300 elementary students and staff. Cows and maple sap buckets, broccoli and beans beg for touching from all who pass by. Running one's hand over corn and chickens every day may indeed contribute to culinary bravery and enjoyment!

Paintings of Vermont apples to zucchini, installed in the front hall, were painted by 89 middle school students. In a stunning rainbow, the simple images of vegetables, fruits, and herbs tell an intriguing story of delicious and lovely locally grown food. Most students painted from an actual food that they could hold, turn, and examine. They also had the opportunity to sample several dishes made from local crops while guessing the origins of the ingredients.

There is no way to prove that food-related artwork in a school cafeteria causes students and others to embrace healthier foods. But those scenes become part of the dynamic atmosphere in which new food is being explored, rejected or accepted, and celebrated.

For all students and staff alike, food and farming images are a subliminal message that new foods can be a part of one's life. For those students who helped produce the artwork, the images are a tangible reminder of their art-creating experiences. Pride from painting a purple cabbage might inspire open-mindedness toward sampling confetti coleslaw. Seeing one's strawberries day after day could help inspire confidence when yogurt parfaits with frozen berries are offered for the first time.

Creating art and sampling food both involve myriad senses, and the more educators enable students to explore the connections, the richer the students' lives — all our lives — will be.



Classrooms & Cafeterias

"I have realized that making food is a great way to get kids interested in talking about healthy choices and trying new foods. The changes in our school have been felt throughout the whole K-5, in school and at home!"

Pamela Quinn, 5th Grade teacher

Bringing Lessons from the Classroom into the Lunch Room

Classroom nutrition lessons familiarize children with grains, vegetables, and foods that they have never tried, which influences the kinds of food kids choose in the cafeteria.

Educational partnerships between teachers and school food service staff can provide context for classroom lessons and activities about food, nutrition, and agriculture. Teachers have developed a range of curricula around food. Some classes have been growing their own vegetables to create connections around the places from which food comes; other classes have taken part in cooking lessons and demonstrations led by local chef volunteers.

Classrooms can also help familiarize students with new cooking practices. Because hands-on food preparation experiences in school have declined and time pressures prevent working parents from transferring cooking skills to their children, opportunities to observe and practice food preparation in the classroom are as valuable as ever.

"Classroom nutrition lessons do have an impact at lunch. Lots of kids have discovered they like foods they wouldn't have eaten at lunchtime. It's a great place for tasting."

Alison Forrest
School Cook and Nutrition Mentor
Brewster Pierce Elementary, Huntington, VT

If we were to look into a crystal ball and see the future of the present generation of children, what would we see? As a medical professional, I can't help but worry about the health of these children, now and in the future. At this point we are well aware of the daunting statistics that illustrate our country's obesity rates and associated chronic illnesses and the progression of related problems over time.

We have a captive audience of children in our schools who are ripe for receiving health information regarding nutrition and physical activity. What meaning does this information have if it isn't grounded in what is relevant to them? That is why making farm to school connections, eating locally grown foods, taking field trips to farms, serving healthy foods in cafeterias, and making policies for school districts that support schools moving toward more healthful environments makes so much sense.

Putting our energies into making sure kids grow up healthy will only strengthen and vitalize our communities. We are in a position to change the future health of our children and families. Supporting children, schools, farmers, families and communities on the path to better health is a worthy mission for us all.

Sue Dillon, Waitsfield Elementary School Nurse

Taste Testing

Traditionally, growing, preparing, and eating food involved all five senses: sight, touch, smell, hearing and taste. Today's school-food movement is giving these senses and our emotions new chances to flourish in classrooms and cafeterias where new foods are being served and enjoyed.

For new foods to be accepted by students, teachers, kitchen staff, and others eating in school-based settings, an intellectual response of "I know I should eat that because it's healthy" is not enough. A student's "gut feeling" has to be encouraging that young person to take and then enjoy a green salad or a sandwich with sprouts or a whole grain cookie. This intuitive acceptance has to be developed through experiences involving one or more of the five key senses.

> "We started building anticipation by having the principals announce taste tests in the morning announcements, such as 'taste test of the month is confetti salad – be sure to try some.' Occasionally survey results would be printed in the weekly newsletter. That was marketing! The more people that know about this, the bigger the movement feels…and the more feedback people get."
>
> Abbie Nelson
> Local Purchasing Coordinator, VT FEED

If a student hasn't grown up with sensory healthy food experiences, then teachers and other good-food guides must introduce those experiences in the classroom and in the cafeteria. Food preparation, tasting, and rating is guaranteed to interest — and perhaps transform — even the most skeptical of students because they are seeing mountains of greens ready for salads, they are touching carrots and onions being chopped for chili, they are smelling in-the-oven cookies and apple crisps, they are hearing the curious comments of others around them and they are tasting raw ingredients as well as the finished fruits of their labors. Few other activities can match the sensory inspiration — and excitement — which a hands-on food curriculum can provide.

Even if students cannot help prepare new foods, the five primeval senses are also fully at work for taste tests and new menu items. What are others saying? Does a new food look and smell good? Does it feel and taste good once in the mouth? Embracing a new food may occur because a student hears that his or her best friend enjoyed making the food in a classroom workshop. Or a student may recall a very enjoyable food-painting time in art class.

Taste tests can be structured in a variety of ways, from informal events in the classroom, where a teacher may offer students samples of a fruit or vegetable as part of a wider lesson on food, healthy eating or nutrition, to formal cafeteria events that involve students and volunteers who help prepare and serve food, clean up, and conduct and tabulate surveys.

Coordinating a Cafeteria Taste Test

The goals of a cafeteria taste test are to involve students, teachers, parents, community volunteers, and the food service in building awareness about healthy food, to increase the consumption of healthy food, and to build the relationship between food service and the rest of the school community. When you are designing taste tests, it is important to form a school food committee, which should include food service staff. This group may choose foods based on these criteria:

- To increase consumption of whole grains, fruits, and vegetables
- To try recipes/foods that can be featured on the menu in the future
- To use foods that meet school requirements for nutrition, presentation, and cost.
- To try some local foods.

Agreement among other committee members on a food will ensure their participation, which will make everybody's jobs easier. In addition, you will need to:

- Identify a classroom that can prepare the food in the kitchen on the afternoon before or morning of the taste test and help serve and survey.
- Find parents and/or volunteers who can help serve, clean up, and survey, and find a classroom that can tabulate the results of the survey. Often, a teacher will embrace the opportunity to participate in this kind of "real world" math exercise with students.
- Make sure the taste test is announced the morning of the event to create excitement in your school.
- Check ahead of time that all the necessary food for the taste test is available.

TIPS AND PROCEDURES FOR SUCCESSFUL TASTE TESTING IN THE CAFETERIA: SURVEYING AT LUNCH

- You need 1-2 students to serve at each lunch period.
- You need 1-2 students to survey participants at each lunch period.
- Have your students use the survey below. You may want to go over the survey procedure with them first.
- Collect and tally the date from the survey. This can be a great student math project with graphing.
- Report the data to the school newsletter or local media and report whether the items will be on the menu in the future.

Be sure to have students do the surveying for the taste testing. Other students respond well when served by peers who made the product!

EXAMPLE:

Nelson Elementary September Taste Test Survey

Food or recipe tested: Vermont Minestrone
Made by 3rd grade and food service
Served and surveyed by 5th grade

Number of participants at table	"I tried it"	"I liked it"	"I'll eat it again"
𝍸 𝍸 ||||	𝍸 𝍸 ||	𝍸 ||||	𝍸 |||

See Appendix 1, p.84 for a blank taste test survey.

IDEA!

To increase the consumption of fresh vegetables, ask classrooms to experiment with recipes or create names for new dressings and dips to feature in the lunch line.

Coordinating a Classroom Taste Test

Some teachers have successfully introduced new foods in the classroom during short, informal, and regular weekly/monthly session. Working with the food service is crucial so that food tested in the classroom will be featured on the school menus. Parent and community volunteers can help organize the taste testing for more than one classroom or provide some of the foods to be tested. The key is to keep it simple: sliced cucumbers, different types of lettuce, or sliced pear can be part of a dynamic taste testing lesson. Accompanying the tasting with some "fun food facts," helps students become more familiar and accepting of the new food. Also, if they can be involved in preparing the food to be tested, they will be more likely to eat it.

Classroom taste tests can act as an important component of schoolwide, cafeteria-based taste tests, or they can stand alone. First, talk to teachers to see if they will allow you, a member of food service, or a volunteer to spend 30 minutes once a week for three to four weeks conducting classroom taste tests. Discuss ahead of time which foods you will choose and connections to curriculum. Then, using the freshest foods you can find, wash, cut, and prepare foods in bowls. Save a few uncut vegetables for demonstration. Uncover some interesting facts about the foods, or bring books relating to the foods to read aloud. In class, discuss the foods and pass around the bowls, encouraging each child to try.

"Feed Your Head" is an educational program of the Brattleboro Food Co-op. It provides free in-class programs for grades K-8 on topics such as "healthy snacks," "good carbs/bad carbs," "as sweet as sugar" and "local farms and food." The Co-op also provides discounts on fresh produce to schools that want to provide more healthy snacks and salad bars. As a result of this work and efforts to collaborate, other co-ops have sought nutrition education training and are offering discounts to schools on food purchases.

From Basil to Pesto Pizza - Taste Testing at Edmunds Middle School, Burlington

Taste Test Do's and Don'ts

From Dan Treinis, Edmunds Middle School teacher and the Burlington School Food Project

TASTE TESTS DO'S	TASTE TEST DON'TS
Involve as many teachers, food service employees, parents, and other interested, school community linked adults as possible	Expect things to happen too quickly. (*Substantive change takes time, dedication, set backs, disappointment and hard work.)*
Empower your food service workers to take over roles more than merely "lunch ladies;" food service workers have valuable insights into the eating habits and preferences of the students they serve daily.	Immediately ask kids what they want. *(You likely know the answer: pizza, french fries, ice cream, soda, and candy are likely to be their ideas for improving school lunch.)*
Provide students with choices from pre-selected locally grown or produced food items. Having options is good, but keep it within a reasonable scope.	Make the choices too quickly or too obscure. (*Keep it simple and honest. Kids will try lots of things but their palates are not necessarily ready for "adult" foods.)*
Involve students in the preparation, serving, sampling, and tabulation of results from cafeteria-based taste tests.	Begin placing new and strange foods on lunch trays without some introduction. (*Keep it nonthreatening by having a taste test table or a person circulate with samples on a tray.)*
Strengthen connections between teachers and administrators and food service personnel by attempting to include them in normal school functions such as faculty meetings, awards or celebration ceremonies, lunch-related events and other in-class goings on.	Think changes can be made without the help and support of the food service personnel and food service director. (*Everyone should be focused on the same goal: serving students nutritious food, and it takes a variety of adult roles to see this come to fruition.)*
Think sustainability — testing food items you can serve with some regularity is better than offering exotic foods that will never find their way to lunch trays.	Be discouraged if food isn't accepted right away. (*Word of mouth and "peer pressure" will help build interest.)*

Case Studies

Case Study 1

HARDWICK ELEMENTARY USES TASTE TESTS TO EXPAND THEIR MENU

At Hardwick Elementary School, teachers and the Food Service Director, Val Simmons, have started taste testing at regular intervals. Each month the school food committee collectively decides on a grain and vegetable to feature and which class will conduct the taste tests. Val helps the class with the recipe, and feedback from the testing is returned to her. Popular foods are then served on the lunch line the next month. Each September Val offers a free teacher-meal-day as one way to inspire staff to buy lunch.

Case Study 2

FERRISBURG TASTE TESTS: TRY IT, YOU'LL LIKE IT — MAYBE

Kathy Alexander, Ferrisburg Elementary School Food Service Director, believes that one of the most important things we can teach students as part of the school lunch program is to try new things. Kathy explains: "It is critical that trying a new food does not mean having to like it. We know that children (and probably many adults as well) may often need multiple samplings of new foods before they begin to acquire a taste for a particular new food. So, when offering 'try its' to reluctant students, make sure that all the emphasis is on a student's willingness to try regardless of whether they like the food or not. Having opportunities to try foods can be a regular part of school lunch as well as an opportunity offered on special occasions. At Ferrisburgh Central School we do 'try-its' both ways. About four or five times a year (about every other month) we have a new recipe that we want to test. We make a smaller batch of the recipe and offer every student a sample as they go through the serving line. In these situations we ask students to fill out a comment card before they leave the cafeteria. The card asks three simple questions 1) did you like it? 2) is there any way you can think of to improve on the recipe? and 3) would you like to see this one the menu again? Students have given us surprisingly positive feedback and helpful suggestions and have really helped us to develop new regular items on our menu. These

opportunities are very empowering for students and they show students that we are not making food into another power struggle; we really want to know what they like. We also offer 'try-its' when the lunch count for the main meal item is particularly low. After all the students who ordered the item have been served, we offer the leftovers to students who chose the alternate meal or brought cold lunch. Sometimes students, especially younger ones, are just too scared to commit to an unfamiliar food. Often a student will try a food every time it is offered for an entire year. The next year when that food is on the menu the student will sign up and announce that it is his or her 'favorite.' We just have to be patient, create frequent opportunities, and keep making food that is so yummy they are sure to love it — someday."

Case Study 3

TASTE TESTING AT EDMUNDS ELEMENTARY AND MIDDLE SCHOOLS: ACCOMPLISHMENTS AND LESSONS LEARNED

Monthly taste tests have been established in the Edmunds Cafeteria for over two years. In order to make the classroom-cafeteria-kitchen connection, we prepared some foods in classrooms and some in the cafeteria kitchen with designated grades. Different grades were assigned different months so every student had the opportunity to participate. While it was important for students to see the large scale food preparation in the kitchen, we learned that we needed to be selective of age; for instance, kindergartners did best when preparing foods in their classroom instead of in the kitchen.

Every month we tried to incorporate local foods in our taste test as well as attempted to increase whole grains, fruits, and vegetables in the lunches and breakfasts. If the foods tried met with students acceptance (75% or greater for "will try it again" on the surveys) and were not difficult to produce, they would be features on the following month's menu.

Lessons learned:

• Try to have all the different groups of people who make decisions about children's lunch and nutrition involved in the school food committee. Community members who want to make change must learn the kitchen staff's perspective and challenges. Food service staff members need to learn what is going on at home and appreciate how much demand there is on teachers' time. Teachers must learn to appreciate what

is going on at home and behind the counter in the cafeteria. Teacher and community members may get to have a voice in what is being served at lunch, but they must realize that getting healthier food is a process that will take time.

• The food service director paid the food staff to be present at the meetings. Teachers are getting paid, so why not food service staff? That way the buy-in is more complete and faster, and everyone feels his or her opinion is equally valued.

• Be sure to keep school administration informed through email. Taking notes at the Food Committee meeting and distributing them via email to all involved parties helps people communicate.

• The more people who know about taste tests, the bigger the movement feels and the more feedback people give. Be sure to have your taste test plans and results announced in the school newsletter.

• Having a consistent volunteer or staff person to act as a link between classrooms and cafeteria can make an enormous difference in the success of taste testing. The volunteer can orchestrate the signing up of each class for preparing the taste tests, develop relationships with the food service staff, staff the taste test table, help with the survey, and take the minutes of the monthly food committee meeting.

After five months of taste tests the food service staff noticed that students' attitudes toward them were changing; indeed, having children in the kitchen has made a difference at Edmunds. Additionally, food service staff were surprised students were trying the foods. They enjoyed having small groups of students in the kitchen, and they wanted to know more about the food in order to talk about it with students. During the fall of 2006, the food service staff at Edmunds plans to feature more local foods.

Lastly, build community alliances with the local businesses and town organizations. Ask around; you never know who might be excited to help.

Case Study 4

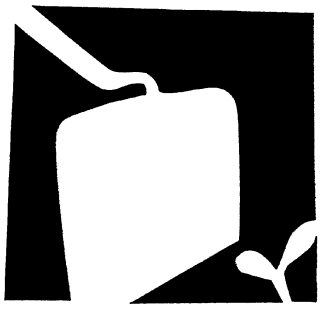
ALBURGH COMMUNITY SCHOOL: KINDERGARDEN NUTRITION CAPTAINS

At Alburgh Community School, kindergartners have many opportunities to connect to their food and local farms. As part of a greater food and farm curriculum unit, these 5- and 6-year-olds are adopting a calf, raising chicks in their classroom, and cooking with their teacher. Every morning, a small team of students visit the cafeteria to interview the food service director +about what is for lunch. It only takes 2 minutes, but then these nutrition captains report back to their classmates about the lunch options, describe what food group the different dishes belong in, chart if on a food pyramid, and describe what plant or animal gave us these lunch favorites.

Case Study 5

HYDE PARK ELEMENTARY HIRES A TASTE TEST COORDINATOR

Hyde Park Elementary School principal wrote and received a Vermont Wellness Grant to help implement the nutrition goals of the school's Wellness Policy. The nutrition committee hired a taste-test coordinator to run 6-8 weekly taste tests in the school cafeteria. Her job was to meet with the food service director and parent volunteers to plan on the foods to be tested. A parent and local chef helped get the local and fresh foods (also paid for by the grant). Berry and yogurt parfaits, maple granola, fresh vegetables and dip, and fresh fruit kabobs were among the foods tested. If the foods were well received based on the student surveys, they were repeated on the lunch menu. At the conclusion of the grant, the taste test coordinator, food service director, and the local farmer planned out a vegetable purchasing arrangement the following fall.



Community
Forming School Food Councils and Community Connections

"We have found that change in school food requires a change in school food culture. Rather than school breakfasts, lunches, and snacks being viewed as something to hurry through and fill children, they need to become an integral part of the school, and nourish children. Food, farms, and nutrition can become part of the school fabric, part of the daily conversation. In schools where this has been accomplished, often as part of the VT FEED Project, you can hear students asking each other about new foods in lunch boxes and anticipating the monthly taste testing of new foods in the classrooms and cafeterias."

VT FEED Staff

Working with and Engaging Others

Schools influence children's eating habits and set examples for lifestyle choices. The school food service director need not try to implement a farm to school program independently. To create and sustain long-term systemic change in schools, many communities across the U.S. are forming School Food Councils to address how to better serve children's health, nutrition, physical activity, emotional, and academic needs.

School Food Councils are comprised of parents, PTA members, teachers, principals, school nurses, food service personnel, students, and other community members. Some School Food Councils are comprised entirely of students who are the liaisons between classrooms and the cafeteria.

Organize a School Food Council in your school by gathering a group of concerned community members to discuss student health, foods sold and given away at school, the quality of school food service, food as reward, physical activity opportunities, school eating, curriculum and learning environment.

Ideas to Engage Others

The following information is excerpted from: The Center for Science in the Public Interest School Tool Kit. Used with permission.

Individual action can make a difference, but you may find the involvement of others is needed to convince decision makers to improve the quality of foods and beverages in your school. You can work with and seek the support of parents, community leaders, and health professionals who you think might share your goals. In your community, you may be able to work with existing networks of individuals or groups, or you may need to bring together a new group.

Potential Partners: Organizations & Individuals

- PTAs, teachers, principals, other school officials
- City, county, and state health departments
- Local school food service directors
- Health professionals, e.g., dietitians, nutritionists, nurses, dental hygienists, dentists, doctors, etc.
- State/local affiliates of national organizations:
  - American Cancer Society
  - American Dental Association
  - American Diabetes Association
  - American Dietetic Association
  - American Heart Association
  - American Public Health Association
- City/county/state Cooperative Extension Services
- Large health care providers, e.g., hospitals, HMOs
- Community food and nutrition programs and local organizations involved in domestic and world hunger problems, e.g., WIC clinics, food stamp offices, church groups, food banks
- Food cooperatives
- Produce industry
- Local community service organizations (e.g., Lions Club, Kiwanis Club, Rotary Club, Knights of Columbus, etc.)
- Community development corporations
- Local colleges or universities
- Public Interest Research Groups (PIRG) based at colleges and universities
- Women's groups and clubs (e.g., American Association of University Women, League of Women Voters, National Organization of Women, Junior League, Organization of Business and Professional Women)
- Local or state Wellness Councils (they might also have a list of work sites with wellness programs that may be interested in health issues)
- Local chapters of the NAACP
- Boy Scout and Girl Scout troops
- YMCA and YWCA
- Land Trusts
- Recreational centers and parks

1. School Food and Beverage Decision Makers must be included for successful and sustained school system change. These decision makers may include local school food service directors, principals and vice principals, athletic directors, school superintendents, school board members, PTA, city and county legislators, mayors, state legislators, governors, state departments of education officials and U.S. Department of Agriculture officials. Having "VIPs" on board either in your project or working for state-wide school food change can make your work successful.

2. Work with Existing Networks/Organizations. Sometimes you will find that there are existing school, health, or other interested groups or coalitions that you can work through or with to improve school foods and beverages. Work through the PTA either at the school or district level by joining a committee, making a presentation or getting a resolution passed. Work with a local school health council. The council usually includes members from within the school system, health department and community members such as doctors, dentists, nutritionists, and nonprofit organizations like the American Cancer Society and American Heart Association.

3. There are many Types of Alliances that You Can Develop to Help Achieve Your Goals. A loose arrangement of parents, healthcare professionals, organizations, etc., that share a common goal (for example: a list of individuals or organizations that sign a letter to the school board but do not meet formally); an ongoing network of individuals and/or groups that share common goals on one or more issues; and/or a separate organization of individuals or groups that share broader goals with its own organizational identity and perhaps with funding, letterhead and staff.

4. Get Others on Board. Identify individuals and/or organizations that might be interested in the issue and invite them to join your effort. Call, write, or meet with individuals or representatives from organizations to familiarize them with the substance of the issue and with the goals of your effort. Meet with existing coalitions to discuss and develop a strategy to achieve your goals.

5. Find Help in Likely and Unlikely Places. Look on-line, in the phonebook, or at the local chamber of commerce, which often has a list of local organizations. Approach individuals and groups that you know have

influence within your community or have expertise on an aspect of the issue. Recruiting a health care professional brings credibility to a meeting with decision makers and editorial writers by turning vague complaints about health-related topics into specifics backed up by medical practice and science. Do not ignore a local group because its national organization has not yet taken a stand on the issue. In many organizations the local chapter can decide its own stand on local issues. Also, search out local groups that are not affiliated with a national organization such as neighborhood groups or civic associations. If an individual or organization cannot formally participate, ask them to communicate on their own with decision makers. For example, the local public health department may not be able to take a position on legislation, but it might be able to develop a fact sheet on the link between soda and childhood obesity, which could be helpful to your cause.

6. Combine Strengths and Work Together. As a group, individuals and organizations might work together to influence and change policy in a number of ways, including: joint letters or visits with decision makers, public statements or press releases, organizing phone banks or letter writing campaigns, sponsoring public forums, circulating petitions, etc. Individuals or organizations that are not able to participate fully may still be able and willing to educate and activate people through newsletters, email networks, meetings and other means, or develop fact sheets and other materials.

7. Understand the Advantages and Disadvantages of Working as a Group. Creating an alliance with other stakeholders demonstrates to decision makers that a broad group of individuals and/or organizations share a common goal. Other advantages of working together are that you can pool resources and expertise, as well as share the workload. While there are many important advantages to working with others, there are some disadvantages. For example, coalitions can add to your workload. Building and maintaining a coalition can take time and resources away from working directly on an issue. In addition, group decision making and consensus building take time and may require you to make concessions in the substance of what you are advocating or the methods by which you work.

Connecting to the Community

Looking to involve your school in your community food system? Read on for ideas on how to begin.

WITH LOCAL FARMS

1. September & October could be local food months at your school. How about pairing up with a local farmer to arrange for a taste test of some of her fall fresh produce?
2. Summer produce is often in excess. Local farmers and gardeners can give, or sell at a reduced price, vegetable seconds. Tomatoes and zucchini, for example, can be made into a "Zippy Zucchini Tomato Sauce" which can be frozen for use during the school year, or sold as a fundraiser.
3. Arrange class trips to local farms. See the VT FEED Farmer Guide for farm-based activities.
4. Arrange with a farmer for a class to plant a fall crop or two for the school. The students plan in the spring (squash, carrots, or potatoes work well); the farmer cares for the row during the summer, and the students return in the fall to harvest for the school.

WITH PARENT/PARENT COMMUNITY GROUP

5. Cooks can be educators too! At school open house night, the cafeteria and kitchen can be included in the school tour.

6. Parents can volunteer in the cafeteria. Ask the PTO to form a parent "School Lunch Group" to facilitate a yogurt bar, potato bar, rice bar, farm visits, or fresh fruit at lunch.
7. Create an in-school monthly ´"Meet your child for lunch" event. Parents can sample the school lunch and the adult lunch money will go toward the lunch program.
8. Work with a teacher to create and conduct mininutrition lessons for classrooms to include a tie-in to what foods are served in the food service program. (See nutrition lessons/taste test template, Appendix 1, p.83.)

IN THE CLASSROOM

9. Enlist a classroom to grow lettuce under grow lights for the lunch program. The class can sell the lettuce for the school salad bar.

10. Work with a teacher to create and carry out a survey(s) to collect student opinion of new foods or recipes.
11. Set up special days when students can eat lunch in-class with tablecloths, napkins and candles for a unique dining experience!
12. Establish regular communication between the food service and classroom teachers regarding special themes or projects that the food service can tie into the food served. For example, if a class is studying ancient Egypt, cous cous salad and humus wraps could be served as a choice for lunch.

THE LARGER COMMUNITY

13. Create a school cafeteria cookbook and sell it as a fundraiser. Let local newspapers know about the project. Include your school's food based education plans in the cookbook as well as pictures of taste tests and the farmers you are working with.
14. Don't forget the media — get the story out.
15. Use already scheduled school and community events to highlight new foods and recipes the school is using.

Case Studies: Where All Three C's Meet (Classroom, Cafeteria, and Community)

ORANGE CENTER SCHOOL: Welcome to the Orange Center School, "Garden For Learning" Experience!

Case Study 1

By Peggy Thompson, Orange Gardens for Learning Site Coordinator

It all began in 1999, when Food Works of Montpelier offered to assist in the development of a summer gardening program. Orange needed an outlet for good nutrition, a summer program for the children and exposure to the traditions and benefits of having an onsite gardening area.

Food Works has assisted Orange in developing and enriching their summer gardening program to be an educational, nutritional, and fun experience for six weeks during the summer months. From 1999 through the summer of 2004, the children continued to learn the nutritional value of foods and made healthy choices when choosing, growing, and preparing foods. Additional garden boxes or other gardening areas were added to enhance the children's experiences. Food Works continues to be an active component of this program, which is now funded through the

Orange Center School. Providing this program within our rural community creates an opportunity for the Gardens for Learning to reduce childhood hunger during the summer months.

The VT FEED program will continue to build on a continuum of hands-on food education and nutritional education from kindergarten through the eighth grade. The community is fully involved in this process throughout all of the seasons. This program is addressing food and diet related disease through sensory-based prevention. With the VT FEED Program, the school is able to incorporate fresh produce grown at the school into the curriculum. Within varied grades are grow labs that the students designed and built. Each spring these labs are filled with seeds and nurtured until planting time in June. Student involvement is the key to having a well-maintained garden. Students are able to plant, grow, and harvest the very seeds they extracted the year before. Including fresh picked vegetables and herbs into the snack plan for the day is very gratifying for students and staff alike.

"A school garden should be connected with every school where children can have opportunities for leisurely gazing upon trees, flowers, and herbs and are taught to enjoy them."

- John Amos Comenius (often referred to as the "father of modern education")

The Orange Center Community Center constructed a Quebec Bread Oven at the site, together with the school and community. This oven will be used for educational, historical, and community purposes and will fit in wonderfully with our school and community gardens.

The 2004 National Gardening Association gave the program an award "because of a demonstrated commitment to actively and creatively engaging youth in the gardening process and to improving the community. In addition, we were able to see from their application that the garden program will be sustained for years to come." The 2004 National Gardening Association award provided us with gardening supplies, seeds, fertilizer, and plants from companies from around the United States.

Orange now has a four seasons gardening program. Involvement by the school and community members and local and surrounding resources have assisted in the success of this program.

MILTON: UTILIZING COMMODITY PRODUCTS IN CLASSROOM LEARNING

Case Study 2

By Janet Lynch, Milton Elementary School teacher

Jane Lynch researched taste testing in her classroom through her nutrition lessons. She was able to successfully introduce new foods in the classroom in short, informal, weekly sessions.

"After observing plate waste in the cafeteria, I targeted eight fruits and vegetables that had been on the menu that week. Using observation, I determined how much of a portion the children had eaten. We then taste tested four of these fruits and vegetables in the classroom: fresh pears, canned pears, fresh carrot sticks, and different types of lettuce. After the nutrition unit, I again observed plate waste in the school cafeteria to determine how much of a portion my students had eaten. Three of the four foods tasted in the classroom showed an increase in the portion eaten by my students. The fourth item, salad greens, decreased very slightly. The fresh carrot sticks, which increased from 14% of a portion to 45% of a portion, showed the most significant increase. The fresh pears also showed a significant increase, from 11% of a portion to 25% (see Table 1). On average, the consumption of these targeted fruits and vegetables increased by 59.1%. I then examined the portions consumed of the four fruits and vegetables not tasted in the classroom: canned corn, canned pineapple, cooked broccoli, and canned peaches. The average portions eaten by my students stayed the same or decreased in size (see Table 2). Although sample size was small, it appeared obvious that taste testing had increased the consumption of the targeted fruits and vegetables. Children's comments also supported the findings that taste testing in the classroom encouraged them to try new foods. They reported being more willing to try new foods at home and in restaurants. The children perceived taste testing in the classroom as a safe and fun thing to do. Even the children labeled by their parents as fussy eaters were willing to try new foods in the classroom."

TABLE 1

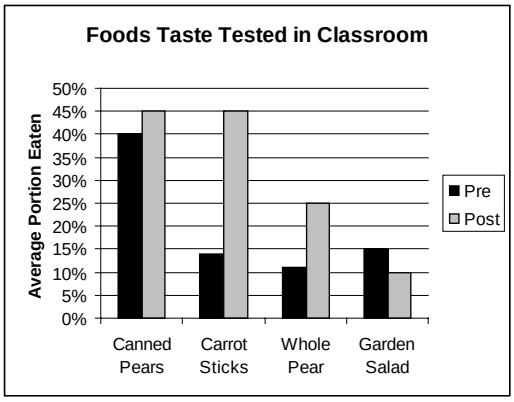
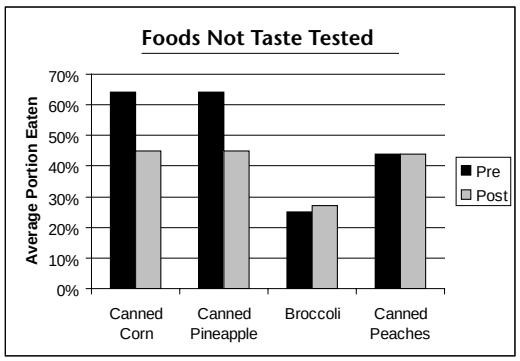


TABLE 2



Case Study 3

TEACHERS AND FOOD SERVICE STAFF FORMING CONNECTIONS IN SHARON

Sharon Elementary began its journey toward school food change during the 2004-2005 school year. The principal, several teachers, and the new food service director set up the purchase of a variety of produce from the local farm through a CSA format. Field trips to that farm, a harvest festival and monthly taste tests were established to highlight the connection between the school and local farms.

"Sharon Elementary has faced challenges in many forms," stated Keenan Haley, third grade teacher, and Donna Derenthal, food service director. "Buying local produce from the farm is more expensive than from the local distributor. Some teachers expressed that they can't add on food or farm education to an already busy curriculum. Finding time to implement a program, start and maintain a garden, prepare the local foods, and going on field trips has been challenging. However, we do realize that we have just barely begun. We believe that the connections between the local farms and school are important and we will continue to make that relationship happen!"

Case Study 4

BURLINGTON: THE IN-DEPTH STORY

Burlington, Vermont community partners were the recipients of a USDA CFP grant to do in-depth farm to school education and food system change. The project offered a comprehensive citywide approach involving multiple stakeholders. A highly skilled team of experienced professionals was assembled to work side-by-side with a dedicated core of parent and community volunteers to accomplish an ambitious citywide effort to improve nutrition for school aged children. Using a three-tired action strategy to accomplish its goals the project addressed: 1) Community Capacity Building 2) Farm/School Infrastructure and 3) Education Programs for Youth and Families.

Low-income students had access to healthier snacks in their after-school and summer programs, nutritional quality of school meals were improved by linking cafeterias to local farms, and the program educated children and their families about nutrition and provided them with real tools such as gardens and farm connections to better understand and provide for their own food needs.

In practical terms the activities that resulted were the formation of a city-wide food council, local purchasing contracts with the district for produce to be served fresh and to be processed over the summer and frozen (shredded zucchini, pesto, frozen berries), recipe development by students and food service staff, workshops for food service and afterschool staff on using local and fresh foods, and at the heart were taste tests. For this activity many community volunteers joined the efforts: City Market, a food co-op, parent groups, and local chefs and food producers.

The result is that the whole school food system is changing in many small ways: calzones and pizza are made by local producers specifically for Burlington school district, taste tests are a monthly event in three schools and will soon be expanded to others, the school food service is purchasing fresh produce from 4-5 local farms and has doubled the amount served to children and the amount that was local foods. Finally, the food service staff in the schools where the taste tests take place feel that the students respect them more since the taste tests started and view them as part of, not separate from their education.

Case Study 5

HARDWICK ELEMENTARY SCHOOL

Hardwick Elementary School, which has an enrollment of approximately 300 students, has been purchasing local foods for about four years and has been involved with the FEED program for three years. The program has been very successful for the school and community, as the focus is to connect classroom, cafeteria, and community.

Val Simmons, food service director, reports: "We have used many of the program tools: purchasing, taste tests, cooking with kids, ethnic menus, menu themes, and parent-student activities."

Some of the Hardwick Elementary projects are:

- Kids planting and harvesting crops at school and local farms. They use them for projects, snacks, and give them to the cafeteria. A pumpkin and squash processing party was set up and families, teachers, students, nutrition staff, etc. processed and froze the commodities for use throughout the school year.
- They have held many taste tests (usually monthly) in all classrooms and students have conducted surveys used for math, other studies, and for cafeteria use.
- The school hosts monthly family lunches that are thematically designed, usually connecting to classroom studies. They use the harvested and/or seasonal foods, and kids are involved in some way with the meal.
- Hardwick designs menus with seasonal foods when available. The school asks farmers for a list of available foods by the month and even by the week before the frost. The school also tries to create recipes that incorporate USDA commodities along with local foods.
- To serve labor intensive foods, they ask for help from classrooms: shucking corn on the cob, sorting potatoes by size, etc. They cut corn off the cob and freeze for many uses. (A family farm donated the corn one year and this year students are going to the farm to pick it and then they will shuck it for us).
- The students now make the food for our annual Open House. Along with the nutrition staff, they make the healthy foods in the classroom, copy and multiply the recipes, decorate the cafeteria, and conduct a parent survey. The autumn theme is very impressive to say the least.

These are just some examples of Hardwick's success. The school does many other things to keep connected and learn about foods every day.

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Appendix 1
Contact Information & Planning Tools

Organizational Resources & Local Distributors

ORGANIZATION WEB	ADDRESS	PHONE NUMBER
VT 4-H	www.uvm.edu/uvmext/4h/	656-0648
VT Agency of Agriculture	www. vermontagriculture.com	828-2416
Intervale Center	www. intervale.org	660-0440
NOFA-VT	www. nofavt.org	434-4122
UVM Center for Sustainable Ag	www. uvm.edu/~susagctr/	656-5459
VT Farm Bureau	www. vtfb.org	434-5646
VT Fresh Network	www. vermontfresh.net	434-2000
Black River Produce	www. blackriverproduce.com	228-5481
Squash Valley Produce	*- none -*	244-1290
VT Vegetables and Berries Growers Association	www. uvm.edu/vtvegandberry/VV&BGA/VVBGA.html	- none -
Deep Root Cooperative	www. deeprootorganic.com	635-7616
Central VT Farm to Table	www. tworiverscenter.org/cfarm.htm	223-1515
Vital Communities	www.vitalcommunities.org	291-9100
Burlington Food Service Co.	www.bfcfoods.com	272-5302

VT Cooperative Grocery Stores

COOP NAME	TOWN	PHONE NUMBER
Adamant	Adamant	223-5760
Brattleboro Food	Brattleboro	257-1841
City Market/Onion River	Burlington	863-3659
Buffalo Mountain Food	Hardwick	472-6020
Middlebury Natural Foods	Middlebury	388-7276
Hunger Mountain	Montpelier	223-8000
Plainfield	Plainfield	454-8579
Putney Food	Putney	387-5866
White River	Randolph	728-9554
Rutland Area Food	Rutland	773-0737
Springfield Food	Springfield	885-3363
Rail City Market	St. Albans	524-3769
St. Johnsbury Food	St. Johnsbury	748-9498
Otter Creek Food	Vergennes	877-3663
Nutshell	Wardsboro	896-6032
Upper Valley Food	White River Junction	295-5804

Internet Resources

www.foodroutes.org www.localharvest.org www.eatlocalvt.org

Calendar for Purchasing VT Products

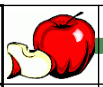
Incorporating local foods in the Vermont school menu does not need to happen at a grand scale to make a big impact. Start with introducing one thing at a time, adding seasonal vegetables into favorite recipes and enlisting teachers and parents for taste testing of new foods and recipes. Remember, eating foods in season is usually less expensive. For example, simply replacing tomatoes with grated carrots on a sandwich or salad bar in winter can save you money.

JANUARY	FEBRUARY	MARCH
• root crops served raw as sticks (rutabaga, turnip, parsnip) with hummus or bean dip • beet, parsnip and carrot salad*	• chili with root vegetables • roasted potatoes • potato bar • chicken pot pie with winter vegetables*	• late harvest soup with root crops • potato soup • rice pilaf with root vegetables
APRIL	**MAY**	**JUNE**
• potatoes and root vegetables in soups and stews • Vermont minestrone with root vegetables*	• spring roll ups with early lettuce, spinach, cheese and dressing • bok choy • stir fried onions and herbs on rice • chicken Caesar salad with spinach	• wash and freeze strawberries
JULY	**AUGUST**	**SEPTEMBER**
• shred and freeze zucchini	• process and freeze blueberries, zucchini, swiss chard, and kale	• summer squash spears with dip, fresh corn • corn chowder • late spinach mixed with salad greens • zucchini-carrot bread* • pesto on pizza or pasta
OCTOBER	**NOVEMBER**	**DECEMBER**
• apple crisp* • apple, cheese and lettuce wrap* • swiss chard and peppers chopped fine in rice pilaf • process and freeze pumpkin and squash	• cabbage patch salad* • kale chopped fine in soups and casseroles • Vermont minestrone soup*	• winter squash in bread* • small squash in rice pilaf • sunshine soup*

NOTE: Many crops can be quick frozen, without cooking, and saved to use throughout the school year, if there is freezer space. Examples tried in some schools: pesto, mashed squash, corn off the cob, shredded zucchini, shredded kale and swiss chard.

* Recipes for these items have been tested by school food service and students, and are available in Appendix 2, p.92.

Vermont Produce Availability Calendar for the School Year

	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
APPLES												
BEANS												
BERRIES												
BROCCOLI												
CARROTS												
CABBAGE												
CUCUMBERS												
EGGPLANT												
LEAFY GREENS												
LETTUCE												
ONIONS												
PEAS												
PEPPERS												
POTATOES												
PUMPKIN												
SQUASH (winter)												
SQUASH (summer)												
SWEET CORN												
TOMATOES												
TURNIP/PARSNIP												

REMEMBER, local cheese, yogurt, meats, and eggs are available all year long!

Nutrition Summary and Recommendations to Help Follow Wellness Guidelines

The rationale for these elementary school recommendations is that children should be presented with opportunities to make only healthy food choices at school, and healthy choices should be modeled throughout the school environment.

Sugar: Excess sugar adds unnecessary calories to the diet. This includes added sugars that do not naturally occur in food. Added sugars are sugars and sweeteners (white, brown, and raw sugars; fructose, honey, molasses, anhydrous dextrose, and crystal dextrose), and syrups (corn, malt, pancake, maple, and high fructose corn). Naturally occurring sugars present in milk and fruit, such as lactose and fructose are not considered added sugars. (Dietary Reference Intakes: Energy, carbohydrate, fiber, fat, fatty acids, cholesterol, protein, and amino acids. Institute of Medicine of The National Academies. 2002)

Fats: Higher intakes of saturated and trans fats, and dietary cholesterol raise low density lipoprotein (LDL or "bad") cholesterol in the blood. An elevated LDL cholesterol increases the risk of developing coronary heart disease (CHD). To decrease LDL cholesterol and the risk of CHD, substitute monounsaturated and polyunsaturated fats for saturated and trans fats and decrease the intake of cholesterol. Trans fat can be found in vegetable shortenings, some margarines, crackers, candies, cookies, snack foods, fried foods, baked goods, and other processed foods made with partially hydrogenated vegetable oils. Small amounts of naturally occurring trans fat can be found in some animal products, such as butter, milk products, cheese, beef, and lamb. Labeling of trans fats on food labels will be required starting January 1, 2006. (FDA information on the web accessed August 22, 2004 http://www.cfsan.fda.gov/~dms/qatrans2.html#s4q2)

Sodium: Schools should be aware of the sodium content of foods served and sold. According to the FDA foods labeled healthy must contain less than or equal to 360 mg per serving for an individual food and 480 mg per serving for meal-type products. (FDA's food label information on the Web: www.cfsan.fda.gov/label.html Hypertext updated by clb 1999-MAY-17)

Caffeine: Caffeine is a central nervous stimulant that in children may cause nervousness, anxiousness, fidgetiness, or other similar behaviors. FDA requires that caffeine be listed on ingredient labels although herbal forms may not be recognized as caffeine sources. Herbal products containing kola (cola or kola nut), cacao (cocoa), guarana, mate, and green tea are known sources of caffeine. Durrant K.L. Known and Hidden Sources of Caffeine in Drug, Food and Natural Products. Journal of the American Pharmaceutical Association 42:625-29.

Beverages: Beverages are included that provide nutritional value. Fruit and vegetable juices contain a variety of nutrients including vitamin C; low fat and nonfat milk include calcium and vitamin D and vitamin A, while not adding excess calories from fat; water without added ingredients provides hydration without any calories. Flavored milks may be offered as long as they are low or nonfat and do not contain excess calories from added sugar.

If soy beverages are sold they must be fortified with vitamin A, calcium and vitamin D to a level equivalent to cow's milk (see note); other dairy alternatives of low nutritional value are not recommended. Serving sizes are limited to reduce consumption of excess calories. According to the food guide pyramid, serving sizes are 6 oz. for fruit juices and 8 oz. for milk.

Note on vitamin A in milk: "both vitamin A and its precursors called carotenoids, principally B-carotene, are present in variable amounts in milk fat. About 11-50% of total vitamin A activity in milk is derived from carotenoids… Because vitamin A and carotene exist in the fat portion of milk, lower fat and fat free milks contain little of this vitamin. Consequently, lower fat and fat free fluid-milks are required to be fortified with chemically derived vitamin A to a level found in whole milk or 300 IU per 8 fluid ounce serving". Source: Miller, G. et. al. Handbook of Dairy Foods and Nutrition 2nd ed. National Dairy Council. CRC Press, New York. 2000.

Snacks: Recommendations for snacks include those that a lower in calorie and contain nutrients. For all foods ingredient labels list items in the order of highest content in the food. If sugar or fat is listed first or second it is more likely that the item contains little nutritional value. Nuts and seeds are exempt from the fat restriction as they are high in monounsaturated fat, which can help lower LDL "bad" cholesterol and maintain HDL "good" cholesterol. There are not standard portion sizes for snacks but smaller portions are preferred to avoid excess calories from one food item. Best practice would be to include "whole" foods (close to their original state prior to processing, such as: fruits, vegetables, yogurt, cheese and nuts) whenever possible, which contain not only all the original nutrients but also health promoting phytochemicals and other biologically active substances.

These guidelines were created by a working group of agency representatives and nutrition professionals including: Susan Coburn, RD, Chronic Disease Nutritionist, Vermont Department of Health; Jo Busha, Director, Child Nutrition Programs, Vermont Department of Education; Doug Davis, Director of Food Service, Burlington Schools; Carol Frary, MS, RD, Clinical Research Coordinator, Department of Nutrition and Food Sciences, The University of Vermont; Dorrigen Keeney, MS, RD, Nutrition Programs Specialist, Vermont Campaign to End Childhood Hunger; Joan West, RD, Representative for the Vermont Dietetics Association; Denise Russo, Dairy Marketing Specialist, Vermont Agency of Agriculture

Food Service Equipment Suggestions

To process fresh and local produce, in particular, and to create new, home-cooked meals requires time and labor. Having equipment that can clean, chop, slice, and cook foods more efficiently, are invaluable.

Large scale commercial equipment can be great timesavers for efficient and cost effective processing of foods, but they require training to be used properly. A school that serves a large number of students can save on labor costs by purchasing equipment, such as a commercial food processor. A stove top or stand-alone steamer is useful processing produce to freeze or for cooking grains.

For some schools, depending on the number of students to be served and food products used, smaller, home appliances can be useful. A food processor can make grating and chopping for salad bar ingredients easier. That July bumper crop of zucchini can be shredded and frozen as fall and winter zucchini bread for soups. Cooperative district buying, processing, and storing of local foods can work well for the smaller elementary schools.

IDEAS!

- Publish a wish list in your school newsletter for functioning appliances.
- Inquire at local restaurants and industrial kitchens about purchasing their older equipment when they upgrade.
- Work with your school parent group on fundraising for that salad bar unit that will allow you to serve fresh vegetables every day.

Classroom Sample Taste Test: Sensing Greens

Preparation Time:
30-35 minutes

Class Time:
30 minutes

Goals:
- increase students' knowledge and acceptance of lettuce varieties via taste, touch, sight, and smell
- encourage students to choose and consume more vegetables in the school cafeteria and at home

Objectives:
Students will:
- Practice basic sanitation and safety rules
- Participate in tasting and describing varieties of greens grown in Vermont
- Name at least one nutritional or environmental benefit of locally grown, fresh produce
- Learn to enjoy the taste of vegetables

PREPARATION

1. Purchase lettuce greens from a local farm. Buy three different lettuce varieties you want to encourage students to eat.
2. Wash and dry several leaves of each variety and refrigerate in a plastic bag until ready to use.
3. Arrange the leaves of each variety on a large platter or board. Keep one head of each variety available for display.

IN THE CLASSROOM

1. Have students wash hands (or they can wash them before you arrive).
2. Introduce any assistants (parents are great helpers for this exercise!).
3. Explain that you have brought three different types of lettuce for students to try, and students should use their senses to describe and compare the varieties.
4. Explain why greens are an important part of the diet. For example, dark greens are an excellent amount of vitamins, minerals, and fiber that help bodies grow and stay healthy. By themselves, greens are low in calories and fat.
5. Ask the students: How many of you eat lunch in the cafeteria? What kinds of vegetables do you like to eat there? What are greens? Tell me everything you know about them. Which of these kinds of lettuce do you think have the most nutrients? Guess the name of each lettuce. Where is lettuce on the food pyramid?

ACTIVITY

1. Taste the lettuce.
2. Ask the students what it tastes like, and have students describe how it tastes, feels, smells, and feels. Students can draw pictures of the lettuce or talk about other foods that might go well with lettuce, using the Food Pyramid as their guide to build a balanced meal.

NOTE: This taste testing template can be used for any food you would like to try.

Taste Test Survey

DIRECTIONS: Use this form to collect information about the food you are taste testing!

1. Visit each class in the school or the cafeteria during lunch times.
2. Highlight the whole grain, local fruit, or vegetable that is in your product. (For example: if you are making zucchini bread, bring a zucchini)
3. Column One: Record the number of participants you are surveying (give them time to taste the food).
4. Column Two: Record the number of participants who tried the food.
5. Column Three and Four: Record the number of participants who liked the food and then will eat it again (at lunch or breakfast).

Product_____

Number of Participants (at testing table)	**"I tried it"**	**"I liked it"**	**"I'll eat it again"**

Appendix 2
Dietary/Cooking Information and Recipes

Substitutions to Help Meet Nutritional Guidelines

Dietitians and nutritionists recommend reducing the amount of sugar, salt, fat, and refined flour in our diets. But besides cutting out ingredients in our favorite recipes and risking tasteless disasters, what can we do? Listed below are substitutions for these ingredients in the proportions that work in recipes. As always, try a small batch with substitutions first to get the flavor and texture you want. Check out the VT FEED recipes on p.92 that have been tested in schools and already include these suggested substitutions for ideas and inspiration.

Substitutes for Sugar

The substitutes are designed for extra-fine granulated white sugar, the standard table sugar with which we are all familiar.

ALL-PURPOSE SUGAR SUBSTITUTES:

Reduce: Up to ⅓ of the sugar in most recipes can be eliminated with no replacement, reducing total calories. Don't reduce sugar when making pickles; sugar often plays a role in retarding spoilage.

Turbinado Sugar: Substitute 1 cup turbinado sugar for each cup granulated sugar.

Light Brown Sugar: Substitute 1 cup firmly packed brown sugar for every cup of granulated sugar. This substitution affects the texture and reduces the volume of baked goods; for example, it makes cookies darker and chewier. Don't make this substitution in white or sponge cakes.

Honey: Substitute ¾ cup honey for each cup of granulated sugar called for in a recipe, then reduce another liquid in the recipe by ¼ cup and add ¼ teaspoon baking soda (to neutralize the acid in the honey). Reduce oven temperature by 25°F. Substituting honey for sugar alters the flavor and tends to make baked goods moister, chewier and darker. Warning: Don't feed honey to babies who are less than one year old; it may cause infant botulism.

SUGAR SUBSTITUTES FOR BAKING:

Powdered Milk: Substitute up to ¼ of the granulated sugar in a recipe with powdered milk.

Maple Syrup: Substitute ¾ cup maple syrup plus ¼ teaspoon baking soda for each cup of granulated sugar, and reduce another liquid in the recipe by three tablespoons.

Maple Sugar: Substitute ½ cup maple sugar for every cup of white sugar. Maple sugar adds a rich, natural flavor to baked goods.

Molasses: Substitute 1⅓ cup molasses plus 1 teaspoon baking soda for 1 cup of granulated sugar, then reduce another liquid in the recipe by ⅓ cup and reduce the oven temperature by 25°F. This substitution will give a strong molasses flavor to the product. Replace no more than half of the sugar in the recipe with molasses.

Links:

For tips on how to reduce sugar in recipes, visit "Preparing Healthy Food: How to Modify a Recipe," at http://ohioline.osu.edu/hyg-fact/5000/5543.html. See also "Sweeteners for Vegans," posted at http://www.recipesource.com/misc/hints/00/rec0032.html, and the North Dakota State University Extension Service's "Ingredient Substitutions," at http://www.ag.ndsu.edu/pubs/yf/foods/he198w.htm. For tips on cooking and baking with artificial sweeteners, visit the FAQs at the Sweet'n Low web site: http://www.sweetnlow.com/faqs.html.

Substitutes for Salt

Salt is sodium chloride. Most recipes that call for salt are referring to table salt, which has additives like iodine (to prevent a thyroid disease), and an anticaking agent so the salt won't get lumpy in humid weather. Though we need some salt in our diet, most Americans consume much more than necessary. Too much salt can lead to high blood pressure.

SUBSTITUTE SEASONINGS:

Citrus Zest, Pepper, Herbs, Soy Sauce

Hatcho Miso Use especially in hearty soups and stews; 1 teaspoon salt = 2 tablespoons hatcho miso.

Salt Substitute

Kelp Powder

OTHER SALT SUBSTITUTES:

Omit. Reducing salt in a recipe may impair flavor and, in the case of baked goods, texture. Since salt enhances flavorings, use more of them if you reduce salt in a recipe.

Marinades. Marinating meats enhances their flavor without the overuse of salt.

Substitutes for Flour

For All-Purpose White Flour: For 1 cup, substitute ½ cup whole wheat flour plus ½ cup all-purpose flour. It is generally recommended that you replace no more than half the all-purpose white flour with whole wheat flour. Too much whole wheat flour in a recipe calling for all-purpose flour might result in a reduced volume and a heavier product. Experiment and see for yourself!

For Cake Flour: For 1 cup, substitute 1 cup minus 2 tablespoons all-purpose flour.

Substitutes for Fats

Substitutes for 1 cup of Mayonnaise
(for use in salads and salad dressings):
Use 1 cup sour cream or 1 cup yogurt or 1 cup cottage cheese pureed in a blender.
Or use any of the above for part of mayonnaise

Vegetable oil: Use oil instead of solids (such as shortening, lard, butter, or margarine), except in baking. Use less vegetable oil than recipe calls for.

SUBSTITUTES FOR BAKING:

Reduce: Fat can be generally reduced by ⅓, except in yeast bread or pie crust.

Yogurt: Use plain low fat or nonfat yogurt instead of sour cream.

Apple Sauce: Reduce up to ½ the fat called for with apple sauce. This substitution makes moister, denser, sweeter baked goods.

Substitutes for Rice

Most rice products will substitute for each other on a fairly equal basis in recipes, although their cooking times and the amount of liquid needed may vary. If possible, choose a variety of rice with a comparable grain length for the closest match. Substitute half of white rice with half brown rice. Because brown rice will take 10-15 more minutes to cook, start it earler than the white rice.
(See "Cooking Times and Proportion for Grains and Beans" on p.91.)

Sources: *http://www.foodsubs.com/ http://schoolmeals.nal.usda.gov/Training/train.html*

Creating Tempting Salad Bars at School - A Great Place for Local Foods!

8 Ways to Encourage Students and Faculty to Participate in Your Salad Bar

1. Use a variety of foods that offer mixable options.
2. Include commodity items, fruits and vegetables from local producers and the freshest produce you have on your shelves.
3. Take time to arrange a tempting display.
4. Keep vegetables crisp by covering well when not in use.
5. Include small cut vegetables that are easier for younger students to eat.
6. Students will choose fresh fruits and vegetables when salad bars look fresh, colorful, and appealing.
7. Rinse canned beans and chickpeas to reduce salt content and keep them fresh on the salad bar.
8. To clean salad greens quickly, use a salad spinner.

Resist the temptation to offer high-sodium items like pickles, olives, or bacon bits.

10 Great Salad Bar Ideas

1. Take stale bread and make croutons. Try garlic cheese, pizza, or herb croutons.
2. Offer a bowl of fresh chopped herbs to sprinkle on salads.
3. Get creative with your commodity allotment. Do you have extra chicken patties? Grill, slice, and serve in the salad bar. Too much frozen corn? Include that, too.
4. Offer different vegetable pasta or rice salads each week.
5. Try a Nacho Salad Bar with Mexican Black Bean Salad. Combine 10 cans of black beans with corn, diced tomatoes, fresh herbs and a little salt. Serve with shredded cheese, ground beef, steamed vegetables and baked tortilla chips.
6. Try a Make Your Own Sandwich Salad Bar. Include sliced meats, cheeses, tuna, and chicken salad with vegetables. Offer soup on the side.
7. Try a Rice Salad Bar. Offer 3 kinds of rice (which can be cooked with beef/vegetable bullion or spice packets), steamed or lightly sautéed vegetables and cheese to sprinkle on top. Serve with vegetables and salad dressings.
8. Try a Potato Salad Bar. Serve baked potatoes with beans, steamed vegetables, shredded cheese, ranch salad dressing and, of course, salad.
9. Try a Dessert Yogurt Bar. Include different yogurts, fresh, dried or canned fruit, and nuts.
10. Try an International Salad Bar. Prepare cold dishes to serve with salad. Include dishes from:
    - The Middle East: Hummus, falafel and pita with lettuce, tomatoes, sliced carrots, and cucumbers. Serve with yogurt sauce and tahini sauce.
    - Asia: Peanut or sesame noodles, cabbage, carrot, and sesame salad.
    - Italy: Antipasto and marinated Italian pasta salad with dressing.

9 Ways to Reduce Salad Bar Costs

1. Let students and faculty know how much they are eating by labeling serving tools with measurements, which will also help portion foods more effectively.
2. Cut down on waste by putting up signs that read, "Take only what you plan to eat."
3. Order lettuce from local farms. Because local lettuce usually has fewer miles to travel, damage to outer leaves is reduced. This translates to less waste and lower labor costs. Buy local to get more product!
4. Work with local farmers to consistently purchase surplus or sale items, even if the variety of items fluctuates from week to week.
5. Local producers and farmers grow more than just vegetables. Cheese, meats, maple syrup, and breads are available year-round.
6. Combinations of commodities can be used to create quick and easy salads. For instance, dried cranberries are a great topping and provide a good source of vitamin C. Utilize commodity bonuses in the salad bar.
7. Be flexible with the foods you want to serve. Allow salad bar items to change according to price, freshness, and season.
8. Serve foods that are in season. Importing tomatoes in the wintertime is expensive. Try replacing them with colorful beets or grated carrots.
9. Vegetable proteins such as kidney, black, pinto, and white beans almost always cost less, so serve them when possible.

Converting Recipe Yields

Most recipes are not written for large groups, so the ones from home, or from the Food Shows, the Internet, friends, or cookbooks have to be converted. Unless you are a wiz at fractions, converting recipes to larger quantities can be discouraging. Here's a simple way to go about this task.

1. Divide the desired new yield by the existing recipe yield:

$$\frac{\text{New yield}}{\text{Old yield}} = \text{conversion factor}$$

2. Multiply each ingredient quantity by the conversion factor:

old quantity x conversion factor = new quantity

EXAMPLE:
You have a recipe for 10 portions of broccoli casserole with cheese sauce, requiring 3 pounds of broccoli and 2.5 cups cheese sauce. You want to convert to 15 portions.

$$\frac{\text{New yield} = 15}{\text{Old yield} = 10} = 1.5 \text{ conversion factor}$$

So: Broccoli: 3 lbs. x 1.5 = 4.5 lbs. Sauce: 2.5 cups x 1.5 = 3.75 cups

NOTE: spices, salt, and pepper do not necessarily follow the same rule for converting. Use common sense when multiplying the amount of these.

Visualizing Serving Sizes

from Linda Berlin, UVM Extension nutrition specialist

The dietary guidelines suggest serving sizes for different food groups. These are hard to visualize and compare. The chart below describes what these servings really resemble.

Food Group	**Amount**	**Serving size**	**Resembles**
Dairy	1 serving cheese	(1.5 oz.)	9-volt battery
Grain	2 servings of rice or pasta	1 cup	tennis ball
	1 serving bread	1 slice	audiotape
	1 pancake	1 serving of grain	a CD
Protein	1 serving peanut butter	(2 Tbsp or 1 oz)	ping pong ball
	1 serving meat, fish or poultry	(3 oz)	deck of cards
Vegetable	Salad	1 cup	
	Fresh, frozen, or canned	One-half cup	
Fruit	1 medium sized fresh fruit		tennis ball
	Frozen or canned	One-half cup	

Cooking Times and Proportion for Grains and Beans

GRAIN (1 CUP)	WATER	COOKING TIME	YIELD
Barley (whole)	3 cups	1 hour, 15 minutes	3 ½ cups
Brown rice	2 cups	45 minutes	3 cups
Buckwheat (kasha)	2 cups	15 minutes	2 ½ cups
Bulgur wheat	2 cups	15-20 minutes	2 ½ cups
Cracked wheat	2 cups	25 minutes	2 ⅓ cups
Millet	3 cups	45 minutes	3 ½ cups
Cornmeal (polenta)	4 cups	25 minutes	3 cups
Wild rice	3 cups	1 hour or more	4 cups
Whole wheat berries	3 cups	2 hours	2 ⅔ cups
Quinoa (pronounced "keenwa")	2 cups	15 minutes	2 ½ cups
Black beans	4 cups	1 ½ hours	2 cups
Black-eyed peas	3 cups	1 hour	2 cups
Garbanzo beans (chickpeas)	4 cups	3 hours	2 cups
Great northern beans	3 ½ cups	2 hours	2 cups
Kidney beans	3 cups	1 ½ hours	2 cups
Lentils and split peas	3 cups	45 minutes	2 ¼ cups
Limas	2 cups	1 ½ hours	1 ¼ cups
Baby limas	2 cups	1 ½ hours	1 ¾ cups
Pinto beans	3 cups	2 ½ hours	2 cups
Red beans	3 cups	3 hours	2 cups
Small white beans (navy, etc)	3 cups	2 ½ hours	2 cups
Soybeans	4 cups	3 hours or more	2 cups
Soy grits	2 cups	15 minutes	2 cups

VT FEED Recipe Collection

Basic Vinaigrette

Yield: dresses 20 heads of lettuce for 200 students • Serving size: ½ Tbsp.

INGREDIENTS

12 cloves garlic chopped finely *(use a food processor)*
½ c. brown mustard
¼ c. honey
1½ c. vinegar
1½ c. vegetable oil
1 c. olive oil
1 c. apple juice
2 Tbsp. dried dill
1 Tbsp. thyme
2 Tbsp. salt
2 tsp. black pepper

DIRECTIONS

1. Combine all ingredients in a blender or food processor so it mixes really well.

NUTRITION INFORMATION

Amount per Serving	
Calories	27 cal
Protein	0mg
Carbohydrate	1g
Fat, Total	3g
Cholesterol	0mg
Saturated Fat	<1g
Trans Fat	0g
Dietary Fiber, Total	0g
Sugar, Total	<1g
Sodium	114mg
Vitamin A	1RE
Vitamin C	1mg
Iron	0mg
Calcium	2mg
Percentage of Calories	
Fat, total	90.0%

Contributed by Alison Forrest of Brewster Pierce School, Huntington, VT

Yogurt & Cucumber Dip for Vegetables

Yield: 2 qts. (75 servings) • Serving size: 2 oz.

Can also be used as a dressing or dip for raw vegetables.

INGREDIENTS

10 cloves of crushed garlic or 4 Tbsp. dried garlic
¼ c. olive oil or vegetable oil
2½ Tbsp. white wine vinegar or apple cider vinegar
2 qt. plain, low-fat yogurt
4 cucumbers, grated
1 tsp. sea salt
1 tsp. black pepper
3 Tbsp. honey
2 tsp. fresh dill or 1 tsp. dried
4 tsp. fresh mint or 2 tsp. dried

DIRECTIONS

1. Mix the crushed garlic with the salt and pepper. Add the oil and vinegar and mix well.
2. Place the yogurt in a serving bowl or blender or food processor. Add the oil and vinegar mixture in stages.
3. Add grated cucumber and mix well. Chill before serving.
4. Cut up a variety of raw vegetables into dip-size pieces.

NUTRITION INFORMATION

Amount per Serving	
Calories	29 cal
Protein	2g
Carbohydrate	3g
Fat, Total	1g
Cholesterol	2mg
Saturated Fat	<1g
Trans Fat	0g
Dietary Fiber, Total	0g
Sugar, Total	3g
Sodium	45mg
Vitamin A	8RE
Vitamin C	1mg
Iron	0mg
Calcium	51mg
Percentage of Calories	
Fat, total	35.0%

Bean Dip

Yield: 18 servings • Serving size: 2 oz.

This dip is great for vegetables for corn chips or pita bread.

INGREDIENTS

30 oz. cooked beans (black, pinto, or kidney. If using canned beans, be sure to drain and rinse them as they have extra salt)
4 Tbsp. olive oil
2–4 cloves fresh garlic
3–4 tsp. chili powder
¼ tsp. mustard
2 Tbsp. lemon juice
a little water for blending

DIRECTIONS

1. Add all ingredients to a food processor with chopping blade.
2. Blend until smooth. Add water for desired consistency.
3. Taste and add more seasoning as needed.
4. Chill or serve immediately.

Optional: Add mild salsa or chopped cilantro leaves for variety.

NUTRITION INFORMATION

Amount per Serving	
Calories	79 cal
Protein	3g
Carbohydrate	10g
Fat, Total	3g
Cholesterol	0mg
Saturated Fat	<1g
Trans Fat	0g
Dietary Fiber, Total	3g
Sugar, Total	<1g
Sodium	107mg
Vitamin A	15RE
Vitamin C	2mg
Iron	1mg
Calcium	18mg
Percentage of Calories	
Fat, total	36.6%

Hummus

Yield: 50 servings • Serving size: 2 oz.

Serve as vegetable dip or sandwich wrap spread. This can be made in large batches and frozen.

INGREDIENTS

1 #10 can chick peas
1½ c. lemon juice
5–7 garlic cloves or 2–3 Tbsp. dried garlic
1 lb. tahini (sesame seed paste) is more authentic (but can substitute 1 lb. peanut butter or ½ cup vegetable oil)
2 Tbsp. salt
1 c. olive oil or vegetable oil
½ c. fresh, chopped parsley or ¼ c. dried parsley
½ c. chopped fresh mint or ¼ c. dried mint *(optional)*

DIRECTIONS

1. Drain chickpeas, reserving 1 cup of liquid.
2. Puree all ingredients until smooth, like a thick batter. Add reserved liquid if too thick.

NUTRITION INFORMATION

Amount per Serving	
Calories	166 cal
Protein	5g
Carbohydrate	12g
Fat, Total	11g
Cholesterol	0mg
Saturated Fat	2g
Trans Fat	0g
Dietary Fiber, Total	3g
Sugar, Total	2g
Sodium	421mg
Vitamin A	4RE
Vitamin C	4mg
Iron	1mg
Calcium	23mg
Percentage of Calories	
Fat, total	60%

Variations

Roasted red pepper or scallion: add 1 cup of either the pepper or scallions before pureeing
Green olive and chive: add 1 cup chopped before pureeing

Labor saving methods

- Use a food processor to chop the parsley and mint and/or to puree the ingredients.
- Use a salad spinner to wash and spin dry the leaves of parsley and mint.

Fruit with Creamy Yogurt Dip

Yield: 50 servings • Serving size: 2 oz.

Students have named this the "Sunshine Dip."

INGREDIENTS

2 qts. organic whole milk plain or vanilla yogurt (if using plain yogurt, sweeten with honey or real maple syrup first)
2½ c. frozen juice concentrate, thawed (raspberry, orange, pineapple, other)
2½ gals. fresh or canned, frozen and drained fruit in bite-sized pieces* (apples, cherries, strawberries, bananas, melon, peaches, kiwi, blueberries, pineapple)
2 c. shredded coconut for garnish
2 Tbsp. honey, if necessary

DIRECTIONS

1. In a small bowl, mix yogurt and fruit juice concentrate (honey, if needed) until thoroughly combined.
2. In a large bowl, toss fruit with dressing or serve fruit separately using yogurt as a dip.
3. Garnish with sprinkles of shredded coconut and serve.

NUTRITION INFORMATION

Amount per Serving	
Calories	160 cal
Protein	2g
Carbohydrate	31g
Fat, Total	3g
Cholesterol	6mg
Saturated Fat	2g
Trans Fat	0g
Dietary Fiber, Total	3g
Sugar, Total	23g
Sodium	32mg
Vitamin A	139RE
Vitamin C	129mg
Iron	0mg
Calcium	62mg
Percent of Calories	
Fat, total	16.0%

Labor saving method: Use a food processor or blender to mix ingredients.

**If you are preparing the salad to serve later, cut and stir in apples and bananas just before serving since they will brown when exposed to air. Sprinkle apples with lemon juice to keep from browning.*

Autumn Harvest Salad

Yield: 44 cups (88 servings) • Serving size: 4 oz.

INGREDIENTS

3–4 qt. green cabbage, cored and thinly shredded
2 qt. red cabbage, cored and thinly shredded
2 qt. carrots, shredded
8 tart, crisp apples, cored and cubed (leave the skins on for nutrition and color)
1 Tbsp. lemon juice
¾ c. cider vinegar
1½ c. oil (olive or vegetable)
1 tsp. each salt and pepper
½ c. honey
1 c. dried cranberries or raisins *(optional)*

DIRECTIONS

1. Shred or slice cabbage and carrots in food processor.
2. Cube, slice, or grate apples. Toss lightly with 1 Tbsp. lemon juice.
3. Place vinegar and honey in bowl and whisk in oil (or use a blender or food processor).
4. Toss remaining ingredients with vinaigrette.
5. Let salad stand for 1 hour to marinate before serving.

NUTRITION INFORMATION

Amount per Serving	
Calories	54 cal
Protein	<1g
Carbohydrate	5g
Fat, Total	4g
Cholesterol	0mg
Saturated Fat	<1g
Trans Fat	1g
Dietary Fiber, Total	1g
Sugar, Total	4g
Sodium	37mg
Vitamin A	283RE
Vitamin C	8mg
Iron	0mg
Calcium	12mg
Percentage of Calories	
Fat, total	60.0%

Labor saving method: Use a food processor to finely slice the cabbage and grate the carrots.

Tabouleh

Yield: 9 qts. (72 servings)
Serving size: 4 oz.

INGREDIENTS

2 qts. uncooked bulgur
1 gallon water, salted
1 qt. diced cucumbers (about 3 large gourmet cucumbers; if using regular cucumbers, seed first)
2 c. chopped fresh parsley
2 c. chopped scallions or red onion (or ½ c. chopped fresh chives)
6 c. tomatoes, diced (use either fresh or drained canned)
1½ c. lemon juice
2 c. olive oil
1 Tbsp. garlic powder or fresh garlic, chopped
Salt and pepper to taste

DIRECTIONS

1. Boil water and pour over bulgur in a large bowl. Let sit until cool, about 1–1½ hours.
2. Add veggies to bulgur and toss gently.
3. Mix lemon juice, olive oil and garlic together with a wire whisk until well combined.
4. Pour dressing over bulgur and veggies and toss again. Add salt and pepper if necessary.

NUTRITION INFORMATION

Amount per Serving	
Calories	114 cal
Protein	2g
Carbohydrate	14g
Fat, Total	6g
Cholesterol	0mg
Saturated Fat	1g
Trans Fat	0g
Dietary Fiber, Total	3g
Sugar, Total	1g
Sodium	6mg
Vitamin A	20RE
Vtiamin C	7mg
Iron	1mg
Calcium	14mg
Percentage of Calories	
Fat, total	47.0%

Labor saving methods

- Use a food processor to dice the vegetables.
- Use a salad spinner to wash and spin dry the leaves of parsley.

Carrot, Parsnip, & Beet Salad

Yield: 68 servings • Serving size: 2 oz.

INGREDIENTS

2½ lbs. parsnips
1½ lbs. carrots
1 lb. beets or ½ lb. green cabbage and ½ lb. red cabbage
2 Tbsp. grated fresh ginger or 1 Tbsp. dried ginger
½ c. honey or ½ cup of brown sugar (sweeten to taste depending on vegetables)
½ c. lemon juice
½ c. orange juice
1 c. olive or vegetable oil

DIRECTIONS

1. Clean and grate all vegetables (peeling is not necessary).
2. Make a dressing by mixing ginger, honey, lemon juice and orange juice.
3. Add vegetables to dressing. Mix well.
4. Let stand for 1 hour to marinate before serving

Variations: Add dried fruits such as cranberries.

NUTRITION INFORMATION

Amount per Serving	
Calories	56 cal
Protein	<1g
Carbohydrate	7g
Fat, Total	3g
Cholesterol	0mg
Saturated Fat	<1g
Trans Fat	0g
Dietary Fiber, Total	1g
Sugar, Total	4g
Sodium	14mg
Vitamin A	282RE
Vitamin C	6mg
Iron	0mg
Calcium	11mg
Percentage of Calories	
Fat, total	50.0%

Labor saving methods: Use a food processor to grate all the vegetables.

Asian Cabbage Salad

Yield: 50 servings • Serving size: 4 oz.

INGREDIENTS

2 medium heads of green cabbage sliced thin (one head of savoy cabbage adds a fun texture with lighter, crinkly leaves)
12 chopped scallions
1 c. sugar
⅔ c. rice vinegar
1 c. vegetable oil
1 tsp. black pepper
3 Tbsp. soy sauce
6 pkgs. Ramen noodles (throw away the flavor packets and break up the noodles)
½ c. sunflower seeds
½ c. slivered almonds *(optional)*
½ c. oil

DIRECTIONS

1. Slice the cabbage with the slicing attachment of the food processor. Chop the scallions and mix in a bowl.
2. Sauce: mix together the vinegar, oil, pepper and soy sauce and set aside.
3. Toast in a frying pan: broken up Ramen noodles, almonds, and sunflower seeds in oil. Watch carefully and stir constantly.
4. Assemble *just* before serving so toasted ingredients don't get soggy.

Labor saving method: Use a food processor to slice the cabbage.

NUTRITION INFORMATION

Amount per Serving	
Calories	122 cal
Protein	1g
Carbohydrate	17g
Fat, Total	6g
Cholesterol	0.000
Saturated Fat	1g
Trans Fat	0g
Dietary Fiber, Total	1g
Sugar, Total	4g
Sodium	95mg
Vitamin A	3RE
Vitamin C	4mg
Iron	1mg
Calcium	15mg
Percentage of Calories	
Fat, total	43.0%

Contributed by Betty Beattie, Montpelier School District Food Service Director

Confetti Rice Salad

Yield: 80 servings • Serving size: 4 oz.

Preparation beforehand: Cook 6 cups white rice in 10½ cups of water and 6 cups brown rice in 12 cups of water. White rice will cook in 20 minutes; brown rice takes 45 minutes. Cool.

INGREDIENTS

1½ gals. cooked white and brown rice
1½ qts. chopped red and green peppers
1½ qts. chopped red cabbage
1½ qts. grated carrots
1½ c. scallions, finely chopped
3 Tbsp. dried parsley or
2 c. chopped fresh parsley (or use ½ parsley, ½ cilantro)

Dressing

2¼ c. canola oil
1½ c. cider or white vinegar
6 Tbsp. tamari or soy sauce
¼ c. sesame oil
Optional: To sweeten the dressing, add ¾–1 c. honey

DIRECTIONS

1. Toss cooled rice with all the vegetables and herbs
2. Mix dressing ingredients well with a wire whisk or in a blender.
3. Add dressing to rice and veggies and toss gently.

Labor saving methods: Use a food processor to chop the vegetables.

NUTRITION INFORMATION

Amount per Serving	
Calories	281 cal
Protein	5g
Carbohydrate	47g
Fat, Total	8g
Cholesterol	0mg
Saturated Fat	1g
Trans Fat	0g
Dietary Fiber, Total	2g
Sugar, Total	2g
Sodium	86mg
Vitamin A	297RE
Vitamin C	25mg
Iron	2mg
Calcium	16mg
Percentage of Calories	
Fat, total	25.0%

Contributed by Alison Forrest of Brewster Pierce School, Huntington, VT

Butternut Rice Pilaf

Yield: 25 servings • Serving size: 4 oz.

Butternut squash and brown rice take the same amount of time to cook, so this curried pilaf is a one-pot wonder!

INGREDIENTS

2 lbs. Butternut Squash, peeled and diced (2 lbs. is roughly 1 large squash)
2 c. brown rice
32 oz. vegetable broth dissolved in water (3 Tbsp. powder to 8 oz. of water)
1½ Tbsp. curry powder
½ lb. green beans cut into small pieces
3–4 Tbsp. finely chopped fresh basil leaves

DIRECTIONS

1. In a medium saucepan, combine squash, brown rice, broth, water, and curry powder and bring to a boil over high heat. Reduce to low, cover, and simmer 25 minutes.
2. Add green beans, stir to combine, and cook over low heat five minutes or until rice is just tender. Stir in basil.

NUTRITION INFORMATION

Amount per Serving	
Calories	78 cal
Protein	2g
Carbohydrate	17g
Fat, Total	1g
Cholesterol	0mg
Saturated Fat	0g
Trans Fat	0g
Dietary Fiber, Total	2g
Sugar, Total	1g
Sodium	91mg
Vitamin A	289RE
Vitamin C	9mg
Iron	1mg
Calcium	28mg
Percentage of Calories	
Fat, total	6.0%

Broccoli & Carrot Stir-Fry

Yield: 50 servings • Serving size: 4 oz.

INGREDIENTS

3 c. chicken or vegetable broth
8 tsp. cornstarch
8 Tbsp. balsamic vinegar
8 Tbsp. vegetable oil
8 tsp. grated fresh ginger
12 c. thinly bias-sliced carrots (about 12 medium carrots cut in a food processor using slicing blade makes perfectly thin slices)
16 c. broccoli florets (fresh is best, but frozen will work)

DIRECTIONS

1. For sauce, in a small bowl stir together the broth, vinegar, and cornstarch. Set aside.
2. Put oil into a large skillet and preheat over medium to high heat. Stir-fry the ginger in the hot oil for 15 seconds. Add carrots and stir-fry for 2 minutes. Add broccoli and stir-fry for 3–6 minutes or until vegetables are crisp to tender. Push vegetables from center of the pan.
3. Add sauce to the center of the pan. Cook and stir until thickened and bubbly. Then stir in all the vegetables and coat with the sauce. Heat thoroughly and serve.

NUTRITION INFORMATION

Amount per Serving	
Calories	47 cal
Protein	1g
Carbohydrate	5g
Fat, Total	2g
Cholesterol	0mg
Saturated Fat	<1g
Trans Fat	0g
Dietary Fiber, Total	2g
Sugar, Total	2g
Sodium	76mg
Vitamin A	863RE
Vitamin C	27mg
Iron	<1mg
Calcium	23mg
Percentage of Calories	
Fat, total	44.0%

Variation: You can do this in the oven at 375°: put carrots, oil, and ginger in a 2-inch hotel pan and cover with foil. Cook for 15 minutes. Take out and add broccoli and cook five minutes. Take pan out and stir in sauce, put back in oven uncovered and cook until the sauce has thickened and is bubbling.

Labor saving method: Slice carrots in a food processor — no need to peel them.

Contributed by Carol Brill, St. Johnsbury Elementary School Food Service Coordinator

Vegetable Roll-up

Yield: 50 wraps • Serving size: 1 wrap

INGREDIENTS

50 12-inch whole wheat flour tortilla
2½ lbs. fresh spinach or green leaf lettuce (Romaine works well)
8 medium sized apples
2½ lbs. grated cheddar cheese
½ c. toasted sunflower seeds, dried cranberries, raisins or nuts *(optional)*
1½ qts. herb vinaigrette, yogurt-cucumber sauce or other dressing *(see below)*

NUTRITION INFORMATION

Amount per Serving	
Calories	340 cal
Protein	11g
Carbohydrate	28g
Fat, Total	20g
Cholesterol	24g
Saturated Fat	6mg
Trans Fat	0g
Dietary Fiber, Total	3g
Sugar, Total	4g
Sodium	714mg
Vitamin A	67RE
Vitamin C	11mg
Iron	2mg
Calcium	194mg
Percentage of Calories	
Fat, total	53.0%

DIRECTIONS

1. Core apples and slice in a food processor fitted with a slicing blade (or slice very thinly by hand). No need to peel. Sprinkle a few tablespoons lemon juice on the apples and toss gently so they will not discolor during assembly of the wraps.
2. Lay open tortilla on work surface.
3. Place 1 cup spinach or lettuce leaves along center of the tortilla. Layer ¼ cup apple slices, 2–3 Tbsp. grated cheese, and ½ Tbsp. sunflower seeds *(optional)* on top of spinach
4. Drizzle 1 Tbsp. dressing on top of the cheese.
5. Fold up bottom of wrap 1 inch, fold in the left and right ends and then roll wrap from one side to the other.

Variations

- Spread nonfat cream cheese, yogurt or any other dressing in place of oil and lemon juice (peanut butter, tahini, bottled dressing).
- Use grated cheese, nuts, seeds, dried fruit, other grated vegetables (cabbage, carrots beets) for fillings.

Labor saving methods

- Use a corer and food processor to core and slice the apples. (Leave the skin on as the slices will be thin.)
- Use a salad spinner to wash and spin dry the leaves of spinach and lettuce.

Adapted from 4-H Growing Connections Recipes, University of Vermont

Rice & Chick Pea Pilaf

Yield: 50 servings • Serving size: 6 oz.

INGREDIENTS

4 c. uncooked white rice
4 c. uncooked brown rice
3¾ qts. vegetable, chicken broth and/or water (you can use the drained tomato juice from canned tomatoes)
1 #10 can or 1 gal. chick peas, rinsed and drained
12 diced tomatoes or 1 #10 can tomatoes, drained
8 c. mixed fresh, seasonal diced vegetables, such as celery, carrot, parsnip, green peppers
24 scallions, thinly sliced or 3 small, finely diced onions
1½ c. finely chopped, fresh mint or ¾ c. dried (optional)
1 c. dried parsley
1½ c. olive oil (or vegetable oil)
3 Tbsp. salt
1 Tbsp. pepper
2 Tbsp. basil
1 Tbsp. thyme
1 Tbsp. powdered garlic

NUTRITION INFORMATION

Amount per Serving	
Calories	20 cal
Protein	1g
Carbohydrate	3g
Fat, Total	1g
Cholesterol	0mg
Saturated Fat	0g
Trans Fat	0g
Dietary Fiber, Total	<1g
Sugar, Total	0g
Sodium	72mg
Vitamin A	11RE
Vitamin C	1mg
Iron	0mg
Calcium	3mg
Percentage of Calories	
Fat, total	26.0%

DIRECTIONS

1. Add uncooked white rice and 7 cups of the stock/water to a pot. Bring to a boil. Reduce heat to a simmer, cover and cook for 15–20 minutes or until done.
2. Add uncooked brown rice and 8 cups of the stock/water to a pot. Bring to a boil. Reduce heat to a simmer, cover and cook for 35–45 minutes.
3. Combine cooked rice and all other ingredients in a bowl and mix thoroughly. Adjust seasoning if necessary.

Labor saving methods

- Use a food processor to chop the parsley and mint.
- Use a salad spinner to wash and spin dry the leaves of parsley and mint.

Rice & Seasonal Vegetable Casserole

Yield: 80 servings • Serving size: 1 cup

INGREDIENTS

16 c. cooked white rice (approximately 5½ c. uncooked)
16 c. cooked brown rice (approximately 5½ c. uncooked)
¼ c. canola oil
2 Tbsp. granulated garlic or 8–10 cloves fresh garlic
5 lbs. onions (3½ qts., chopped)
2 lbs. zucchini, cut in small pieces
3 lbs. green peppers, cut in small pieces
3 lbs. red peppers, cut in small pieces
3 lbs. carrots, (approximately. 2 qts. grated)
1 qt. frozen peas
2 qts. chopped cabbage, kale, spinach, or swiss chard
1 #10 can diced tomatoes, pureed in food processor
2 qts. cheddar cheese, shredded - divided
16 eggs, beaten
2 Tbsp. dried basil
2 Tbsp. dried oregano
2 Tbsp. salt
2–3 tsp. black pepper

NUTRITION INFORMATION

Amount per Serving	
Calories	202 cal
Protein	8g
Carbohydrate	29g
Fat, Total	6g
Cholesterol	54mg
Saturated Fat	3g
Trans Fat	0g
Dietary Fiber, Total	4g
Sugar, Total	5g
Sodium	362mg
Vitamin A	654RE
Vitamin C	58mg
Iron	2mg
Calcium	121mg
Percentage of Calories	
Fat, total	27%

Note: during winter months substitute the peppers and zucchini with a frozen vegetable mix.

DIRECTIONS

1. Cook grains or use leftover grains
2. In a large skillet or pan, heat oil over medium heat. Sauté garlic and onion until tender (3–5 minutes). Add peppers and sauté another 5 minutes. Add carrots, and zucchini and any of the leafy veggies that you choose to use. Cook for 2–3 minutes. Add spices and cook until all the veggies are just tender about 3–5 more minutes.
3. Add tomato puree and cook the mixture for about 5 minutes. Season with salt and pepper to taste.
4. Beat eggs with 1 quart of shredded cheese until well blended.
5. In a large bowl, combine rice, vegetables, egg/cheese mixture. Mix well.
6. Pour rice mixture into 2 lightly oiled, deep hotel pans. Sprinkle 2 cups grated cheese on top of each pan.
7. Cover and bake in a 325° convection oven or 350° conventional oven for 35–40 minutes or until just turning brown.

Labor saving method: Use a food processor to chop the vegetables.

Brown & White Rice Pilaf with Vegetables

Yield: 40-50 servings • Serving size: 4 oz.

INGREDIENTS

3¼ c. uncooked brown rice
3¼ c. uncooked white rice
3 qts. + 1 c. chicken, vegetable stock and/or water
2½ c. chopped seasonal vegetables (in the winter try using finely chopped rutabaga, kale, and carrots) *Note: More vegetables can be added to this recipe.*
4 cloves fresh garlic, chopped, or 2 Tbsp. dried garlic powder
3 Tbsp. dried basil
Salt and pepper to taste

DIRECTIONS

1. Place brown and white rice in hotel pan.
2. Sauté vegetables and all the herbs and spices briefly in canola oil before adding them to the rice to add to flavor and texture of the pilaf. Mix well.
3. Bring stock and/or water and onions in a pot to a boil.
4. Pour stock into pan of rice, vegetables and herbs.
5. Bake covered in conventional oven at 350º for 40–50 minutes or in convection oven at 350º for 30–40 minutes or in compartment steamer for 40 minutes.

NUTRITION INFORMATION

Amount per Serving	
Calories	147 cal
Protein	4g
Carbohydrate	28g
Fat, Total	1g
Cholesterol	2mg
Saturated Fat	<1g
Trans Fat	0g
Dietary Fiber, Total	1g
Sugar, Total	2g
Sodium	113mg
Vitamin A	3RE
Vitamin C	1mg
Iron	1mg
Calcium	16mg
Percentage of Calories	
Fat, total	45%

Variations: Replace some of the vegetables with chopped dried fruit, or nuts as desired.

Labor saving methods: Use a food processor to chop the vegetables.

Roasted Winter Root Vegetables

Yield: 80 servings • Serving size: 8 oz.

INGREDIENTS *Preheat oven to 400º*

3 lbs. sweet potatoes
8 lbs. potatoes
3 lbs. carrots
3 lbs. parsnips
3 lbs. beets
20 cloves garlic, minced
2 Tbsp. salt
2 tsp. pepper
1 Tbsp. thyme
2½ cup canola or olive oil

DIRECTIONS

1. Wash vegetables and chop into large cubes (peeling is not needed; skins add fiber)
2. Toss in oil, garlic, herbs, and salt and pepper.
3. Arrange veggies in a single layer of sheet pans that have been greased or line each with parchment paper.
4. Bake for 35 minutes covered in foil, stir occasionally
5. Remove foil for 10 minutes or until evenly brown and tender.

NUTRITION INFORMATION

Amount per Serving	
Calories	127 cal
Protein	2g
Carbohydrate	16g
Fat, Total	7g
Cholesterol	0mg
Saturated Fat	<1g
Trans Fat	0g
Dietary Fiber, Total	3g
Sugar, Total	4g
Sodium	198mg
Vitamin A	766RE
Vitamin C	13mg
Iron	1mg
Calcium	25mg
Percentage of Calories	
Fat, total	45.0%

Winter Turkey or Chicken Pot Pie

Yield: 25 servings • Serving size: 6 oz.

Preheat oven to 425°

INGREDIENTS

Make or buy a two crust pie crust that can
be rolled into one piece to cover the hotel pan.
1 gal. chicken stock
½ lbs. carrots cubed
½ lbs. parsnips cubed
½ lbs. rutabaga cubed
1 lbs. potatoes
12 oz. onions, chopped
8 oz. chopped celery or celeriac, cubed
14 oz. butter or margarine
10 oz. flour
2 tsp. salt
1 tsp. white pepper
3 lbs. cooked and cubed turkey or chicken
10 oz. frozen peas
Add some dried herbs such as sage or thyme for more flavor.

NUTRITION INFORMATION

Amount per Serving	
Calories	399 cal
Protein	23g
Carbohydrate	29.000
Fat, Total	21.000
Cholesterol	80mg
Saturated Fat	8g
Trans Fat	<1g
Dietary Fiber, Total	3g
Sugar, Total	6g
Sodium	627mg
Vitamin A	389RE
Vitamin C	10mg
Iron	3mg
Calcium	48mg
Percentage of Calories	
Fat, total	48.0%

DIRECTIONS

1. Cube and sauté turkey or chicken in a frying pan with a little oil.
2. Bring chicken stock to a boil.
3. Add carrots, parsnips, rutabaga and potatoes to stock. Simmer until tender.
4. Melt butter or margarine, add onion, celery or celeriac, and cook until onions are clear.
5. Mix in flour, salt, and pepper to make a roux and cook 4–6 minutes.
6. Add roux to hot stock and stir. Bring back to a boil.
7. Add cooked turkey or chicken and peas.
8. Pour into hotel pan and top with pie crust.
9. Bake for just under 2 hours. Take out when bubbling and crust is brown.

Labor saving methods: Use a food processor to chop the vegetables.

Contributed by Donna Derenthal, Sharon Elementary School, Sharon, VT

Squash Soup

Yield: 50 servings • Serving size: 6 oz.

INGREDIENTS

12 lbs. winter squash (butternut works best because you don't have to peel it)
3 large onions, chopped
5 cloves minced fresh garlic, or 4 Tbsp. garlic powder
6 stalks of celery or celeriac, chopped (amounts to 2 cups)
4 oz. butter or margarine
¼ c. olive oil
5 bay leaves
6 c. orange juice *(optional)*
6 c. apple juice or cider *(optional)*
¼ c. vegetable base
1 Tbsp. pepper

NUTRITION INFORMATION

Amount Per Serving	
Calories	76 cal
Protein	1g
Carbohydrate	13g
Fat, Total	3g
Cholesterol	5mg
Saturated Fat	1g
Trans Fat	0g
Dietary Fiber, Total	2g
Sugar, Total	1g
Sodium	166mg
Vitamin A	780RE
Vitamin C	17mg
Iron	1mg
Calcium	52mg
Percentage of Calories	
Fat, total	33.0%

DIRECTIONS

1. Cut squash in half and take out seeds. Place cut side down on greased sheet pans and roast in a 325° oven until fork tender (about 45 minutes.) When done, cool briefly and then scoop squash meat out of skin. If using a tender skinned squash, you may be able to leave the skin on. *Squash may be cooked the day prior and refrigerated until ready to use. Soup has much better, sweeter flavor when squash is roasted prior to boiling.*
2. Sauté onions and garlic in the butter and oil in a large kettle.
3. Add squash and celery or celeriac, coat in oil, cook 1 minute.
4. Add water (about a gallon) to cover vegetables, add 5 bay leaves and veggie base, and boil until tender (this will take a short time if squash has been roasted already).
5. Take out bay leaves and puree soup in food processor.
6. Return puree to pot. Add orange juice, apple juice, pepper and salt, if needed. If you do not add the juices, add more water until soup has a nice consistency without being too thin.
7. Reheat on low. Do not boil. Hold at 160° for service.

Labor saving methods: Use a food processor to chop the vegetables.

Contributed by Alison Forrest, Brewster-Pierce School, Huntington, VT

Sue's Minestrone Soup

Cooking time is one hour.

Yield: 4 gals. (90 servings) • Serving size: 6 oz.

Please note that the ingredients can be changed quite dramatically to incorporate whatever seems to be on hand. With a base of olive oil, garlic, onions and tomatoes, anything is possible and delicious!

NUTRITION INFORMATION	
Amount per Serving	
Kilocalories	83 cal
Protein	2g
Carbohydrate	13g
Fat, Total	2g
Cholesterol	0mg
Saturated Fat	<1g
Trans Fat	0g
Dietary Fiber, Total	3g
Sugar, Total	4g
Sodium	288mg
Vitamin A	325RE
Vitamin C	17mg
Iron	1mg
Calcium	44mg
Percentage of Calories	
Fat, total	25.0%

INGREDIENTS

1½ c. olive oil or vegetable oil
5 qts. onions, coarsely chopped
3 c. garlic, finely chopped (measure after chopping)
6 c. water (add some and see if more is needed later)
15 qts. canned tomatoes, diced, with the juice
2 qts. carrots, coarsely chopped
2 qts. celery, coarsely chopped
2 qts. zucchini, coarsely chopped (or other seasonal vegetables such as left over corn or peas)
2 qts. sweet peppers (green or red), coarsely chopped *(optional)*
2½ qts. kale, finely chopped (first strip off tough stems)
5 c. parsley, finely chopped (optional, if available)
2 Tbsp. oregano
4 Tbsp. basil
2 Tbsp. salt
1.5 tsp. pepper
14 c. garbanzo beans, drained, without the liquid
10 c. elbow or shell noodles (whole wheat if possible)

DIRECTIONS

1. In a large pot sauté the olive oil, onions, and garlic for 10 minutes.
2. Add remaining ingredients (except noodles), and simmer for 30-40 minutes.
3. When vegetables are not quite cooked, add the noodles. (If you plan to cook, freeze, and reheat the soup, don't add noodles now because noodles will not freeze well. Instead, cook and freeze everything else, then add noodles when you reheat the soup.)
4. Just before serving, add 1 cup tomato paste (adding this earlier will cause the whole batch of soup to burn unless it is constantly stirred and in a very heavy-bottomed high-quality pot).
5. Taste and adjust. If too thick, add more diced tomatoes or water. If too thin, add more tomato paste. And don't worry about exact quantities! As Sue Thompson put it, "This is really a homemade soup so don't worry about exact amounts! Anything with these ingredients will taste really great."

Other possible ingredients, based on availability: Summer squash (yellow crookneck), green beans, peas, rutabaga or parsnips, swiss chard.

Labor saving methods: Use a food processor to chop the vegetables.

Contributed and created by Bonnie Acker and Edmunds Middle School Students, Burlington, VT

Maple Sunflower Granola

Yield: 1 lb. (8 servings) • Serving size: 2 oz.

Easy to make and a great snack or breakfast cereal for kids. Serve by itself or on top of layers of yogurt and fresh or frozen berries to make a Yogurt Parfait! It can be made in large batches and frozen.

Preheat oven to 350°

INGREDIENTS

4 c. rolled oats (not instant or flavored)
½ c. sunflower seeds (raw, not roasted or seasoned)
4 Tbsp. canola or other vegetable oil
½ c. 100% maple syrup
1 tsp. vanilla

DIRECTIONS

1. Mix dry ingredients (oats and sunflower seeds).
2. Mix wet ingredients in a separate bowl.
3. Combine everything and spread evenly on a sheet pan (no more than ½-inch layer).
4. Bake for about 15 minutes and stir. Bake 10 more minutes or until light brown.

NUTRITION INFORMATION

Amount per Serving	
Calories	219 cal
Protein	6g
Carbohydrate	33g
Fat, Total	7g
Cholesterol	0mg
Saturated Fat	1g
Trans Fat	0g
Dietary Fiber, Total	4g
Sugar, Total	9g
Sodium	3mg
Vitamin A (RE)	0 RE
Vitamin C	0g
Iron	2mg
Calcium	34mg
Percentage of Calories	
Fat, total	30.0%

Developed by Edmunds Middle School students in Burlington, VT

Sweet Potato or Winter Squash Muffins

Yield: 90-100 servings • Serving size: 3 oz.

Preheat oven to 400°.

INGREDIENTS

3 c. canola oil
3 c. sugar
3 c. brown sugar
12 eggs
1 qt. + 3½ c. mashed sweet potato or winter squash
1½ c. molasses or honey
¾ c. milk
4½ c. unbleached flour
4½ c. whole wheat pastry flour
1½ tsp. salt
¼ c. baking powder
2 Tbsp. cinnamon
1½ tsp. nutmeg
1½ tsp. allspice

DIRECTIONS

1. In a large bowl, combine oil with both sugars and beat well. Add eggs one at a time, beating thoroughly after each. Stir in sweet potatoes or squash, molasses or honey, and milk, blending well.
2. In a large bowl combine the flour, baking powder, salt, and spices. Add these dry ingredients carefully to the wet ingredients, stirring just until moistened. Do not over mix.
3. Spoon batter into muffin tins lined with paper cups or oiled.
4. Bake for 20–25 minutes or until tops spring back when pressed down.

NUTRITION INFORMATION

Amount per Serving	
Calories	172 cal
Protein	3g
Carbohydrate	28g
Fat, Total	6g
Cholesterol	28mg
Saturated Fat	1g
Trans Fat	0g
Dietary Fiber, Total	1g
Sugar, Total	14g
Sodium	101mg
Vitamin A	335RE
Vitamin C	1mg
Iron	1mg
Calcium	43mg
Percentage of Calories	
Fat, total	30.0%

Contributed by Kathy Alexander, Ferrisburg Elementary School Food Service Director

Beetnick Cake

Yield: 75 servings • Serving size: 3 oz.

Preheat oven to 350°

INGREDIENTS

67 oz. boiled and peeled beets (save some water for pureeing.)
2 c. cocoa powder
1½ c. oil
1 c. applesauce
2 Tbsp. vanilla
3 lbs. sugar
3 Tbsp. baking soda
7 eggs
1½ lbs. unbleached flour
1½ lbs. whole wheat pastry flour

DIRECTIONS

1. Puree beets in food processor with a little juice from cooking.
2. Mix all ingredients in mixer.
3. Pour into greased sheet cake pan.
4. Bake 40–45 minutes, test with toothpick.
5. Top with sprinkled powder sugar or vanilla frosting.

Labor saving methods: Use a food processor to chop beets.

NUTRITION INFORMATION

Amount per Serving	
Calories	201 cal
Protein	4g
Carbohydrate	36g
Fat, Total	5g
Cholesterol	20mg
Saturated Fat	1g
Trans Fat	0g
Dietary Fiber, Total	3g
Sugar, Total	21g
Sodium	178mg
Vitamin A	10RE
Vitamin C	1mg
Iron	1mg
Calcium	14mg
Percentage of Calories	
Fat, total	24.0%

Contributed by Mary Lou LaPierre, Jericho Elementary School, VT

Chocolate Chip Oatmeal Cookies

Yield: 175 cookies (2¼" diameter)
Serving size: 1 cookie

INGREDIENTS

Preheat oven to 350°

1¾ c. canola oil
3¾ c. brown sugar, packed
1¼ c. maple syrup
3 Tbsp. plus 1 tsp. pure vanilla
1½ c. plus 6 Tbsp. milk
5 eggs
3 Tbsp. plus 1 tsp. cinnamon
3 Tbsp. plus 1 tsp, baking powder
1¼ tsp. salt
4 c. whole wheat flour
4¾ c. white flour
8¾ c. rolled oats
3¾ c. chocolate chips

DIRECTIONS

1. Mix oil, brown sugar, maple syrup, vanilla, milk, eggs salt and whole wheat flour together in a bowl with an electric mixer until well combined. Add rolled oats and chocolate chips and mix until oats are just combined. Let sit in bowl 10–15 minutes while preparing pans.
2. Drop by tablespoons (or use a ¾ oz. scoop) onto cookies sheets that are either oiled or lined with parchment paper.
3. Bake 10–15 minutes until just brown on the edges. Remove and cool on wire racks.

NUTRITION INFORMATION

Amount per Serving	
Calories	100 cal
Protein	2g
Carbohydrate	15g
Fat, Total	4g
Cholesterol	6mg
Saturated Fat	1g
Trans Fat	0g
Dietary Fiber, Total	1g
Sugar, Total	7g
Sodium	33mg
Vitamin A	3RE
Vitamin C	0mg
Iron	1mg
Calcium	18mg
Percentage of Calories	
Fat, total	35.0%

Contributed by Bonnie Acker and the Burlington School Food Project

Zucchini Carrot Bread

Preheat oven to 350º

Yield: 9 large loaves (135 servings)
Serving size: 3 oz.

INGREDIENTS
6 lbs. shredded zucchini
5 lbs. shredded carrot
8 lbs. sugar
3 lbs. eggs
3 lbs. oil
3½ lbs. unbleached flour
3½ lbs. whole-wheat flour
2½ oz. baking powder
1½ oz. baking soda
½ oz. cinnamon
½ oz. nutmeg
1 oz. salt

DIRECTIONS
1. Mix all ingredients for 5 minutes.
2. Bake at 350º for 45 minutes to 1 hour for bread loaf or for 25–35 minutes for cake pan. Makes 3 full-sized cake pans.

NUTRITION INFORMATION

Amount per Serving	
Calories	252 cal
Protein	4g
Carbohydrate	37g
Fat, Total	10g
Cholesterol	97mg
Saturated Fat	2g
Trans Fat	0g
Dietary Fiber, Total	2g
Sugar, Total	22g
Sodium	187mg
Vitamin A	421RE
Vitamin C	3mg
Iron	1mg
Calcium	36mg
Percentage of Calories	
Fat, total	36.0%

Labor saving methods: Use a food processor to shred and chop zucchini and carrots.

Contributed by Denise Newell at Burlington High School, VT

Apple-Cranberry Crunch

Preheat oven to 350º

Yield: 48 servings • Serving size: 3 oz.

This is a great way to use up some of that USDA commodity cranberry sauce or dried cranberries!

INGREDIENTS
18 large apples, cored, and sliced thin
10 c. cranberry sauce or 12 c. dried cranberries
2–3 c. sugar (2 c. if using sauce, 3 c. if using dried berries)
1½ c. orange juice
6 tsp. cinnamon
1½ c. whole wheat pastry flour
1½ c. unbleached flour
¾ c. packed brown sugar
6 c. rolled oats (regular, not quick oats)
1 c. melted margarine or butter

DIRECTIONS
1. Spray a hotel pan with oil.
2. In a large bowl, combine apples, cranberries (or sauce), sugar, juice, cinnamon and half of flour. Put mix into the hotel pan.
3. In a large bowl combine the rest of the flour, brown sugar, and oats. Stir in butter or margarine and mix until combined and crumbly. Spoon topping mixture over fruit.
4. Bake for 40–50 minutes or until the crisp is slightly browned.

NUTRITION INFORMATION

Amount per Serving	
Calories	266 cal
Protein	3g
Carbohydrate	55g
Fat, Total	5g
Cholesterol	0mg
Saturated Fat	1g
Trans Fat	1g
Dietary Fiber, Total	4g
Sugar, Total	38g
Sodium	63mg
Vitamin A (RE)	43RE
Vitamin C	7mg
Iron	1mg
Calcium	21mg
Percentage of Calories	
Fat, total	16%

Labor saving method: Use food processor to slice apples. The slices will be thin enough so you won't have to peel the apples beforehand.

Adapted from a Recipe by Laura Biron, MBA, RD

Zucchini, Carrot and Applesauce Cake

Yield: 50 servings • Serving size: 3 oz.

INGREDIENTS

Preheat convection oven to 350°

3 c. all-purpose flour
2½ c. whole wheat flour
2 Tbsp. baking soda
2 Tbsp. cinnamon
2 tsp. nutmeg
7 whole eggs or 12 oz. frozen eggs
½ c. vegetable oil
3 c. brown sugar or 1 c. honey and 2 c. brown sugar
2 tsp. vanilla
3½ c. unsweetened applesauce
3 c. shredded carrots
3 c. grated, drained zucchini *(if you don't have zucchini, add 1½ more cups of carrots)*
2 c. raisins or other dried fruit or nuts *(optional)*

DIRECTIONS

1. Prepare one large sheet pan with oil and flour.
2. In a large bowl, mix flour, baking soda, cinnamon, nutmeg.
3. In a second bowl, lightly beat eggs. Stir in oil, sugar vanilla.
4. Add applesauce to egg mixture.
5. Add wet ingredients to dry ingredients and mix just to combine.
6. Add grated carrots and zucchini to batter and mix again just to combine.
7. Pour batter into one large sheet pan which has been lightly oiled and floured.
8. Bake in convection oven for 20–25 minutes or until toothpick comes out clean.

Labor saving methods: Use a food processor to shred the zucchini and carrots.

NUTRITION INFORMATION

Amount per Serving	
Calories	313 cal
Protein	5g
Carbohydrate	72g
Fat, Total	3g
Cholesterol	30mg
Saturated Fat	1g
Trans Fat	0g
Dietary Fiber, Total	4g
Sugar, Total	48g
Sodium	177mg
Vitamin A	203RE
Vitamin C	3mg
Iron	2mg
Calcium	53mg
Percentage of Calories	
Fat, total	9.0%

Adapted from 4-H Growing Connection Recipes, University of Vermont

Vermont Apple Crisp

Preheat oven to 375°

Yield: 48 servings • Serving size: 3 oz.

INGREDIENTS

15 lbs. crisp apples, peeled, quartered and sliced into ¼" wedges
4 c. raisins or other dried fruit *(optional)*
1½ c. maple syrup or 1 c. honey or 1½ c. sugar
½ c. lemon juice
2½ Tbsp. vanilla extract
3 tsp. cinnamon
3 tsp. nutmeg

Topping:
2 c. rolled organic oats
2 c. brown sugar
1 c. all purpose flour
1 c. whole wheat flour
2–3 Tbsp. cinnamon
2½ Tbsp. salt
4 sticks (1 lb.) unsalted butter, softened or melted

NUTRITION INFORMATION

Amount per Serving	
Calories	259 cal
Protein	2g
Carbohydrate	48g
Fat, Total	8g
Cholesterol	20mg
Saturated Fat	5g
Trans Fat	0g
Dietary Fiber, Total	3g
Sugar, Total	34g
Sodium	369mg
Vitamin A	77RE
Vitamin C	7mg
Iron	1mg
Calcium	37mg
Percentage of Calories	
Fat, total	27.0%

DIRECTIONS

1. In a bowl, toss the apples together with the raisins, syrup, lemon juice, cinnamon and nutmeg. Spread evenly in a buttered 9-inch deep-dish pie plate.
2. In another bowl, toss the rolled oats with the maple or brown sugar, flour, cinnamon and salt. Add the melted butter and stir until evenly moistened.
3. Scatter crumbs over the apples all the way to the edge. Bake for 45 minutes, or until apples are tender, the filling is bubbling, and the topping is toasted. Let rest for 20 to 30 minutes.

Labor saving methods: After coring the apples, use a food processor to slice them. The slices will be thin enough so you won't need to peel the apples beforehand.

Adapted from 4-H Growing Connection Recipes, University of Vermont