

Road Map

RETHINKING SCHOOL LUNCH GUIDE

Rethinking School Lunch – a project of the **Center for Ecoliteracy**
2528 San Pablo Avenue, Berkeley, California 94702 www.ecoliteracy.org



Road Map

RETHINKING SCHOOL LUNCH GUIDE

FOOD FOR THOUGHT

“When the lunch period is recognized as part of the learning day, new opportunities and responsibilities emerge for students, food services, and the district as a whole. The lunch period is a window for critical learning and modeling of attitudes toward food. This learning can be linked to the classroom curriculum, experiences in the school garden and kitchen classroom, and visits to local farms. In an integrated farm-to-school approach, the lunch period and the lunch itself become teaching and learning opportunities in the daily life of the entire learning community.”

— Janet Brown, program officer for food systems, Center for Ecoliteracy



WHAT'S INSIDE?

SCHOOL LUNCH FEEDS MINDS, BODIES, AND COMMUNITIES: School lunch is a vital issue in our society that goes far beyond the meal on the plate. It can be the doorway to a whole new way of providing education for sustainability with broad-reaching effects for our children and community.

VISION: A program that uses a systems approach to combine farm-to-school concepts with an integrated curriculum.

IMPLEMENTATION: The challenges are great. It takes a team, a systems approach, and a business planning process to bring together diverse partnerships to find solutions in common.

IT'S TIME TO IMPLEMENT A FARM-TO-SCHOOL PROGRAM: **Marilyn Briggs**, former director of the Nutrition Services Division and retired Assistant Superintendent of Public Instruction for the California Department of Education, outlines the urgent need for a farm-to-school lunch program, and shares her experiences and thoughts on how it can be accomplished.

SCHOOL LUNCH FEEDS MINDS, BODIES, AND COMMUNITIES

The Center for Ecoliteracy has found that a school lunch program based on serving fresh, locally grown food is the heart of an innovative approach to learning and teaches children how to make intelligent choices that will benefit their health and create sustainable communities. Local experiences indicate that with an integrated educational approach, school lunch can be the doorway to a whole new way of providing education for sustainability with broad-reaching effects for our children and community.

Here's what can happen in such a program:

- **Using the local food system as a context for learning**, students gain a deeper understanding of the relationships among their food choices and the environment.
- **Working with food service staff**, students have hands-on experiences planning healthy meals that connect to the classroom nutrition lessons.
- **As consultants to a school menu marketing campaign**, students hone their language arts skills and apply what they have learned about effective communication.
- **Students become familiar with their local landscape** by visiting farms and learning about the local farm economy, making real-life connections to their history and social studies lessons.
- **Field-to-table lessons** offer exposure to local economic issues and help students experience the benefits of sustainable living.
- **Students apply their math skills** as they measure ingredients while helping prepare meals.
- **By composting kitchen waste** from food preparation, students connect their real-life experiences with science lessons on decomposition.
- **Students see cause and effect** in lessons about food packaging. By buying fresh, local foods, package waste is reduced and natural resources are conserved.

Today, the nation's school lunch program is at a crossroads, faced with nutritional and service problems so serious they make news headlines. So many issues are involved — nutrition, facilities, food service, student disinterest — that it's hard to know where to begin. Rethinking School Lunch reframes this challenge as an opportunity to embrace a whole-systems approach to education. It is a roadmap that can guide interested stakeholders to an integrated program that provides a wide range of benefits that extend beyond the meal on the plate.

VISION

Rethinking School Lunch envisions school lunch not as an isolated meal-a-day program, but as the vital center of an intricate connection of relationships among students, teachers, parents, and community. One essential element in this web of interconnections is the **farm-to-school** model, which provides the school lunch program with fresh food from local, sustainable family farms. Farm-to-school practices connect students to their food source through meals and field trips, improve the nutritional content and quality of food in schools, and help local farmers remain economically viable.

Another distinguishing characteristic of Rethinking School Lunch is its inclusion of an **integrated curriculum approach**. Centering the curriculum on food systems increases ecological literacy by focusing on how food reaches the table, as well as the impacts the food system has on the natural world. This increase in “food literacy” will naturally inform the food choices of children and their families into the future.

Here’s what this vision of an effective school lunch program looks like:

- **Meals are prepared using fresh, seasonal, sustainably grown produce** and products from local and regional sources.
- **The dining facility also serves as a learning center:** It offers fresh food prepared on site, supports and reflects the

lessons learned in the classroom, and welcomes students with an inviting atmosphere.

- **District-wide educational goals** include integrating the school food service with the academic curriculum.
- **Hands-on activities in school gardens**, kitchen classrooms, and on local farms or at farmers’ markets help reconnect students to their own habitats and communities.
- **A school waste management program** helps students make connections between daily life and the need to conserve natural resources.
- **Professional development** supports the integration of classroom curriculum and the school lunch experience.
- **Marketing efforts promote healthy meal programs** and meaningful learning environments to parents and students.
- **Communications efforts** — educational pamphlets, guides for rallying action committees, and other informational materials — build relationships between schools and their constituencies.
- **Community-wide development of a district food policy** guides the school nutrition program.
- **Viable budget planning** uses real data to balance the value of serving fresh food with the costs of serving packaged, processed foods.

IMPLEMENTATION

Sustainable communities are achieved through meaningful collaboration. Informed, committed people engaged in active teamwork with common goals provide the energy that fuels this vision. Rethinking School Lunch is designed to motivate a collaborative partnership of school administrators, food service personnel, educators, change agents, and parent groups to implement a business planning process that enhances the well-being of students and helps improve student performance.

Every school district has a unique set of institutional challenges and opportunities, so Rethinking School Lunch does not dictate a single implementation solution. Instead, the Rethinking School Lunch (RSL) guide provides a comprehensive overview of the 10 key components identified as vital to the success of any school lunch program.



HOW TO BEGIN

Where is the best place to start? Marilyn Briggs, former director of the Nutrition Services Division and retired Assistant Superintendent of Public Instruction for the California Department of Education, says, “You can break into the implementation circle at many points. The most important thing is to start somewhere, and stick with it.”

Every interested reader — school administrators, food service directors, teachers, and parents — will approach this project from a unique perspective. Perhaps the most effective way to enter Rethinking School Lunch is by reading the topic closest to one’s area of interest, and then exploring related topics. To understand the ideas that ground Rethinking School Lunch, be sure to read “Food Policy” and “Food and Health.”

Consider the following approach for learning about and connecting with potential collaborative partners:

- I. **Each person should read the chapters** that are closest to his or her own discipline or area of responsibility.
 - **A district administrator might become familiar with theory and practice** by reading “Food Policy” and then moving on to “Finances,” “Facilities,” and “Procurement.”
 - **A food service director might begin by reading “Food and Health”** and “The Dining Experience” to discover how food service staff can contribute to the cafeteria as an important social experience and classroom, and “Procurement” to learn about new buying practices.

- **An educator might begin by reading “Curriculum Integration,”** and then turn to “Waste Management” and “Marketing and Communications” to better understand the motivation for integrating classroom learning into the lunch experience and how students can become proactive by promoting the program to the community.
- **A parent might begin with “Food and Health”** to learn how nutrition affects their children’s overall health and ability to learn, and move on to “Food Policy” to see how school lunch can become a fundamental part of the academic curriculum.

2. **Read the chapters that will illuminate the viewpoints** of other partners in the process. Learning as much as possible about all of the interconnected elements in Rethinking School Lunch will provide a 360-degree vision of the process and will help all partners see the common ground among the issues that affect school lunch. It may spark ideas that lead to a positive, creative discussion and better business planning.
3. **Contact other interested parties** and get started. Help the school community begin to make positive connections between children, the food they eat, and the land the food is grown on, in the interest of healthy children and healthy communities.

RETHINKING SCHOOL LUNCH

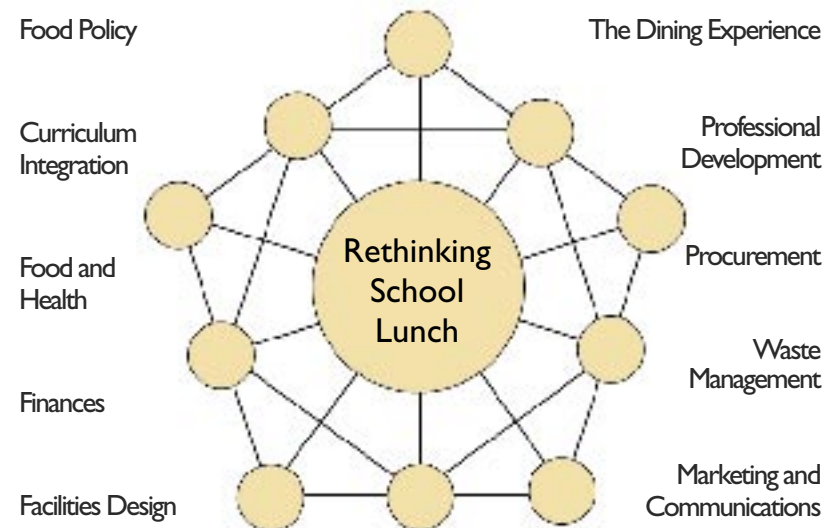
Web of Connections

This document is part of a comprehensive **Center for Ecoliteracy** project that provides helpful information on topics related to redesigning school lunch programs.

The diagram illustrates our systems approach to integrating school lunch programs with curriculum, improving student health and behavior, and creating sustainable communities.

School administrators, food service directors, teachers, and parents will each approach this project from their unique perspective. Readers can begin with the topic that interests them most, then explore the other related topics.

The entire Rethinking School Lunch project is available at: **www.ecoliteracy.org/rethinking/rsll.html**



IT'S TIME TO IMPLEMENT A FARM-TO-SCHOOL PROGRAM

Rethinking School Lunch is not just a goal to be attained at some time in the future: Many of its concepts are being put into practice right now. Throughout the RSL guide, exemplary leaders who share the Center for Ecoliteracy's vision for Rethinking School Lunch discuss their experiences. Marilyn Briggs, an award-winning and nationally recognized professional and leader in food service and nutrition research is one of those dedicated innovators who can see the relationship of the parts to the whole issue. Her work promotes the link between agriculture, nutrition and health through policy and programs.



Connecting Health with Educational Goals

by Marilyn Briggs

Food services is often the last district partner to be brought into the change process, but it is the one upon which all others rely for success. School districts, especially those that undergo a food policy development process, should plan on implementing a program of professional development for food service staff. Professional development is a direct and critical investment in the individuals the district is counting to make the change.

New menus based on cooking from scratch may require food service employees to learn new skills, especially if the current service is thaw-and-serve. The menus the district intends to serve will tell you what skills the food service staff needs to acquire. It is also true that food service employees' jobs become more rewarding and satisfying when the work is less routine and requires skillful execution. It is through professional development that food service staff acquires those valuable and transferable skills which might qualify them for higher pay. When food service staff find the work more satisfying, and receive the respect they deserve, enthusiasm will build for the new program.

Though many food service directors still provide professional development, it's not a requirement. The California Department of Education offers training through community colleges. An entire infrastructure is set up, but it's difficult to fill the classes if no specific requirement exists.

At a policy level, I would advocate for better pay for food service staff, and development of some professional requirements and expectations for anyone who is involved in the preparation of food for children. These would include cooking skills, basic sanitation and safety training. We're not there yet. For instance, a state requirement

for basic sanitation and safety training only emerged in California in the last five years, and it requires only one person in the district to be certified in sanitation and safety.

This emphasis on the farm-to-school approach to improving food in schools comes at a time when we are facing a national health crisis, and much of that crisis is nutrition-related. Childhood obesity has reached epidemic proportions. Some 4.7 million (11 percent) of children between six and 17 are overweight; this proportion has doubled in the last 30 years. Type II diabetes was once called “adult onset” diabetes. Today, it’s one of the most serious health problems of overweight children, and its rates have recently escalated.

Reports to the U. S. Department of Agriculture show that only two percent of school-age children meet the USDA’s serving recommendations for all five major food groups. Just over half eat less than one serving of fruit a day. Nearly 30 percent eat less than one serving a day of vegetables that are not fried. Added sugar contributes to 20 percent of total food energy in children’s diets; 56 percent to 85 percent of children consume soda on any given day.

According to the U. S. Department of Health and Human Services, poor diet and physical inactivity are responsible for as many premature deaths as is tobacco—more than 1,200 deaths a day. The Centers for Disease Control (CDC) identify diet as a “known risk” for the development of the nation’s three leading causes of death: coronary heart disease, cancer, and stroke, as well as for diabetes, high blood pressure, and osteoporosis, among others.

If one of our primary goals as educators is to help students prepare for healthy and productive lives, then nutrition and health education are central to that goal. The most systematic and efficient means for improving the health of America’s youth is to establish healthy dietary and physical activity behaviors in childhood. The CDC reports that “young persons having unhealthy eating habits tend to

maintain these as they age. Behaviors and physiological risk factors are difficult to change once they are established during youth.”

Yet fewer than one-third of schools provide thorough coverage of nutrition education related to influencing students’ motivation, attitudes, and eating behaviors.

Most of us already connect nutrition with health. If we go one step further to connect health with educational goals, then we have effectively connected nutrition to academic performance. There is so much concern over test scores these days. But if kids aren’t in a position to learn because they’re hungry, or they don’t get enough nutritious food at home, then schools that don’t make the nutrition/performance connection in the cafeteria end up undermining what they’re trying to do in the classroom. They know this, too. As an example, on the night before schools administer standardized tests, they’ll tell kids to eat breakfast in the morning, or they’ll serve a breakfast on campus on test days.

Studies repeatedly link good nutrition to learning readiness, academic achievement, and decreased discipline and emotional problems. A hungry child is not equipped to learn. Any teacher knows that if children are hungry, they’re not thinking about their lessons. Educational theorists sometimes forget that.

In 2003, I served as one of the writers for a joint position statement of the American Dietetic Association, the Society for Nutrition Education, and the American School Food Service Association. Part of our statement read: “. . . comprehensive nutrition services must be provided to all of the nation’s preschool through grade twelve students. These . . . shall be integrated with a coordinated, comprehensive school health program and implemented through a school nutrition policy. The policy shall link comprehensive, sequential nutrition education; access to and promotion of child nutrition programs providing nutritious meals and snacks in the

school environment; and family, community, and health services' partnership supporting positive health outcomes for all children."

To me, that means that you need to connect health, through nutrition education, to the whole curriculum—not merely as one of the components in the curriculum—but as something that's embedded in all aspects of it. It means making school meals part of the nutrition education program. That connection feels self-evident, but schools and districts have been slow to make it. The lunch period has more often been regarded as time stolen away from the curriculum, rather than as part of the curriculum.

Implementing a program that addresses nutrition, health, and school lunches, through an integrated curriculum requires many steps. It's a circle that can be entered through many points, including the many sections of this "Rethinking School Lunch" guide, but it all starts with the food on children's plates.

Menus are the heart of the whole system. Kitchens should be designed to prepare the menus you want to serve, and not the other way around. Menus also provide the basis for reviewing food service staffing and staff development programs, facilities, budget, and the procurement system, to see what needs to change.

School meal programs can provide students with better nutrition for one or two meals every day, which would be a great health improvement for many students. Even the average lunch brought from home provides less than one-third the Recommended Dietary Allowance for food energy, vitamin A, vitamin B-6, calcium, iron, and zinc.

But it's not enough that school food be nutritious. Healthy meals won't make a difference to student health if students reject them or throw them away. The food needs to be delicious, attractive, and appealing to young people. Fortunately for nutrition educators, good fresh food usually does taste better. When children taste freshly picked or prepared foods—sometimes for the first time—they often discover that they like them.

I much prefer this approach to the negative approach of "Do not eat this, and do not have that." It's a more positive, much more educational way for students to learn how delightful and wonderful it can be to add fruits, vegetables and whole grains to their diet. Rather than calling attention to a banned food, which then becomes more attractive, enjoyment of fresh food's natural tastiness will help to establish new attitudes toward food and lifelong healthy eating habits.

Offering nutritious food by itself, even if it tastes good, may still not be enough. The pervasive availability of high-fat foods, non-nutritious foods served in the influential environment of restaurants geared to young children, and children's predisposition to these foods, all contribute to unhealthy diets. The media has the capacity to persuade children to make poor food choices. Studies have shown that even brief exposure to televised food commercials can influence preschool children's food preferences. A successful program may also need to use the tools of marketers to reach both children and parents. And when school gardens or cooking classes are also integrated into the curriculum, so that children grow or prepare the foods they eat, the food almost always becomes more attractive.

Buying food locally, to be prepared and served fresh, helps local farmers who are often struggling to compete with agribusiness. It gives local farmers a chance to diversify their markets, and that in turn helps the local economy. Healthy farms provide jobs, pay taxes, and keep working agricultural land from going to development. The benefits of preserving farmland include lower costs of community services, more open space, valuable flood control, diversified wildlife habitat, and greater community food security.

Schools represent a reliable and steady demand for produce and products that farmers can plan for, allowing farms to establish better controls on planting, harvesting, and marketing. Buying locally also reduces the transportation costs, packaging, fossil fuel use, and

exhaust emissions caused by shipping food over long distances. In many cases, food bought locally costs schools less. Having local food sources also enables schools to bring farmers to the classroom, and allows students to go on field trips to farms and at farmers' markets.

The lifelong nutrition habits and lessons that children acquire from school food programs don't end with eating better food. A food systems curriculum promotes understanding about where food comes from and the natural cycles that produce it. The way that meals are served and eaten is part of the hidden curriculum that tells students what the school really believes about food. Does the school encourage fast-food attitudes by providing short lunch periods in which eating competes with getting out of the cafeteria and onto the playground? Or does the school model a belief that mealtime is part of living a healthy life?

I advocate serving meals family style, around a table, as an alternative to "grab and go" through a cafeteria line. When the social experience of sitting together with other students and calmly eating the food is a positive experience, children want to make time to have that experience with their friends and families. In order for this to happen, the cafeteria needs to be a positive environment in all respects.

Some people argue that cafeteria lines are faster and more efficient, but family style service can actually be faster because it's all set up in advance. The kids come in, and the food is there on the table. They actually have the full lunch period to eat without having to stand in line.

In order to serve family style successfully, you do need an adult in the role of "table host" at each table. It quickly becomes too costly if you rely on paid staff, but I've been involved in very successful programs in which senior citizens served as the table hosts. Those programs worked very well. The kids ate in a better atmosphere; the senior citizens were able to make a valuable contribution

and enjoy a nutritious lunch. The table hosts received stimulation from interacting with the kids; the kids were exposed to new role models. A program like that also helps connect schools to their communities, which can create more advocates for the schools when bond issues and other funding measures come before the community.

Unfortunately, the hidden curricula of most school systems—from industrial cafeteria lines, to the amount of time allotted for lunch, to combining lunch with recess—teach kids that meals are something to rush through on the way to somewhere else. Recent research shows that children eat better when they also have a quiet time that follows eating. The ideal seems to be to have physical activity in the morning, have a quiet study time of some type before lunch, have lunch, and then have a reading or quiet time after that. Physical activity needs to be delayed until later in the day. It's pretty obvious that if you go right out to PE, which is often what schools do, then kids who are anxious to get out on the playground shortcut their meals.

We think of today's kids as having grown up as a junk food generation, but it's often their parents who grew up surrounded by junk food, and they passed on those habits to their kids. We've lost a lot of parent role modeling. Parents often lack the ability to make wise food choices, or lack the skills to prepare fresh food. We've lost our home economics courses. Even so, time and time again, I have seen children take food knowledge home and really make a difference with their parents. They often help teach their parents about healthy, fresh food. Sometimes they take their parents to the farmers' market. Sometimes they bring home food preparation skills that their parents forgot or never had.

When we connect schools and parents, we find that many parents have skills that they can bring into the classroom. This is especially true of parents who have traditional cooking skills from different cultures. I've seen it happen so many times, where a parent who

might not be participating at all in school is asked to come in and share ethnic recipes—often a traditional recipe that incorporates local seasonal foods. They come, they meet people, and they see the values of their culture being recognized and honored.

That reminds me of a study among the Hmong living in Berkeley. Their kids were taking home processed food like pizza, and the parents felt, “Okay, this is the culture, and I want to learn this culture. So, we’d better serve this at home.” Meanwhile the study I referred to was busy highlighting the wonderful, delicious, high-nutrient fruit-and-vegetable recipes that the parents knew. Seeing their culture valued, and perceiving themselves as having a rich cultural gift to contribute, can be the door that leads those parents to become much more involved in the school and in the community. I’ve seen that happen repeatedly.

Moving from good ideas to action is never easy. School systems are among the most entrenched systems in our culture, often for good reason. We see programs succeed most often when a key administrator, especially a superintendent, is driving them. Sometimes administrators aren’t ready. Sometimes school lunch and nutrition education programs are too far down their priority lists. Then, the change process can still be initiated from the ground up. It can begin with a food service director, or a parent, or a school nurse. I’ve seen it begin with a school board member who became very interested, inspired the rest of the board, and dragged the principal into it. I’ve even seen students take it on as a project.

So it can work from the top down, or from the ground up, but it’s ideal if you have both. The most important thing is to start somewhere, and stay with it. Probably more than anything else you need an advocate, someone who will spend the time and energy to stick with it. The change you want is so positive that many people will be drawn toward it. But you still need an advocate to bring the different groups together.

Building partnerships, among administrators and parents, or teachers and nurses, or between schools and the agricultural community is a way in to involve new partners in the effort. In fact, I did that with school bus drivers, who look skeptically at programs that require changes in the bus schedule—one of the big obstacles to successful breakfast programs. Knowing that food talks, I invited the bus drivers to dinner. We talked about goals, and imagined working together to make the program happen for the kids. The next thing I knew, the drivers were adjusting their schedules to encourage breakfasts for children.

About the author Marilyn Briggs served the California Department of Education for over 20 years, most recently as director of the Nutrition Services Division and Assistant Superintendent of Public Instruction, after serving as administrator, assistant division director and acting director of the Child Nutrition and Food Distribution Division. She was section chief of the Nutrition, Education, Therapy, and Research Unit of the Veterans Administration Hospital in San Francisco, nutrition education specialist of the San Juan Unified School District in California, public health nutritionist for Hawaii State Department of Health, instructor at the University of Hawaii, and assistant director of the Dietetics Department at American River College. She was the first recipient of the Award for Outstanding Contributions from the California Conference of Local Health Department Nutritionists. She has been a keynote speaker at numerous conferences, and served as an officer in many nutrition organizations, including the editorial board of the *Journal of Nutrition Education* and president of the Society for Nutrition Education. She is finishing a doctorate in nutrition sciences at the University of California, Davis.

Cover photo: Tyler/Berkeley High/Center for Ecoliteracy

Food Policy

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Food Policy

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FOOD FOR THOUGHT

“To be successful in changing the food in schools . . . there needs to be a sense of experimentation, a kind of open-mindedness about what is possible. . . . The policy process can allow for the integration of school lunch with instructional gardens, kitchen classrooms, with classroom curriculum, and the waste management practices of the school district. It can provide the impetus for the district to begin forging relationships with farmers and sustainable agriculture in the region. . . . The process of engaging all these different points of view into an integrated whole — a whole that is both a policy and a program that’s enacted in a school district — that takes leadership, and it takes commitment, and it takes persistence, and it takes a kind of hope and a belief that change is possible.”

— Zenobia Barlow, executive director and a co-founder of the Center for Ecoliteracy

WHAT’S INSIDE?

RETHINKING FOOD POLICY: The goal, the challenge, and some key points to remember.

THOUGHTS ON IMPLEMENTING A FOOD POLICY: An interview with **Zenobia Barlow**, executive director and a co-founder of the Center for Ecoliteracy.

MODEL SCHOOL DISTRICT FOOD POLICY: The Berkeley (California) Unified School District’s Nutrition Education and Physical Activity Policy, a model of successful change.

FOOD POLICY RESOURCES: Ready to go further? This annotated list of helpful resources on the theory and practice of healthy food policies, including more model policies, is a good start.

RETHINKING FOOD POLICY

The Goal *To undertake a food policy development process, driven by the shared leadership of school administrators, educators, school food service directors, and parent groups, that leads to the adoption of a districtwide fresh food policy.*

The Challenge *Working together effectively and collaboratively over the long term.*

All of the stakeholders — school administrators, educators, food service personnel, and parents alike — are concerned with student health and academic performance and want to help schools make a more positive impact in this area. Often, however, they cannot find the common ground that allows them to solve problems collaboratively or work together effectively. Even when they do begin to work optimistically, expectations of change can lead to frustration when the process moves more slowly than anticipated.

Innovation that occurs at a single school is unlikely to become part of lasting, districtwide change unless the innovations are institutionalized in a district food policy. And innovations that are not supported by all stakeholders have little chance of success. Shared leadership creates the conditions for a real and lasting change in a district's food policy.

KEY POINTS

District Food Policies Can Create a Shared Vision for Child Nutrition Developing a school district food policy is a practical way to create a shared vision and language about needed change. This policy is a guide that spells out the challenges and proposes solutions that have been arrived at through a public process that engages multiple perspectives. When the board of education adopts a district food policy, the entire community knows the district is committed to improving the school environment for children and youth, particularly the school food system.

Implementing District Food Policies Can Bring Exciting Curriculum Opportunities School district food policies often designate the school dining room as a place where learning occurs, and the lunch period as a learning opportunity. Typically, these policies include strategies that make lunch part of the academic curriculum.

Classroom lessons resonate when students are able to connect their learning to the dining experience, and to hands-on activities in school gardens and kitchen classrooms. Visits to local farms add another dimension. Using this kind of multifaceted approach to student learning about nutrition and the food system can be powerful enough to change attitudes and behaviors toward food, health, and the environment.

More and more, educators are coming to recognize nutrition education as a necessary component of the school curriculum. Marilyn Briggs, former director of the Nutrition Services Division and former assistant superintendent of public instruction for the California Department of Education, makes the case: “If one of our primary goals as educators is to help students prepare for healthy and productive lives, then nutrition and health education are central to that goal. . . . You have to connect health, through nutrition education, to the whole curriculum — not merely as one of the components in the curriculum, but as something that’s embedded in all aspects of it. It means making school meals part of the education program.”

District Food Policies Can Build Communications

Bridges School district food policies can also specify the formation of a nutrition advisory committee (NAC). The name may vary — the Food Trust in Philadelphia designates a Nutrition Advisory Council; the Center for Ecoliteracy and the Berkeley Unified School District term it a Child Nutrition Advisory Committee (CNAC) — but the role is the same: to represent the student perspective. Students, chosen by their peers to participate in a CNAC, can report to their classmates on the process and what they are learning from it.

This service group keeps an eye on the project, making recommendations and receiving reports concerning progress in implementing the policy, and is also available to interpret specific policy goals. Nutrition advisory committees comprise a diverse body of interested parties who have a stake in improving student health. In addition to students, they typically include food service directors and staff, educators, principals, school nurses, maintenance staff, educators, and parents.

District Food Policies Can Empower Communities

School food policies join the district’s commitments and resources with those of the local community to improve the health of school-age children. In doing so, they often have far-reaching implications: They can empower the community and the district to become partners in envisioning a better school environment for students, beginning with food but often going beyond it. They are a framework for action within which local school boards can take steps to improve conditions that affect the health and learning ability of students.

District food policies provide another level of responsibility for the public dollars that underwrite school meal programs. They link education to local economies, and student health to local landscapes. This means buying food from local farmers.

Finally, school district food policies can help to raise awareness of the need for more sustainable food systems and the impact individual food choices have on our health, the environment, and our future. This awareness is far-reaching: It influences school culture and the values of the entire learning community.

Communities embrace district food policies when these policies unite district goals for student health with similar concerns for the health of the larger community and the environment. District food policies can be brought into alignment with, or serve as models for, community food policies that are mutually reinforcing.

District Food Policies Make a Commitment to Health

A number of scientific studies support the fact that we develop our attitudes toward food and diet in childhood. That's one reason why it makes sense for school district food policies to promote consistency between what children are taught about health in the classroom and the messages and choices available to them in the lunchroom.

A school district food policy spells out the district's commitment to improving the health of students, staff, and the school community. It provides a framework for action for all food- and health-related activities in the school district. And it is also a local mechanism that restores the authority for decisions affecting the health of children to their parents and the community.

District Food Policies Make a Commitment to Education District food policies can reinforce educational goals by linking them, through the academic curriculum, to students' real-life experiences with their school meal programs. The scale of change for affecting school meal programs is ultimately at the district level, not the classroom or even the single school. A leadership core of individuals concerned with children's health can use the policy process to state concerns in positive terms that make a difference in children's lives.

Lasting Change Calls for Internal Champions The change process can begin anywhere: at the top, with the superintendent of schools, or from outside the formal district structure, with parents, health-care professionals, researchers, and others. But in the end, creating lasting change means that those inside the formal structure of the school district — superintendents, business managers, food service directors, principals, and educators — will become internal champions for change.

Give thought to who will make up the core policy leadership group. Make sure it consists of people who will foster a participatory approach that leads to successful policy development and implementation.

Change Is a Long-Term Process Changing from commercialized, “thaw-and-serve” food service to a farm-to-school model is not something that happens overnight. It takes thought, planning, and ongoing commitment to the well-being of students, and it means working together over the long term to see that the goal is achieved. Implementing such a change can be a complex process, and adopting a food policy is just one phase of it. Having a shared goal of improving the health of our children, and ultimately the health of our planet, can inspire everyone who is involved to make a real commitment to working in partnership.

Beginning to Think About Implementing a District Food Policy At first, the process of implementing a school district food policy may seem daunting. Considering these and other questions in the beginning can provide a framework for changing a school's food service system.

- **What examples of district food policies** can be used as models?
- **How will improvements in the school meal program** become part of the formal learning experience of all students?
- **How will that learning migrate** home to family and community?
- **How can the school district** use the food policy development process to formalize its commitment to improving student health?

- **How will impacts on student health** be monitored?
- **How will student input be elicited** and incorporated into the change process?
- **After the policy is adopted**, what mechanisms can be put in place to ensure that it is implemented?

RETHINKING SCHOOL LUNCH

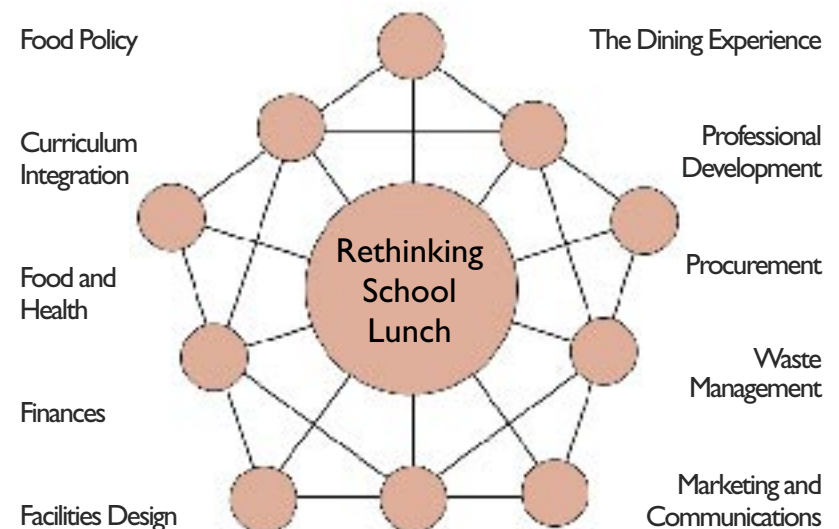
Web of Connections

This document is part of a comprehensive **Center for Ecoliteracy** project that provides helpful information on topics related to redesigning school lunch programs.

The diagram illustrates our systems approach to integrating school lunch programs with curriculum, improving student health and behavior, and creating sustainable communities.

School administrators, food service directors, teachers, and parents will each approach this project from their unique perspective. Readers can begin with the topic that interests them most, then explore the other related topics.

The entire Rethinking School Lunch project is available at:
www.ecoliteracy.org/rethinking/rsl.html





Thoughts on Implementing a Food Policy

An interview with Zenobia Barlow, executive director and a co-founder of the Center for Ecoliteracy

by Janet Brown, program officer for food systems at the Center for Ecoliteracy

Center for Ecoliteracy: *If people outside the school system wanted to improve the food served to students at the school, what would be your advice to them?*

Zenobia Barlow: Well, it's interesting to think about a school system, because you can think about it in two ways. One is as a district-wide, formal, hierarchical structure. People reporting to each other. There's a board of education at the top. There's a

superintendent, and so on. So first, you need to understand that a school system is a formal structure.

But a school system is also an informal network of relationships, and those networks of relationships are nested at individual schools. The parent community, by and large, has a commitment to a particular neighborhood school and a particular student body. They know each other, and they know the teachers and the principal.

Part of the challenge of this effort to improve school meals is that the district food service is a *district-wide phenomenon*. It exists in the formal structure at the district-wide level. But many parents who are concerned about the food in their particular child's school probably don't know, or have never met, the food service director who is making the decisions at the district level. Depending on the scale of the district, those decisions are made downtown, or farther and farther away from the PTA at the local, individual school. So, there's this scale question and it presents a challenge to change.

I would say that to be successful in changing the food in schools, I would start top down, bottom up, and horizontally across all the networks of relationships in the school community. I think you're going to need to do all three. You could probably start anywhere. You could start as a single parent in a single classroom at a single school. If a person were so motivated and moved, he or she could begin to work with members of the community, the network of people at the local school, and also begin to work with the structure—with the principal, for example.

Ideally, the superintendent and the board of education would feel inclined to make this change, but maybe it's not going to start there. And in our experience, where superintendents were committed to doing this, what they've done is to encourage a very wide circle of participation and conversations in a rather lengthy process that begins to gain momentum. I think the answer is that it's a network of conversations that rides on the enthusiasm, commitment and caring of individual people. You can't overestimate the power and

persistence of individual people who genuinely care about this, who have a heart commitment to the care and feeding of children.

And at the same time, there needs to be an awareness that this is, or can be, a long-term progression. Advocates at one school will need the engagement and participation of advocates at other individual schools in the district, and the whole group of people needs to work together across the district to focus on the leverage points within the system. That cross-district networking could evolve into a process that leads to the adoption of a district food policy.

One of the things we discovered is the clarifying effect of the policy process. The policy process can begin with an individual school, but eventually, it needs to include groups of parents and informal networks of people who really care about this issue from schools across the entire city or the entire school district. At the same time, those groups also need to engage the formal structure of the district: the principals and superintendents, and the district food service director. That way, the system is engaged both vertically and horizontally, through informal networks of conversations and through formal structures.

Our experience is that it's not a linear process. There needs to be a sense of experimentation, a kind of open-mindedness about what's possible. Many of us who start out with a fixed notion about how long it will take, find that it takes longer than that, or it's more complicated, or that obstacles that seem insurmountable lead to innovation and emergence. And so there's a sort of unpredictable nonlinear quality to this work. It takes persistence, and holding a positive outcome in spite of discouragement, obstacles or seemingly insurmountable odds. It takes remaining open-minded, building coalitions across areas of interest, across the school district, and waiting to see what's possible.

We've seen schools experiment, for example, with "Pack it in...pack it out," removing garbage cans from the lunch area and requiring

students to take home any food scraps leftover from the lunches they brought to school. We've seen salad bar experiments. We just keep seeing people come at this with different procurement models, with ways of getting breakfast served inside the classroom without changing the bus routes and the bus times, experiments with physical exercise preceding or following the lunch period. I mean, despite the fact that the system may seem to be resisting, there remains a sense of experimentation, problem solving, and excitement about possibilities. If it persists, it can lead to unexpected and amazingly wonderful discoveries.

CEL: *Let's talk about leadership and change.*

ZB: Sometimes we think of leadership in a sort of top down way, as hierarchical. It's the person at the top. And certainly when it comes to changing food in schools, you really do need the leadership of an innovative food service director. You need an innovative and experimental superintendent who's willing to see the curriculum implications. You need principals who observe that children's attention spans increase significantly when they are well fed from breakfast on. So, every place along the way, there's an opportunity for leadership. And that includes parent communities, and that one individual who has a commitment in their heart to this. There's no person too small or too unimportant to provide leadership. There are so many examples of how a single person in a school system, in a school community, can be the person or the team of people who can carry the leadership at any given stage.

We think it becomes possible to transform school systems to the degree that the leadership is as widely distributed as possible, up and down the formal structure, and horizontally across the network of relationships. At times, when the formal leaders become fatigued or overwhelmed, the commitment and persistence of people who are not perceived to be the most powerful in the community matters the most.

We've advocated, as one model, this idea of a Child Nutrition Advisory Council (CNAC). A CNAC might be the formalization over time of a network of conversations within the district that has coalesced through the policy process. The conversation can begin with the PTA or the food service director. Or the superintendent can initiate it, and as it builds participation, it can culminate in a formal policy and a formal body of people, the Child Nutrition Advisory Council, who make recommendations about the implementation of the policy. It requires the participation of the widest possible complement of the community.

CEL: *When you say “policy process,” it’s understandable that people would focus on the instrument at the end—the policy—but isn’t it the process itself that generates momentum for change?*

ZB: Well, the first phase of engagement of a community process might feel a lot like going backwards. It creates a circumstance that brings out people with single issue commitments: the recycling people, the garden people, the waste management people, the people who advocate for one or another kind of diet, or the people who think it’s all about physical exercise. So, there’s an opportunity at the beginning to coalesce people with very strong feelings and diverse viewpoints, many of whom are frustrated and angry and rightly so, that might not previously have thought they had much in common with the others. This first phase might be thought of as creating a safe space for people to air things that concern them or frustrate them. And as those issues that people are against are given voice, the possibility begins to be presented for people to be *for* something.

When that happens, the policy they create together is going to be multifaceted and, hopefully, increasingly integrated. It can, if the process is effectively facilitated, transform the concern and frustration into more than a policy. It can become the reinvention, the *rethinking* of school lunch, and the rethinking of where school lunch fits in an integrated school system and community.

The policy process can allow for the integration of school lunch with instructional gardens, kitchen classrooms, with core curriculum, and the waste management practices of the school district. It can provide the impetus for the district to begin forging relationships with farmers and sustainable agriculture in the region.

At first, each of those areas of interest is merely a fragment of the whole pattern. They tend to be fragments, special interest groups, and people who are not necessarily in conversation with one another. So, the process of engaging all these different points of view into an integrated whole—a whole that is both a policy *and* a program that’s enacted in a school district—that takes leadership, and it takes commitment, and it takes persistence, and it takes a kind of hope and a belief that change is possible. And that’s all dependent on the goodwill of individuals who are earnestly committed to improving the lives of school-age children.

We hear many voices of people who care about this and are willing to commit their time and energy to it. There is a policy process, a change process really, that has been observed over time in many communities. It gives expression to the frustration, and that expression can lead to an improvement in the lives of children and the practices of a whole school system. In Berkeley, we benefited through the participation of some people who had a background in the political process. That might be something that people who are getting started would look for. Who do they know in their community who has a political background, who understands how to work through community process? It requires someone who knows how to engage people in public hearings that lead to the drafting of a policy that can be presented for adoption to the board of education.

The policy process encourages all the different voices to express themselves toward some kind of positive end. And I think there’s always a fear about opening up a public process. It entails listening and patience. It usually requires an airing of resentment, blame

and frustration, so that those concerns can be heard and can become incorporated in envisioning something that can truly be implemented.

That original school district food policy has certainly traveled. In fact, we recently saw that it is acknowledged on the Grab 5 website from Great Britain. They acknowledge the Berkeley school board, and the food policy they adopted in 1999, as the inspiration for their work.

CEL: *Where would you suggest someone start looking for examples of food policies that other districts have adopted, or additional materials that can assist the policy process?*

ZB: Well, on our Rethinking School Lunch website, there's an example of a food policy that was adopted by a community. One of the commitments in that policy is that it would be shared with other school communities. There are organizations such as Commercial Alert who have on their website examples of how to work with and change school district policies. There are many resources. There are models. There are examples of how other communities, over long processes, have formalized their concerns into a policy. You don't need to start with a blank page. But it still will require a process and some time to accomplish.

Even in a place such as Lagunitas Unified School District, with a strong commitment, beginning with a policy that already existed as a template, they still needed to engage in a dialogue over a period of at least two years to make that policy their own. So, I don't think you can, I don't think it's even desirable to try to, skip over the discourse in order to try to implement.

There's always this urge to move immediately and directly into implementation. I think it's because that might appear to be the fast track. In reality though, it usually turns out to be the track where you have to back up and go through the process of hearing what people really care about. There's no shortcut to engaging enough members of the total community. It's the engagement that

generates the kind of commitment across the system and across the community that it's going to take to really implement this kind of change.

School systems are so susceptible to the issues, concerns, demands and requests of every kind of interest group that I think it's reasonable to expect that they resist being changed immediately by anyone, from the superintendent down. Systems cohere. It's their very resilience that protects them from transforming overnight, every time someone has a big idea. I think it is reasonable to expect that the system, no matter how much it wants to change and how much it should change, is going to have a tendency to resist dramatic and immediate change.

CEL: *How does change occur, and how can a school district improve conditions out of which innovation emerges?*

ZB: Strangely enough, emergence of innovation, in our experience, comes frequently out of failure, comes from the fork in the road where *neither* path seems feasible. It's in the impossible situation frequently, that the most amazing surprises and innovations occur. One should expect resistance from the system. One should be prepared to encounter obstacles. The good news is that frequently it's just at that point, just when it seems to be at its height of resistance, where you disturb the system, and that disturbance leads to fortuitous changes that were unanticipated.

So, this change process is unlikely to be linear, sequential, able to be managed, and absolutely planned for. I mean, you do need to have plans, and you really do need to have a sense of a calendar. But the change itself might happen in its own time and in its own way. Leaders need to remind themselves, while working within a sort of managed process that, actually, an *unmanageable* process or unpredictable event is the place out of which the most exciting innovations are likely to emerge.

CEL: *Who should be there from the beginning and how does the process begin?*

ZB: I think you start where the readiness is, where people really have cares and concerns. And I suppose the caveat is that you don't want to get too far along a path and have left out really important constituencies.

CEL: *What are some of the important constituencies?*

ZB: Well, let's say a superintendent decides to make this change. That begins to engage groups of people in a pattern of activity that leads to fundamental change, such as the parent group. Consider that when you describe the parent group, it's not likely to be a homogenous group. You've got many different constituencies in the parent group, and food is a very emotionally charged issue. Meeting and working together brings up culturally diverse feelings and opinions about food, and what's appropriate, and what it looks like, how it's delivered.

Even if you could get the parent group, in all of its diversity, to agree about all of this, there is still one group that is chronically left out of the conversation and that happens to be food service staff. Our experience is that the food service staff are frequently invisible to those who are managing the process. They're not given as many opportunities to participate in the dialogue. Frequently, they are part time employees of the district. Their schedules are not attuned to the regular schedule of the larger learning community. The care and concern that many food service employees do have about children, about the food they are serving, is a potential and valuable resource to a change process, but it's a challenging group to engage. It is the responsibility of the leaders, or change agents, to create a comprehensive inventory of who needs to be included, and then systematically visit those people, collect comments, keep information flowing, and make every effort to invite those people into the process.

Part of what we know about change is that there are better and worse places to start. Rather than beginning with the group who

is inalterably opposed to the change, probably the more effective path might be that second tier of people, those who are ambivalent, or for whom this isn't a burning issue. You might not start with the early adapters since those people are already on board for it. You might not go directly to setting up dialogues between the people who are fervently for something and fervently opposed. The most effective path is likely to be in that second tier of people who might be invited along the path. It's probably the most strategic leverage place.

Again, I think you can start anywhere, and through a sensitive, committed process of engaging many different people in this conversation, it builds momentum that has a kind of resilience over time. Someone needs to dedicate him or herself to touching bases with all the different people. The custodial staff is very important in this change and has a role to play. All those parents who care. Homeroom teachers who notice which children come to school hungry. Principals who see the improvement in the children who have eaten breakfast, the improvement in their attention span between 10 o'clock and noon. PE teachers, farmers, school nurses—so many people who can be important to the process.

Much of our most exciting work has been with educators, teachers and principals committed to linking core curriculum to school gardens, kitchen classrooms, school lunch, and regional sustainable agriculture. "Where does our food come from?" is such an evocative question that has the potential for integrating curriculum across subject matter and grade level, and connecting to some of the most important problems of our time.

CEL: *In following the policy process in different communities, what have you learned about expectations and time frames? How much does the adoption of a policy have to do with when and how the meals served to students will improve?*

ZB: Schools have many policies. The complexity of implementing a policy might signal the second phase of a very long process. The

second phase might require the partners in the effort to think through how to change a complicated system that's already been intact for a long time. Remember that systems are resilient, and they have boundaries, and part of how they express those boundaries is by repelling external influences. A food policy is another phase in a change process.

There are so many variables that come into play in school food service. Each of those systems interacts in what we call school food service; transportation, labor, personnel, facilities, procurement, all of those gears need to be shifted at the same time. So, the process of implementing a school food policy could be a matter of years. Changing systems is a long haul. Sometimes it seems to happen overnight, and sometimes it takes a long time.

CEL: *In light of the difficulties and the unpredictable time frames, why would you say that you still find this work worthwhile? What do you sense is possible that inspires you to continue?*

ZB: Well, these are the lives of our children. This is our future. It's the health and the real well-being of our learning communities and the future of our larger communities. What I find very hopeful is that the infrastructure is already there. Children are already being fed something in schools. The school lunch program is supported by taxpayer dollars. There's already a significant revenue stream attached to this effort. We're currently investing billions of dollars in that system. So, this is also an opportunity to make sure that our tax dollars are invested wisely, and that our investment in these children leads to the most life affirming future for them, for our communities, and for the planet. The absence of making a wise investment has dire consequences that are becoming clearer each day. Here we are with an opportunity to invest wisely, and in a way that has these synergistic effects. It's better for everyone. I think it's noble work. I think it's essential work. And it's inherently life affirming.

Zenobia Barlow is executive director and a co-founder of the Center for Ecoliteracy, a public foundation in Berkeley, California. She is a member of the steering committee of the California-based Funders for Sustainable Food Systems (FSFS) and of the national Sustainable Agriculture and Food Systems Funders (SAFSF). Barlow is the former executive director of The Elmwood Institute, an ecological think tank and international network of scholars and activists. She previously worked with the American Academy of Pediatrics and the Office of Child Development of the United States Department of Health, Education, and Welfare.



Model School District Food Policy

The Berkeley (California) Unified School District's Nutrition Education and Physical Activity Policy

Responsibilities

The Board of Education recognizes the important connection between a healthy diet, physical activity, and a student's ability to learn effectively and achieve high standards in school. The Board also recognizes the school's role, as part of the larger community, to promote family health, physical activity, nutrition education, sustainable agriculture and environmental restoration.

The Board of Education recognizes that the sharing of food and participation in physical activity are fundamental experiences for all people; are primary ways to nurture and celebrate our cultural diversity; and are excellent bridges for building friendships, and inter-generational bonds.

Mission

The educational mission is to improve the health of the entire community by teaching students and families ways to establish and maintain life-long healthy eating and physical activity habits. The mission shall be accomplished through nutrition education, physical education, garden experiences, the food served in schools, and core academic content in the classroom.

Goals

1. Ensure that no student in Berkeley is hungry.
2. Ensure that an economically sustainable meal program that provides healthy and nutritious breakfast, lunch, and after school snack is available to every student at every school so that students are prepared to learn to their fullest potential.
3. Ensure that eating experiences, gardens, and nutrition education are integrated into the curriculum for math, science, social studies and language arts at all grade levels to the maximum extent possible.
4. Ensure that the nutritional value of the food served significantly improves upon USDA Dietary Guidelines by providing nutritious, fresh, tasty, locally grown food that reflects Berkeley's cultural diversity.
5. Ensure that the food served shall be organic to the maximum extent possible, as defined by the USDA National Organic Program.
6. Eliminate potential harmful food additives and processes, such as bovine growth hormones, irradiation, hydrogenated oils, and genetically modified foods.
7. Serve attractively presented meals in a pleasant environment with sufficient time for eating, while fostering good manners and respect for fellow students.
8. Maximize the reduction of waste by recycling, reusing, composting and purchasing recycled products. Each school site shall have a recycling program.
9. Ensure appropriate infrastructure, facilities, equipment, supplies and staff support to achieve the district Nutrition and Physical Activity goals.
10. Encourage maximum participation in the school meal program by developing a coordinated, comprehensive outreach and promotion plan for the school meal programs.
11. In Elementary and Middle Schools (K-8)*, no food sales of any type, other than by Nutrition Services, may take place until the end of the last regularly scheduled food service period of the day. However, up to two days during the year may be designated on which any number of organizations may conduct sales of food items with the prior authorization of the Food

Service Director. At his/her sole discretion, and subject to any conditions he/she may require, the Food Service Director may authorize up to two additional food sale days.

12. Snack foods provided to students during any daily snack period or in school offices should conform with food policies 4-6 above.
13. Elementary School class parties at which food or snacks is/are provided to students, should be held after that class' lunch period. Middle School class parties at which food or snacks is/are provided to students, should be held after that class' lunch period, unless the class does not meet after lunch.
14. In recognition that physical education is a crucial and integral part of a child's education, BUSD will provide opportunities to ensure that students engage in healthful levels of vigorous physical activity and develop physical, mental, emotional, and social well-being as directed by the State Education Code and the Physical Education Framework.
15. Ensure that movement skills, self-image, personal development, and social development are integrated into the curricula through team sports, individual sports, dance, and cooperative physical activities.
16. Improve the quality of physical education curricula and increase training of physical education teachers through district-wide staff development.
17. This policy shall be distributed and publicized to the entire school community including classrooms, PTA meetings, teacher and principal meetings, etc.

*A competitive food policy for the high school will be developed after the new Food Court has opened and after consultation with the BHS Principal, Staff and Students.

Food Policy Resources

For Parents

Information and resources for parents, school staff, and community members to improve the food served in their schools

Childhood Obesity and the Marketing of Junk Food in Schools

Statistics on obesity and the marketing of junk food in schools helps Commercial Alert, a national nonprofit organization protecting children from commercialism, arm community members with statistics that help make the case for healthier food in schools. (PDF: 2 pages)

www.commercialalert.org/obesity.pdf

Healthy School Food Policies: A Checklist

This working paper collects many of the innovative policies that have been adopted or proposed to improve school food, providing a checklist of around 50 such policies.

www.healthyschoolscampaign.org/farm-paper-1.htm

How to Start a School Garden

From organizing a garden committee to getting students outside planting, the Environmental Education Council of Marin (EECOM) spells out a step-by-step process to creating a garden on school grounds. (PDF: 2 pages)

www.eecom.net/projects_school_garden.pdf

Local Food Connections: From Farms to Schools

Developed by researchers at Iowa State University, this resource discusses the fiscal and nutritional benefits to both local farms and

schools when they are connected to each other through a farm-to-school program. (PDF: 4 pages)

www.extension.iastate.edu/Publications/PM1853A.pdf

Organizing Cafeteria Recycling Programs in Elementary Schools: A How-to Guide

The Los Angeles County Department of Public Works provides the steps to implement a cafeteria recycling program in a school. They also discuss other ways to save the environment during lunchtime and offer a case study from an elementary school in Los Angeles. (PDF: 9 pages)

<http://ladpw.org/epd/envdef/Teacher-PrincipalPacket.pdf>

School Lunches, Smart Yet Satisfying! Healthy Eating at School: Ten Steps for Parents

The U. S. Department of Agriculture offers ten important steps for parents to show their child's school that healthy, nutritious meals matter.

www.fns.usda.gov/tn/Parents/lunch.html

Ten Steps to Expel Commercialism from Schools in Your Neighborhood and State

Commercial Alert notes ways, such as coalition building and engaging local news media, to work toward removing Coke and fast food from your local schools. (PDF: 1 page)

www.commercialalert.org/schoolcommercialism.pdf

Center for Ecoliteracy Newsletter

Inspiring stories and information that illustrate the efforts of educators and students whose work the Center supports

Community Food Security

Spring 2002: Sara Marcellino interviews Robert Gottlieb

www.ecoliteracy.org/pages/newsletter3_gottlieb.html

The Fertile Crescent Network

Summer 2003: Farm-to-school advocates in the San Francisco area

www.ecoliteracy.org/pages/newsletter5_fertilecrescent.html

The Marriage of Farm-Fresh Food and Schools

Spring 2002: The Center for Ecoliteracy's Food Systems Project

www.ecoliteracy.org/pages/newsletter3_brown.html

Changing the School Nutrition Environment Planning Tools and Resources

For more information about ways to implement the change process in schools

ASCD Advocacy Toolkit

This kit offers educators the basics for developing an advocacy plan on behalf of their students. It also includes tips for communicating with policymakers and the media.

www.ascd.org/advocacykit/

Changing the Scene: Improving the School Nutrition Environment

The U.S. Department of Agriculture designed a guide for the school community (school administrators, school food service employees, parents, teachers and other concerned community members) that first examines a school's "nutrition environment," and then guides the user through developing a plan and putting it into action.

www.fns.usda.gov/tn/Healthy/changing.html

Guidelines for School Health Programs to Promote Lifelong Healthy Eating

Developed by the Centers for Disease Control in collaboration with other experts, “these guidelines identify strategies most likely to be effective in promoting lifelong healthy eating among young people.” (PDF: 47 pages)

<ftp://ftp.cdc.gov/pub/Publications/mmwr/rr/rr4509.pdf>

Healthy Food Policy Resource Guide

This step-by-step guide provides school governance leaders with ways to enhance the school environment so students can develop and practice healthy eating habits. It describes the link between nutrition, physical activity and learning; provides sample policies and resources, and more. The site includes PDFs of selected sections of the guide, which can be ordered online.

www.csba.org/PS/hf.htm

Healthy School Food Policies: A Checklist

The Center for Food and Justice, Urban and Environmental Policy Institute’s working paper brings together some of the innovative policies that have been created to improve school food. This document is a source of good ideas for organizations working to create or strengthen school food policies.

<http://departments.oxy.edu/uepi/schoolfoodschecklist.htm>

Healthy Schools

The National Association of State Boards of Education website offers links to its “Healthy Schools” projects. Resources include the Healthy Schools Network, publications, articles, state-level school health policies, sample policies and more.

www.nasbe.org

Iowa Food Policy Council

This website includes news, publications, current legal issues, Q&A, new developments, and links to other resources.

www.iowafoodpolicy.org/index.htm

Leading in a Culture of Change

Michael Fullan

Fullan’s “practical guide is designed to help leaders in all sectors (corporate, education, public, and nonprofit) manage and drive productive change within their organizations.”

www.josseybass.com/WileyCDA/wiley/Title/productCd-0787953954.html

Leading in a Culture of Change: Personal Action Guide and Workbook

Michael Fullan

This workbook is a companion to Fullan’s best-selling book. It’s filled with case examples, exercises and resources that help change agents “the five core competencies—attending to a broader moral purpose, keeping on top of the change process, cultivating relationships, sharing knowledge, and setting a vision and context for creating coherence in organizations.

www.josseybass.com/WileyCDA/wiley/Title/productCd-0787969699.html

National Alliance for Nutrition and Activity

For more about national policies and programs to promote healthy eating and physical activity, visit the website of The National Alliance for Nutrition and Activity (NANA).

www.cspinet.org/nutritionpolicy/nana.html

School Foods Tool Kit: A Guide to Improving School Food and Beverages

The Center for Science in the Public Interest designed this tool kit to help parents, teachers, and others interested in improving the nutritional quality of food and beverages served to children in school. (Three PDFs: Part I: 35 pages, Part II: 28 pages, Part III: 23 pages)

www.cspinet.org/schoolfood/school_foods_kit_part1.pdf

www.cspinet.org/schoolfood/school_foods_kit_part2.pdf

www.cspinet.org/schoolfood/school_foods_kit_part3.pdf

Model School Food Policies

Here are a few more examples of model school food policies

Building Strong Communities through Healthy Food

This site includes the Comprehensive School Nutrition Policy for the School District of Philadelphia, Pennsylvania.

www.thefoodtrust.org/policy.html

Sample School Food Policy: Lagunitas Elementary School

This Marin County (California) elementary school's food policy is modeled after the Berkeley Food Policy. (PDF: 2 pages)

www.eecom.net/projects_school_examplepolicy.pdf

Reports, Research, and Information

See these references for research articles related to school health programs and food policies

Minnesota School Food Policies and Practices

French, Simone A., Mary Story and Jayne A. Fulkerson. "School Food Policies and Practices: A State-Wide Survey of Secondary School Practices." *JADA* 102(12) (2002): 1785-1789. This is a study of the Minnesota secondary school food environment and practices, including "the presence of à la carte, snack bars and vending machines, school food and nutrition policies and principals' attitudes about the school food environment." (PDF: 5 pages)

www.eatright.org/images/journal/1202/r5.pdf

School Health Policies and Programs Study

U. S. Dept. of Health and Human Services/CDC/Division of Adolescent and School Health. School Health Policies and Programs Study. *Journal of School Health* 71 (7) (2001). This national survey periodically is conducted to assess school health policies and programs at the state, district, school, and classroom levels. It includes fact sheets, state report cards, state-level summaries and more.

www.cdc.gov/shpps

Soft Drinks in Schools

This American Academy of Pediatrics' policy statement warns pediatricians and other health care professionals, parents, superintendents, and school board members about nutritional concerns regarding soft drink consumption in schools.

www.aap.org/policy/s010119.html

The New Agriculture

Hamilton, Neil D. "Putting A Face on Our Food: How State and Local Food Policies Can Promote the New Agriculture." *Drake Journal of Agricultural Law* Vol. 7 (2002). This report discusses: what is state and local food policy; the use of state food policy councils, the purpose

of such councils and how they are created; and it raises the idea of “developing a model state law reflecting a comprehensive legislative proposal to improve state and local food policy.” (PDF: 37 pages)

www.statefoodpolicy.org/faceon.pdf

Systems Perspective

Leadership and the New Science Revised: Discovering Order in a Chaotic World

Margaret J. Wheatley

“The new science offers a radically different understanding of change as a natural and continuous process. This science challenges us to think about new processes for engaging with life’s creative force for change.”

Berrett-Koehler Publications, Inc., 1999. \$24.95

The Hidden Connections: Integrating the Biological, Cognitive, and Social Dimensions of Life into a Science of Sustainability

Fritjof Capra

Dr. Capra offers a systems approach to leadership and change in the 21st Century.

Doubleday, 2002. \$24.95

International

For information about school food policies outside the U. S.

A Model School Food Policy: A Practical Guide (Grab 5)

This booklet is intended to outline the advantages to a school of adopting a food policy and to provide practical guidance on how to go about this.

www.sustainweb.org/g5fp/index.htm

Establishing A Whole School Food Policy

This section of the British Nutrition Foundation’s website guides users through the process of writing and implementing a school food policy.

Other pages of the BNF site offer downloadables, information for teachers and parents, and links to other helpful information.

www.nutrition.org.uk/schoolfoodpolicy.htm

Healthy Eating & Active Living in Northern British Columbia

Website includes sample school nutrition proposal, links to school and youth food and activity programs and policies.

www.healbc.ca/schools.htm

School Meals: Healthy Eating & Sustainable Food Chains

The Regeneration Institute’s report that positions the school meal as a “...litmus test for our collective commitment to sustainable development.” (PDF: 4 pages)

www.cf.ac.uk/cplan/ri/publications/sm-execsum.pdf

Cover photo: Tyler/Center for Ecoliteracy

Curriculum Integration

RETHINKING SCHOOL LUNCH GUIDE

Rethinking School Lunch — a project of the **Center for Ecoliteracy**
2528 San Pablo Avenue, Berkeley, California 94702 www.ecoliteracy.org



Curriculum Integration

RETHINKING SCHOOL LUNCH GUIDE

FOOD FOR THOUGHT

“[We can make health and the food system part of the learning experience.] Through our students’ work in the garden, wonderful socialization is occurring. Students are coming together in groups to do group activities in wonderfully cooperative ways. On the academic side, the life cycle is being taught to children in the gardens, and there’s a much greater awareness of ecology. Now we need to make certain that the job we’ve done in the gardens is extended to the lunch hour. We need to continue to make connections between the cafeteria, the garden, local farms, physical activity, and the academic classroom. . . . The lunch hour and the delivery of food to kids is an opportunity for learning that we have almost completely ignored and need to include.”

— Michele Lawrence, superintendent of the Berkeley (California) Unified School District

WHAT’S INSIDE?

RETHINKING CURRICULUM INTEGRATION: The goal, the challenge, and some key points to remember.

INTERVIEW WITH MICHELE LAWRENCE,
SUPERINTENDENT OF THE BERKELEY (CALIFORNIA)
UNIFIED SCHOOL DISTRICT: A look at how one district is working to make the food system and health a learning experience for students.

CURRICULUM INTEGRATION RESOURCES: Getting started with curriculum integration means becoming familiar with a range of topics, including brain-based learning, multiple intelligences, environmental education, and much more. Explore this world through these intriguing resources.

RETHINKING CURRICULUM INTEGRATION

The Goal *To make the food system and health part of the academic curriculum and the learning experience.*

The Challenge *Making the shift from teaching single subjects to a thematic approach that helps students see relationships and find meaning in what they are learning.*

The learning mind is constantly searching for patterns and connections, yet academic instruction is traditionally separated into disciplines. Many teachers do try to connect learning in a variety of subject areas, and many children are excited when they make these leaps of understanding. Too often, however, the combination of scheduling issues, short class periods, and teachers with insufficient time to plan can result in learners who have difficulty making connections and finding meaning in the subjects they study in school.

Binet Payne, author of *The Worm Café*, says, “Today’s students are hungry for work that is real, for learning that is meaningful. Project-based learning (PBL) is a teaching strategy that allows students to take more responsibility for their learning as they make decisions and create solutions to problems that interest them. All subjects can be integrated as students apply their academic, social, and life skills to their work.”

Using a theme to connect disciplines makes the curriculum more coherent and helps students see relationships. With the local food system as a theme, for example, students might learn about the carbon cycle through classroom lessons connected to the

activity of managing a compost pile of lunch scraps. Lessons in nutrition might become part of a science curriculum that is integrated with visits to local family farms, work in the school garden, and the practice of harvesting and preparing a healthy lunch.

Some schools are actively attempting to integrate classroom lessons and experiential learning right now — for example, educational programs that use school gardens and kitchen classrooms as learning environments with project-based learning as the teaching strategy — with some exciting results. Encouraged by these successes, many administrators, educators, and parent groups have become interested in using project-based learning as a teaching strategy that integrates all subjects as students apply knowledge acquired in the classroom to real-life situations. They recognize the ultimate success of these curriculum innovations will depend on the strong support of an official commitment to student learning that truly incorporates classroom lessons in math, science, health, cultural studies, and other disciplines into an experiential context.

KEY POINTS

Healthy School Environments Support Learning

Children learn from everything they experience while they are at school. Healthy school environments reflect understandings about how learning occurs, support student well-being, and lead to improved student performance.

The Food System Can Be a Theme for Organizing the Curriculum

Recently, groups of educators have begun to focus on the local food system as a theme around which to organize their curriculum, and they have included lunchtime as a powerful context for learning. Marilyn Briggs, former director of the Nutrition Services Division and former assistant superintendent of Public Instruction for public instruction at the California Department of Education, feels that it's important “to connect health, through nutrition education, to the whole curriculum — not merely as one of the components in the curriculum, but as something that's embedded in all aspects of it. It means making school meals part of the nutrition education program.”

Instructional materials have already been developed that use the food system as a theme. They integrate classroom lessons and the learning environments of the lunchroom, garden, kitchen, farm, home, and natural world — a real-world context that supports brain/mind learning.

District Food Policies Can Support Healthy

Connections Lunch is not separate from the rest of school. Schools have an impact — positive or negative — on children's health every day. Lunch is part of the learning experience of the student, whether schools are managing it or not. The question is, Who is controlling the learning experience in the lunchroom?

District food policies can support connecting health to the curriculum by pointing out the connections between nutrition and cognition. When they announce the district's intention to assume educational responsibility for the whole child — from the time the student arrives at school until the school day is over — they can reinforce the idea of a healthy school environment.

In this vein, district food policies can declare the lunch period to be part of the learning day, and they can encourage educational staff and food service personnel to work together to integrate learning with the dining experience. Some district food policies choose to exclude all external and commercial messaging from campus and to allow only those messages (initiated by the district) that are consistent with district goals for student health and learning.

It makes sense to give that responsibility back to educators. Schools already assume responsibility for teaching such skills

as discipline, honesty, civility, and conflict management. Increasing student aptitude for developing and maintaining personal health is consistent with that suite of skills.

Organizing Curriculum Around Food Systems Means More Complexity, Not More Hours If the school day is already filled with required subjects, — how can we incorporate food systems as a theme for instruction? It's important to recognize that using a thematic approach to instruction adds complexity and learning opportunities — not necessarily time — to the school day. When the curriculum is thoroughly integrated with the larger goals of the district, such as improved student health and ecological understanding, those goals become part of the culture of the entire learning community.

Achieving Change Takes a Shared Vision Making nutrition education and the local food system part of the school curriculum requires educators to rethink how they approach teaching and learning. Attempting to institute changes on a voluntary basis in classes scattered throughout the district rarely meets with lasting success. Before beginning the curriculum integration process, it helps to build a shared language and vision for the work. Change that is held in place solely by the will of a superintendent or principal lasts only as long as that person is managing the change process.

That's why assessing district readiness, communicating the reasoning behind a district-wide curriculum integration process linked to nutrition education and the local food system, and seeing the process through should be the responsibility of a committed coalition of all the stakeholders.

A mutually supportive group will generate the energy needed to see such a change to the curriculum take hold: Plan on several years from initiation of the process to last phase of rollout.

How to Begin the Process Even the most thoughtfully developed curriculum will gather dust without a process that allows a critical mass of teachers and administrators to take ownership of it. The process of changing to a district-wide food systems curriculum can take several years to complete. Michele Lawrence, superintendent of the Berkeley (California) Unified School District, has these suggestions for getting started:

- 1 **Develop a shared language and vision.** Define what it is you want children to know about diet, health, agriculture, and the environment.
- 2 **Identify a pilot group** of interested principals and teachers. If possible, include the food service director and staff from the beginning so that they regard themselves as full partners within the new curriculum design.
- 3 **Study the state standards** to determine how much of what you want to teach is already required by the state. Then follow through with curriculum shifts that integrate the state- required learning outcomes with what supports the district's goals for student health and learning.
- 4 **For elements of your proposed food systems** curriculum that are not required by the state, but that you feel are important, ask whether they are important enough to replace something else you're now teaching. If you can't

replace anything in the current curriculum, how else might you begin embedding these elements in the school day? Can these elements be integrated with the lunch period and student assemblies, essay and reading assignments, field trips, and information sent to parents?

- 5 **Share the proposal** with a larger group of principals and teachers. Modify it in response to their feedback.
- 6 **Present the proposed curriculum** and a plan for implementing it to the district board of education. If the district food policy does not already support the curriculum integration process, recommend that this

process be adopted. This can help create the expectation that all schools and teachers will honor it.

- 7 **Identify ways to measure your effectiveness** in meeting the intentions you've set through district goals and objectives. Assess what and how children are learning about diet, health, and the environment from the integrated curriculum.
- 8 **Include assessment of changed attitudes and behaviors**, as well as quantifiable tests of knowledge. Add assessment of students' ability to apply their learning in different settings.

RETHINKING SCHOOL LUNCH

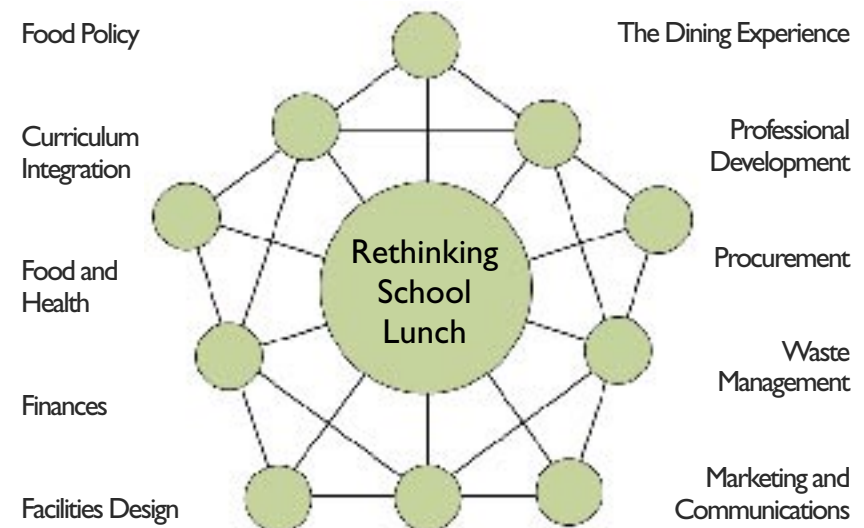
Web of Connections

This document is part of a comprehensive **Center for Ecoliteracy** project that provides helpful information on topics related to redesigning school lunch programs.

The diagram illustrates our systems approach to integrating school lunch programs with curriculum, improving student health and behavior, and creating sustainable communities.

School administrators, food service directors, teachers, and parents will each approach this project from their unique perspective. Readers can begin with the topic that interests them most, then explore the other related topics.

The entire Rethinking School Lunch project is available at:
www.ecoliteracy.org/rethinking/rsl.html





Interview with Michele Lawrence, Superintendent of the Berkeley (California) Unified School District

by Janet Brown, program officer for food systems at the Center for Ecoliteracy

Center for Ecoliteracy: *Can you see a way that the food system and health can become a part of the learning experience of students?*

Michele Lawrence: In my own mind, I'm formulating and evolving these concepts. I'm trying, as an educator, to come to grips with some things that I have believed in and now see all the more clearly in my work with Berkeley School District.

Today, our classroom teachers have assumed so much responsibility for so many aspects of the child's life. As an example, while it is not mandated to teach honesty or courtesy, we teach these things

to kids as a matter of professional culture. We teach students conflict management, consensus building, and being neat and tidy with their work. There are no prescribed curricular documents that mandate those important lessons but it has become more and more apparent how critical it is to teach those to our students. It is part of recognizing that in order to exist as a community of learners we need some rules and conventions that govern our lives while working together. The teaching of these skills has evolved over time through conversations among teachers and through staff development. I'm beginning to think the idea of food, dining and health can come about in the same way.

I'm coming to realize that the lunch hour and the delivery of food to kids is an opportunity for learning that we have almost completely ignored and need to include, in the same way we have included those other necessary skills. We have taken very few deliberate steps to tie food and nutrition into the framework of the child's schooling from the time they come to us in the morning, during the lunch hour, until the time they leave us. I am recognizing that we have an educational obligation that I have ignored in that time every day called "the lunch period" to consider what's happening to our learner.

This is a part of the day that educators traditionally think of as outside the formal educational process. During that time, we have generally invested in supervision of kids or monitoring them play. So, I'm thinking we can take this period of time, and in the way that a classroom teacher folds in the teaching of honesty or listening, we can fold in a consciousness about a child's health and well-being. I'm also thinking that this idea of the whole child's well being can be worked into our social studies, our science, and our math as practical units that might replace or enhance other concepts we teach. I'm not talking about duplicating efforts, or adding things on, but rather incorporating the concepts that we want to deliver around food, nutrition, physical activity, and a child's well being, through existing content areas.

Our Berkeley teachers can testify to the fact that through our student's work in the garden, for example, wonderful socialization is occurring. Students are coming together in groups to do group activities in wonderfully cooperative ways. On the academic side, the life cycle is being taught to children in the gardens, and there's a much greater awareness of ecology. Now, we need to make certain that the job we've done in the gardens is extended to the lunch hour. We need to continue to make connections between the cafeteria, the garden, local farms, physical activity, and the academic classroom.

I think we need to change basic notions about what it means to send the students to the cafeteria. As an educational community, we're fairly conscious about the importance of children's nutrition and we understand that nutrition is linked to academic performance. The district's support system for nutrition education is generally through food services. That department is also beginning to recognize its responsibility to ensure that meals served at school are a reflection of that consciousness for a child's well being, because it can be a learning for the students not just a lunch meal. It should not be a business, or a delivery of services and goods, rather teaching and learning.

CEL: *And is there a way that the meal itself is part of that learning?*

ML: I think so. Generally we teach the food groups or the life cycle of plants etc., in the relative isolation of the classroom. The teacher might hold up examples of pears and apples and ask kids to identify which group they fall in. But since there might not be the practical application of what goes into their body as fuel, these examples amount to little more than a conversation. Lunch is a much more exciting context in which to teach nutrition or physiology, because the kids are fully engaged in eating and enjoying the food. I think we can use the midday meal to teach math, for example. "Let's look at your serving today, and let's do some estimation of the number of carbohydrates on your plate. Do you think it's going to be a high

or low number? How does it compare to your breakfast? What item is more likely to cause you to gain weight? How many calories would you have to burn to off-set the impact?" It's that kind of thing. "What were the steps that led to that cookie or apple being on your plate?" The integration of these kinds of ideas and concepts into core curriculum allows students to begin to consider the diet/health connections of what they take into their bodies every lunch hour and keeping a goal in mind to reduce obesity and create healthier students.

In addition, the lunch period provides an important time for the enjoyment of food, socializing, and building camaraderie. It is a time when the whole learning community can sit down together as a family. We can gently extend the nuclei of what we've come to believe is a traditional family to include classmates and the classroom teacher. So, the community of learners becomes an extended family. I just see so much potential for good healthy school culture in the development of this notion. Perhaps these understandings and lessons around food and culture will be the key to combat the horrible rise in diet related diseases and obesity of school age children.

CEL: *How do you imagine a curriculum integration project would rollout across an entire district. What would that look like?*

ML: Because of the pressure to meet state requirements and to make certain that what we are teaching is in fact tested, it is important to first bring people together to identify the elements that we want to teach, and that we think are important to teach. From a practical standpoint, it would probably take more than two or three full days of working together with teachers to have them come to these agreements, but it could be done. We would identify the various things that are important for kids to learn relative to nutrition, health, eating, food, the garden, agriculture, etc., and chart those things out. Once we've brainstormed what we think would be important to teach, then we would take the practical step of

looking at the things that the State already requires us to teach and integrate the two. We would look for intersections of those things that the teachers thought were important to teach relative to the topics that we want to get across, and how much is already required by the state. With that information, we can begin to shift what is required by the state into a format that contains the things that we know are important.

There will also be elements that are not required by the state, but which teachers still feel are important to teach. So, now you begin to say, “How can we embed those things in the day? What are the things that might happen in a child’s life that we can turn into instructional lessons without lengthening the day?” And through that examination, a whole new set of ideas will surface, like this idea of using the lunch hour for education. It is also possible to embed these lessons in other activities such as student assemblies, or we can encourage kids to write particular essays or plays through which concepts about health and nutrition can be delivered. We would look for those things that are routine in a teacher’s day, such as reading periods, information that goes home to parents, and field trips, that teachers recognize bring excitement to a student’s life and that encourage interest and engaged learning. We would try to connect the message of health and good nutrition to those learning opportunities. At the high school level are several opportunities, particularly in chemistry, physics and other sciences. But, I can also see that we could make *Silent Spring* or *Fast Food Nation*, required reading in English.

Because of our larger responsibility to tend to the health of the whole child, there are many natural opportunities throughout the day to begin making these connections that will influence student attitudes and behavior for a lifetime, and the lunch period can be part of this. I’m not just talking about physical health. I’m also talking about mental well being and a personal recognition of responsibility for one’s own body. We need to teach children to see their “connection” and responsibility which extends to the whole school,

the community and to the universe of which they are a part. So I guess that’s how it might roll out.

When you’ve reached that stage with the small group of teachers, you begin to meet with a larger number of teachers, move it through the system, and then analyze the results. After you incorporate that feedback, you can begin to disseminate this to other districts. Usually this stage involves teachers working with teachers, administrators with administrators, and then a combination thereof. You would also present your framework to the policy makers and ask them adopt it as one of those policies which becomes universal truth or theorem. Then it can be formally disseminated with some kind of expectation that all classroom teachers are responsible to do it. I really think it has to be through these larger combined efforts that we’ll be able to address health and dietary issues in this Country.

CEL: *What about training and professional development?*

ML: The training comes as you begin to roll this out. As you develop activities that are good for students you need to provide teachers with collaboration time to do it. It’s not difficult to change curriculum but it is greatly time consuming. From the initiation, to the rollout, to the training, it is a good three years of hard work. You will also need to measure your effectiveness in order to assess what it is you’re teaching, and whether it’s being effective and successful. So, you begin to develop measurements and benchmarks for kids. You might want to start with the attitudinal changes kids have about food, their knowledge of food groups, or their understanding of the environment or the life cycle, as examples.

CEL: *In order to succeed, how much of a “critical mass” of teachers do you need to have on board to begin?*

ML: If it is all coming from a superintendent, it can only be sustained as long as that superintendent is in place. So, that’s not the best way. It has to come through the ownership and understanding of

the entire staff and community. The superintendent can light the fires, but they have to burn on their own. The fuel is ignited when classroom teachers begin to get excited about this because they see it as important for students.

Begin by identifying people who have similar kinds of passions and concerns for students' health. Usually, in order to roll out this kind of curriculum, the initial critical mass is about a third of the people who will finally be engaged in the process. Find a core group of people with complimentary philosophical outlooks. They need to share recognition of the need to act. It starts with the philosophical buy-in and the commitment. Once you get the teachers to say, "Yes, there's a need", then a smaller group can get involved in the actual mechanics. Then, the smaller group rolls it back out to a larger, critical group. It builds momentum this way.

CEL: *As a superintendent, how would you find those teachers to begin with?*

ML: First, I might go out and talk to those teachers I respect and know well, to float the idea. That's kind of a dipstick test. Most often a superintendent communicates with teaching staff through their principals. In that case, I would talk to the principals, get their sense of the issues, and ask them, in turn, to work with their staff. I would go personally to meet with those schools that have expressed interest to see if our concepts match, in order to improve the communication. The principal in this case is the middleman communicator, and I would check to make sure that the system can accommodate the ideas of the school groups. Then I would identify what group to begin with, either as a pilot, or as the initial model group. Sometimes this stage becomes a very enthusiastic contest in that various groups vie to become the pilot group. That's a great situation to be in when you want to try something new.

CEL: *Do you need a whole school in order to do a pilot?*

ML: I don't think you do. It's cleaner if you approach it from a consistent grade level across the district. Let's say we want to roll this curriculum integration process out across the entire district. So, it might be all third grade classrooms, or, it might be all fourth or fifth grade classrooms, because the exchange and the bringing together are much easier when it's done in concentrated numbers. Then you can fill in, and build up and down through the system, based on the learning experiences that one grade level has had. A couple of our schools had grade levels of teachers who were the first to invest in the garden curriculum. It was through those efforts that the other schools and grade levels got involved. One might also approach it as a whole school experiment. When a whole school buys in, the whole school becomes the disseminator of their experience to the next school.

What I think is least successful is having something that is voluntary, where people participate on a voluntary basis, because then it's absolutely hit and miss. It is not embedded, and there's no guarantee of a sustained effort. It's too expensive to do teacher training when it is only volunteer, and so there is no inherent commitment to sustainability. I think this issue is too important to come at it accidentally. That approach will only allow already limited resources to dwindle down, and so it's not an effective model to work through. If the idea has merit for kids, then all kids need to experience the results of the curriculum change. In this instance, the importance of good nutrition and a child's well being should apply to all children throughout the system.

CEL: *As a superintendent, do you need to be careful in terms of how many new ideas you're bringing to people?*

ML: Oh, sure. And this becomes specific to an individual district. In some places, innovation and creativity are pretty easily adopted. What is often missing though, is the means to sustain the creativity. What is most important in my view is a recognition that a teacher's

day is filled, so if we want to take on new initiatives, we've got to be able, in a practical sense, to show how this will substitute for something else that is currently being done. If that is not possible, and more and more time and resources have to be provided, the innovation will be hampered because of dwindling resources.

CEL: *Is it possible to incorporate food service people as partners and educators in rethinking school lunch?*

ML: The inertia we need to overcome is the “public ed” atmosphere. We have been conditioned that we have 30 minutes to get the students in and get them out of the lunchroom. We tend not to pay very much attention to the cafeteria line worker. The line worker's responsibility has not been to assess whether the food being served is healthy, but just that kids get the right portions in a timely way. If the line workers were offered professional development about nutrition and they were more attuned to health themselves, then they will look and say, “Oh, gosh, this kid's chosen nothing but chocolate milk and chocolate cookies.” Current training focuses more on efficiency of service, as opposed to the nutritional value of the food and the need to be a teacher of better nutrition. This is where that “community” of learners needs to expand.

That's another exciting piece about this idea. In the nutrition services department, if we can all think about how food service employees can become more like instructional aides who have a link to an educational piece, I think it brings a richer idea of how all this fits together. I would think that when a group of teachers comes together about curriculum, it would be really important for the typical food service worker who's at the tray line, and doesn't have curriculum knowledge, to be a part of the evolution of the curriculum change from the beginning. The attitude people have when they're serving the food affects children's experience and teaches the kids something about what all the employees in the school think is important for them and their health. You can't tell them in the classroom, “Food is important,” and then serve them

something for lunch that is inconsistent with that message in an environment that is rushed and unpleasant.

CEL: *Is there time in the school's schedule for somebody in food service to come into classrooms and make those educational connections?*

ML: There hasn't been that time. It would require us to do some modification of work hours and to do some shifting. It would require us to get the unions on board first so that they embrace it as a great idea for kids. You're really facing the same problem with the teachers. If you're going to deliver it as curriculum, it's got to take the place of something they currently do or else you've got to add more time, and adding time costs money.

CEL: *Using the food system as an integrator of curriculum, what larger themes can you imagine linking school lunch to?*

ML: We would need to ask, what is it that we want kids to know relative to agriculture and a sustainable food system? What is it that we want kids to know about recycling and conservation of resources? What is it that we want kids to know about their health and the health of the environment? What is it that we want them to know relative to the foundations of civilization? That's where the classroom teacher would step forward and say, “Here are the things that I think they ought to know,” and then relate that to the standards.

My experience with many educators and superintendents is that the demands on them are so incredibly great for what is required in a day that it forces some to think there's no room for innovation. But I know I'm not in this alone. I've got other people who have invested in this idea that school can become a much healthier place for students long before I arrived. It gives me the fortitude to sit down and invest the time to figure out how we're going to do it because of the commitment I have seen. And, if I'm going to invest the time for Berkeley, I might as well invest the time to figure out how we can do this for the greater good. Because in fact, I do think it is part of the greater good for public education and kids.

All along we've said, "Please bring your child to school with a good breakfast." Up till now it's been someone else's responsibility, and now it's becoming ours, and perhaps it should be ours. Our staff recognizes that we have an impact on children's health, positively or negatively, everyday. What we've got to do is reduce the number of unintended negatives. For example, there is learning going on in the cafeteria that we are not controlling at all. I think kids can learn, simply from the way food is served to them, to become a fast food consumer. It's as though the school is saying, "The way to eat a meal is as fast as you can." It's an obstacle in the way to where we really want to go. If that lunch time attitude changes, and it becomes an event in itself, with the camaraderie, with time to eat and enjoy lunch, with food that people are proud to serve, and with links to why this food is ultimately good for you as the learner, then it's a different lesson.

CEL: *Say someone in your field—a superintendent—is thinking about initiating a district-wide curriculum integration process like this. What kinds of questions should they be asking?*

ML: Well, I guess one question is: "How do you define your educational responsibility to teach the whole child?" I would ask that question of the board of education as well as the teachers. And, I can predict pretty much the kinds of things that they will say. Many are committed to the "whole child." And then I would then ask, "Is nutrition an important feature of teaching the whole child? And physical activity, is that an important piece?" I believe there will be agreements on this. We also need to recognize the things in the organization that interfere with or detract from our teaching responsibility for the whole child. I'm willing to bet that school lunch won't be mentioned. I would pose the question, "What about the 30 minutes or 40 minutes when the student is having lunch? What are the elements connected to that period of time that we would expect kids to learn and to know?"

I think it's through those questions that I would begin to introduce the idea of what we've been talking about. There are a lot of ways that the right questions can lead you to the epiphany that I've had, that "We do have a responsibility here." Getting others to recognize this fact may be our biggest hurdle. But I believe we do in fact have a responsibility at the lunch hour to make certain we are educating, as well as nourishing, the whole child.

Michele Lawrence is superintendent of the Berkeley (California) Unified School District. Lawrence has been a public educator in California schools for more than 30 years, serving in many roles including classroom teacher, counselor, high school principal, curriculum director, and superintendent.



Curriculum Integration Resources

The Center for Ecoliteracy provides the following resources through Rethinking School Lunch:

Year One Introductory lessons of the Linking Food, and the Environment Program (LiFE), An Inquiry-based Science and Nutrition Program, developed through Programs of Nutrition Education and Science Education at Columbia Teacher's College, New York City

www.ecoliteracy.org/pages/rethinking/downloads/LiFEyr1IntroLessons.pdf

Questions in the LiFE Curriculum, Year One Module
www.ecoliteracy.org/pages/rethinking/downloads/LiFEyr1IntroLesWS.pdf

Other Resources

Curriculum Integration Resources

ASCD Education Topics page

Expert Heidi Hayes Jacobs answers questions on curriculum integration.

www.ascd.org/cms/index.cfm?TheViewID=996

Practitioners share their views on curriculum integration.

www.ascd.org/cms/index.cfm?TheViewID=996

Curriculum Integration Professional Inquiry Kit

This multimedia kit from ASCD shows how to make an integrated curriculum work at your school.
(ASCD Professional Inquiry Kit, 1998)

<http://shop.ascd.org/ProductDisplay.cfm?ProductID=998214>

The EIC Model™

Here's where to find out more about using the environment as an integrating context. State Education & Environment Roundtable.

www.seer.org/pages/eic.html

Planning Integrated Curriculum: The Call to Adventure

Susan M. Drake

www.ascd.org/cms/objectlib/ascdframeset/index.cfm?publication=http://www.ascd.org/ed_topics/1993drake/1993draketoc.html

Understanding by Design

Grant Wiggins and Jay McTighe

www.ascd.org/publications/books/198199/

Brain-based Learning

For more about how people learn and ways to create non-threatening environments that foster dynamic learning

ASCD Education Topics page

Expert Marian Diamond answers questions about the brain and learning.

www.ascd.org/cms/index.cfm?TheViewID=1708

Practitioners share their views on the brain and learning.

www.ascd.org/cms/index.cfm?TheViewID=1708

The Brain, Education, and the Competitive Edge

Geoffrey Caine and Renate Caine

<http://cainelearning.com/books/home.html>

Connecting Brain Research with Dimensions of Learning

Mariale M. Hardiman

www.ascd.org/cms/objectlib/ascdframeset/index.cfm?publication=http://www.ascd.org/publications/ed_lead/200111/toc.html

Making Connections

Geoffrey Caine and Renate Caine

<http://cainelearning.com/books/home.html>

Teaching to the Brain's Natural Learning Systems

Barbara K. Given

<http://shop.ascd.org/ProductDisplay.cfm?ProductID=101075>

Multiple Intelligences

For more about the theory and practice of multiple intelligences

ASCD Education Topics page

Expert Howard Gardner answers questions on multiple intelligences.

www.ascd.org/cms/index.cfm?TheViewID=999

Practitioners share their views on multiple intelligences.

www.ascd.org/cms/index.cfm?TheViewID=999

Multiple Intelligences: Theory and Practice in the K-12 Classroom

A compilation of materials that provide an introduction to the topic of multiple intelligences.

www.indiana.edu/~reading/ieo/bibs/multiple.html

The Project on Schools Using Multiple Intelligences Theory (SUMIT)

This is a three-year national investigation of schools using Howard Gardner's theory of multiple intelligences.

<http://pzweb.harvard.edu/SUMIT/>

So Each May Learn: Integrating Learning Styles and Multiple Intelligences

Harvey F. Silver, Richard W. Strong, and Matthew J. Perini

www.ascd.org/cms/objectlib/ascdframeset/index.cfm?publication=http://www.ascd.org/ed_topics/2000silver/2000silvertoc.html

Curriculum Materials

Resources and frameworks to support integrating food systems, nutrition, and the environment into your curriculum design

The Biodiversity Collection: Resources for Educators

Produced by World Wildlife Fund in association with the North American Association for Environmental Education.

<http://naaee.org/npeee/biodiversity.php>

The Environmental Education Collection: A Review of Resources for Educators Volumes 1-3

The materials were evaluated using the Environmental Education Materials: Guidelines for Excellence developed by the North American Association for Environmental Education.

www.naaee.org/npeee/vol_1_resources.php

www.naaee.org/npeee/vol_2_resources.php

www.naaee.org/npeee/vol_3_resources.php

A Guide to Food and Fiber Systems Literacy (K-12 framework)

A Compendium of Standards, Benchmarks, and Instructional Materials for Grades K-12 funded by the W. K. Kellogg Foundation in cooperation with Oklahoma State University. (PDF: 7 pages)

http://food_fiber.okstate.edu/FINALI.PDF

Nutrition to Grow On

This curriculum contains nine hands-on lessons, each linking a nutrition education activity with a gardening activity.

www.cde.ca.gov/cdepress/catalog/nutried.html

Interdisciplinary Curricula

CookShop®

A hands-on approach to better nutrition that connects the classroom and the school lunch menu.

www.cfrnyc.org/index.php?name=cookshop

Discovering the Food System: An Experiential Learning Program for Young and Inquiring Minds (for ages 12-18)

This program is meant for anyone who is curious about food, how it gets from farm to table, and how we, as eaters, are involved in that system.

www.cce.cornell.edu/foodsys/

Farm to Table (K-8)

New England Breeds Heritage Conservancy at Hancock Shaker Village publication.

www.nehbc.org/FarmToTable.html

French Fries and the Food System: A Year-Round Curriculum Connecting Youth with Farming and Food

Written and developed by The Food Project's growers and educators.

www.thefoodproject.org/newtfp/tfpstore/books.shtml

Garden Mosaics Educator's Manual

A science education and community action program for youth ages 10-18.

www.gardenmosaics.cornell.edu/pgs/edmanual/intro/intromenu.htm

Garden Mosaics Food Systems Action Projects

In the Food Systems Action Project, youth learn about our complex, modern day food system, starting at the local level.

www.gardenmosaics.cornell.edu/pgs/edmanual/activity/action3.htm

Junior Master Gardener Curricula

Headquartered at Texas A&M University, this is an international youth gardening program of the University Cooperative Extension network.

www.k2demo.com/jmg/index.k2?did-6019§ionID=6019

National Gardening Association's Kidsgardening.com

Information and curriculum materials for youth gardening, especially for anyone involved in school gardens.

www.kidsgardening.com

School Market Program

Curriculum for students to create and operate their own farmers' market in school.

www.thefoodtrust.org

Research

Hosig, Kathryn W., Jamie Dollahite, Rosemary Rodibaugh, and Karen Adeletti White. "Development and Evaluation of a Consortium to Support a School-based Community Nutrition Education Program in the Rural Arkansas Delta." *Journal of Nutrition Education*. 30 (5) (1998): 281-288.

Liquori, Toni, Pamela D. Koch, Isobel Contento and Jennifer Castle. "The Cookshop Program: Outcome Evaluation of a Nutrition Education Program Linking Lunchroom Food Experiences with Classroom Cooking Experiences." *Journal of Nutrition Education*. 30 (5) (1998): 302-313.

Environmental Education

ASCD Education Topics page

Bora Simmons Answers Questions on Environmental Education

www.ascd.org/cms/index.cfm?TheViewID=2104

Practitioners Share Their View on Environmental Education

www.ascd.org/cms/index.cfm?TheViewID=2104

Research

Rasmussen, Karen. "Environmental Education Evolves: Developing Citizen, Furthering Education Reform." *Education Update*. 42 (1) (2000).

www.ascd.org/publications/ed_update/200001/rasmussen.html

International

Curriculum Matters: guidance and advice for schools

www.foodforum.org.uk/curriculum/index.shtml

Food for Life Curriculum Pack

Food education, including farming, food production, trade, nutrition and cooking.

www.farmtrails.org.uk/fflcurrpac/foodforlife/index.html

Food in the National Curriculum: balanced diet or seriously malnourished?

A summary of the position of food in the National Curriculum (England).

www.foodforum.org.uk/hot/National_Curriculum-Tea-Fis.shtml

Cover photo: Tyler/Franklin School, Berkeley/Center for Ecoliteracy



Food and Health

RETHINKING SCHOOL LUNCH GUIDE

Rethinking School Lunch – a project of the **Center for Ecoliteracy**
2528 San Pablo Avenue, Berkeley, California 94702 www.ecoliteracy.org



Food and Health

RETHINKING SCHOOL LUNCH GUIDE

FOOD FOR THOUGHT

When I arrived [at the school], many of the returning eighth-grade students were coming to school without breakfast and getting Funyons® and Diet Pepsi at first break. . . . A lot of the first-year menus that I wrote used the familiar packaged frozen burritos, but we would add a good fresh salad and some fruit, like kiwis . . . it was a worthwhile step in the right direction. I know a lot of these kids eat fast food, but they can learn by our example what a well-rounded, nutritious meal can be . . . which all becomes a part of the education. . . . After a little while, we pulled the packaged burrito and replaced it with a healthier version of our own making. By that time the kids were ready to say, 'This is great!' because by then their tastes were beginning to tune into something different."

— Nancy May, food service supervisor for the Healdsburg (California) Unified School District

WHAT'S INSIDE?

RETHINKING FOOD AND HEALTH: The goal, the challenge, and some key points to remember.

CASE STUDY: Nancy May, food service supervisor for the Healdsburg (California) Unified School District, discusses her experiences implementing a farm-to-school lunch program.

SEASONAL LUNCH MENUS: These model school lunch menus, based on local seasonal availability, show one school's creative approach.

FOOD AND HEALTH RESOURCES: Check the "food odometer" and explore current thinking on nutrition and school lunch programs in this compendium of articles and journals.

RETHINKING FOOD AND HEALTH

The Goal *To help shape healthy eating habits, which are essential for students to achieve their full academic potential and lead healthy and productive lives.*

The Challenge *Improving the nutritional content and appeal of school meals to model the healthy lifestyle choices students learn in the classroom.*

We've all heard the phrase "You are what you eat." What does that mean for our children?

Today, school-age children are facing an escalation of diet-related illnesses, including obesity, anemia, and Type 2 diabetes. These serious health challenges — as well as problems associated with chronic low-grade malnutrition — interfere with the ability of students to learn effectively, achieve high standards in school, and lead healthy and productive lives.

Many families *do* try to ensure that their children eat healthy meals. Too often, however, the meals served at school do not reflect the healthy choices advocated in the classroom and at home. Surveys from the Centers for Disease Control show that barely 2 percent of school-age children consume the USDA daily serving recommendations for all five major food groups, and over half eat less than one serving of fresh fruit and vegetables a day. Nearly 30 percent of American school-age children eat less than one serving a day of vegetables that are not fried.

In their *Guidelines for School Health Programs to Promote Lifelong Healthy Eating*, the Centers for Disease Control state (italics ours):

An optimal policy on nutrition should publicly commit the school to providing adequate time for a curriculum on nutrition, serving healthy and appealing foods at school, developing food-use guidelines for teachers, supporting healthy school meals, and establishing links with nutrition service providers. The written policy should describe the importance of the nutrition component within the comprehensive school health program.

Good nutrition has a role in promoting childhood growth, health, and learning, and in reducing the risk for chronic diseases of adulthood. It is important to establish a school environment that supports healthy eating choices by young people, and generates support for the policy, by identifying how improvements in student nutrition can satisfy the needs of different constituents of the school community.

Making the school lunch period — and the process of cooking and eating — a true learning experience helps children understand that they have choices about the kinds of food they put into their bodies, reinforces the idea that there is a real connection between their health and the food they eat, and encourages them to learn even more about how what they eat affects their lives every day.

KEY POINTS

Healthy Food = Better Students Hungry or undernourished children make poor students. They may be irritable and have difficulty concentrating, which can interfere with learning, and low energy can limit their physical activity. They are more likely than other children to become sick, to miss school, and to fall behind in class. Chronically undernourished children attain lower scores on standardized achievement tests (especially tests of language ability), are more likely to suffer from learning disabilities and retention problems, and are more prone to drop out of school.

The school meal program can model food choices that build lifelong healthy eating habits while supplying the nutrition and calorie energy children need to stay healthy and energetic. Marilyn Briggs, former director of the Nutrition Services Division and former assistant superintendent of public instruction for the California Department of Education, makes a strong case for healthy eating at school: “Most of us already connect nutrition with health. If we go one step further — to connect health with educational goals — then we have effectively connected nutrition to academic performance. There is so much concern over test scores these days. But if kids aren’t in a position to learn because they’re hungry, or they don’t get enough nutritious food at home, then schools that don’t make up the nutrition/performance connection in the cafeteria end up undermining what they’re trying to do in the classroom.”

Healthy Food = Healthy Children Obesity is increasing among children and adolescents in the United States. Approximately 4.7 million — 11 percent — youth ages 6 to 17 are seriously overweight. Obesity in young persons is related to elevated blood cholesterol levels and high blood pressure, and some very obese youth suffer from immediate health problems (including respiratory disorders, orthopedic conditions, and hyperinsulinemia). Being overweight during childhood and adolescence has also been associated with increased adult mortality.

When school food policies limit sales of foods that compete with school lunch and completely eliminate sales of certain kinds of snack foods and sodas with additives, and high fat and sugar content, they are serving the health of children.

Healthy Food = Healthy Communities School district food policies that follow the farm-to-school approach often specify that food will be obtained, to the greatest extent possible, from local, sustainably run farms. These seasonal links to local agriculture and rural communities improve the quality of food served at school and are important threads that connect the entire learning community to the local landscape.

School menus that make a point of reflecting the cultural diversity of the community include vegetarian and dairy-free choices, sending a positive message to students and parents that they are valued.

Supporting healthy eating through written policy is a tremendous opportunity for school districts to directly affect children's health and to restore authority for decisions affecting the health of children to their parents and the community.

Healthy Food Goes a Long Way Behaviors and psychological risk factors associated with dietary choices that are established during youth are difficult to change. Positive food experiences that start early will last a lifetime.

It's not hard to get children to eat healthy food — fresh, seasonal, and well-prepared food tastes delicious. When children grow and prepare the foods they eat and visit farms that serve the school, they are naturally more adventurous about tasting and enjoying new foods. Good habits learned at school have a positive impact on families at home; students are effective at bringing home newly adopted healthy attitudes and behaviors toward food.

Healthy Eating Serves Students, Administrators, Educators, and Parents The benefits of a school district's decision to adopt a healthy food policy can be far-reaching. For parents (and the community at large), it restores authority for decisions affecting the health of their children. For educators and administrators, it offers a way to build longer-lasting changes into the school system, and it allows boards of education and district food services to formalize responsibilities for improving student health.

A healthy food policy can institutionalize innovations that can occur only at the district level, such as improvements to

the nutritional content of school meals, lengthening the lunch period, forming a district nutritional advisory committee, and waste management initiatives that include reduction, recycling, and composting.

Beginning to Explore Your District's Nutrition Policies

When you begin to explore your own district's nutrition policies, you will want to form a picture of the current state of affairs. Ask the hard questions, and listen to the answers. Then think: How can we move toward healthier meals that support student learning experiences in the classroom, the garden, and the kitchen classroom?

Here are some questions to begin with:

- **Are the learning experiences in the cafeteria linked to the classroom curriculum,** garden experiences, and the kitchen classroom?
- **Does the quality of meals served at school** accurately reflect the district's level of concern for student health as expressed in the district food policy?
- **Is nutrition services a full partner** with the district in improving the quality of meals served to students, and in its role and responsibilities for improvements in student health?
- **Do meals served to students represent what and how students should eat** to create and maintain high standards of personal health over a lifetime?

- **Has the district ensured that à la carte items, junk food, and sodas** are not competitive with school meals and are unavailable to students during school hours?
- **Is a wide array of healthy, tempting, delicious alternatives available** to students in place of high-fat, high-sugar, and highly processed meals, drinks, and snacks?



RETHINKING SCHOOL LUNCH

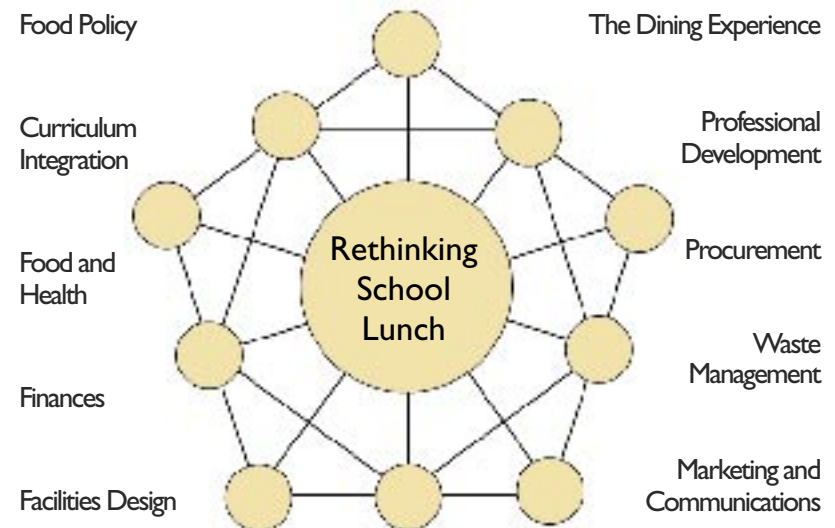
Web of Connections

This document is part of a comprehensive **Center for Ecoliteracy** project that provides helpful information on topics related to redesigning school lunch programs.

The diagram illustrates our systems approach to integrating school lunch programs with curriculum, improving student health and behavior, and creating sustainable communities.

School administrators, food service directors, teachers, and parents will each approach this project from their unique perspective. Readers can begin with the topic that interests them most, then explore the other related topics.

The entire Rethinking School Lunch project is available at: www.ecoliteracy.org/rethinking/rsl.html





Case Study

Implementing a Farm-to-School Lunch Program in the Healdsburg (California) Unified School District.

by Nancy May, food service supervisor for the Healdsburg Unified School District

My advice for anyone who wants to implement a farm-to-school program is to start anywhere, start somewhere. Start as small as you need to start to be manageable and successful. If it means one meal, once a month and the ripples spread, just however small. In a school district, if there is a site that might be better because it has better facilities, and if a willing parent group or teacher is excited and enthusiastic, then start there, where something is in place. Maybe a farmer has a child who attends school in the district. There are lots of places to begin.

I've worked on change at the state policy level, but right now it makes more sense for me to devote my attention to working the

front line. There wasn't really the support for someone to work on the policy level. But the front line is a place where I could show that change is possible. And then hopefully, the policy process here in Healdsburg will follow.

My daughters and I have been here in Healdsburg for six years. Our school district is beyond broke, and many families with school-age children can barely afford to live here anymore. They are moving out, and more expensive homes are moving in. Therefore, the school enrollment district-wide has dropped just in the time we have been here.

My first year assignment was to open up the program with the district at the junior high kitchen. About the time I got here, some nutrition education funds from the SHAPE program were offered and I had had some experience with them. I didn't know one person here in terms of building a team, but I knew it was the right kind of funding for here, so I wrote a grant and got \$30,000 for the junior high program. I made the executive decision of no soda, no junk, and I said we're not only going to do that, we're going to try something new.

We launched the program at the junior high, but I had to reel my vision back in as soon I got to know the people. The junior high kitchen is a production kitchen. I would redesign it now because originally it was set up as a snack bar for fast food. I would really encourage any new school that is building a new facility or changing an old one to have a very open, beautiful serving line that everyone eats from—open, with beautiful presentation, where the food is right there for the kids. We are held back by the design of our current facility from the kind of service that we would like to do. We've struggled with that. But even with that, we've had to move forward.

We've done what we can to market all the food to all the kids. We had fresh hot food coming out all the windows, especially during the first year and into the second year at the middle school. We've

offered samples and taste tests. We've gone into the classrooms and done cooking in the classroom. We've marketed our program in so many ways; two for ones, information tables in the cafeteria. We brought in Odwalla drinks. Kids didn't want to try the green drinks until their friends tried them and liked them, and then it was okay. We did taste-testing with the kids of anything healthy that we could think of that we thought kids might like.

Many kids were coming to school without breakfast and getting Funyons and Diet Pepsi at first break. That's what many of the returning 8th grade students were eating when I arrived. A lot of these kids hadn't eaten with us in the new program yet. The junior high kids are experiencing bringing their own money to school to buy à la carte and snack food for the first time. It takes some doing to get them accustomed to the new foods that we're serving.

One of the things that we did to build relationships within our school community—which I realized was the key to building trust—was to get everyone familiar with what everyone else was doing. This was not the case before. We tried a guest chef thing, so that once a month we would invite a guest chef from within the school community. The format for these events was using some of our select USDA commodities, fresh produce, and different cultural kinds of meals. The first guest chef we had was head of maintenance of that site. He cooked this beautiful Cajun meal because that was his background. One of the school board members did garlic mashed potatoes and roasted chicken. We served the entire junior high, which was our experimental site for one and a half years, as long as the grant funding lasted.

A lot of the first year menus that I wrote used the familiar packaged frozen burritos, but we would add a good fresh salad and some fruit, like kiwis, which all becomes a part of the education. I know a lot of these kids eat fast food, but they can learn by our example what a well-rounded, nutritious meal can be. So we served the packaged burrito, added some healthy salad and fruit, and it was a worthwhile

step in the right direction. After a little while, we pulled the packaged burrito and replaced it with a healthier version of our own making. By that time the kids were ready to say, "This is great!" because by then their tastes were beginning to tune into something different.

From there, that rolled into reopening one of our elementary school sites that had a kitchen. That was a likely place to start. That just took off. Our participation went off the charts. That kitchen is also the site that transports to a small district that doesn't have any type of kitchen facilities, so they come over to pick up the meals we prepare. Soon the other sites began to say, "Hey, what about us?"

By the end of that next year we were ready to go, and our food staff members were hands on hips, but eyes sparkling. This is not easy, and it was not an easy transition. Now, there may have been grumbling, but their eyes were shining the whole time because they were cooking and creating and being included and involved. Fall 2000, we opened the high school kitchen which now serves as a district central kitchen.

Building relationships was so key to us moving along together. The food staff members were into it. I could tell from the very first time I mentioned the idea that there was a spark there and that this was going to be good. A lot of these women have been here for many, many years, prior to the prepackaged meals, so they came forth with all their stories of how it used to be. So they had life coming back into them around their profession. There is a great sense of pride and ownership in their life skills, so when we tapped into that, that's when things really took off.

A big part of it is that this new style of food service ushered them, and all of us, out of our comfort zone. It was a stage-by-stage thing. The first couple of years that I was here, we were still funded for professional development days through the grant, so we had actual work days when the kids weren't here. We did some training then, but really any staff training has to be on the job, which has its

challenges. But when people are into what they are doing they bend more than if it's just being imposed on them.

For staff development, we've done cooking projects that emphasized how to produce something and how to eliminate a lot of the fat and the salt—how to use fresh food and not packaged, and how to look at the menu and create the simplest menu possible. We developed a strong focus on production and serving. This is separate from the accounting and production records we are mandated to keep. We spent time on how to look at the whole menu, keeping all the parts that they are responsible for in mind.

It's important to remember that people learn in different ways. Some will get it in the setting of one day's lesson. Others won't fully understand it until they have the opportunity to apply it. But over the course of time, people are getting it. There is so much more problem-solving going on now. The staff hardly comes into my office anymore to solve problems. They're figuring it out. That continues to happen.

What's so gratifying is to see the spark of how good they feel about themselves, and how they are with the food and the kids. That's how they need to be. I have stressed that you have to be in a good way around this food and these kids, and if you're not, then we need to figure out what is going on. Our perspective is that we have the honor of providing meals for kids. And I love my staff for the high level of connection that is going on around what they are doing. It really shows up in our participation numbers. No one ever complains about our food, ever.

It's unfortunate that mealtime is not honored or recognized by school districts as it should be. That time is not protected, not set aside and staffed in an honorable way. It's a far less than good situation. Our district is 55 percent Free and Reduced eligible, but that is not a clear reflection of community need. There are still a lot of students out in the community that could benefit from our services. At the elementary sites, we're serving over half of the

enrollment in the schools. About a quarter of the kids in junior and high school eat with us. Those numbers would be even higher if our lines weren't so long, and our lines wouldn't be so long if our facilities were different.

The National School Lunch and School Breakfast programs hold us to many, many regulations around the school meal initiative (SMI) review. We're offered several different options on how to account for the nutrition components in our meals. The other part of it is the eligibility applications. Both those aspects are really scrutinized every five years. Our district had just been reviewed before I got here. So this whole five years that I've been here, we've been enacting these sweeping improvements in the school meal program. The whole goal was to create a program that was fiscally sound and could pass the USDA review with fresh, simple, good meals.

Last spring, we had our review and our reviewer was here for a week and went through every single piece of paper, nutrient, and menu—it's an extremely thorough review. And we passed. As far as the meals went, she really had to stretch her brain to take a look at some of these menus because we've done some different things. Like with tamales, we have a good commercial purveyor for tamales, but these tamales don't quite have enough protein for our bigger kids to qualify for our two ounces of meat/meat alternate. We supplement protein by serving chips and a really good homemade bean dip or savory, hot beans. That's the entrée—those two things, rather than one contained unit.

I spent a week by our reviewer's side as she asked, "What's this, what's that, how do you deal with this, what's going on here?" I would explain our way of meeting the nutritional requirements to her. It had to make sense to her from her perspective. It took some working with her to get her into the flow, so to speak, of how we're doing things here. Nowadays, a lot of outside vendors are producing entrées that already meet these regulations for the USDA. That's a convenient, grab-and-go thing for schools.

A formula for me in developing our own menus is: a hot entrée, fresh veggies, one other item, which is typically a grain bread, and then fresh fruit. I keep it simple, and I keep it open, and depending on what's seasonal and fresh and available, we can plug it in. For example, we had a frost two weeks ago so that suddenly ended tomatoes and peppers locally. Because I'm not so specific, it's okay. I just fill it in with something fresh and local that I can get.

Food-based menu planning is one of the options the USDA offers to schools. It's not computer-based. Of course, it is easier if you are getting prepackaged meals, since a lot of the nutritional analysis is taken care of for you because it is completely standardized. But if you are doing fresh food production, it's a bit more challenging because you have to look up all of the ingredients and figure it out yourself. Again, it consumes a little more time, but it's manageable.

The USDA commodity program also publishes a cookbook that contains a lot of nutrient serving information. So we have relied on some of that. But food-based menu planning is an old way of figuring out the nutritional component, used at a time when kitchens were well staffed. You know, people to run the mixer, take the change, run the nutritional analysis. So we've had to really modify these recipes according to the level of staffing that we have. So again, there's so many "You can't's", but you *can*!

We've done a lot of different kinds of menus over the years and I've had to reel in my big vision and modify it by site. You need to meet people, and staff in particular, where they are. If a particular staff group really isn't there yet, then we modify the menu for them, but with that same basic concept of good and fresh—we'll never sacrifice that part of it.

An area of real interest for me is to watch the quality of the USDA commodity food program that we rely on steadily improve, and to see the politics around how that food is distributed. We know several months in advance what commodity foods will be offered,

and we can choose from that published list. There's a large inventory of commodity food that I'd never consider, but there are a surprising number of decent products too, especially if used as ingredients with fresh things.

For example, there are really good deli turkey roasts that come in raw. We roast and season them, slice them, and make a sub sandwich with them. We add local downtown bakery bread, local lettuce and tomatoes when they are in season, and turkey. And so the turkey roasts are \$2.70 for 40 pounds. If you use them for protein, then you can afford a good roll, and you can afford a few extra cents for a nice helping of fresh, locally grown lettuce. The bean salad that goes with our tamales is all commodity beans, and then canned kidneys and garbanzos. Bean and cheese burritos have commodity beans and cheese, seasoned really well, with fresh cilantro. Soups and chilies are made at the end of the week. We use up the veggies and other things that won't last until the following week. That all goes into the soups, perhaps with some commodity pasta. The kids love that.

Doing business with the farmers depends on what season it is, and what's happening on the farm. For example, right now in Northern California we're in early winter. We're going into a period where the farmers are saying, "I won't be seeing you for awhile." Just today a farmer let me know that this delivery of apples may be the last until next year. We've had a freeze, so it's going to be a little while until we're back on track for the lettuces and peas. It could take until February or March. So we've got some weeks to go before all the fresh local produce is back in production. There's no local citrus grown right here, but there's regional citrus, and so we have to broaden our buying circle. It's a real learning experience dealing with seasonal production, but it's bringing us all closer to this place.

I started working with farmers about three years ago. Generally, I've worked with about seven or eight farmers. Not all of them at the same time. Sometimes it's really busy and sometimes it's not. Most of the time, I created relationships with these farmers by calling

them on the phone. I let them know that the district was interested in purchasing fresh local produce and products. But I've also had them call me. There's a wonderful pear grower over in Lake County who heard about what we're doing over here with the food in the schools. He has beautiful, beautiful organic pears, several different varieties, and it's regional enough for me. He brings his fruit over here for us.

It can be time consuming in terms of being in touch with them, creating purchase orders, getting them paid, but not insurmountable. In a district that has any type of clerical support it would be easy to do that. In our case, it's me doing all of it and it's a little bit more time consuming. But for the sake of building this program and what we're creating together, it's okay with me to do that. We work with Love Farm here in town, and Ed Miller at Carrot Top Farm, and there's Dry Creek Peach and Produce. We get the most delicious peaches from them. There are local kiwis.

The main thing is building and maintaining these valuable relationships. To me, farmers are artists. I need to be flexible with them and meet them in the middle with pricing. They have been extremely gracious with us, and they are excited to be with schools and kids and moving something positive forward through our schools. They understand that there's so much good education going on around that.

If you ask me what success looks like here, it looks like cleaning up the food supply even more. In terms of how we purchase, we are moving toward more and more organic. That's the goal. Being able to be in the classroom more. We are holding that vision for how we take care of our kids and always looking to do better. In terms of the food, it means good, fresh, and close, with more attention to the values in the commodity food program.

Nancy May has been the food service supervisor for the Healdsburg (California) Unified School District for the past six years. Before moving to Healdsburg, May was the food service director of the Lagunitas (California) School District, where she oversaw the opening of the school cafeteria and worked with SHAPE grant funding to start gardens throughout the school district linked to nutrition education and cooking classes. May has held management positions with numerous restaurants and conference centers and studied restaurant and hotel management at the University of Nevada.



Seasonal Lunch Menus

Prepared for the Center for Ecoliteracy by Nancy May, food service director, Healdsburg Unified School District, Healdsburg, California

Introduction

The following school lunch menus represent a creative shift to a farm-to-school approach to food services. They are similar to menus already being served in many school lunch programs but include significant enhancements.

These menus illustrate how seasonal, local, and fresh ingredients can augment the nutritional content and appeal of school meals while adding very little to the bottom line. As these fresher, tastier, more nutritious meals attract new students to the program, sales and revenues increase. Positive changes also gain the attention of parents, earning their enthusiasm and confidence, thereby further raising participation levels.

These menus offer useful and practical suggestions that lead the way to a farm-to-school approach and provide an opening for positive change within the reach of most school meal programs.

(Continued on next page)



Seasonal Lunch Menus

Fall Menus

Menu 1	Menu 2	Menu 3	Menu 4	Menu 5
Chicken Fajitas	Turkey Sub Sandwiches	Pizza	Enchiladas	Pasta with Red Sauce
Jicama with Lime	Sweet Corn Salad	Fresh Veggie Cup	Crunchy Green beans	Armenian Cucumber Slices
Chips and Salsa	Cookies	Brownies	Chips and Salsa	Garlic Bread
Fresh Grapes	Asian Pears	Red and Golden Pears	Fuji Apples	Fresh Melon Wedges

Winter Menus

Menu 1	Menu 2	Menu 3	Menu 4	Menu 5
Tortilla Soup	Lasagne	Grilled Cheese Sandwich	Roasted Chicken	Chili
Mexican Rice	Caesar Salad	Winter Greens Salad	Apple Cabbage Slaw	Baby Carrots with Poppy Seed Dip
Jicama Orange Salad	Multigrain Roll and Butter	Roasted Potatoes	Pumpkin Nut Bread	Cornbread with Butter
Churro	Meyer Lemon Pudding	Faraway Fruit! Pineapple!	Tangerines	Kiwis
	Mandarin Oranges			

Spring Menus

Menu 1	Menu 2	Menu 3	Menu 4	Menu 5
Tamales	Turkey Sub Sandwiches	Teriyaki Chicken	Pizza	Chicken Rice Burritos
Bean Dip/Frijoles	Broccoli Raisin Salad	Veggie Fried Rice	Pasta Salad	Jicama with Lime
Baby Carrots and Pea Pods	Fresh Strawberries	Sugar Snap Peas	Brownies	Chips & Salsa
Chips and Salsa		Oranges	Strawberries	Pears
Faraway Fruit! Papaya!				

Fall Menus

Fall Menu 1

Chicken Fajitas	Use bountiful sweet peppers cut in strips, sautéed in a bit of oil. Combine with cooked diced or shredded chicken, grated cheese, and serve with good thick tortillas (local, if possible), that have been wrapped in foil and warmed in the oven.
Jicama with Lime	Jicama is a crunchy tuber that is available from produce vendors as sticks—specify FRESH. Kids love these with a squeeze of fresh lime and a shake of chili powder.
Chips & Salsa	Homemade salsa is best, but the USDA product is very good. Enhance it with fresh cilantro, chopped cucumbers or other fresh vegetables.
Fresh Grapes	These are often available fresh from local sources in the first several weeks of school. Student helpers are great at cutting portion bunches with scissors. Present a variety of colorful and delicious grapes from your region.

Fall Menu 2

Turkey Sub Sandwiches	Use USDA uncooked turkey roasts, and prepare them yourself, well seasoned with salt, pepper, and herbs. This allows more portion cost to be used for good local bread and fresh produce such as local tomatoes, lettuces, and cucumbers. Kids love subs, so it's a great way to get fresh vegetables in them.
Sweet Corn Salad	Use fresh corn if you have the staff to shuck, and cut kernels. Otherwise USDA canned is a good straightforward product. Add a lot of diced different colored fresh, local, raw sweet peppers, celery, and a bit of onion.
Cookies	Bake these fresh from your favorite recipe. Depending on staffing, make up a large batch of dough monthly, parcel out week by week. If staff is short, there are very decent commercial doughs available as 1 oz. portions.
Asian Pears	We buy the smallest size fruit from local farmers—these are not as commercially viable for the farmers, but the perfect size for school lunches, so we all benefit! Talk to the farmers.

Fall Menu 3

Pizza	Homemade is best, if you have the staff. Commodity product can be enhanced with lots of good fresh produce such as mushrooms, bell peppers, onions, zucchini, and black olives. It provides an example of how a prepared entrée can become part of an overall good fresh meal.
Fresh Veggie Cup	In Autumn, you can find a variety of sweet bell peppers, cucumbers and green beans. Slice the peppers and cucumbers into strips and combine with green beans—beautiful and well liked.
Brownies	Again, homemade are best, if possible. Otherwise get samples of commercial mixes from your vendor and enhance them with fresh applesauce or fruit purée.
Red and Golden Pears	These are so stunning, beautiful, and delicious when served at their peak ripeness time. Keep your eye on them in storage so they aren't served rock hard or mushy. It's valuable education for kids to be served properly ripened fruit. So many children aren't exposed to this incredible and important experience!

Fall Menu 4

Enchiladas	Make a simple and delicious layered casserole by adding minced vegetables added to commercial enchilada sauce, heated, then combine with corn tortillas and cheese.
Crunchy Green Beans	These seasonal favorites speak for themselves! In the first season of serving so much fresh raw produce we used 1 oz. portions of homemade Ranch dressing as a dip. The whole idea is to get kids to try something new and Ranch dressing makes it “familiar.” After they develop a taste for the new foods, now we serve mostly just fresh, plain, raw vegetables, which saves labor and production time.
Chips & Salsa	Homemade salsa is best, but the USDA product is acceptable. Enhance it with fresh cilantro, chopped cucumbers or other fresh vegetables.
Fuji Apples	As with Asian Pears, try purchasing small fruit in season from local farmers.

Fall Menu 5

Pasta with Red Sauce	This sauce is good, simple, tasty, and inexpensive to produce. We make sauces and soups at the end of the week with the fresh produce that is no longer at peak quality for the fresh veggie cup serving. We enhance this pasta sauce with chopped carrots, celery, zucchini, bell peppers, or other vegetables we have on hand.
Armenian Cucumber Slices	These are sweet and crunchy. Cut them into long sticks or rounds. Regular cucumbers may be substituted.
Garlic Bread	This is a great use of leftover bread, whether fresh or frozen. Spread bread with olive oil, butter, minced fresh garlic, and a sprinkle of school garden parsley, oregano, or other herbs.
Fresh Melon Wedges	This is usually the first thing eaten at lunch! We wash them well and cut into wedges with the rind on so kids can check out the different varieties. Honeydew, cantaloupe, and watermelon all work well.

Winter Menus

Winter Menu 1

Tortilla Soup	Make a soup with basic chicken stock, good fresh carrots, celery, garlic, white onions, and shredded chicken. Place tortilla chips in bowls then ladle hot soup on top. You can make a meatless version but it must be served with a protein source.
Mexican Rice	Brown dry, uncooked rice on a griddle or in a large fry pan, stirring constantly until golden and fragrant. Put rice in hotel pans with simple stock or water, diced tomatoes, and seasonings. Cover tightly and bake for about 15 minutes in a 450°F oven, then another 25 minutes at 350°F. It's easy to produce and transports well.
Jicama Orange Salad	This is an easy Mexican recipe. Combine jicama sticks with orange sections and add salt and cilantro, if available. Jicama sticks may be purchased to ease production.
Churro	We use a commercial product, but we roll it in minimal sugar and good Mexican cinnamon. We serve ½-stick portions.

Winter Menu 2

Lasagna	We use our vegetable enhanced sauce and grate zucchini into the ricotta mixture. Cheeses provide the protein. Add school garden herbs to the ricotta mixture and/or the sauce. This is a great way to use school garden herbs.
Caesar Salad	This is a great salad for school garden greens. Croutons help many kids accept leafy green salads more readily. We make a big batch of simple creamy Italian style dressing from scratch, but you can enhance a dry commercial product with fresh ingredients.
Multigrain Roll with Butter	We buy these fresh from a local baker in 2 oz. portions.
Meyer Lemon Pudding	Meyer lemons are sweeter than other lemons and are fantastic to cook with especially in salad dressings, and desserts. If they are not available in your area, use regular lemons and adjust for sweetness. Add lots of grated lemon zest to a basic vanilla pudding or blend together lemon juice and powdered sugar and top each portion with a generous drizzle of the sweet juice mixture.
Mandarin Oranges	These are easy for kids to peel which greatly minimizes chances of whole fruit getting tossed in the garbage.

Winter Menu 3

Grilled Cheese Sandwich	This is a basic favorite we make with local, fresh bread. Brushing the bread with olive oil and baking the sandwiches in the oven is simplest.
Winter Greens Salad	Make this with greens from the school garden or a local farm. Toss with a citrus dressing.
Roasted Potatoes	Cut a variety of potatoes into chunks, including Finnish, Yukon Golds, and Reds. Toss in olive oil and herbs, salt lightly, and bake. Kids love this. A variety of potatoes is great looking and stirs imagination and curiosity.
Faraway Fruit! Fresh Pineapple	When we serve tropical fruit, we do a mid-winter education about local produce being less available and about where the pineapple comes from.

Winter Menu 4

Roasted Chicken	Toss chicken pieces with olive oil, minced garden herbs, salt, and pepper. Bake in a hot oven. This is well loved.
Apple Cabbage Slaw	Shred cabbage, grate apples, and mix with a simple dressing. This makes a great class project.
Pumpkin Nut Bread	We make a basic quickbread using canned pumpkin. It's fragrant and nutritious.
Tangerines	Look for ones that are seedless and easy to peel.

Winter Menu 5

Chili	As with red sauce and soups, we use less than plate-perfect vegetables to make this popular recipe. Cook any combination of beans until soft. Add a sauté of well seasoned onions, peppers, tomatoes, and other vegetables. Top with grated cheese.
Baby Carrots and Celery with Poppy Seed Dip	Combine mid-winter available fresh produce with an easy and somewhat sweet dip.
Cornbread with Butter	As with brownies, homemade is best but check with vendors for the best commercial brands. You can add corn, chopped sweet bells, or jalapeños, depending on your students' tastes.
Kiwis	Wash these well, cut in halves—or quarters for the littlest kids. As with all fresh fruit, be sure the kiwis are soft, ripe, and sweet before serving. Kids love to scoop them out with a spoon.

Spring Menus

Spring Menu 1

Tamales	They have great commercial products available that are easy to prepare and transport. These do not provide sufficient Meat/Meat Alternative (MMA) for older kids (according to “Food-based Menu Planning”) so we supplement with simple savory Bean Dip/Frijoles.
Bean Dip/Frijoles	Cook pintos or black beans until soft and season with salt, cumin, and oregano. Purée or serve beans whole. It’s a simple and inexpensive nutritional accompaniment to tamales.
Baby Carrots and Pea Pods	These are colorful, crunchy, and well liked.
Chips & Salsa	Homemade salsa is best, but the USDA product is very good. Enhance it with fresh cilantro, chopped cucumbers or other fresh vegetables.
Faraway Fruit! Papaya!	We do a mid-winter education about local produce being less available and about where the papayas come from.

Spring Menu 2

Turkey Sub Sandwiches	Use good quality USDA uncooked turkey roasts, and prepare them yourself, well seasoned with salt, pepper, and herbs. This allows more portion cost to be used for good local bread and the freshest produce. In spring, use lots of good fresh greens. Veggie Subs are very well-liked by older kids. Use a variety of vegetables and cheeses.
Broccoli Raisin Salad	When kids get to make this in class they recognize it and enjoy it at lunch. Use raw broccoli florets and stems with the tough, fibrous outer “skin” removed, then chopped into bite-size pieces. Add raisins, walnuts, and a bit of red onion (optional).
Fresh Strawberries	When these are local, organic, and seasonal – they speak for themselves!

Spring Menu 3

Teriyaki Chicken	Coat chicken pieces with a marinade of soy sauce, brown sugar, garlic, and ginger, then bake.
Veggie Fried Rice	Start with cold, cooked rice with separate grains. Cut up a variety of vegetables including carrots, celery, and onions. Toss vegetables and rice together on an oiled griddle. Add soy sauce and stir well. This is easy to produce and transports well.
Sugar Snap Peas	These are a welcome spring arrival! Wash and serve.
Oranges	Cold and juicy wedges are great with this meal as the citrus season winds down.

Spring Menu 4

Pizza	Homemade is best, if you have the staff. Commodity product can be enhanced with lots of good fresh produce such as mushrooms, bell peppers, onions, zucchini, and black olives. It provides an example of how a prepared entrée can be part of an overall good fresh meal.
Pasta Salad	Go light on the pasta and add lots of cut up vegetables such as celery, peas, olives, or whatever is in season that your kids enjoy. Dress with a light vinaigrette.
Brownies	Homemade is best, if possible. Otherwise get samples of commercial mixes from your vendor and enhance them with applesauce or fruit purée.
Strawberries	When these are local, organic, and seasonal, kids never tire of them.

Spring Menu 5

- Chicken Rice Burritos** Seasoned diced chicken tossed with chopped fresh vegetables, fresh herbs, and leftover rice make an easy and great filling. Roll filling in flour tortillas with a little cheese. Burritos can be prepared in stages and transports well.
- Jicama with Lime** Jicama is a crunchy tuber that is available from produce vendors as sticks—specify FRESH. Kids love these with a squeeze of fresh lime and a shake of chili powder.
- Chips & Salsa** Homemade salsa is best, but the USDA product is acceptable. Enhance it with fresh cilantro, chopped cucumbers or other fresh, seasonal vegetables.
- Pears** Use ripe, late season varieties. Keep your eye on them in storage so that they are served at peak ripeness.



Food and Health Resources

Check the Food Odometer: Comparing Food Miles for Local Versus Conventional Sales to Iowa Institutions

Rich Pirog and Andrew Benjamin

This University of Iowa-sponsored study documents the large difference in miles traveled between items bought locally and those bought through “conventional” channels. (PDF: 8 pages)

www.leopold.iastate.edu/pubinfo/papersspeeches/food_travel072103.pdf

Eight Component Model for Coordinated School Health Program

This Centers for Disease Control schema elevates nutrition/health education to equal status with other parts of the curriculum. (PDF: 8 pages)

www.cdc.gov/nccdphp/dash/conference/archive/2002conference/abstracts-access01.htm

Guidelines for School Health Programs to Promote Lifelong Healthy Eating

These guidelines developed by the Centers for Disease Control, affirm, “Healthy eating patterns in childhood and adolescence promote optimal childhood health, growth, and intellectual development . . .”

www.cdc.gov/mmwr/preview/mmwrhtml/00042446.htm

Nutrition Services: An Essential Component of Comprehensive School Health Programs

Marilyn Briggs, SeAnne Safaii, Deborah Lane Beall

This joint position of the American Dietetic Association, the Society for Nutrition Education, and the American School Food Service Association calls for comprehensive, sequential nutrition curricula

integrated with child nutrition programs providing nutritious meals and snacks as part of all K-12 education. It emphasizes the need for schools to accept responsibility for preparing people for lives as healthy, productive adults.

www.eatright.org/Public/GovernmentAffairs/92_8243.cfm

Weston A. Price Foundation

The Weston A. Price Foundation is dedicated to restoring nutrient-dense foods to the human diet through education, research and activism. The WAPF website provides information on nutrition, diet, and health. The Foundation’s quarterly journal, *Wise Traditions* in Food, Farming, and the Healing Arts, is dedicated to exploring the scientific validation of dietary, agricultural and medical traditions throughout the world. It features illuminating and thought-provoking articles on current scientific research; human diets; non-toxic agriculture, and holistic therapies. The journal also serves as a reference for sources of foods that have been conscientiously grown and processed.

www.westonaprice.org

Cover photo: Tyler/Fresh Choice, Berkeley/Center for Ecoliteracy



Finances

RETHINKING SCHOOL LUNCH GUIDE



Finances

RETHINKING SCHOOL LUNCH GUIDE

FOOD FOR THOUGHT

“[When the farm-to-school model is implemented], labor costs will probably go up, and food costs will go down. Some directors will find that food savings will offset increased labor costs, while others will find that the net cost of a fresh food program is higher. It’s my sense that there’s a huge variance in the level of business assumptions made by food service directors. . . . Down the road, the real potential for savings is in terms of healthier children, less absenteeism, better learning, and higher retention because the students are better nourished.”

— J. P. Dozier, director of finance at Bon Appétit Management Company

WHAT’S INSIDE?

RETHINKING FINANCES: The goal, the challenge, and some key points to remember.

INTERVIEW: J. P. Dozier, Director of Finance, and **Marc Zammit**, Director of Culinary Support and Development, at Bon Appétit Management Company. Straight talk on costs from people who know.

RETHINKING SCHOOL LUNCH FINANCIAL CALCULATOR: Downloadable interactive Excel spreadsheets can help you budget and plan your district’s costs.

FINANCES RESOURCES: What does a school lunch program cost? These websites will help you start thinking in practical terms.

RETHINKING FINANCES

The Goal *To determine the financial implications of a farm-to-school approach, and to make the shift in food service away from prepackaged, prepared meals financially viable.*

The Challenge *Making the transition from an approach that relies on assumptions about how much school meal programs cost to working with real cost figures and creating scenarios that motivate stakeholders to support the change to a fresh food model.*

Food service income is one of a school district's few unencumbered revenue sources, and school districts have a minimum expectation that food service will break even or generate profits for the district. This expectation leads many school districts to serve highly processed, or "thaw-and-serve," prepared meals in the belief that serving healthy, fresh meals from whole ingredients would be too costly.

In addition, many food service directors lack effective planning and budgeting tools with which to forecast the impact of innovations to the bottom line. Without such tools, it is difficult to determine the economic feasibility of improvements in food service.

Changing these preconceptions and meeting the challenges means taking the time to do research. Having all the facts will help you make your point.



KEY POINTS

What About Financial Viability? Perhaps the single most-often-asked question regarding the shift in food service from prepackaged, prepared meals to the farm-to-school approach is, Is it financially viable? The answer is yes — but it takes careful planning and a shifted perspective.

If you compare the “true” costs of processed, packaged foods (including the hidden costs, in terms of the environment and health), purchasing fresh foods might actually be less expensive, even after adding in the increased labor costs.

Marc Zammit, director of culinary support and development at Bon Appétit Management Company, explains, “The cost of fresh food varies according to location and season, but savings could be as much as 50 percent. With fresh food, you’re not paying the processor’s labor costs, and you’re saving on shipping and packaging, which is where most of the food cost is. I’ve seen statistics that show that packaging alone can represent 50 percent of the food cost. Then you save a second time by not having to dispose of all that packaging.”

Fresh, Healthy Foods Offer Value Beyond Dollars The very real problem of financing improvements to school meal programs requires districts to consider what they value: Are meals served to students an accurate expression of the district’s commitment to student health? Are those values reflected in budget allocations and priorities? 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 Real Trade-off May Be Less Profit for Healthier Kids Depending on where they live and what is available, many people find it is not more expensive to buy locally grown food. The hidden costs in purchasing processed food need to be factored into the true costs of food purchases. If the numbers still indicate that purchasing processed food is the best financial decision to make, there are other factors to consider — not the least of which is children’s health. What’s the bottom line? It may not be cheaper to buy local, fresh food, but it may not cost as much money as one might assume.

A New Food Program Can Bring Improved Efficiency Implementing a new food program is a good occasion for instituting other changes that produce more efficiency in the system. Improved efficiency may mean that total expenses will not increase and may actually decrease. Inevitably, the greatest dollar savings in food service are achieved through greater efficiencies. Improving efficiency may require an initial investment in training and management. Remember: Positive attitudes toward innovation begin at the top. A focus on efficient preparation of food will occur only when it is supported by the culture of district food services as a whole. When food service staff view change as an opportunity, efficiencies follow.

Food Service Staff Can Make the Change and Bring Added Savings It has been found that, given appropriate programs of professional development, 80 percent or more of food service staff can make the transition to an improved and more demanding food service model. Better management — hiring staff with the right skills and motivation, scheduling

and assigning work more efficiently, concentrating skilled people where they are most needed — has an added financial benefit: It allows many school districts to realize increased participation and enough savings to offset higher labor costs.

A strong accounting system, for example, allows the food service director to conduct weekly inventories and weekly profit/loss accounting in order to make adjustments in real time. A purchasing director may realize enough in savings through fresh purchase to more than offset his or her salary. In the long run, school districts might actually become *more profitable* by improving student dining rooms as gathering places for young people and by hiring a general manager with marketing skills to attract more participants to the program.

Beginning to Explore Cost Issues Virtually all school districts can begin at some level to improve nutritional content and quality of meals served at school. What is important is that food services has the tools to explore the financial implications of a farm-to-school approach. Here are some areas to explore.

Food and labor costs

- **How much would labor costs increase** in a farm-to-school approach to food service? How much would food costs decrease using locally purchased ingredients?
- **If the cost of meals increased, how many participants would the program need** to attract to remain economically viable? If the cost of meals decreased, how many more participants could be expected?

Food quality

- **If the quality of school meals improved** significantly, how much would participation increase?
- **What quality of meals does the district intend to serve** to students? What is specified in the district food policy, if there is one?

Current facilities and staff

- **What facilities and equipment does the district have** for cooking and dining? What changes are required for the envisioned program?
- **How amenable are staff members to changes** in the school meal program? What is needed, in terms of professional development, to bring staff skills and motivation into alignment with envisioned improvements?

The district

- **Is incremental change an option**, or is the district prepared to make sweeping improvements?
- **Are there notable differences** between revenue or expense totals at different schools in the district? What would explain the differences? How can the information be used?
- **What demographic changes** does the district anticipate over the next few years? What do these changes imply for the food services program?

Rethinking School Lunch Financial Calculator

Get started thinking about finances with the Center for Ecoliteracy's "Rethinking School Lunch Financial Calculator." Download these Excel spreadsheets for budgeting and planning right now:

The Sample Financial Planner The Financial Planner Template

www.ecoliteracy.org/downloads/rethinking_calculator.zip

The **Sample Financial Planner** is loaded with representative figures from a selected district, providing an example of a completed spreadsheet. Use the **Financial Planner Template** to fill in your own district's numbers and

then test various scenarios. Food service directors and others can explore alternatives to their current model.

Consider these questions when using the Rethinking School Lunch Financial Calculator:

- **If you enter current revenues and expenses** in the Calculator, does it yield existing revenue and expense totals? If not, has something been left out?
- **After filling out the Calculator**, do you find any notable surprises? For example, are there wide fluctuations in participation levels of different categories of students? Are revenue totals from particular programs more or less than expected? Do these realizations prompt specific actions?

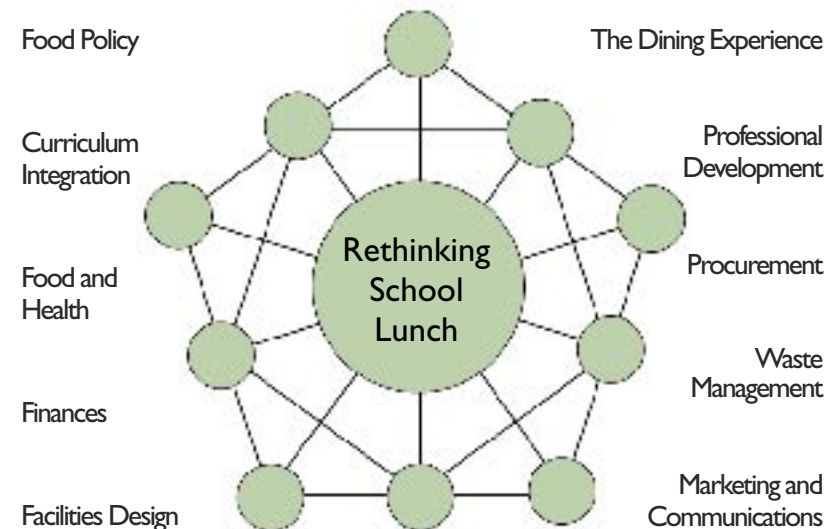
RETHINKING SCHOOL LUNCH Web of Connections

This document is part of a comprehensive **Center for Ecoliteracy** project that provides helpful information on topics related to redesigning school lunch programs.

The diagram illustrates our systems approach to integrating school lunch programs with curriculum, improving student health and behavior, and creating sustainable communities.

School administrators, food service directors, teachers, and parents will each approach this project from their unique perspective. Readers can begin with the topic that interests them most, then explore the other related topics.

The entire Rethinking School Lunch project is available at: www.ecoliteracy.org/rethinking/rsl.html





Interview

J. P. Dozier, Director of Finance and Marc Zammit, Director of Culinary Support and Development, for Bon Appétit Management Company

By Michael K. Stone, Center for Ecoliteracy

Center for Ecoliteracy: *Many school districts would prefer to serve meals made from fresh, locally grown ingredients, but believe it would be too costly. How do you approach that problem?*

J. P. Dozier: I've met with a number of school food service directors and, so far, I haven't encountered many who have a plain old budgeting program—a tool that allows them to model their existing business, and then create various scenarios that will model changes they could make. We developed the Rethinking School Lunch Financial Calculator, an interactive financial spreadsheet, in the hope that it might be such a tool.

CEL: *Does the farm-to-school model cost more to operate than a conventional program?*

JPD: Labor costs will probably go up, and food costs will go down. Some directors will find that food savings will offset increased labor costs, while others will find that the net cost of a fresh food program is higher. It's my sense that there's a huge variance in the level of business assumptions made by food service directors. If a thaw-and-serve program is being run as efficiently as possible, I suspect that costs for fresh prep would be greater than savings, at least initially. If that were the case, it's possible that costs could be offset by raising the participation level of full-paying students, thereby increasing revenues.

I want to stress that one of the best arguments for implementing this sort of program is that quite possibly there is money being left on the table right now. By increasing efficiencies, food service directors can bring costs of a fresh food model much closer to the level of the current program.

Down the road, the real potential for savings is in terms of healthier children, less absenteeism, better learning, and higher retention because the students are better nourished. I'd love to see a study that tracks these things over time.

CEL: *In the short run, what are the major cost determinants?*

JPD: A major cost is labor. Instead of bringing in a chicken burrito that's already been assembled, food service staff are going to have to warm the tortillas, make the sauce, cook and pull the chicken, and assemble it.

Marc Zammit: A fresh prep approach will require workers with different skill levels at higher rates of pay. Instead of a production cook, it would be preferable to hire an executive chef who can write a menu and execute a recipe, someone who knows what to order and how to handle raw food safely.

JPD: And with a larger staff comes a need for more management.

CEL: *Where can you realize the greatest savings without sacrificing quality?*

MZ: The first place is by changing the culture and the approach to feeding children. If staff people are excited about doing the right thing for the kids, it leads to a different level of efficiency. Our experience, by the way, is that changing the culture starts at the top.

Another way to increase efficiency is with strong management. Take a very close look at the skills of your staff, and make an initial investment in management and training based on that assessment. The greatest efficiency is achieved with the right staff, who have the right skills and the right motivation. Usually, one staff element becomes very excited because they want to make a difference, while another element is signaling that it is never going to make the transition.

CEL: *What happens if you have the wrong mix of employees?*

JPD: You try to retrain them.

MZ: We have found that it takes awhile, but that it is doable.

JPD: And doable on a grand scale; probably 75 to 80 percent can make that transition with adequate professional development. When you invest money in someone, and send that person to a class to acquire new skills, they normally appreciate it.

CEL: *What other efficiencies can you suggest?*

MZ: A really strong accounting system allows you to do a weekly inventory and weekly profit and loss statements, giving you real-time information for managing. If the cost per meal last week was higher than budgeted, adjust the menu. If you come in below budget, let it go a little bit. The point is that you've got information to react to and can make decisions on a regular basis.

JPD: Efficiency also results from implementing cost controls, schedules and work assignments, and compartmentalizing duties, especially in a central kitchen. For instance, one person can slice all the tomatoes for all the different meals. I've also seen schools make good use of a few student employees. They're not paid, but they understand that it's a privilege to participate. They learn about the effort and care that go into preparing meals, and they become advocates of the food program with other students.

CEL: *What about the costs of food? Can you save money by buying fresh food locally?*

MZ: The cost of fresh food varies according to location and season, but savings could be in the range of as much as 50 percent. With fresh food, you're not paying the processor's labor costs, and you're saving on shipping and packaging, which is where most of the food cost is; I've seen stats that show that packaging alone can represent 50 percent of the food cost. Then you save a second time by not having to dispose of all that packaging. Between more composting and less trash, you'd probably lower your trash pickup costs.

JPD: There's also a potential for savings from districts buying cooperatively. Let's say that an average budget for a district food service is a million dollars a year and that there are 14 districts in a county. That's a total of \$14 million. If those districts' food costs are 50 percent of their budgets, they're spending a total of \$7 million on food purchases. Spending that \$7 million cooperatively would let them speak a lot louder than each district purchasing individually.

MZ: They might be able to bargain with farms or dairy cooperatives, especially if the producer can drop off at 14 central kitchens, as opposed to 150 individual schools. We discovered that once we hired a purchasing director, we were able to realize significant savings. A district's investment in a purchasing director—or several districts sharing the costs—might more than pay for itself.

CEL: *What would be the difference between the district's having an employee who went to all the farms versus the farmers delivering to all the schools? Would the farmers lower their prices?*

MZ: Probably. Delivery is the one thing that most farmers don't like doing. And since most farmers specialize in two or three things, if schools want a big variety of produce, it quickly becomes a large number of farmers. There might be an advantage to finding someone who's interested in doing that pickup.

MZ: We had a similar issue in our company. We didn't want our chefs to order from 10 different farmers, and then have to process 10 different invoices. We found someone who shares our commitment to fresh, flavorful, organic food and human-scale agriculture. He was willing to act as a broker for us. We order through him, and get one invoice, and he takes care of all the insurance, liability issues, and all that. He also works with the farmers to create harvest charts—harvest plans to help them supply us. That's another thing. Some farmers don't have the concept of how much a school will really need. We're starting to realize that when it comes to organic produce, it's on average 17 percent less costly to work through a broker than to buy directly from our regular producers.

CEL: *Can you make up some of the costs by increasing the number of full-pay students?*

JPD: It depends on what the competition is, but a 10-percent increase in participation would make a huge difference to most programs. In a high school where students have the option to go off campus, which means they're carrying five bucks in their pocket for lunch, if you can capture that five bucks, you'd be all right. In an elementary school, you might be competing with lunch brought from home. That suggests another staff skill set—a general manager or district director with marketing skills who can do what's necessary to attract students and parents to the new menus.

MZ: That increase probably wouldn't happen the first year. It certainly wouldn't happen the first three months. You'd have to build participation over time.

CEL: *How can school food services eliminate the stigma associated with the free and reduced lunch program?*

MZ: The subsidized lunch is associated with not-very-good food. If you changed the perception about how good the food is, it might be fine to eat there.

CEL: *Tell us about the Rethinking School Lunch Financial Calculator that you developed.*

JPD: It's adapted from tools that we use in our business. I revised it after meeting with the Food Service Directors' Roundtable, which the Center for Ecoliteracy convened, and listening to their needs. Then, I tried out the revised version with Miguel Villarreal, the food service director of Novato Unified School District, and revised it again from his input. The numbers in the completed sample are indicative of a typical mid-sized school district.

CEL: *How do you see food service directors using the Calculator?*

JPD: I'd suggest that they start by filling it in with their current numbers, and using the totals that it calculates as a baseline. That way they'll know if they trust the model and know that whatever they change later, they're going to be comparing apples to apples.

In order to calculate the total revenue that the school is going to receive for a meal, the spreadsheet adds the federal and state reimbursements from the assumptions page, then adds the cash, if any, that students are paying. The Calculator does a separate calculation for fully subsidized, partially subsidized, and full-paying students. That tells us how much we are actually receiving for serving that meal to each type of student, which can help us price appropriately. It's an annualized summary, so the food service

director can see where their revenues are coming from on an annual basis.

CEL: *Is it your experience that a lot of directors don't know that?*

JPD: I don't think they think of it that way, no. I don't think they stop to consider what their total revenue is, by group or individual school.

I also encourage users to think on the basis of expenses as a percentage of total revenue, and participation as a percentage of total enrollment and/or campus population. That helps them to understand, for instance, "Oh, my God, I only have 15 percent of my total population participating. I have a huge opportunity here." Or "This elementary school is netting a 10 percent 'profit,' while this other school is spending 10 percent more than its revenues. What can I learn and change because of this knowledge?"

CEL: *What if they do want to consider the switch to fresh food?*

JPD: Once they have a baseline—what they're currently doing—they can take the model and try various changes: "Here's what my labor costs would be if we continued with the present delivery setup. Here's what they would be with a central kitchen. Here's what food costs would be under a variety of procurement options. Here's what would happen if we raised the price we charge, but made the food so good it could attract 12 percent more participation." Then they can look at the bottom line. Does it compare with what they're currently doing? Is it more? Is it less? Is it realistic to imagine this change?

I would save the spreadsheets in different versions. Scenario Base would become my current case. Then I would compare Scenario 1, Scenario 2, Scenario 3, etc., with each other and with Scenario Base. In Scenario 1, I might play with increasing what I charge. Can I justify this to the consumer, and get him to pay it? In Scenario 2, I might see what happens if labor costs increase 20 percent and food costs decrease 35 percent. And so on.

CEL: *Can using the Rethinking School Lunch Financial Calculator have results that might not be immediately apparent?*

JPD: I can think of a couple. To begin with, the food service director will need to work closely with the district business manager in order to develop the data they'll need to fill in the spreadsheet. For the most part, this working together should benefit everyone. The quality of the relationship between the business manager and the food service director is critical to the success of the analytical process. Making information flow two-ways can be the start of much more fruitful relationships.

I also think that concrete numbers will help administrators and school boards realize the impact of government reimbursement programs. Schools that receive certain federal grants are required to offer meals for poor children, but the size of the reimbursement that they receive sometimes forces them to choose between poor food for poor children and balancing the budget on the backs of the paying students, or selling junk food to increase profits. Seeing this dynamic demonstrated graphically might motivate administrators and boards to become active in arguing for increased funding and higher nutritional standards for their meal programs.

Planning tools like this spreadsheet can shine light into corners that haven't seen the light of day for a while. I believe completely in serving fresh food, but these tools can help a district identify changes that might increase revenues or reduce expenses even if it isn't ready to adopt a fresh food program.

J. P. Dozier is the director of finance at Bon Appétit Management Company. He started his career at Bon Appétit working on their first education account and subsequently opened and operated several accounts prior to becoming a district manager in 1997 and then director of finance in 2002.

Marc Zammit is director of culinary support and development at Bon Appétit Management Company. He owned a fine food and confectionery distribution business and served as general manager of a premier Silicon Valley catering company. At Bon Appétit, his responsibilities include developing the company's position on socially responsible issues related to food.



Rethinking School Lunch Financial Calculator

These downloadable Excel spreadsheets are tools for budgeting and planning. The Sample Financial Planner is populated with representative figures from a selected district. It provides users an example of what a completed spreadsheet looks like. The Financial Planner Template is designed for districts to fill in their own numbers, and then test various scenarios. It provides food service directors and other with the opportunity to explore alternatives to their current model. The Financial Planner Template is annotated throughout.

The Sample Financial Planner and the Financial Planner Template are available at:

www.ecoliteracy.org/downloads/rethinking_calculator.zip

Finances Resources

The following are food service industry websites:

Food Service Director

Reports on news, issues, ideas, and trends impacting the noncommercial foodservice operations. Subscription \$79/year. *Food Service Director* is published by the Food Industry Research Center, which also manages a website, Foodservicetoday.com, and a free email newsletter, *Food Manager*.

www.foodservicetoday.com

National Restaurant Association

The leading association representing the restaurant industry.

www.restaurant.org/index.cfm

Restaurants and Institutions

Free restaurant industry online publication.

www.rimag.com/index.html

Facilities Design

RETHINKING SCHOOL LUNCH GUIDE

Rethinking School Lunch – a project of the **Center for Ecoliteracy**
2528 San Pablo Avenue, Berkeley, California 94702 www.ecoliteracy.org



Facilities Design

RETHINKING SCHOOL LUNCH GUIDE

FOOD FOR THOUGHT

“There are, generally speaking, three primary models [for serving fresh meals using locally sourced ingredients]. First, there’s the central kitchen model from which food is transported to all the other schools in the district, whether that’s one other school or 40 others. The second model sites a kitchen at every school. A third model some districts are trying is a variation on these two... The variation might site six ‘base’ or hub kitchens throughout the district to serve 20 or 30 schools, but we have found that model to be inefficient.”

—Steve Marshall, president of The Marshall Associates, Inc.



WHAT'S INSIDE?

RETHINKING FACILITIES: The goal, the challenge, and some key points to remember.

ANSWERS TO BASIC QUESTIONS: The Center’s interview with **Steve Marshall** of The Marshall Associates, Inc., a food service consulting and design firm, answers basic questions for those engaged in the planning process.

ARCHITECTURAL CHARTS, DIAGRAMS, EQUIPMENT LISTS, AND COST ESTIMATES: Charts and diagrams illustrate generic solutions to design problems. Equipment lists and cost estimates for central kitchens and satellite serving sites provide useful planning information.

FACILITIES DESIGN RESOURCES: Look to these professional organizations and resource guides for information on purchasing food service equipment, and many other issues and concerns related to food service facilities.

RETHINKING FACILITIES DESIGN

The Goal *To create a dining facility that serves as both an inviting place to eat and a learning center, that offers fresh, locally grown food prepared on site, and that supports and reflects the academic lessons learned in the classroom.*

The Challenge *Creating food preparation, service, and eating environments that are consistent with the farm-to-school model of using fresh, locally grown ingredients served in an appealing atmosphere.*

Connecting student learning outcomes to school gardens, school meals, local agriculture, and larger health issues integrates classroom learning with practical experience and helps students form healthy eating habits. It follows that the school district's commitment to improving student health should be modeled in the school dining experience. Quality of school meals is one expression of that commitment; environment and social atmosphere of the student dining hall are another.

But changing the way we serve food in schools goes much deeper than simply removing Coke machines from the hall and packaged, processed food from trays. Many school districts are faced with antiquated or inadequate cafeterias, kitchens, dining areas, and storage facilities — a major obstacle to redesigning food programs.

The idea of redesigning facilities is challenging and exciting. Districts facing budget constraints may find themselves looking for creative ways to assess their needs and obtain financing,

but the many good reasons to move forward in this area will provide good fuel for your new cooking fires.



KEY POINTS

Lunchrooms Can Be Learning Centers School dining environments can be revitalized in two important ways. First, they can accomplish their primary purpose: to provide nourishing, wholesome meals for students. Second, they can serve education by functioning as learning centers. As Alice Waters, owner of Chez Panisse Restaurant and founder of The Edible Schoolyard, points out elsewhere in this study, “The opportunity to see what is occurring in the kitchen can be a valuable part of the learning experience.” Lessening visual and social barriers between the kitchen and the dining room encourages students to enjoy their lunchroom experience and learn from it. An open kitchen design allows students to observe food preparation. These daily observations can lead to the acquisition of practical skills and knowledge that support and influence lifelong eating habits.

Consider designing a new facility with an open serving line that everyone eats from. The food should be easily available and beautifully presented. Design kitchens around the menus you want to serve.

Every Planning Challenge is Unique School district food policies often specify particular conditions — such as time allotted for eating, socializing, and quiet time — that have implications for facilities design. Before undertaking a facilities redesign, be sure to give careful attention to the full intent of local district food policies.

How Much Space Do You Need? Switching from frozen and preprocessed meal service to meals prepared daily from

fresh ingredients will probably require more space than you currently have. Here are some factors to consider:

- **Cooking with fresh ingredients doubles the space needed** for food preparation — to about 1 square foot of kitchen space for every meal served. This assumes a base kitchen size of at least 1,000 square feet to serve between 200 to 1,000 students. Thereafter, the kitchen can be increased in size by the formula of 1 square foot per meal served.
- **If more than 200 lunches are served** one at a time by hand in a single period, add 100 square feet for an additional serving line. (By contrast, a speed line with prepackaged food will serve up to 400 K-8 students in 20 minutes or less.)
- **Allow 50 percent of kitchen space** for food preparation, and 50 percent for storage.
- **Allow 50 percent of the total space** allocated to storage for dry storage, and 50 percent for refrigerated or frozen storage.
- **When cooking from scratch**, 90 percent of cold storage is refrigeration and 10 percent is freezer.

What About Costs? Do research — make sure to get the information about costs before beginning to plan in earnest. Here are some hidden and not-so-hidden costs to keep in mind:

- **Construction costs average about \$300 per square foot** to remodel an existing building on school grounds. If new building construction is a metal warehouse-style shell, a typical school site shell building might cost between \$100 and \$125 per square foot. The average cost to build an on-site district kitchen from scratch is \$425 per square foot.
- **“Soft costs”** building permits, and sewer hookups increase construction costs by about 20 percent to 40 percent. Soft costs include 10 percent for design contingencies and 10 percent for construction contingencies.

- **Budgeting for improvements** to kitchen facilities should also include improvements to the environment and atmosphere of the dining hall.
- **Cooking fresh** requires on average nearly five times as much incoming delivery truck traffic as for processed food. A central kitchen plan adds one refrigerated delivery truck (\$55,000 to \$70,000 each, with power tailgate) for every 10 schools served across the district.

RETHINKING SCHOOL LUNCH

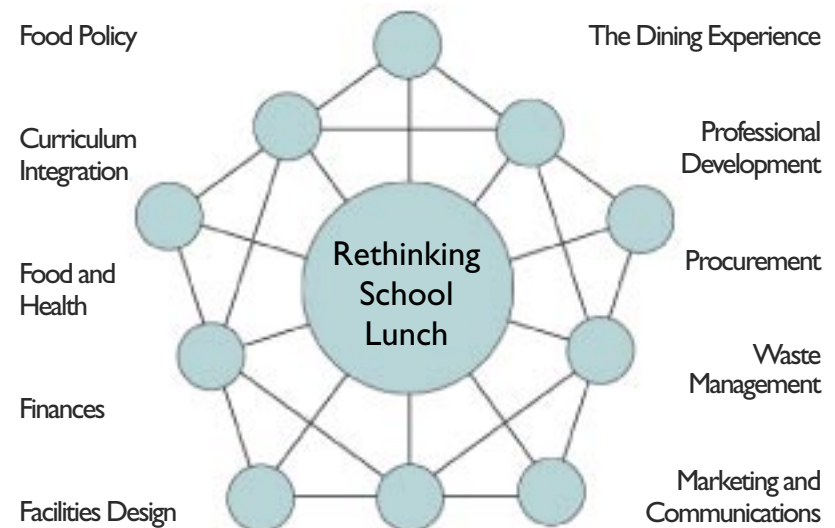
Web of Connections

This document is part of a comprehensive **Center for Ecoliteracy** project that provides helpful information on topics related to redesigning school lunch programs.

The diagram illustrates our systems approach to integrating school lunch programs with curriculum, improving student health and behavior, and creating sustainable communities.

School administrators, food service directors, teachers, and parents will each approach this project from their unique perspective. Readers can begin with the topic that interests them most, then explore the other related topics.

The entire Rethinking School Lunch project is available at: www.ecoliteracy.org/rethinking/rsll.html





Answers to Basic Questions

An interview with Steve Marshall, president of The Marshall Associates, Inc.

by Michael K. Stone, Center for Ecoliteracy

Center for Ecoliteracy: *What is the ideal make-up of a planning team to begin a facilities planning process?*

Steve Marshall: Every district's situation is different, but I've found that a good planning team includes the district's food service director, its business manager (the money source), and a facilities planning person (the construction and site location source). It's always good to have a board member involved and the superintendent, or his or her representative. It's nice to have a food consultant to advise the group. You don't need an architect until you've decided to implement a plan.

CEL: *Where does the planning team begin?*

SM: By asking the right questions. The answers to those questions, along with a few rules of thumb, should enable the district to project its needs for facilities and equipment, estimate costs, and measure the district's readiness to make the transition. The district should be able to estimate how much money it would need to raise (for example through a bond measure), without hiring an architect or other outside professional.

CEL: *Once the team is in place, what are the first questions a district should ask?*

SM: First, the district should determine its needs. How many meals does it project serving every day? What are the district's enrollment and the level of participation in its meal programs? Are those likely to change? For instance, a California school district that projects increases of 300 students a year for the next 10 or 15 years needs to anticipate that growth when designing facilities.

The team should study recent community demographic trends and incorporate what they are suggesting about increases or decreases in the number of children eligible for subsidized lunches in the coming years into the planning process. The team should also run projections of how many students could be attracted to buy full-price lunches from the food service if improvements to service were made. The planning process needs to strike a balance between the quality of meals the district intends to serve and the needs and costs associated with that service.

Then, the district needs to examine its goals for food service, because these will help determine the infrastructure requirements. Does the district want to serve as many students as quickly and cheaply as possible? Does food service need to turn a profit? Are prepackaged meals, frozen food, and convenience food acceptable? Or does the district intend to serve quality, fresh food, obtained to the greatest extent possible from sustainable local farms? The

answers to these questions all carry implications. For example, preparing meals from scratch with fresh ingredients will probably require at least twice the kitchen space as serving preprocessed food does.

A district food policy can answer many questions about the food program's goals and priorities. For example, before a school district begins discussing facilities, it might choose to adopt a nutrition policy that describes the intended direction its school meal program will follow. If, for example, the district concludes that it is moving away from frozen and processed food, and it incorporates that decision into its district policy, it is then prepared to discuss facilities. During the policy and planning phases, adequate attention should also be directed toward the student dining experience and the atmosphere of the dining environment.

CEL: *If a school district has decided on, or is considering, serving fresh meals using locally sourced ingredients, what implications does that have for facilities design?*

SM: There are, generally speaking, three primary models. First, there's the central kitchen model from which food is transported to all the other schools in the district, whether that's one other school, or 40 others. The second model sites a kitchen at every school. A third model some districts are trying is a variation on these two, but these are the basic choices. The variation might site six "base" or hub kitchens throughout the district to serve 20 or 30 schools, but we have found that model to be inefficient. Even if the district has enough space for that many kitchens—and many don't—to have six managers, and six bakers, or six cooks at each of six sites is cost prohibitive. A central kitchen might have six cooks, depending on shifts, but that would be serving the entire district. There is economy in scale.

Here's one rule of thumb for estimating space needs. A minimal "fresh food" production kitchen to serve 200 meals up to 1,000 meals would be 1,000 square feet. Beyond 1,000 meals, add one

square foot for each additional meal served (e.g., 4,000 lunches requires a 4,000 square foot kitchen). Even in very large kitchens, it actually scales up the same. We've designed central kitchens that serve 30,000 lunches, and they're in the neighborhood of 30,000-35,000 square feet. A kitchen that was built as an original production kitchen for a high school or a middle school is likely to be in the 2,000–2,500 square foot category. To go up to a 4,000 square foot model, there's a good chance you can find space to expand around the existing building. As you move to an 8,000 square foot model, I doubt if there's that kind of adjacent square footage available on most school sites.

CEL: *What are the general parameters around remodeling an existing kitchen?*

SM: Here's another rule of thumb: building costs will be about \$300 a square foot for remodeling (\$150 for equipment, \$150 for interior construction), while building a new kitchen will cost an additional \$50 a square foot for the outer shell. If the building is a metal, pre-engineered structure (e.g., a Butler Building), these types of structures usually are only allowed on maintenance yard sites. A kitchen shell building converted on a school site will require Division School Site materials, which will be \$100 to \$125 per square foot. Then you need to add another 20 percent for "soft costs" such as architects and engineers, permits, sewer hook-ups, inspectors' fees, and so on. So there's a definite cost savings in remodeling if you have enough space around an existing kitchen. I've provided drawings to suggest an efficient way to do that: move all the storage, including refrigerators and freezers, to the outside of the existing building. Then use the space freed up inside to expand the area available for food preparation.

The downside to expanding on an existing school site is that it's typically in a neighborhood, invariably with houses just across the street. The neighbors may object to the visual expansion. Truck traffic will increase, probably fivefold. Instead of single purveyors delivering processed meals, often in quantities to last several days,

many individual purveyors of fresh food will make deliveries at the kitchen door every morning. You must also add the impacts on neighborhood traffic of multiple district dispatch trucks leaving the kitchen to transport finished food to other school sites.

That's why central kitchens are often located at corporation yards or other non-school sites in more industrial neighborhoods that already experience bus and truck traffic, and that don't have adjacent residences. A central kitchen doesn't necessarily need to be centrally located to the district. Once you're on the road, delivering to one school after another, it doesn't matter where you started.

Any construction on a school site in California has to be approved by the Division of the State Architect (DSA). If construction is not on a school site, you don't need to go to the DSA, which is concerned about structural and fire safety in buildings used by children. If the DSA is involved, you'll need to pay its inspector \$30,000, and there are all kinds of additional costs. But if it's on a maintenance site or other non-school site, all you need are local building permits, which are much quicker to get—literally, three weeks versus nine months.

If you need to buy a site to build a central kitchen, unless you're in a really rural area, that's an expensive proposition. It's much less costly to site the new construction on a maintenance yard. Occasionally, a district will solve the problem by purchasing a warehouse building in the industrial area of town and remodeling it into a central kitchen.

CEL: *What decisions about delivery of food from a central kitchen affect facilities and equipment needs?*

SM: There are really two distinct choices. The food can be prepackaged—meaning that every meal leaves the kitchen in a single-portion package. It usually goes out in two containers, one hot and one cold. The “hot” one still leaves the kitchen cold, but it's rethermed like an airline meal at the satellite kitchen. Or, it can be sent in bulk—tote boxes of lettuce, sheet pans of pizza or lasagna,

hotel pans of starch, rice, corn, etc., and then served in a traditional cafeteria style.

There are many reasons to conclude that bulk is better, but sometimes goals conflict, as when schools set a goal of serving high-quality food, but also set a goal of serving the most lunches in the shortest time. A whole pan of green beans or corn holds heat better than individual little portions, which have a tendency to get cold. All the solid waste from all those individual packages adds up. The bulk program is the desirable way to serve food, but it's slower.

During the planning phase, it is also important to consider improvements to the environment in which students are served, as well as the kitchen facilities used to prepare the food. Students are highly influenced by the school meal environment and often make decisions to eat, or not to eat, at school based on their experience of the dining room. Most elementary schools average 30- to 35-minute lunch breaks, and usually one lunch period. A 900-student school with 50 percent participation needs to serve 450 students, and the students need to eat in about 20 minutes. With elementary school students especially, they want to gobble lunch down as fast as they can, so they can get out and play, because the lunch break is also their recess.

A cafeteria line with any interplay at all, where the kids can make choices, takes time. In short order, the lunch line can begin to back out the door. One obvious way out of this dilemma would be to increase the length of the lunch period, but that idea often meets with resistance, for example, from administrators demanding more “instruction time,” teachers and bus drivers not wanting to lengthen the school day, or business managers trying to minimize the food service staff's hours.

CEL: *What advice do you have about the charts, diagrams, and plans you have provided for this section, including generic drawings and equipment lists?*

SM: I hope that the captions to the drawings will explain them clearly. Some of the equipment recommendations may need further investigation. Some pieces of equipment may cost more, but will pay for themselves in better-tasting, safer food and more efficient operations.

For example, a blast chiller is one of the most important pieces of equipment if food is to be cooked in a central kitchen and sent cold to satellite sites. Chilling quickly is more efficient; food doesn't need to remain as long at the kitchen site. Chilling quickly is also best for food safety. A pan of chili can take up to 10 to 12 hours to cool from 180°F to 40°F; a blast chiller will cool the same amount in 1.5 to 2.5 hours, giving bacteria much less chance to develop.

For the central kitchen, I recommend roll-in rack ovens instead of conventional convection ovens. With a convection oven, you have to individually put each pan—whether it's chicken or cookies—on every shelf, and then pull the pan out halfway through the cooking procedure and turn it around to get even cooking. A roll-in rack oven spins the rack, giving constant even cooking. The ingredients from your prep area don't have to be put onto a pan rack and then transferred from that to the oven. The whole rack rolls into the oven, and can be rolled from the oven into a blast chiller. The food never leaves that rack. That allows a person to prepare three times as many meals per labor hour. In a partially automated kitchen, that person can produce five times as many meals per labor hour as in a conventional kitchen.

At present, food is often shipped cold and then rethermed at satellite sites in a convection oven. But this method cooks the food too fast, and then overcooks it. As with any other oven or furnace, a convection oven set at 300°F actually fires at 550°F until it reaches 300°F. That's not good for retherming.

Good retherm cabinets, the equipment of choice, are much like prime rib slow-cook ovens. They're a much gentler heat source. Hot

items can be transported in mobile warming cabinets, which are then plugged in at the satellite, where they warm the food to about 160°F.

CEL: *Does a shift from thaw-and-serve, to cooking from whole ingredients, mean that school districts must buy industrial-sized equipment?*

SM: I recommend going large with some equipment such as high-volume cheese cutters. Government commodity cheese comes in giant blocks. You wouldn't normally have equipment to cut those blocks in an elementary school kitchen. And then you need equipment to grate it, if you're making your own tacos, burritos, and pizza. A high-speed automatic grater accomplishes in one hour what it would take a human 10 hours to accomplish with a hand grater. It's the same thing for pressing cookies versus using a cookie dropper. Of course, cheese can be purchased grated or cookies already formed and frozen, but food costs will be higher and this leads back to processed foods.

"Preparing fresh food from fresh ingredients" doesn't mean that the cafeteria is a restaurant serving a hundred meals, and chopping all the lettuce with a knife. It's not different from chopping radishes or mixing ingredients in your own kitchen in a Cuisinart®. A Cuisinart® is 10 times as fast as hand preparation. Food service just has bigger Cuisinarts. An automatic reversible sheeter is just a high-speed rolling pin. Same principle, more appropriate scale.

CEL: *Any other advice for school districts?*

SM: Remember that this whole process requires trade-offs. Districts may not be able to serve nutritious, fresh food and expect their food services to make money. Labor and equipment costs may go up, but the hoped-for trade-off is being able to use seasonal local ingredients, which are often higher in nutrition, less expensive, with much lower transportation costs, and less expenditure on packaging that will end up as solid waste. Creating infrastructure appropriate

to the district's desires and resources is a challenge, but in the end it is possible to offer quality food to our children, at less cost than many people assume.

Steve Marshall is president of *The Marshall Associates, Inc.*, a food service consulting and design firm based in Oakland, California. Since 1964, Steve has designed more than 5,000 kitchens for schools, hotels, resorts, restaurants, corporations, hospitals, prisons, military installations, and other organizations. He designed the first cook/chill facility in North America in 1976 and has designed more than 50 central kitchens for school districts around the country. His current projects include central kitchens for school districts in Berkeley and Eureka, California. Marshall was named *Food Service Consultant of the Year* by *Food Equipment Specialist Magazine* and one of *America's top 10 kitchen designers* by *Food Arts*, the professional chefs' magazine.



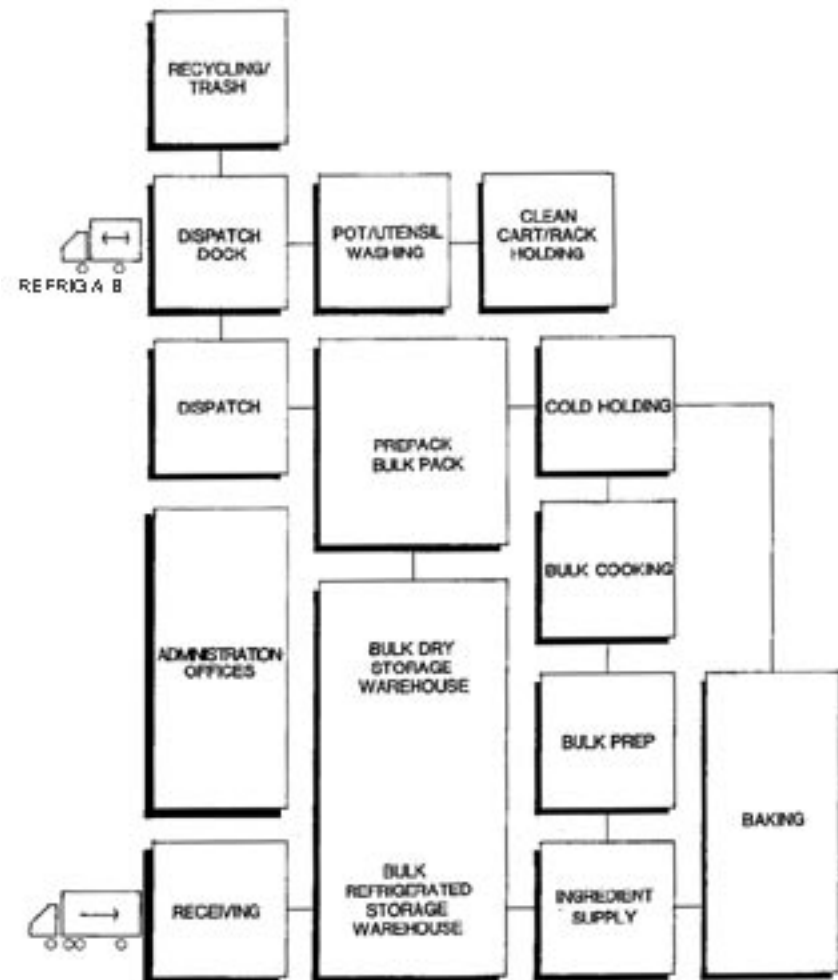
Architectural Charts, Diagrams, Equipment Lists, and Cost Estimates

The following section contains diagrams, illustrations, and equipment lists prepared by Steve Marshall, president of The Marshall Associates, Inc.

These diagrams, illustrations, and lists are not a substitute for professional architectural, financial, or operational advice. Before initiating changes to your facilities, consult the appropriate professionals for guidance on your district's specific needs.

Space, function, and flow diagram for a typical central kitchen

This diagram illustrates kitchen space allocation relative to function and flow, and provides planners with a basic pattern of institutional kitchen design. It indicates relative space, function, and flow allocations for a 4,000-square foot central kitchen to serve 4,000 to 5,000 meals a day, and includes space allocations for food delivery, preparation, staging, and dispatch functions to satellite kitchens throughout the district.



Equipment list and cost estimates to outfit a 4,000-square foot central kitchen

This list outlines general equipment needs and estimated costs relative to expansion of a typical 2,000-square foot kitchen to a 4,000-square foot district central kitchen to serve 4,000 to 5,000 meals a day. This list does not include standard equipment that may already be in place in the original 2,000-square foot kitchen. It assumes use of roll-in rack ovens and blast chillers.

(Continued on next page)

ITEM NO.	QTY.	EQUIPMENT DESCRIPTION	PERTINENT DATA	EQUIPMENT COST(\$)
1	1	RECEIVING DESK		2,000.00
2	1	AIR CURTAIN	HIGH VELOCITY	1,100.00
3	LOT	BUMPER RAIL	TWO TIER	4,500.00
4	1	BULK COOLER/FREEZER	MODULAR	150,000.00
5	1	BLAST CHILLER	TWO CART	18,500.00
6	18	PAN RACK CART	UNIVERSAL ANGLE	14,690.00
7	22	SHELVING		4,400.00
8	1	DISH TABLE	CUSTOM FABRICATED	1,000.00
9	1	WALL SHELF	CUSTOM FABRICATED	700.00
10	1	DISPOSER	2-HP	1,650.00
11	1	BOOSTER HEATER	TABLE MOUNT	1,475.00
12	1	CONDENSATE HOOD	CUSTOM FABRICATED	1,000.00
13	1	DISH MACHINE	HIGH TEMP	6,425.00
14	1	UTENSIL SINK	CUSTOM FABRICATED	2,700.00
15	1	UTENSIL RACK/SHELF	CUSTOM FABRICATED	320.00
16	3	HAND SINK	WALL MOUNT	1,275.00
17	1	REFRIGERATOR	TWO SECTION	21,250.00
18	1	PROOF CABINET		9,000.00
19	1	FIRE PROTECTION	LIQUID CHEMICAL	2,820.00
20	1	EXHAUST HOOD	TYPE I FILTER	4,125.00
21	2	CONVECTION OVEN	TWO DECK	20,200.00
22	1	RANGE/OVEN	OPEN BURNER	3,750.00
23	1	RACK OVEN	ROLL-IN	22,425.00
24	1	FLOOR TROUGH/PAN	CUSTOM FABRICATED	1,400.00
25	4	WORK TABLE	PORTABLE	6,000.00
26	3	TILT SKILLET	60 GALLON	16,000.00
27	2	PREP TABLE	CUSTOM FABRICATED	3,600.00
28	1	HOSE BIBB	WALL MOUNT	200.00
29	1	EXHAUST HOOD	TYPE I FILTER	12,560.00
30	4	INGREDIENT BIN		8,000.00
31	1	WORK TABLE	PORTABLE	2,000.00
32	2	UTILITY RACEWAY	ISLAND UNIT	18,400.00

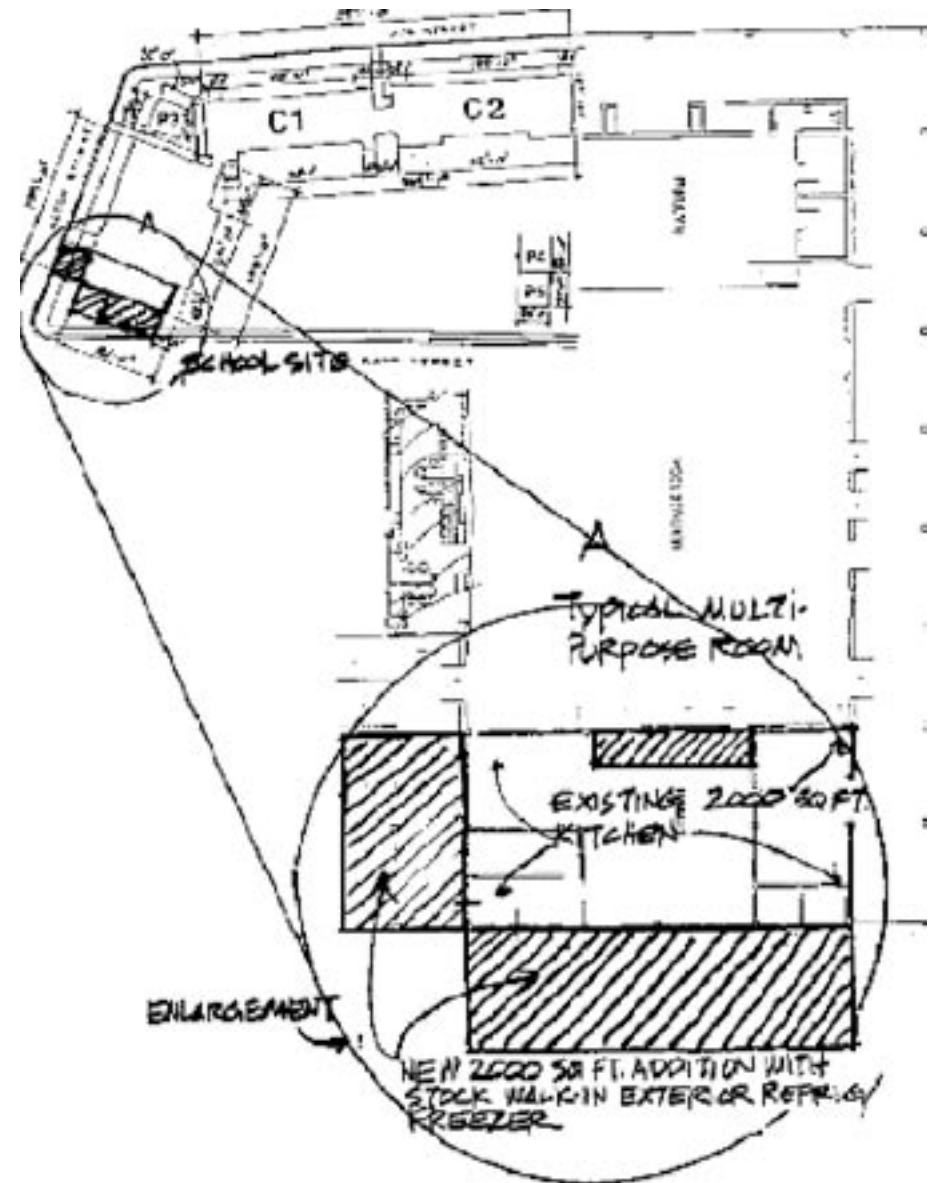
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ITEM NO.	QTY.	EQUIPMENT DESCRIPTION	PERTINENT DATA	EQUIPMENT COST(\$)
34	1	FILL FAUCET	WALL MOUNT	200.00
35	1	MIXER STAND	PORTABLE	550.00
36	1	20 QUART MIXER	BENCH MODEL	3,250.00
37	1	SLICER	PORTABLE	500.00
38	2	CAN OPENER	ELECTRIC	950.00
39	2	BLOWER COIL		45,000.00
40	1	DISPOSER	CUSTOM FABRICATED	1,875.00
41	1	S/S WALL FLASHING	CUSTOM FABRICATED	2,800.00
42	2	RETHERM CABINET		\$18,150.00
43	1	ICE MACHINE/BIN	AIR COLLER CUBER	\$2,980.00
44	1	DISPATCH COOLER	CUSTOM /MODULAR	\$30,300.00
45	1	AIR CURTAIN	HIGH VELOCITY	\$525.00
46	3	CORNER GUARD	CUSTOM FABRICATED	\$300.00
47	2	REFRIGERATION SYSTEM	REMOTE AIR COOLED	\$45,200.00
SUB TOTAL				\$524,045.00
18 percent DELIVERY & INSTALLATION				\$94,328.00
SALES TAX 8 percent (AVERAGE)				\$49,469.00
TOTAL				\$667,842.00

Diagram of “before and after” expansion of district kitchen with detail

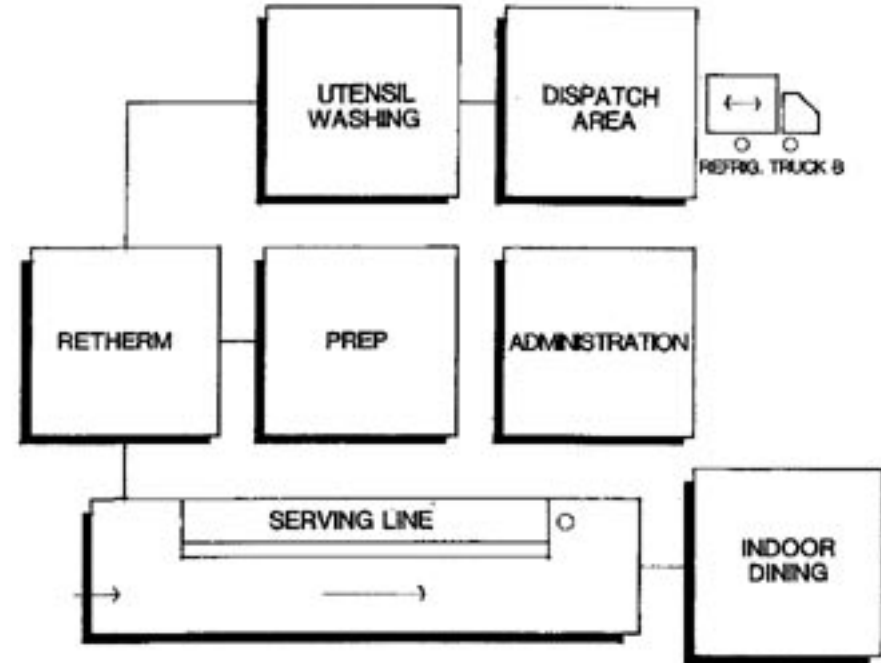
This diagram illustrates a plan to double the square footage of a 2,000-square foot kitchen located at one end of a commissary complex (end of block A). It indicates an affordable expansion plan accomplished by removing freezer, refrigeration, and storage units from inside the original kitchen and replacing them with self-contained metal walk-in refrigerators, freezers, and dry storage units situated around the outside of the building.

The enlarged portion of the diagram illustrates where refrigeration, freezer, and storage units have been relocated, freeing up approximately 2,000 square feet inside the kitchen for food preparation, and adding approximately 2,000 square feet of storerooms and refrigerated storage on the outside the building.



Space, function, and flow diagram for a typical satellite kitchen

This diagram illustrates space, function and flow allocations for a typical satellite kitchen. In this type of kitchen only “finish cooking”, reheating, and serving occurs. The size of the kitchen will depend on the size of the student population to be served.



Equipment list and cost estimates to outfit a typical satellite kitchen

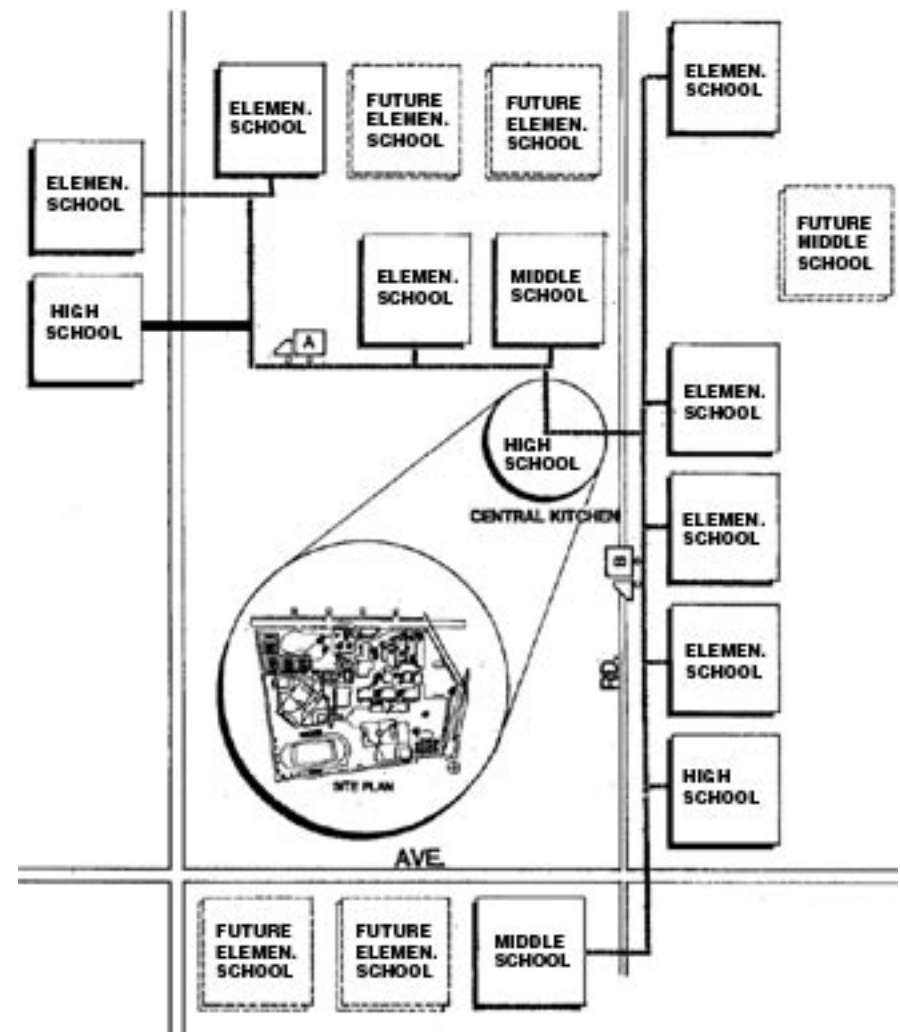
This list outlines general equipment needs and estimated costs to outfit a typical satellite kitchen. At this satellite kitchen site, little or no primary preparation of food occurs. The satellite kitchen receives food that has already been “prepped” by the central kitchen and moves it through the necessary steps to service. The satellite kitchen “finish cooks” the bulk food received from the central kitchen, or heats and then serves food that has already been completely cooked.

ITEM NO.	QTY	EQUIPMENT DESCRIPTION	EQUIPMENT COST (\$)
1	6	MOBILE SHELVING	2,300.00
2	1	MILK COOLER	3,800.00
3	1	HAND SINK W/ S&T DISPENSER	600.00
4	1	S/S UTILITY CHASE	700.00
5	1	CONVECTION OVEN	3,900.00
6	1	S/S WALL FLASHING	650.00
7	1	WORK COUNTER	2,450.00
8	1	STEAMER	6,200.00
9	1	OVERSHELF	550.00
10	1	EXHAUST HOOD	3,100.00
11	1	MOBILE HEATED CABINET	3,800.00
12	1	DISPOSER/PRE-RINSE	2,350.00
13	1	U/C DISH MACHINE	2,800.00
14	1	MOBILE WORK TABLE	1,100.00
15	1	POT SINK	2,950.00
16	1	UTENSIL RACK/SHELF	900.00
17	1	FREEZER	5,100.00
18	1	REFRIGERATOR	5,900.00
19	1	WORK COUNTER	4,400.00
20	1	WALL CABINET	1,350.00
21	1	MICROWAVE	1,700.00
22	1	HOT FOOD WELL	1,050.00
23	1	U/C HOT CABINET	2,200.00
24	1	S/S CORNER GUARD	400.00
SUBTOTAL:			60,250.00
18 percent DELIVERY & INSTALLATION			11,709.00
SALES TAX 8 percent (AVERAGE):			4,800.00
TOTAL:			76,759.00

Central kitchen site and transportation route diagram

This diagram illustrates a plan to locate a new central kitchen within a typical school district. It anticipates a growing student population, and includes plans for building additional schools within the district. In this diagram, a choice has been made to locate the new district central kitchen at the high school and the delivery routes, present and future, are laid out.

Locating a central kitchen within the district is logical and advantageous, but not always necessary or possible. A central kitchen can be located outside the district. Part of the critical planning phase of site selection includes identification of delivery routes.



Facilities Design Resources

Professional Organizations

For more information about organizations that address issues and concerns related to food service facilities and resources

American School Food Service Association (ASFSA)

Advocacy, credentialing, and education institution for school nutrition programs. School Foodservice & Nutrition is ASFSA's official publication. 11 issues per year; free to ASFSA members, \$75/year to nonmembers. For membership information, see website.

www.asfsa.org/

California School Food Service Association (CSFSA)

"Provides a forum for personal and professional development by offering innovative educational programs, supporting legislative efforts, and promoting community awareness for the purpose of improving the well-being of California's children." Poppy Seeds, CSFSA's quarterly magazine, is free to members. For membership information, see CSFSA website.

www.csfsa.org/

North American Association of Food Equipment Manufacturers

This association represents more than 600 companies throughout North America that manufacture food service equipment and supplies. It sponsors an annual conference that showcases products, food service equipment, and supplies.

www.nafem.org/

Resource Guides

Food Service Resource Lists

This website includes downloadable resources from the USDA's Food and Nutrition Information Center.

www.nal.usda.gov/fnic/service/

A Guide for Purchasing Food Service Equipment

Here's where to find Team Nutrition's guide for purchasing food service equipment, presented as 10 downloadable chapters plus glossary, guidelines, charts, and index. (13 PDFs: Introduction-Chapter 1: 24 pages, Chapter 2: 15 pages, Chapter 3: 11 pages, Chapter 4: 22 pages, Chapter 5: 58 pages, Chapter 6: 13 pages, Chapter 7: 15 pages, Chapter 8: 16 pages, Chapter 9: 11 pages, Chapter 10: 4 pages, Glossary: 24 pages, Guidelines: 40 pages, Charts and Index: 54 pages)

<http://schoolmeals.nal.usda.gov/Training/equipment/Equip01.pdf>

<http://schoolmeals.nal.usda.gov/Training/equipment/Equip02.pdf>

<http://schoolmeals.nal.usda.gov/Training/equipment/Equip03.pdf>

<http://schoolmeals.nal.usda.gov/Training/equipment/Equip04.pdf>

<http://schoolmeals.nal.usda.gov/Training/equipment/Equip05.pdf>

<http://schoolmeals.nal.usda.gov/Training/equipment/Equip06.pdf>

<http://schoolmeals.nal.usda.gov/Training/equipment/Equip07.pdf>

<http://schoolmeals.nal.usda.gov/Training/equipment/Equip08.pdf>

<http://schoolmeals.nal.usda.gov/Training/equipment/Equip09.pdf>

<http://schoolmeals.nal.usda.gov/Training/equipment/Equip10.pdf>

<http://schoolmeals.nal.usda.gov/Training/equipment/Equip11.pdf>

<http://schoolmeals.nal.usda.gov/Training/equipment/Equip12.pdf>

<http://schoolmeals.nal.usda.gov/Training/equipment/Equip13.pdf>

Cover photo: Zenobia Barlow/Flatland Farm/Center for Ecoliteracy

The Dining Experience

RETHINKING SCHOOL LUNCH GUIDE

Rethinking School Lunch — a project of the **Center for Ecoliteracy**
2528 San Pablo Avenue, Berkeley, California 94702 www.ecoliteracy.org



The Dining Experience

RETHINKING SCHOOL LUNCH GUIDE

FOOD FOR THOUGHT

“The dining room exists to serve the students . . . and it speaks for the school district. The message should be, ‘We value you. Everything that you’re looking at, everything you taste and smell and hear, how we greet you, how you feel here is telling you that we value you, and that we’re really taking good care of you.’ The environment of the common dining room tells students explicitly, and it tells them unconsciously, how the school district feels about them. . . . The message is embedded in the surroundings of the dining room, in the ways people relate to one another, and in the food itself. It speaks to nourishment of the whole person, in an environment of hospitality, health, and respect.”

— Alice Waters, owner of Chez Panisse Restaurant and founder of The Edible Schoolyard

WHAT’S INSIDE?

RETHINKING THE DINING EXPERIENCE: The goal, the challenge, and some key points to remember.

THE IMPORTANCE OF THE DINING ENVIRONMENT: An interview with **Alice Waters**, owner of Chez Panisse Restaurant and founder of The Edible Schoolyard.

THE EDIBLE SCHOOLYARD PROJECT: An interview with **Marsha Guerrero**, program coordinator of The Edible Schoolyard, a successful one-acre organic garden and kitchen classroom project serving middle-school students.

STUDENT DINING EVALUATION FORM: How do students really feel about their dining experience at school? This questionnaire, developed by Dr. J. Michael Murphy of Harvard School of Medicine with the Center for Ecoliteracy, is a great tool for evaluating the present and planning future changes.

DINING EXPERIENCE RESOURCES: Benefit from the experience of pioneers in creating a dining environment that makes the lunch period a time students actually look forward to. Good information to inspire, encourage, and guide.

RETHINKING THE DINING EXPERIENCE

The Goal *To create an inviting dining ambience that encourages healthy interaction and healthy eating—a place that students enjoy, that makes the lunch period a time they look forward to, and that makes them feel safe and valued at mealttime.*

The Challenge *Transforming a commercialized and uninviting dining experience into one that models sustainable patterns of living and encourages students to linger over meals they enjoy, become interested in the food they eat and how it is prepared, and have meaningful social interactions during the lunch period.*

Many of us have become so accustomed to the idea of the “noisy cafeteria” that it often becomes a forgotten fact of school life. But just as adults would rather dine more slowly in pleasant surroundings than endure a rushed meal in a chaotic setting, young people also react to the physical and social environment of the lunchroom. As kitchen designer Steve Marshall, president of The Marshall Associates, Inc., says, “Students are highly influenced by the school meal environment and often make decisions to eat, or not to eat, at school based on their experience of the dining room.” This is reason enough to try to make the experience a good one.

More than 50 percent of children in the United States eat either breakfast or lunch from the National School Lunch Program/School Breakfast Program. This means that school meal programs provide an opportunity to improve the health of over 25 million children a day by emphasizing that healthy meals need to be served in a positive, relaxed environment with sufficient time for enjoyment and digestion.

To maximize this opportunity, it helps to identify issues that affect students’ food choices. Informal surveys of students who qualify for free and reduced-price meals, but who do not choose to eat the school lunch, indicate that they are concerned with such issues as retaining privacy in regard to their meal status, relationships with food service staff, whether or not their peers are eating the school lunch, having sufficient time and freedom to eat with their friends, and the general comfort and appeal of the surroundings.

The dining experience is created by the totality of the sights, smells, sounds, tastes, and social atmosphere. It includes the lighting, the sound level, the time allowed for eating, the wall decoration, the way food is prepared and served, and the quality of social interactions that take place during meals. To underestimate the impact of the eating environment on student enthusiasm for the school meal experience is to overlook an area that is almost as important to the health and learning experience of our students as the quality of food we serve.

KEY POINTS

The Dining Experience Is About More Than Food In the farm-to-school approach to the lunchtime experience, students absorb information in many ways — and all of their senses receive nourishment. For example:

- **Sight** District food policies can ensure that the lunchroom is free of commercial messages (especially those that advertise foods inconsistent with district food policy) and that the lunch period allows ample time for eating and enjoying lunch.
- **Sound** Thoughtful facilities design can help ensure that sound insulation keeps the noise level down.
- **Smell** Fresh food naturally smells good. Make sure these enticing aromas aren't masked by cleaning products that leave unpleasant or overpowering odors.

The Dining Experience Is Part of the Learning Experience Reading and retaining information is not the only way we learn. That's why it's critical that the choices students encounter in the dining room at lunch are consistent with what they are taught in the classroom about nutrition and healthy eating habits, about good citizenship and participation, and about the environment. District policies help make this happen. They encourage student participation in the school meal program as a foundation for learning about health and nutrition, specify that school meals be prepared from fresh, sustainably grown ingredients obtained from local farms, and model effective waste management.

The Dining Experience Can Promote Healthy Socialization The social atmosphere in the dining environment is critical to the learning that occurs there. The routine of being together at the table, waiting for everyone to be served, and passing around dishes of food is an important way to learn and practice respect, patience, and good manners. Over time, the acquisition of these social skills begins to influence the culture of the entire school.

Student Participation Invites Students to Eat Lunch at School Students appreciate the freedom to make choices, including food choices at lunch. Choosing between a reheated pizza or a burrito every day gets old fast. But when they have the opportunity to choose portion size, entrée, sauces, dressings, or toppings for themselves, kids look forward to eating lunch. A menu that includes healthy choices and culturally diverse ingredients offers them even more variety. The farm-to-school model takes this a step further by including food that students have planted, harvested, and helped prepare.

Students who have a say in choosing the food that is served, who have grown some of that food, and who take an active part in cooking and serving meals are more likely to participate in the school lunch program. These hands-on experiences also help to reinforce lessons in nutrition, waste management, and health. District food policies can recommend that student preferences in planning menus and snacks are solicited through focus groups, surveys, and taste tests of new

foods and recipes. With help from adults, students can also perform many of the activities connected with the dining room.

The Dining Experience Should Welcome All Students

Schools need to protect the privacy of *all* students. Those who eat free and reduced-price meals are especially vulnerable. To protect the confidentiality of the meal status of all students, a district food policy can create a seamless system for admitting free, reduced-price, and full-pay students to meals. This helps every student to feel comfortable and welcome in the school meal environment.

Beginning to Think About Changing the Student

Dining Experience The transformation from noisy cafeteria to an inviting dining room and learning experience presents an exciting opportunity for the school district, school food services, parent groups, and students to work together. Be sure to explore the following areas.

Describe the ideal school dining environment.

- **Have the district food policy include a plan** for how students should be served their meals.
- **This policy can also describe the district's responsibility** to maintain spacious, clean, friendly, beautiful, and respectful student dining rooms.
- **District policy, along with food services, can describe a role for students** in the operation of the dining hall. This may include food preparation and service.

- **Make sure the new policy protects the privacy of all students.** Create a seamless system for admitting free, reduced-price, and full-pay students to meals.

Assess the current state of the dining environment.

- **Form a committee of parents, students, food service staff, and district administrators** and conduct an assessment of the district's dining rooms in order to develop a shared vision and action plan for making improvements where needed.
- **This committee can tour dining facilities** throughout the district and evaluate the atmosphere in each location.
- **Administrators in particular can gather data** about the dining environment and experience by spending time in the school dining room and eating lunch, at least occasionally, with students.

Consult with students.

- **Conduct research with students** to determine what changes to dining areas they would most appreciate. Discuss color choices, lighting and noise levels, advertising, social issues, and food choices, preparation, and service. Ask them to bring up any other issues you may not have considered. (Make sure students' voices are represented before final choices are made in design decisions that affect the student dining experience.)

- **Students can work with food service staff** to develop menus that reflect the cultural diversity and tastes of the entire student body.

Model sustainable and healthy practices in the dining facility.

- **In any discussion regarding renovation** or construction of kitchen facilities, give specific attention to the design of the dining environment.
- **Model sustainable practices**, such as recycling and composting, in the new dining environment.
- **Make certain food served to students reflects the healthy eating practices** taught in the classroom. Prepare nutritionally sound meals. As much as possible, make sure the food served to students is grown without pesticides and is free of preservatives and additives.
- **Avoid using toxics in the lunch facility.** Use earth-friendly and biodegradable cleaning products that do not leave unpleasant or overpowering odors.

Create a dining experience that is relaxing and inviting for all the senses.

- **Children and youth (like adults) need time to relax** and enjoy the sensory and social aspect that is part of a healthy meal. Consider the dining atmosphere in every decision that you make concerning the facilities and lunch program.

- **The school dining commons** can become the site of celebrations and observances. Student committees can be in charge of decorating the cafeteria and preparing it for special occasions.
- **Recess can be scheduled before lunch** so that children will come to lunch less distracted and ready to eat. Schedule activities such as rallies, clubs, and organizational meetings so they do not conflict with the lunch period.

Include the learning experience.

- **If possible, design an open kitchen plan.** Restaurateur Alice Waters observes, “The opportunity to see what is occurring in the kitchen can be a valuable part of the learning experience. The kids need to see the kitchen staff working, and see all the steps that go into preparing the meal, in order to appreciate the hard work the kitchen has been doing on their behalf. It’s all part of understanding what is involved with feeding ourselves. It doesn’t magically happen.”
- **Meals that reflect international ingredients** and foods of various cultures, nations, and ethnic groups teach cultural diversity in a real and memorable way.
- **Outside advertising does not belong in the lunchroom.** The farm-to-school model teaches human and earth-centered values. Commercial messages on walls and on food packaging teach commercialism.

- **Encourage student-grown food as part of the meals.** When students eat food they grew themselves or that they know came from local farms, when they serve others in the dining room, and when they prepare food in the kitchen classroom and compost the kitchen waste, they experience the soil-to-table-to-soil cycle firsthand and learn human values.



RETHINKING SCHOOL LUNCH

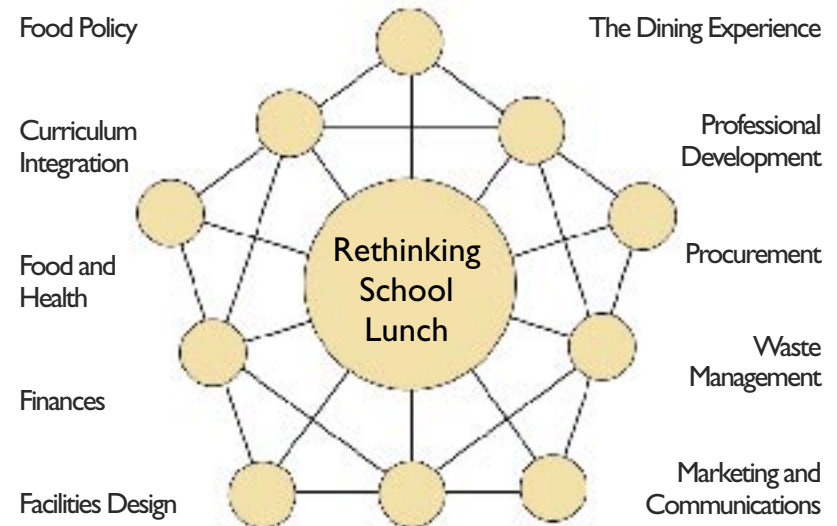
Web of Connections

This document is part of a comprehensive **Center for Ecoliteracy** project that provides helpful information on topics related to redesigning school lunch programs.

The diagram illustrates our systems approach to integrating school lunch programs with curriculum, improving student health and behavior, and creating sustainable communities.

School administrators, food service directors, teachers, and parents will each approach this project from their unique perspective. Readers can begin with the topic that interests them most, then explore the other related topics.

The entire Rethinking School Lunch project is available at:
www.ecoliteracy.org/rethinking/rsl.html





The Importance of the Dining Environment

An interview with Alice Waters, owner of Chez Panisse Restaurant and founder of The Edible Schoolyard

by Janet Brown, program officer for food systems at the Center for Ecoliteracy

Center for Ecoliteracy: *Alice, can you describe your philosophy about the importance of the dining environment, especially as it relates to children and the dining experience?*

Alice Waters: In order for kids to be seated at a table together and really connect around a table, the table needs to be prepared in a particular way that encourages them to be together, and conceivably encourages them to share their food. In our work at The Edible Schoolyard, we're communicating to the kids that we really care about *them*, not only about what they put in their mouths. We've made a place that is comfortable, because that shows them that we care, too. We want them to see beautiful things, as

well as to smell and to taste beautiful things. For example, I love to put down the tablecloth. That's all a part of telling them that we care. We're creating an atmosphere that naturally fosters goodwill and respect—an everyday experience that encourages civilized conduct.

We set the table with a tablecloth, and real plates, forks and knives. We think about the center of the table. Maybe it can use a little centerpiece. The kids choose what that might be, whether it's flowers from the garden, something from the kitchen, some vegetables, or something that's going to be part of what the kids are eating. The improvements to the food or the surroundings don't need to be costly. They can be quite simple.

CEL: *What do you think the distinction is between serving meals on disposable paper or plastic plates, and serving food on real dishes?*

AW: When we serve food on real dishes with real silverware, I think we're modeling sustainability. We're trying to present the kids with an alternative to the idea of disposability—to the notion that you can just throw it away once you've finished. In The Edible Schoolyard kitchen classroom, students have the experience of cloth napkins that are washed every day. I think that the silverware and the dishes have that same teaching value. We're connecting the eating experience to a set of values that naturally leads students toward a healthier future for themselves and the planet.

CEL: *I've heard you mention various serving styles—cafeteria style, family style, fresh prep—several different ways that food can be presented to students that keeps it interesting and appealing.*

AW: I just think about all the different ways that you can connect kids with food. While you want to keep it alive and exciting for them, at the same time there should be something about the eating experience that's always the same. The routine of table setting, table clearing, and recycling is a reassuring activity that all students can take part in.

One service style that is interesting to us is family style. In that approach, the food is on the table on platters as the kids enter the dining hall, or the kids bring the platters to their table when they arrive. Once the whole table is seated, they can begin by passing the platters of food around. In this approach to service, students learn to wait to eat until everyone has been served. They learn not to take more than their share. This style of service allows them to think about everyone seated around the table as they gauge a portion for themselves, to make sure the last person has a serving.

Family style might not be as popular as the serving line model, but I think that's because it takes more preparation time on the side of the cooking team and the serving team. Though some people think that family style is more trouble for food service staff, or a slower service model, the advantage is that when the kids come to the table it's all there for them. They can begin. The kids standing behind one another in the cafeteria line, having to make individual choices there in line as they go through, slows things down, too.

I think that family style and cafeteria style both have things to recommend them. The cafeteria model is its own kind of learning experience. The kids help themselves to the food. They make their choices, bring the food back to the table, and sit with different people. They're not obliged to their tablemates in the same way that family style implies. They can take a shorter time to eat. I think there are times when that style is appropriate.

I also like the "fresh prep" idea of an open kitchen/dining environment where students can see food being prepared and talk with the people who are cooking. That's another kind of an interaction that's very valuable, talking with the cook. It has a little of the feel of a market, where students learn about feeding themselves through watching food being prepared.

The goal is to have information coming in through all the senses, in all the ways it can, because there are many different learning styles.

People learn in different ways, and the dining experience, talking with the cook, observing, participating, are all ways to learn. More important than any particular style of service, of course, is the overall quality of the dining experience.

CEL: *When the midday meal is part of the life of the whole learning community, does that feeling of connectedness begin to extend outside the dining room as well?*

AW: We believe it does. Food is a wonderful way to share and celebrate the diversity of culture and traditions. Sharing a midday meal together is one way to influence the culture of the entire school. And that extends into the way that the food is presented and served. Japanese food, for example, offers an opportunity to learn how to eat with chopsticks, if you haven't learned already. Sometimes it's appropriate to eat with your fingers. Sometimes it's not. For holidays or special occasions, we might want to make the setting in the dining room something very different from what the kids are accustomed to, sort of a surprise that wakes them up for this whole experience. It's really *a whole way of doing things* that we're teaching. In the kitchen at The Edible Schoolyard, we're teaching lessons about cooperation, for example, just in terms of setting plates and clearing plates.

CEL: *You mentioned the skill of judging how much is on the platter, and knowing how much to serve yourself, so there's still a serving by the time it gets to the last person. Ordinarily, wouldn't that learning experience take place at home?*

AW: Many students eat very few meals at home, so you really can't assume that's true. We've become accustomed to food as a convenience. We serve and consume food in such quantities nobody thinks about how much to take. I think that's not good for kids. At school, and probably as a nation, we're going to need to work something out around portion control. What is a reasonable amount for kids to eat? It's a very important question that must

be answered, because we don't want to contribute to the health problems that are already there. One message might be that we just need to eat a little less as individuals, and as a planet.

CEL: *Since environment, or ambience, is essentially a sensory experience, what role do the senses play in student enjoyment of meals?*

I have always felt that it excites the palate to have something delicious cooking: the bread, the herbs, the roasting chicken. The students need their olfactory sense to be stimulated, purposefully stimulated and awakened. The smells that come from cooking real food prepare them to eat that food. It can be aromas from the oven drifting into the dining room, or some fresh rosemary being broken up for cooking. There are lots of ways to create those fragrances. It's equally important that the dining room does not smell like cleaning products, floor wax, and those kinds of smells that are so industrial and so off-putting. Only good smells ought to be connected with food.

In order to lower the clatter of the dining room, especially with so many young people in the room at the same time, I think you want to have softer surfaces everywhere to cushion sound. Even in the dish room, you can really minimize the clatter by putting rubber mats down on the dish racks. You can install rubber mats on the floor for insulation and soundproofing in all the rooms. The sound can be broken up in the dining room with eaves and floor surfaces. Chairs can have cushioned feet. Tables have tablecloths. The kids learn to remove dishes from the table quietly. When students put the silverware down, they need to learn to place it, not throw it down. That's all part of the practice of setting and clearing the table.

Visually, there's an important opportunity to demystify what's happening in the kitchen. Through an open kitchen design that blends the cooking and dining environments, your kitchen staff can interact with the people they serve. The kitchen staff, who've been working from six in the morning to prepare the food, needs to

see the students enjoying their meal and hear their appreciation. Isolation of the kitchen staff from the dining room interferes with the whole community experience. You need to bring those people who are cooking the food out and have them communicate with the kids.

The opportunity to see what is occurring in the kitchen can be a valuable part of the learning experience. The kids need to see the kitchen staff working, and see all the steps that go into preparing the meal, in order to appreciate the hard work the kitchen has been doing on their behalf. It's all part of understanding what is involved with feeding ourselves. It doesn't just magically happen. If the students can see the immediacy of the food arriving, being prepped into salads, washed, drained and served, see the orders going up, they will not only be able to appreciate the care that is going into the lunch, they will also know more about how to feed themselves. It's an entire learning experience. What's most important is that there is a set of values attached.

CEL: *What does it mean to have values connected to the meal experience shared by the whole learning community?*

AWW: For example, when the food is brought in from local sustainable farms, the food itself carries a whole set of values connected to particular places, family farms, and the people who care for the land as a way of life. For the students eating the food, I think it completely enriches their lives. It opens up their senses. The food in the dining room, the work students do in the garden, and the meals they prepare together in the kitchen classroom, are all linked to a set of values that are discussed as part of the work. Values such as responsibility, interconnectedness, cooperation, friendship, pleasure of work, and diversity are foundational to what it means to be human and to live in community with others.

These meta-cognitive lessons provide students with a context that leads to all kinds of understandings and ideas that simply were not available before. They sense and they perceive things differently

because their awareness of the world is fuller. It lends a kind of richness and complexity to their experiences that helps them to evaluate what they're seeing. It brings meaning to the learning. It's a whole other world for them that is connected to a set of values, and a sense of time, and a mutual responsibility for one another.

CEL: *Since we can't give everyone a rulebook or a formula for improving the atmosphere of the dining room at their school, what are some general ways to think about changing the environment where young people eat?*

AW: How you care for the dining room indicates in some ways how you're caring for the person who's sitting at the table. First of all, the room should be clean, and it should have a kind of order that makes dining a pleasure. It's great to have fresh air in the room that is filled with the aromas of the kitchen. The room should be painted in a complementary color that is a bit subdued or neutral—a color that does not compete with the food. Some paint choices are so strong that the color interferes with the experience of eating. I'm most comfortable with a soothing color.

Along with color, it's important to pay attention to lighting. Light is an influencer of mood. Hopefully, the room has plenty of natural light, or interior lighting with a pleasant, softer quality. It seems sometimes that we're trying to see too well. Mindlessly flicking the lights on can be a fatiguing practice, and eating under intense lights is unpleasant. You can turn those buzzing fluorescent lights off, and have another kind of light that's more conducive to eating at a table. Students would benefit from a more decorative, less industrial light that has enough illumination at the table so that you can see what you're eating, of course, but something that's soft and pleasant, not fluorescent and sharp.

Look for tables and chairs that are repaired and in good shape. Avoid having things that are torn and broken. You want to convey the impression to the students that the room, and everything in it, is well taken care of.

CEL: *For people who are designing common dining rooms, what is the core of the message that the dining environment should convey?*

AW: The dining room exists to serve the students. For the students, everyday, the dining environment is speaking for the school district. The message should be, "We value you. Everything that you're looking at, everything you taste and smell and hear, how we greet you, how you feel here, is telling you that we value you, and that we're really taking good care of you." The environment of the common dining room tells students explicitly, and it tells them unconsciously, how the school district feels about them. The message is embedded in the surroundings of the dining room, in the ways people relate to one another, and in the food itself. It speaks to nourishment of the whole person, in an environment of hospitality, health, and respect.

The dining room should be a wonderful place that appeals to young people. The surroundings, as well as the meals, should encourage students to feel happy, healthy, and comfortable in that space. The atmosphere of the common dining room can bring the whole student body together everyday around a set of values, in harmonious surroundings that promote healthy eating habits and healthy interactions.

Alice Waters is the owner of *Chez Panisse Restaurant* and founder of *The Edible Schoolyard*. Author of several cookbooks, Waters has served on the boards of *The Land Institute*, *National Committee for Mothers and Others for Pesticide Limits*, and as an advisor for *Public Voice on Food Safety and Health*. For her efforts in establishing *The Edible Schoolyard*, Alice Waters has been awarded a *John Stanford Education Heroes Award*, the *Excellence in Education Award*, and the *James Beard Humanitarian of the Year Award*.



The Edible Schoolyard

An interview with Marsha Guerrero, program coordinator of The Edible Schoolyard

By Janet Brown, program officer for food systems at the Center for Ecoliteracy

The Edible Schoolyard, in collaboration with Martin Luther King, Jr. Middle School, provides urban public school students with a one-acre organic garden and a kitchen classroom. Using food systems as a unifying concept, students learn how to grow, harvest, and prepare nutritious seasonal produce. Experiences in the kitchen and garden foster a better understanding of how the natural world sustains us, and promotes the environmental and social well-being of their school community.

Center for Ecoliteracy: *The environment of The Edible Schoolyard kitchen classroom is functional, orderly, and beautiful. How has your philosophy of learning influenced the design of this learning environment?*

Marsha Guerrero: The Edible Schoolyard program and facilities are located on the campus of King Middle School, a public school in

Berkeley, California, with a student population of nearly 900. Right now, California's public schools are operating on the scarcity model. We observe that children have strong reactions to environments, in much the same way that we do as adults, and that these reactions can distract from the learning process. In order to facilitate learning, we have developed a way of incorporating what we do into a very particular environment.

CEL: *What were some of your first design priorities?*

MG: The Edible Schoolyard's first kitchen classroom was a beautiful 1930s kitchen that was the original school cafeteria. We lost the use of that space when the school underwent an earthquake retrofit in 2001. Our new home became a portable building that has been on the school site since the 1950s. We tried, and I think we succeeded, at not spending a lot of money to create a very beautiful space for the children.

We gave a lot of attention to making the kitchen an environment that is very, very welcoming. We've been careful about selection of surfaces, and placement of furniture. We tend to have less in the classroom than one might think is necessary. The kitchen isn't jam-packed or crowded. There's plenty of open space so that the children can move freely. Young people are full of energy. They don't like to feel closed in. We're fortunate enough to have a large space, about 1,500 square feet. It's an environment where children can thrive, partly because of the setting and the particular statement of that room.

CEL: *Where did you get ideas for the design of the new classroom?*

MG: We have often found that environments created for children assume things about children and their tastes, that aren't necessarily true. The aquarium scenes, forest murals, neon colors, and cartoon characters we've seen in cafeteria environments contribute to making the eating environment chaotic. From our perspective, the food is the most important component, and that's where the focus

should be. We don't deliberately create distractions with funny paintings on the walls, commercial messages, or overpowering colors. The attention is on the produce the children have grown in the garden. The environment is composed of furnishings and tools the kids can identify, relate to, and like. It's a place that's really comfortable, where they enjoy hanging out.

Before we began to plan the new kitchen, we told the students that over the summer, we would be relocating The Edible Schoolyard kitchen to the art building adjacent to the garden. We knew that the idea of change would be difficult and we wanted to prepare them. Esther Cook (her real name), our chef teacher, is such an intuitive teacher, she understood that the children were very familiar with, and attached to the kitchen. She spent many sessions with the students in the kitchen classes, through the winter and early spring of 1999, preparing them for the move.

During that time, she asked every child to tell her, in the form of a drawing and words, what they would like to have from the old kitchen in the new kitchen. We received many drawings of views outside the windows, so we knew that windows and openness mattered. When we placed our worktables in the new kitchen, we arranged them so that the kids could see out of the windows because we understood that was important to them. We created the environment of the new kitchen out of input about what they loved most from the first kitchen. The design is informed by what they wanted around them, and what made them feel most comfortable. It was the simplest things.

They drew and wrote about the dishwasher, stove, oven, and tablecloths. We still have those cards. Some images were as basic as the recycled jar vases with flowers in them, or the music. We don't always have music in the kitchen, but we do have a piano. Kids come in to play the piano at lunchtime and after school. Certain staff members of The Edible Schoolyard were mentioned a lot. The kids wanted to see us return with the new kitchen.

We had many drawings and words about the kitchen altar table, which became one of the first things that was actually brought into the new kitchen. Some of our cultural study involves the altar table, and it changes all throughout the year. For example, the altar table is particularly inspired around the Day of the Dead celebration, when the students bake Day of the Dead Bread. The children might commemorate a family member, pet, or celebrity they loved who has died, and write a little bit about that person. It was through the card exercise that we came to appreciate just how much the altar table has become an honored tradition of The Edible Schoolyard.

CEL: *Can you explain some of the details in the design of the kitchen and how those effects were achieved?*

MG: When students walk into the kitchen for the first time, they are always a little bit surprised. It registers on their faces. I think particularly of the incoming sixth graders who have just spent the first 10 weeks of school in the garden, which is where The Edible Schoolyard experience begins. When they enter the kitchen for the first time, there's a lot of wonder and joy. They almost can't believe it's a kitchen. It's so big! The colors are quite pleasing. There are open shelves of plates and equipment that appear to be artfully placed, not with any particular intent, but just because the things that we use are inherently beautiful and colorful. We use a lot of wood. We decorate with things that come from the garden. For example, in the fall, we bring in many colorful pumpkins, and beautiful gourds, dried sunflower heads, and bouquets of crimson clover. There are always flowers, leaves or grasses from the garden in the kitchen, and the students use them when they set their tables.

One of the things that we really, really stress is that the kitchen is kept clean. Cleaning isn't relegated to our committed custodial staff. We are very fortunate at King to have a custodial staff who takes a lot of pride in our school. We stress that it's everyone's responsibility to keep the space clean, and to pick up after ourselves. The students need to do a good, thorough job at cleanup after the

class. When kids come into a clean space where there isn't a lot of clutter, or cobwebs on the windows, where the windows are themselves clean, it seems to give them a lot of energy. They, in fact, do notice. "It's so clean in here," we hear them say.

We're in love with paint. Rather than choose the drab gray green that's so prevalent in public buildings, an easy choice was the cheery deep yellow and sort of a brickish tone paint, with a wall of green. Because the walls were in poor condition, we had to come up with some clever camouflage. We did an interesting "combing" technique on one of the walls, so that it hides the flaws with paint. That's not an expensive option and it looks wonderful.

For the floor, rather than choosing the brown linoleum option, we were able to look at a palette of colors and choose a deep blue. We put a black border around the edge so that it almost looks like a carpet. It would have been the same price for the regular tile that we thought we might have to use, but we asked about alternative colors and were able to find something quite striking. Visitors always notice the floor and mention it. The children love it.

CEL: *I know that The Edible Schoolyard has a way of teaching sustainability through the selection of materials in the kitchen classroom, and in the kinds of tools, implements, dishes and furniture that the students use. How does the environment of the kitchen classroom become another context for learning?*

MG: Our kitchen classroom is housed in a portable building that has been on the campus for a number of years. It's just a flat-roofed, rectangular, wood-sided building—from all views, singularly unattractive. It had been partitioned into many small spaces, so we knocked down some walls to get back to one big space. Fortunately, it has a lot of natural light. We built cupboards, workstations, and cabinets for the new kitchen using recycled wood and details from the original kitchen. Where possible, we dropped the old drawers and cupboard doors right into the new frameworks. The students

understood the value we placed on reusing these treasures. They appreciate seeing those fine appointments rescued from the scrap pile as much as we do.

Many people visit The Edible Schoolyard every year. When they come through to look at the kitchen, they often comment on the wood furniture and worktables. Usually the question is, "How much did those cost? They look expensive." They cost about \$1,000 each, and are so sturdy that after three years of 300 kids coming through that kitchen each week, there's nary a wobble or a chip, and those tables are just getting more and more beautiful. They introduce a note of craftsmanship and durability into the kitchen, which the children appreciate and learn from. These tables will outlive us.

If that seems like a lot of money to consider paying for a table, think about what you might see in the school dumpster on the last day of school. I've seen dumpsters piled high with broken furniture that was purchased inexpensively. Middle school children are big, squirmy kids. When they sit and lean on poorly made furniture, the legs collapse in very short order. All of that furniture will have to be replaced. It's costly and the money is spent again and again. We look at our furnishings as long-term investments. We try to have tools and furnishings in the kitchen that these children, and generations of children, will use and care for.

CEL: *The students learn to prepare food using real tools and equipment. How does the environment contribute to making it a safe place to learn?*

We teach cooking skills—what we think of as life skills. Students prepare food by chopping, whisking, stirring, and blending. They learn how to use sharp knives, and a mortar and pestle. It's part of what they come to understand as the most basic ways of preparing the foods that they grow in the garden.

For quality and price, we get a lot of our equipment, such as sauté pans and large pots, wooden implements and baking equipment,

from restaurant supply stores. Heavy pots are safer on the stove. The students love the size and the heft of this equipment, and they feel very proud to be trusted with sharp knives and real tools. We have had some handy things donated from restaurants. We don't have a food processor in our kitchen. We do have an electric mixer, but that's only used occasionally, and usually for mixing dough for a baking project. We have one blender, and occasionally when the weather's good and we have fresh berries, the children will make smoothies.

CEL: *How do you prepare students for working cooperatively?*

MG: The students' first experiences at The Edible Schoolyard take place outdoors in the garden. The class gathers in a circle in the ramada to hear about what will be done in the garden that day. Our garden manager, Kelsey Siegel, will go through the tasks for the day. This is an important settling period, and it creates a mood for the work. When the students break into groups to perform their tasks together, they see rather quickly that cooperation really is how work gets done in a reasonable bit of time. Teamwork awakens the kids to the abilities of other children that they may not be friends with, or socialize with on the playground. By working together on a specific project, the students will learn something about one another outside the classroom setting, or the usual social clique.

In the kitchen it happens very differently, because unless the kids work together, they're not going to have their meal. The vegetable choppers need to be chopping the vegetables so that the sauté people can sauté them, so that the stock people can then add the stock, and it can become soup. The table has to be set, and the bread has to be sliced. The students must work together to decide among themselves who's going to do what. They need to manage their project or they won't be done on time and they won't get to eat. And they really, really want to eat.

We don't usually do competitive things in the kitchen, because we don't emphasize winning and losing as a learning model. We all just want to enjoy ourselves while we're cooking and learning, and sit down at the end of the class to a beautiful meal. But one of the very exciting activities we have at end of every school year is what we have come to call the Iron Chef Competition, which the kids absolutely love. This is as close as they come to taking a "final" in the kitchen. They do the Iron Chef as seventh graders, and usually toward the end of their second year. By then, they really are experienced and they know where everything is and how it all works. So, they can do this. It's quite a lot to do in an hour and a half. After two years though, these students have a whole different experience with, and relationship to, the kitchen.

At the beginning of the Iron Chef competition our Chef Teacher, Miss Cook, presents several ingredients in covered colanders, which are then unveiled to the class. Each group of students has the same number of ingredients from which they need to make three dishes.

The four criteria for evaluation are all qualitative. They are: cooperation, esthetic, taste, and cleanliness. There are no recipes, so it is up to the students to decide what they're going to prepare. The decisions are, "What are we going to make? Who will work on what? What steps need to take place? What's the right order?" They need to work together to be able to finish on time so that they can sit together and enjoy this wonderful meal. It's really quite amazing to see what occurs, and how much they have learned about working together, from their time in the kitchen. It takes enormous cooperation and creativity to put a meal on the table. It's exciting to see what they come up with, and how absolutely delighted they are. You can see it in the way they present what they've done to the judges, who are the chef teacher, the class, volunteers, and their classroom teacher. They're very proud and surprised at the end.

CEL: *What kind of responsibilities are the children able to handle in the kitchen?*

MG: The students do everything from growing, harvesting, washing, and preparing the vegetables, to cooking, eating and cleanup. I think one of the reasons that this works so beautifully is that the children are trusted in the kitchen, and because of that, they're empowered.

As sixth graders, during orientation, they are walked through every facet of the kitchen. The kitchen is comfortable and highly organized. Each table, each workstation, has a toolbox containing many interesting kitchen implements that the students become familiar with. There are some intricate tools in each box from very, very sharp paring knives and chef knives, to lemon zesters, to that wonderful little wooden citrus reamer. We have measuring spoons and cups that are transparent and those that are not. We have the wavy knife, Miss Cook's favorite knife, that cuts interesting, wavy curves. The students learn how to identify and use all these tools during their time in the kitchen. And they love to use them.

In the time that I've been at The Edible Schoolyard, which is almost four years, I have never seen an accident with a knife. The students develop their own cutting styles. There isn't just one way that this can be done. Often the children who aren't comfortable with cutting don't cut. They find something else to do. Students that are comfortable with handling a big knife, pick that particular task to do. I've never seen anything strange happen with any of the tools in the kitchen. We've barely had a cut and we've never had a burn. The children are very, very careful, and they learn to regulate themselves. Through their own cooperation, they take care of one another.

One of the most successful lessons that incorporates what students learn in the garden with what they learn in the kitchen is called, "The Grain Lesson." Over the year, the students plant many varieties of grains in the garden such as amaranth, buckwheat, quinoa, wheat, and oats. We even have varieties of corn that the kids dry, husk, and grind for this lesson.

The students plant, tend, harvest, and winnow the grain crop, and when it arrives in the kitchen, usually in the late fall, they use the grains to prepare a multi-grain hot cereal. When they put the grain in the grinder, they soon see that it is not easy to grind, and their arms get tired. It's powdery, and a tiny amount of the powder is floating off into the air. After the grain is ground, there is even less. Here is this combination of grains that they have spent an entire year growing and harvesting, and they have maybe three cups of grain, total.

The water boils and the grains go into the pot with a little pinch of salt. When the cereal is ready, the students serve themselves and each student gets to add a little bit of organic maple syrup, brown sugar, or fragrant honey. They are quite thrilled and charmed by this experience. They love the few tablespoons of cereal that they get after a year of very hard work. This lesson is connected with values of thrift and conservation. It teaches them so much about what goes into farming and growing, and they come to understand so much more about themselves and the land they inhabit.

Afterward, they decorate the garden and the kitchen with the cornstalks by tying them up into big bundles, and putting them in the garden. They tie them to the entrances of the ramada and the kitchen, and they make beautiful little archways with corn tassels, that we walk through for several weeks each fall. The students learn that the corn serves many purposes. For a while, it's the only shade in the garden. Then, it's a wonderful place to hide. And then they pick it, eat it fresh and dried, and then these graceful bending stalks appear in the garden and at the entrance to the classroom and other places. It's just very exciting and rewarding.

CEL: *How was The Edible Schoolyard able to afford some of the beautiful things and good quality equipment that you use in the kitchen?*

MG: When the kitchen refurbishing was complete, we held a kitchen warming at the school. It was a wonderful event. That's how

we got a lot of our handsome kitchen implements and equipment. Parents and friends came and brought lovely things from their homes that they wanted to pass along. They brought remarkable things. Most of the tools and equipment that we started with six years ago are still here. They will last a long time. A good metal pot can last forever. Parents like to come back and visit, and see something that they brought to the school still being used and taken care of in the kitchen.

CEL: *What is it about the way the kitchen functions that supports more sustainable patterns of living, and how do these routines become a part of the learning experience of the students?*

Our goal is to recycle everything. Wet garbage goes out to the compost area, which our gardeners feel is the most important area of the garden. Children love the lessons around turning the compost. They're dedicated to taking the buckets of scraps from the kitchen out to the garden. We teach them a lot about respect for the tools in the garden and kitchen.

The students also learn to use and maintain the kitchen classroom. We give them things to use that are not disposable and that can be used over and over again. They wash cloth towels and tablecloths in the washing machine. They fold the laundry. We don't use paper cups or plates. Instead, we have flowered tin enamelware plates and bowls from China. These are inexpensive and they last. The students do all the dishes and have lots of fun running the commercial dishwasher we use in the kitchen classroom.

One of the most remarkable parts of the kitchen experience is that the kids who don't do dishes at home often have a change of heart about doing the dishes in our kitchen. They see this big machine with lots of splashing water and a big sprayer, loud noises and metal doors that clank down. The dishes get washed in three minutes, not 20 minutes like at home. When they unload the dishwasher, they have fun rediscovering with their friends where things belong.

There's something in the garden and the kitchen for everyone. We think a lot about the pleasure of work when we see the kids enjoying themselves so thoroughly. Children are learning through their experience, and in these environments, there is always something at which someone can succeed. The program is a great leveler for children that don't necessarily thrive in a classroom setting. Those children really have an opportunity to shine in the framework of this program.

CEL: *How do you create an orderly environment in which staff can maintain discipline, but still foster an atmosphere of inquiry and cooperation?*

MG: The children treasure their time in the kitchen. There's no need for a lot of monitoring and policing. They learn early on, from their experience in the garden, about tools and sharp things, since it is their job to maintain, clean and take care of, the tools they use. That experience, with which we have a lot of success, prepares them to come into the kitchen with an understanding of the kitchen/garden program culture.

When the students first visit the kitchen they are given an orientation. Then the first lesson is the food memory exercise. They are asked to write about a memory that involved food. They talk about the food, as well as who was there, and where it took place. These very interesting experiences are shared out to the group. It gives us an opportunity to know something about the children as individuals, what they like to do in their spare time, about their sensibilities, and perhaps a little bit about their family or their friends. It gives them a chance to learn something about each other. So, these food memories are really quite significant.

Next is a cutting lesson, in which the students learn knife skills. The students usually make a fruit salad and compost the trimmings. We can begin to assess the maturity level of the class by how well they handle these sharp implements.

Occasionally, an adult observing in the kitchen will say, “Oh, a fruit salad. That doesn’t really seem very innovative.” At its most basic, this lesson utilizes knife skills. It teaches composting and recycling. They may use two citrus or three apple varieties for this lesson, so the value of diversity is reinforced. They experience smell, taste, touch, and textures, which bring them into their senses. It’s a very rewarding lesson because kids love fruit. So, right off the bat, we capture them in a way.

We can also tell a lot from how they set the table, how they share the meal, and how they serve themselves. When they pass helpings around, it’s an opportunity to see how they deal with the experience of sharing, and how they regard one another. It’s a very good indicator of cooperation and group maturity, this lesson, yet it seems so simple. They see that the kitchen is a safe, place where they are able to eat, learn, work together and have fun. They want to come back, and so, pretty much without exception, they will do whatever it takes to be able to do just that.

CEL: *Many authorities agree that one key to improving children’s diet and health is in finding ways to encourage young people to eat and enjoy more fresh fruit and vegetables. Students seem to become so much more adventurous in their tastes in The Edible Schoolyard setting. What is the secret to successfully introducing new foods to kids?*

We have a very remarkable experience and success with what children will eat in this particular setting. Because they are growing plants in the garden from seed, because the things they grow have been fertilized with compost that they have spent 10 weeks turning and sifting, because they are experiencing worms in the soil, all of a sudden, the very beautiful rainbow chard that results belongs to them, and they are very, very proud of it. Things that we don’t ordinarily think kids will enjoy—cauliflower, broccoli, romanesco, beets and cabbage—become favored foods when the students grow them themselves. The children say that the food they’ve grown themselves tastes best. When they have an opportunity to use these

foods in a delicious recipe in the kitchen, naturally they’re eager to try them.

More than once, a parent has called to say, “My son came home today, and he talked so much about this soup that he said had onions, chard, and pumpkin in it. We know that it didn’t have chard in it, because he doesn’t eat chard, but could we have the recipe?” We’ll say, “It was chard, and he grew it here at school, and we’re so happy to pass the recipe on.” Parents are completely thrilled with this outcome.

I’m not going to say that it’s 100 percent. Sometimes kids negatively influence other kids who are having a good experience, but most of the time it goes the other way. Most of the time, the kid who will only take a tablespoonful is influenced by all the kids around the table who are eating a bowl of soup, a piece of bread and a tiny little bit of butter they have made. Watching the way classmates eat, and the appetite they have for the food, the one child will eventually try something and might just end up liking it.

CEL: *What is it about the learning opportunities in this program that you perceive are so worthwhile?*

MG: This program really opens children’s minds and hearts. They’re learning, even when they don’t know they’re learning. We observe increases in their interest levels. Kids who have absolutely no interest at all in math and science are completely enchanted by their experience in the garden and in the kitchen. When they come in to do a recipe, Miss Cook will say, “Okay, we’re cutting this recipe in half. I know that it says one cup of flour, but we’re going to divide everything in half. I want you to do that. I’m not going to do that for you. You know your fractions, and you know how to figure this out.” You will see kids just jump in, and divide these recipes in half, and not think twice about a math lesson. It’s a natural thing that just happens.

In this environment too, there are times when we have to let the children make mistakes. Maybe they put too much or too little salt

in the dish they're preparing. When it doesn't taste quite the way that they thought it would, that, again, is another learning experience. It teaches them that if they aren't paying attention or if they aren't focused or working well together, something may not turn out.

There's a certain experience of executing a recipe in the kitchen, the same recipe, with several groups doing it just a little bit differently all at the same time. The vegetables are never exactly the same size. The biscuits never rise to exactly the same height. The rhubarb jam, if it's cooked a little bit longer, is orange, and if it's cooked a little less, is pink.

These sorts of discoveries are significant and important. Kids notice everything, and they take these experiences away with them. In this setting, students are better able to integrate what they are learning with their personal body of knowledge, and that improves understanding and retention. We will always try to bring in something new and see how successful those new things are.

At the end of every year, Miss Cook asks the kids to remember what their favorite foods or experiences in the kitchen were, and to draw and write about them. Over time, input from our students has informed and influenced everything we do. There are recipes that we no longer prepare, because even though we thought they were successful, we received more negative than positive comments. There are activities, and beautiful objects, and plants in the garden that we know remain in the memories of children who go through this program long after they graduate. The children teach us that evolution is integral to success.

Marsha Guerrero is program coordinator at The Edible Schoolyard. Guerrero has worked with Sally Schmitt of The French Laundry and for the renowned Metropol Bakery in Eugene, Oregon. In the 1980s, she opened and managed such restaurants as Prego, MacArthur Park, and Guaymas. She went on to work at Ketchum Communications and with the Il Fornaio America Corporation, where she was Director of Marketing. Guerrero led the development of the Spinelli Coffee Company in Singapore from 1995 to 2000. She then returned to the United States to join her longtime mentor and friend, Alice Waters, at The Edible Schoolyard.



Student Dining Evaluation Form

Developed by the Center for Ecoliteracy, in collaboration with J. Michael Murphy, Ed.D., Department of Child Psychiatry, Harvard School of Medicine

Students report that the environment in which meals are served is as important to them as the quality of the food. The purpose of this questionnaire is to assist adults and students in evaluating the dining environment at school.

This form can be filled out by adults who want to compare different school meal settings, or by the students themselves.

For each of the ten areas of eating experience listed below, **please mark the box that best describes your assessment of this area today.** Please rate each item as Negative, (makes the eating experience less than pleasant) Neutral, (does not make eating either unpleasant or pleasant) or Positive (makes the eating experience much better). Please also include any additional comments you may have.

	Negative	Neutral	Positive
1. The noise level in the cafeteria Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The smells in the cafeteria Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The lighting in the cafeteria Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The taste of the food Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The way the meals are presented Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Continued on next page)

	Negative	Neutral	Positive
6. The amount of time allowed for eating Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. The hospitality of the people who serve the food Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. The way others who are eating makes you feel Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. The way the cafeteria looks Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. The homeyness of the cafeteria Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Dining Experience Resources

Chez Panisse Restaurant and Café

Information about the restaurant and Alice Waters, world-renowned chef and owner of Chez Panisse who started “The Delicious Revolution” in California with a “commitment to good food, community, and sustainability.”

www.chezpanisse.com

Eating at School

This is a summary of three studies sponsored by the Applied Research Division of the National Food Service Management Institute to identify the amount of time elementary, middle, and high school students took to eat lunch. (PDF: 13 pages)

www.nfsmi.org/Information/eating_at_school.pdf

Relationship of the Physical Dining Environment and Service Styles to Plate Waste in Middle/Junior High Schools

This is a National Food Service Management Institute study of the relationship between the dining environment—cafeteria lighting, noise, temperature, and humidity—and food consumption. (PDF: 64 pages)

www.nfsmi.org/Information/environment_and_plate_waste.pdf

The Edible Schoolyard

The Edible Schoolyard, in collaboration with Martin Luther King, Jr. Middle School, provides urban public school students with a one-acre organic garden and a kitchen classroom. Using food systems as a unifying concept, students learn how to grow, harvest, and prepare nutritious seasonal produce. Experiences in the kitchen and garden foster a better understanding of how the natural world sustains us, and promote the environmental and social well-being of the school community.

www.edibleschoolyard.org

Cover photo: Tyler/Edible Schoolyard/Center for Ecoliteracy



Professional Development

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RETHINKING SCHOOL LUNCH GUIDE

Rethinking School Lunch – a project of the **Center for Ecoliteracy**
2528 San Pablo Avenue, Berkeley, California 94702 www.ecoliteracy.org



Professional Development

RETHINKING SCHOOL LUNCH GUIDE

FOOD FOR THOUGHT

“Food service workers’ jobs become more rewarding and satisfying when the work is less routine and requires skillful execution. It is through professional development that food service staff acquire those valuable and transferable skills that might qualify them for higher pay. When food service staff find the work more satisfying, and receive the respect they deserve, enthusiasm will build for the new program.”

— Marilyn Briggs, former director of the Nutrition Services Division and former assistant superintendent of public instruction for the California Department of Education



WHAT'S INSIDE?

RETHINKING PROFESSIONAL DEVELOPMENT: The goal, the challenge, and some key points to remember.

ROUND TABLE ON PROFESSIONAL DEVELOPMENT: **Marilyn Briggs** [former director of the Nutrition Services Division and former assistant superintendent of public instruction for the California Department of Education], **Nancy May** [food service supervisor for the Healdsburg (California) Unified School District], **Marc Zammit** [director of culinary support and development at Bon Appétit Management Company], and **Zenobia Barlow** [executive director and a co-founder of the Center for Ecoliteracy] discuss professional development needs.

PROFESSIONAL DEVELOPMENT RESOURCES: Professional development around the farm-to-school model is a new area for food service professionals, teachers, and administrators to contemplate. These valuable resources will spark thought about competencies, knowledge, skills, and training needs.

RETHINKING PROFESSIONAL DEVELOPMENT

The Goal *To provide food service staff and educators with the professional training and support they need to successfully implement a farm-to-school program that integrates the classroom curriculum and the school lunch experience.*

The Challenge *Finding the resources and time to provide adequate training for staff to learn new ways to make school lunch part of the academic curriculum.*

Using the local food system as a context for learning, and embedding nutrition education in a school's curriculum, means that there will be new content for students to learn. For teachers, this means new content for them to learn and new strategies for teaching it. For food service personnel, new menus mean developing new ways to purchase and prepare foods. There's no getting around it: Making the transition to this farm-to-school model, which makes school lunch part of the academic curriculum, will require professional development.

Once the need for professional development is identified, the question is, What is the best training to meet these needs?

Since farm-to-school programs will, of necessity, vary from location to location, there can be no single model of professional development. Members of the Center for Ecoliteracy's Fertile Crescent Network and Rethinking School Lunch advisors offer

general considerations and some specific examples from their own work to help spark ideas at the beginning of program development.



KEY POINTS

Put Professional Requirements in the District Food Policy Though many food service directors provide professional development, it's not a requirement. The California Department of Education offers training through community colleges. An entire infrastructure is set up, but it's difficult to fill the classes if there is no specific obligation to attend. To help ensure that the necessary professional development occurs, include it in the district food policy. View it as an investment and a necessary part of any successful program that links farms to school cafeterias.

Menus Will Dictate Food Service Skills New menus based on cooking from scratch may require food service workers to learn new skills, especially if the current service is “thaw-and-serve.” The menus that will be served will indicate what skills the food service staff needs to have. Make a list of all the necessary skills, and survey current staff to see where development is needed.

Find Out What the Law Requires Before designing a professional development program, find out if the school district or state has any professional requirements for food service workers. One California school discovered, for example, that basic sanitation and safety training had emerged only in the past five years, and that only one person in the district needed to be certified in sanitation and safety.

Encourage Dialogue About the New Program Make sure food service staff understand their role in providing and maintaining dining rooms that reflect the district's intention to support development of healthy eating patterns.

Best Practices for Teacher Professional Development Since every farm-to-school program is unique, no one model will fit all situations. Nonetheless, all effective professional development programs will share some common elements:

Concern for students and their learning is at the heart of every effective professional development program.

- **Teachers can guide their students more successfully** if they have shared the same type of learning experiences. Engaging in active learning, working collaboratively, and using food systems as a context to make learning more meaningful are at the heart of effective farm-to-school teacher professional development.
- **Align teacher professional development** with the system-based changes that a farm-to-school program introduces. Professional development can use this approach to support the changes in areas such as curriculum.

In designing the framework for professional development, consider the following:

- **Establish goals.** Create a set of clear and shared outcomes for the program.
- **Include time to plan** how the pieces will fit together.
- **Implement the professional development plan.**
- **Leave time for reflection and feedback.** Use the feedback to adjust the professional development program and its goals.



RETHINKING SCHOOL LUNCH

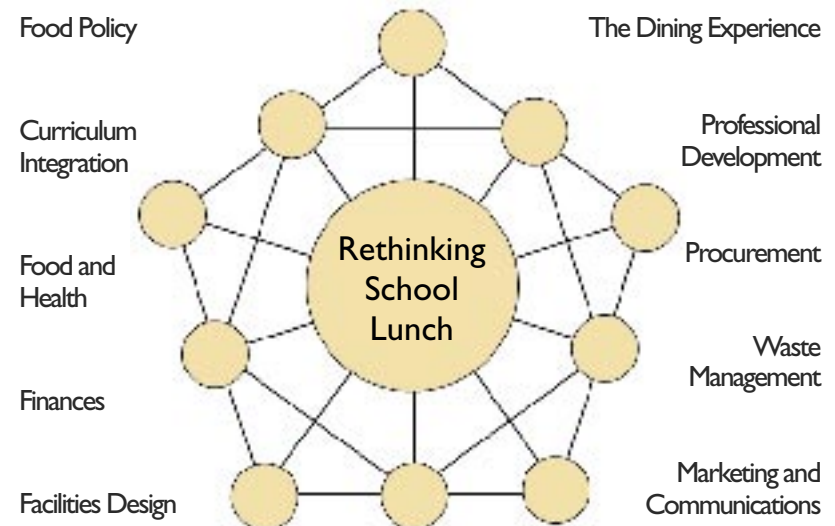
Web of Connections

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The diagram illustrates our systems approach to integrating school lunch programs with curriculum, improving student health and behavior, and creating sustainable communities.

School administrators, food service directors, teachers, and parents will each approach this project from their unique perspective. Readers can begin with the topic that interests them most, then explore the other related topics.

The entire Rethinking School Lunch project is available at:
www.ecoliteracy.org/rethinking/rsl.html





Roundtable on Professional Development

With Marilyn Briggs, Nancy May, Marc Zammit and Zenobia Barlow

Marilyn Briggs: Food service is often the last district partner to be brought into the change process, but it is the one upon which all others rely for success. School districts, especially those that undergo a food policy development process, should plan on implementing a program of professional development for food service staff. Professional development is a direct and critical investment in the individuals the district is counting on to make the change.

Marc Zammit: A fresh prep approach will require workers with different skill levels at higher rates of pay. Instead of a production cook, it would be preferable to hire an executive chef who can write a menu and execute a recipe, someone who knows what to order and how to handle raw food safely.

Marilyn Briggs: I would advocate for better pay for food service

workers, and development of some professional requirements and expectations for anyone who is involved in the preparation of food for children. These would include cooking skills, basic sanitation and safety training. Through professional development food service staff acquire valuable and transferable skills, which might qualify them for higher pay.

It is also true that food service workers' jobs become more rewarding and satisfying when the work is less routine and requires skillful execution. It is through professional development that food service staff acquires those valuable and transferable skills which might qualify them for higher pay. When food service staff find the work more satisfying, and receive the respect they deserve, enthusiasm will build for the new program.

Nancy May: For staff development, we've done cooking projects that emphasized how to produce something and how to eliminate a lot of the fat and salt—how to use fresh food and not packaged, and how to look at the menu and create the simplest menu possible. We developed a strong focus on production and serving.

Zenobia Barlow: Providing the support and training necessary to implement new curricula or teaching strategies is an important element of a successful farm-to-school program. For almost a decade the Center for Ecoliteracy has supported schools and teachers as they developed school gardens and other projects that offer students hands-on experiences that link classroom lessons with real life.

One particularly effective teaching strategy the Center has supported is environmental project-based learning (PBL). This strategy allows students to take more responsibility for their own learning as they identify projects that interest them, research answers, and look for solutions to problems. The PBL strategy is ideal for working across discipline areas and integrating skills and content from different subjects.

Nancy May: It's important to remember that people learn in different ways. Some will get it in the setting of one day's lesson. Others won't fully understand it until they have the opportunity to apply it.

Zenobia Barlow: Much of the Center's most exciting work has been with educators, teachers and principals committed to linking the classroom curriculum to school gardens, kitchen classrooms, school lunch, and regional sustainable agriculture. "Where does our food come from?" is such an evocative question that has the potential for integrating curriculum across subject matter and grade level, and connecting to some of the most important problems of our time. Some of the most effective professional development the Center has supported has provided classroom teachers with the same kinds of learning experiences we advocate for students. From farm tours to hands-on experiences in the garden or with compost, the teachers are the students. The Center supports learning by doing.

Marilyn Briggs *[former director of the Nutrition Services Division and former assistant superintendent of public instruction for the California Department of Education]*, **Nancy May** *[food service supervisor for the Healdsburg (California) Unified School District]*, **Marc Zammit** *[director of culinary support and development at Bon Appétit Management Company]*, and **Zenobia Barlow** *[executive director and a cofounder of the Center for Ecoliteracy]*.



Professional Development Resources

The Center for Ecoliteracy provides the following resources through Rethinking School Lunch:

Farm to School: An Introduction for Food Service Professionals, Food Educators, Parents, and Community Leaders, developed by Alison Harmon at Pennsylvania State University for the National Farm to School Program

www.ecoliteracy.org/pages/rethinking/downloads/FarmtoSchoolGuide1.pdf

Other Resources

Competencies, Knowledge, and Skill Statements for District School Nutrition Directors/Supervisors

This publication developed for the National Food Service Management Institute is an updated version of their *Competencies, Knowledge, and Skills of Effective District School Nutrition Directors/Supervisors* published in 1996. (PDF: 86 pages)

www.nfsmi.org/Information/competencies2001.pdf

Foodservice Training Needs

Sullivan, Kathleen, Maxine Harper and Charles K. West. "Training Needs of School Foodservice Site Managers." *The Journal of Child Nutrition & Management* 26 (1) (2002).

www.asfsa.org/childnutrition/jcnm/02spring/sullivan/

Keys to Excellence in School Food and Nutrition Programs

The American School Food Service Association website provides a self-assessment tool to evaluate school food service programs in four "key" areas: Administration; Communications & Marketing; Nutrition and Nutrition Education; and Operations.

www.asfsa.org

Professional Development Needs Reported by School Food Service Directors and Recommendations for Meeting Directors' Needs

The National Food Service Management Institute at University of Mississippi provides the results of a national survey of food service directors. (Four PDFs: Introduction-Chapter 2: 17 pages, Chapters 3-4: 24 pages, Chapters 5-6: 7 pages, Appendices: 24 pages)

Intro-Chapter 2:

www.olemiss.edu/depts/nfsmi/Information/profdev1.pdf

Chapters 3-4:

www.olemiss.edu/depts/nfsmi/Information/profdev2.pdf

Chapters 5-6:

www.olemiss.edu/depts/nfsmi/Information/profdev3.pdf

Appendices:

www.olemiss.edu/depts/nfsmi/Information/profdev4.pdf

Procurement

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RETHINKING SCHOOL LUNCH GUIDE

Rethinking School Lunch – a project of the **Center for Ecoliteracy**
2528 San Pablo Avenue, Berkeley, California 94702 www.ecoliteracy.org



Procurement

RETHINKING SCHOOL LUNCH GUIDE

FOOD FOR THOUGHT

“Locally produced food purchased directly from the farmer [may be] more affordable than the same item purchased at the grocery store or from a distributor. In the case of direct purchase, the farmer is receiving the mark-up that the grocery store would have received. . . . Purchasing from farmers’ markets or farm stands, or through special contracts between farmers and buyers, makes locally grown food more affordable for the buyer and more profitable for the farmer.”

— Janet Brown, program officer for food systems, Center for Ecoliteracy



WHAT'S INSIDE?

RETHINKING PROCUREMENT: The goal, the challenge, and some key points to remember.

FIVE SUCCESSFUL MODELS OF PROCUREMENT: It's already happening. Janet Brown, program officer for food systems, Center for Ecoliteracy, discusses five procurement systems developed and used by school districts.

PROCUREMENT RESOURCES: Thinking of buying fresh food locally? Learn more about procurement strategies, visit websites for local food systems programs, learn about national and international food networks, and read research and reports on food purchasing.

RETHINKING PROCUREMENT

The Goal *To implement the farm-to-school model by finding practical ways to keep the school lunch program supplied with fresh, seasonal, sustainably grown produce and products, and by building partnerships between the school district and local family farms.*

The Challenge *Developing innovative strategies to purchase fresh, seasonal, sustainably grown ingredients from local farms.*

The vast majority of schools in the United States rely on a relatively simple method of procurement: They use menus that assume all ingredients will be available at all times of year; they buy from large, central suppliers, and they take at least 90 to 120 days to pay from invoice.

Moving to the farm-to-school model — which relies on buying fresh, locally grown, seasonably available foods from smaller family farmers — can take some work. Relying on local sourcing means locating and establishing relationships with a number of local farmers, because a single family farm may not be able to meet all of the district's food needs. Farmers will also need significant lead time to plan for production, and they are probably unaccustomed to waiting three or four months for payment.

Building these bridges will take thought, time, and dedication. But, as a number of school districts nationally and internationally have learned, it can be done successfully.



KEY POINTS

Local Sourcing Supports Classroom Lessons

Most urban children know that food doesn't really come out of a box. But many are unfamiliar with all the steps involved in bringing food from the field to the table, and few have ever set foot on a farm. When the school curriculum includes experiences in school gardens and kitchen classrooms and on local farms, it helps demonstrate and embed the lessons learned in the classroom and during the lunch period.

Classroom lessons can reinforce connections between the food served at school and human and environmental health. Farm field study trips can provide vital experiences that help students understand the connection between fresh food and lifelong healthy eating habits. Food miles — the distance food travels from field to table — is an important concept in sustainability models, and one that students can begin to consider in connection with the meals they eat in school and at home. These connections are part of the foundation of attitudes and behaviors regarding healthy food and eating habits.

Procurement Changes and Menu Changes Work

Together When procurement methods and ingredients change, these changes naturally affect menus. Serving high-quality, seasonal, fresh produce to students at lunch every day is an effective way to promote consumption of fresh fruits and vegetables, and an exciting opportunity to create new, inviting menus. These new menus can incorporate not just local ingredients but local tastes and cultural preferences. Design menus flexibly to accommodate fluctuations in availability of regional, seasonal produce.

District Policies Can Strengthen Children's Health and

Local Economies District food policies return authority for decisions affecting children's health and diet to the parents and the community. These policies are tools that emphasize the importance of students' understanding about how food reaches the table and the implications this has for their future.

District policies strengthen local economies when they prioritize local procurement to the greatest extent possible. These policies play a role in preserving greenbelts and open space through directing more public dollars in the school lunch program toward support of local sustainable agriculture and family farms.

District policies hold the potential to make students, and the greater community, aware of the importance of sharing food as a cultural and community-building tool. Through the school lunch program, schools and farms can recognize and share responsibilities for the health and well-being of the communities they serve.

Local Sourcing Encourages Sustainable Patterns of

Living In the United States, produce bought from local farmers travels an average of about 45 miles from field to table. In contrast, food items bought from conventional sources travel an average of about 1,500 miles. Janet Brown, program officer for food systems, Center for Ecoliteracy, explains, "Moving the field closer to the table has been cited as a major step toward more sustainable patterns of living. Eating locally grown food reduces dependence on nonrenewable

sources of energy and is a primary strategy for preserving farms on the urban fringe.”

The inclination on the part of school districts to connect to local agriculture is founded in common sense. Students will enjoy healthy meals prepared from fresh, wholesome, delicious food that is grown with the school district in mind. Farms will benefit from connections to a steady market for foods that grow well in their region. It makes sense to feed schoolchildren first from those farms closest to the school district, and to direct the public dollars in the school food program toward preserving farming as a way of life in the region.

Planning school menus to take advantage of locally grown produce and products often saves the district money, helps the local economy, and allows students to better understand human nutrition, seasons, cycles, and the bioregion. Schools represent a reliable and steady demand for produce and products that can sustain small-scale local farmers.

Five Models of Local Procurement Are Already in Use As school districts move in the direction of fresh local purchasing, five models of procurement for lunch programs have emerged (see “Five Successful Models of Procurement” in this section for the details):

1. The school district facilitates direct purchase between food services and farmers.
2. The school district uses a “forager” to act as a go-between to facilitate purchasing.
3. The school district arranges for purchase through local farmers’ markets.

4. The school district enters into a “contract-growing” arrangement with farmers.
5. The school district sources locally grown food through a distributor.

Beginning to Think About Local Sourcing Building new relationships with local farmers is a guaranteed eye-opener for administrators, educators, and parents. If you are thinking about making local sourcing a part of your school district’s food policy, meeting farmers and talking about the practicalities is the best place to begin.

Visit local farms to collect information and make connections.

- **Farm tours, farm maps, county extension service,** the agricultural commissioners office, farmers’ markets, and the farm bureau are good places to begin collecting contact information.
- **School administrators, educators, and interested parents** and students can also begin to meet and build working relationships with local farmers at specially organized events designed to help each partner learn more about the other.
- **Connections to farms can assist and inspire** food service personnel in making the shift from processed and packaged food to meals prepared from fresh, whole ingredients.
- **Even when the school curriculum does not yet include nutrition education** and the local food system as a context for learning, visits to farms in conjunction with curriculum connections provide enrichment opportunities for students.

Developing farm-to-school relationships is a full-time job:

- **Nancy May, food service supervisor for the Healdsburg (California) Unified School District**, has worked with seven or eight farmers over the past three years. She began simply, by calling farmers on the phone and letting them know the school district was interested in purchasing fresh local products.
- **Because produce is seasonal**, schools will not be working with the same farmers on a year-round basis. It's important to set up a solid relationship with different farmers that can continue from year to year

- **Although “local sourcing” generally refers to purchasing** food products from local farmers, in some communities “local” may mean up to a 300-mile radius.
- **Farmers usually plan a year or more ahead of delivery**, and plant months in advance, so prepare for a longer fulfillment cycle. And take time to work out the nuts and bolts of your procurement plan: Know how many farms it will take to feed the school district, if decreased food costs will offset increased labor costs, how deliveries will be facilitated, and what payment models will work for both districts and the farms.

RETHINKING SCHOOL LUNCH

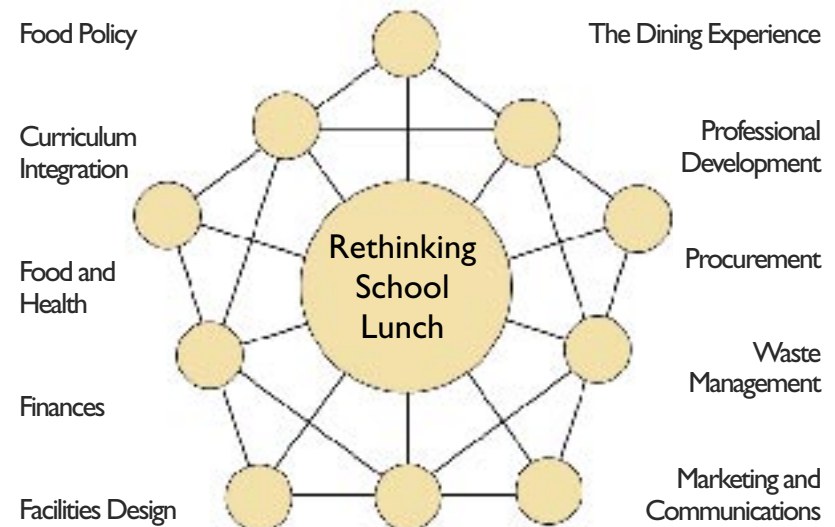
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Five Successful Models of Procurement

by Janet Brown, program officer for food systems at the Center for Ecoliteracy

Bringing schools and local family farms together is a good idea. Eating seasonally and locally is an important and delicious step in developing of a “sense of place.” Just as hiking and walking in the places where we live brings new understanding and appreciation of the unique character of the natural world surrounding us, so too does a meal prepared from locally grown food.

For students, eating seasonally and locally is an excellent bridge to understanding the culture, climate, soil complexity, and productivity of their bioregion. These understandings, reinforced by field trips to farms and core curriculum in the classroom and

the garden, are foundational to a sense of caring and responsibility for the environment and each other. Local food—food that is not anonymous but carries the name of a farm or region near to us—provides us with indispensable connections to particular places.

Sustainable family farms depend on support from the communities they serve. Local small to mid-range food producers are the foundation of a sustainable food system but farmland on the outskirts of towns, sandwiched between urban development and rising real estate values, is the most threatened farmland in the United States. Small-scale farms struggle to remain economically viable even in the best of times, all the while surrounding us with scenic beauty, productive greenbelts, and critical habitat for wildlife. These farms are an indispensable element of what is known as “community food security”. Many of these farms report a definite interest in cultivating relationships with school districts.

The Center for Ecoliteracy and its Food Systems Project have funded farm field studies for students and have helped to obtain funding for food service professionals to visit local farms. In both cases, it is clear that the farm setting allowed participants to make beneficial connections about food, health, and the environment. These connections naturally lead to a desire to support local agriculture.

What is meant by “local sourcing?” The distinct character of bioregional food production will effect how and which foods are purchased locally. For example, schools in many parts of California can reasonably look forward to availability of fruits, vegetables, grains, and dairy products year-round. School menus that take advantage of local seasonal abundance make the task of local sourcing even easier. On the other hand, eastern or northern states that experience a high degree of weather-dependent agricultural productivity may discover that local year-round sourcing of dairy or grains is achievable, but that during certain times of year fresh fruits and vegetables may need to come from farther away.

Any region can become more locally responsive by:

- Improving farming techniques to widen the productivity window on both sides of the “lean months.”
- Improving capture of the harvest through drying, canning, and otherwise preserving the bounty during peak months to serve later when productivity is reduced for winter cold or summer heat.
- Developing farmer cooperatives with the aim of adding more diversity to the harvest. By growing a greater variety of products, farmers face less competition over the same few crops.
- Improving consumer awareness of, and demand for, locally grown foods.

How “local” is local? Moving the field closer to the table has been cited as a major step toward more sustainable patterns of living. Eating locally grown food reduces dependence on non-renewable sources of energy and is a primary strategy for preserving farms on the urban fringe. Today in the United States, locally sourced produce travels on average about 45 miles from field to table. By contrast, the conventionally sourced food item travels an average of about 1,500 miles.

In warm western states, a figure of 150 miles to represent local may be a good average number to keep in mind when preparing menus and building a directory of farms. However, that number might expand to 300 miles or more in desert or mountain states where farmers tend to plant less intensively due to water restrictions, fierce summer heat, significant winters, or fragile soils. Because of shorter growing seasons, northern states may need to expand their search for suppliers even further to supplement availability of fresh produce.

What are some initial considerations for school districts in sourcing locally grown food? It may make sense to begin local sourcing with products that offer a high degree of availability, for example, lettuce or other fresh produce used in salad bars.

It may also work for the school district to identify the top five to 10 products, by volume, that it uses on a daily basis and notify local farms that it is interested in sourcing these frequently used items. This single list of items may actually constitute 50 percent or more, by volume, of the total food needs of the district and may represent a significant piece of business for nearby farms.

Another good place to start is by finding those locally grown, delicious fresh foods that make the greatest difference to the meals the district serves. For example, fresh, ripe tomato slices on a sandwich, or crisp, crunchy lettuce and apples, and fresh harvested herbs for soups and sauces can make a memorable addition to the lunch tray without adding significant cost.

Occasionally, schools can begin purchasing from local farms through a fortuitous set of circumstances in which the farmer has a bumper crop of a particular product and the school district has an intention to make use of locally grown food.

How can school districts locate farms in their area? Often, food service directors don’t know how to begin contacting farms. They need to find or create a directory that organizes contact information, and a list of what the farm produces, with quantities, pricing, and availability. Farm tours, farm maps, county extension services, the agricultural commissioners office, farmers’ markets, or the farm bureau are good places to begin collecting contact information.

How can school districts begin to meet and build working relationships with local farms? Farms and schools often meet through special community events that focus on a farm-to-school approach. It makes sense to include the farm bureau, the county extension office, or a local organic certifying agency on the planning committee of such gatherings so that an organization with close relationships to the agricultural community can help to shape the event.

Often, farmers and school administrators begin collaborating through attendance at district food policy development meetings. During these meetings, school food service directors and farmers can begin working together. The resulting policies can provide a framework for action that connects farms and schools.

Farmers and food service directors benefit from framing problems and resources in ways that take into account the entire system of production, distribution, and consumption. Each will need to gain a better understanding of the way the other operates. Each will use that understanding to create or modify the business relationship to constitute a win for each side. For example, food service directors need to develop menus that accommodate what grows seasonally in a given region, and farmers need to grow a diversity of crops to serve more of the daily needs of the school food service.

Visits to local farms by food service personnel can increase both the effectiveness and willingness on the part of food services to deal with local and seasonal issues. Equally important are visits by farmers to school district kitchens. These connections build mutual understandings. When each party is familiar with the opportunities and challenges the other party is facing, working relationships are more likely to flourish.

A map that shows the location of local farms and the school districts they serve is an illustrative tool to facilitate connections and assist the partners in envisioning solutions.

What are the school district's needs? The school district is responsible for feeding the students in the school lunch program every day. The district may only serve lunch, or it may serve breakfast, lunch, and an after school snack. It needs to know a month or two in advance what will be available in order to plan menus. The district needs to source produce and products in the fall, spring and winter, but will probably not need to order, or will not need as much, during the summer.

What are the farmers' needs? The farmer is responsible for the economic viability of the farm. Farmers need relatively long lead times since they are propagating, planting, and harvesting produce and products on a yearly schedule. Most of the time, farmers will only be able to discuss future business relationships and will not already have on hand enough product to satisfy a school district's immediate needs. Generally, farmers will be approaching their most productive season at the time school is adjourning for the summer.

What about the increased cost of fresh, locally grown food? School meal programs need to remain economically viable and food costs are central to that goal. Often, sustainably produced food from local farms costs more than conventionally produced food, or more than imported food that travels hundreds or thousands of miles.

But it is possible that locally produced food purchased directly from the farmer is more affordable than the same item purchased at the grocery store or from a distributor. In the case of direct purchase, the farmer is receiving the mark-up that the grocery store would have received. This small “extra” may mean the difference between success and failure for a small farm. Purchasing from farmers' markets or farm stands, or through special contracts between farmers and buyers, makes locally grown food more affordable for the buyer and more profitable for the farmer.

Another important consideration when examining food costs is whether the purchase supports local economies and networks. Purchasing locally puts food dollars into the local economy and supports farms, feed stores, and the necessary infrastructure that allows farming to continue. Local sourcing creates and sustains networks of relationships that are vital to preserving farming as a way of life in the region.

Local purchase is tied to the “true cost” of food production in any region, at any time of year. In sharp contrast to the global market place in which all food in any season is available, local purchase relies

on regional production for regional consumption. Prices reflect the true cost of producing food in a particular place.

For example, apples produced on a sustainable family farm in upper New York State might cost a little more than apples imported from China, but they will be fresher, tastier, and therefore more healthful and delightful. (Consumer surveys continue to rate locally grown food as the freshest and most delicious.) Local purchase of apples insures that local apple farmers will continue to maintain production, and that the local countryside will remain intact for agriculture.

Where cost is the only measure of desirability, cheap food becomes the rule. However, what is becoming clear is that diet-related disease, particularly as it relates to children's health, is at epidemic proportions, and health care professionals, nutritionists, and parents are placing more and more emphasis on fast food served at school as a contributing cause to the decline in children's health. Serving children healthful meals made from fresh, sustainably produced ingredients supports growing young bodies and minds and is likely to lead to the formation of lifelong healthy eating habits. In the long run, healthy local food is the affordable choice.

How can deliveries be facilitated? Often, no efficient delivery systems exist to transport food from local farms to schools, or they are only beginning to develop.

Though some farmers may be ready and willing to accommodate the delivery schedules of school districts, others are not. Some farmers are willing to deliver to a central kitchen or central delivery point, but are not able to deliver to each school site in a district on a regular basis. Often, arrangement for delivery between farms and schools is a unique collaboration.

The following are several distinct models of procurement in farm-to-school programs:

1. The school district facilitates direct purchase between food service and farmers. If the food service director and the farmer can come to an agreement about what ingredients the school can use and what the farmer is able to produce, they may find that the simplest solution is for the farmer deliver directly to the district. If this arrangement is agreeable to both parties, it is the simplest method of procurement.

2. The school district uses a “forager” to act as a go-between to facilitate purchasing. If the school district has quite a few needs to meet through local procurement, the district may wish to employ a “forager”. A forager is someone who is knowledgeable about local agriculture and can act as the go-between between the district and the farmers. A forager's job is to be in touch with local farms, to meet the district's needs for fresh ingredients, and to inform the district when a special opportunity for sourcing some exceptional, affordable, or especially abundant produce arises. Often, it is the forager who visits the farms and picks up and delivers produce to the district on a regular basis. The forager may also take responsibility for seeing that farm invoices are “batched” and paid promptly.

3. The school district arranges for purchase through local farmers' markets. Often, a school district's food service can meet and do business with a number of farms through the convenience of local farmers' markets. Farmers' markets are places where many farmers come together to showcase and sell the weekly harvest from the farm. The food sold at farmers' markets has a reputation for being fresh, seasonal, and diverse. Farmers' markets are good places to meet farmers, find out where the farms are located, and begin to discover what is grown locally and seasonally. It is possible that a business relationship can be initiated at the market, or it might be necessary to schedule a meeting at another time when both parties can speak in a less hectic environment. One very convenient aspect to farmers' markets is that the market is a good drop-off and

pick-up point; school districts can arrange to meet with and pick up orders from several farmers each week at the same farmers' market.

4. The school district enters into a “contract growing” arrangement with farmers. Sometimes, when a school district knows its needs and has developed a relationship with a particular farm, the district might wish to proceed with a “contract growing” arrangement. In this model, the district works cooperatively with the farmer to identify the district’s needs and “contracts” with the farmer to grow specifically for the district.

For example, the district might estimate the total amount of salad greens it needs to purchase over the course of the school year for both the hot lunch menu and the salad bars. The contract could cover growing all the salad greens. The contract between the district and the farmer would include produce varieties and amounts, and an agreed upon price, either by item or for the total contract.

This arrangement can serve the district because it has a part of its “shopping” done. It knows what is coming, how much, and when. The district may receive a very good price in exchange for a substantial order.

Contract growing can work for the farmer too, because the farmer knows that part of the planting plan is already sold and the sale will not entail extra marketing or packaging. The farmer can count on the sale.

Although the contract represents a “best efforts” promise from both parties, both sides need to prepare for what can go wrong. Bad weather, equipment problems, or crop failure can mean that the farmer won’t be able to fulfill the entire contract. The district needs to develop a contingency plan in the event that the farmer experiences difficulties. A failure by the district to proceed with the contract could mean disaster for the farmer. The contract should protect the farmer in the event the district has difficulties in meeting its agreements.

5. The school district sources locally grown food through a distributor. Occasionally, a school district can approach a produce distributor or natural foods distributor with the idea of sourcing for the district. In this case, the district is using the distributor as a forager or shopping service.

The distributor makes connections between local farmers and school districts. The distributor needs to be familiar with local agriculture and have a prior working relationship with local farms. The distributor also has the means to make deliveries and to store fresh food between deliveries. The distributor may try to negotiate a special price with farmers so that the price the district pays is not too far above the farmer-direct price.

What payment models will work for both the district and the farms? Farms and school districts need to problem solve cooperatively around how payment will occur. Many school districts are accustomed to dealing with a single supplier who is able to provide everything the food service needs from food to other essentials such as serving utensils, catsup squeezers, and cleaning supplies.

Dealing with farms is different. For each delivery the farmer will probably present an invoice. If the district is sourcing produce and products from several farms at once, then each farm will be presenting its own invoice. At first, this can seem like a lot of extra paperwork for food service. In addition, districts often have a payment cycle of 30-90 days and even longer. Many farmers are used to receiving payment upon delivery.

On occasion, a forager, non-profit, or other intermediary will pay the farmers from a special fund established for that purpose, and batch the invoices to the district under a single cover invoice from the fund. In this way, the farmer receives payment upon delivery and the school district can pay in its regular cycle and use that payment to replenish the fund. Though this system takes a little time and thought to establish, it works very well for both parties.

How many farms does it take to feed a school district?

Depending on the school district's needs and the farms in any local bioregion, it may take from one to many farms to fill the needs of the district.

Some farms are large and diverse, growing a variety of fruits, vegetables, herbs, and other products year-round. For a small district, a single farm like this might meet many of the district's needs.

Other farms specialize and do not produce all year. In that case, the district might obtain tree fruit and berries from several fruit growers, vegetables from several other farms, dairy products from the local dairy, and eggs, nuts and oil from still another group of growers, and so on. Because many farms come on and off line all throughout the year, school districts need to be aware of this fact and prepare by developing and doing business with a rotating list of farms and products.

Janet Brown is the program officer for food systems at the Center for Ecoliteracy. Brown is a certified organic farmer and vice president of Marin Organic, an association of nearly 30 organic producers in Marin County working to educate consumers about the value of local food systems. She is founder and chair of the Marin County Food Policy Council. With Zenobia Barlow, she is co-facilitating a five-county network of innovative farm-to-school projects in Northern California, called the Fertile Crescent Network.



Procurement Resources

Procurement Strategies and Resource Guides

For more about local procurement strategies, resources to help start your own program, and background about the benefits of purchasing locally grown and processed foods

America Fresh

“Operates a web-based Farmers Market for just-in-time delivery of the freshest, most flavorful organic foods to selective chefs and produce buyers, while reducing marketing costs and returning higher revenues to innovative farmers.”

www.americafresh.com/

Bringing Local Food to Local People: A Resource Guide for Farm-to-School and Farm-to-Institution Programs

This resource guide, published by Appropriate Technology Transfer for Rural Areas, puts the experiences of others at the fingertips of farmers, food-service planners, and educators interested in starting a farm-to-school program. Resources include information about

successful programs, lists of publications to guide you in starting and managing your own program, and sources of funding and technical assistance. (PDF: 28 pages)

<http://attra.ncat.org/attra-pub/PDF/farmtoschool.pdf>

Checking the Food Odometer: Comparing Food Miles for Local Versus Conventional Produce Sales to Iowa Institutions

This paper from the Leopold Center for Sustainable Agriculture offers a brief discussion of the term “food miles,” includes food miles calculated from production to point of sale (in Iowa), implications and future research. (PDF: 8 pages)

www.leopold.iastate.edu/pubinfo/papersspeeches/food_travel072103.pdf

Connecting Growers and Food Service Operators: A Gathering of Participants in the Leopold Project

This report summarizes discussions from a retreat attended by growers and food service directors in central Iowa who participated in the project “Institutional and Commercial Food Service Buyers’ Perceptions of Benefits and Obstacles to Purchase of Locally Grown and Processed Foods.” It includes links to preliminary findings from this project and a study that tracked transportation costs for different types of food distribution systems. (PDF: 4 pages)

www.extension.iastate.edu/hrim/localfoods/downloads/localfoods_summary.pdf

The Farmer-Chef Connection: Guide to Local & Seasonal Products | Willamette Valley

Produced by Ecotrust and the Farmer-Chef Connection, this 100-page directory helps connect local farmers and chefs. Ecotrust’s Food and Farms Program objective is to improve public understanding of local agriculture and increase market share of local

foods. The website provides up-to-date information on their work and other resources.

www.ecotrust.org/foodfarms/

Food Routes

This national nonprofit is dedicated to reconnecting consumers to their local food system. Their website includes tools for action, farm-to-school information, numerous downloadables in support of buying locally, an interactive map to connect you to local farmers, and more.

www.foodroutes.org

From Asparagus to Zucchini: A Guide to Farm-Fresh Seasonal Produce

Madison Area Community Supported Agriculture Coalition, a group dedicated to supporting small-scale farms, protecting the environment, and promoting a healthful local food supply, published this resource guide to local and seasonal produce. The main section of this book features nutritional, historical, and storage information for 51 vegetables and herbs. In addition, there are essays about sustainable agriculture, recipes, and more. Ordering information is available on the website.

www.macsac.org

Grown in Marin

A good example of farmers’ collective marketing and promotion efforts. This website will help you find what you need at farms, wineries, nearby farmers’ markets, restaurants and retail stores.

www.growninmarin.org

Institutional Buying Models and Local Food Markets: The Iowa Experience

Rich Pirog, Marketing and Food Systems Program Leader at the Leopold Center for Sustainable Agriculture presented this paper at the 2002 “Farm to Cafeteria: Healthy Farms, Healthy Students”

Conference in Seattle, Washington. This paper provides an overview of several models and describes the factors that make these systems work. (PDF: 6 pages)

www.leopold.iastate.edu/pubinfo/papersspeeches/I00502_cafeteria.pdf

Local Food Connections: From Farms to Schools

This fact sheet discusses the ways that local farmers are connecting to Iowa schools. Fact sheets are published in cooperation with the ISU Extension. (PDF: 4 pages)

www.extension.iastate.edu/Publications/PMI853A.pdf

Seasonal Produce Lists and Food Guide Poster

This website offers seasonal guides to foods grown in the Northeast United States. It also includes “The Northeast Regional Food Pyramid,” which features foods primarily grown and processed in the Northeastern U. S.

www.nutrition.cornell.edu/foodguide/lists.html

Small Farms/School Meals Initiative, A Step-by-Step Guide on How to Bring Small Farms and Local Schools Together

This manual was developed for groups interested in starting a farm-to-school project. Drawing on USDA’s experiences in North Carolina and Virginia, the manual outlines activities to plan, conduct and publicize a professional town hall meeting that encourages collaboration between small farmers and local school food officials. (PDF: 22 pages)

www.fns.usda.gov/cnd/Lunch/Downloadable/small.pdf

Websites for Local Food Systems Programs

Here are a few of the programs that are working hard to link local farmers and growers to public school lunch programs

Buy Fresh, Buy Local

This initiative was organized by Practical Farmers of Iowa in collaboration with the University of Northern Iowa’s Center for Energy and Environmental Education. Their website offers helpful information about existing Iowa food systems projects, research, and other resources and links.

www.pfi.iastate.edu/BFBL/buylocal/about/index.html

The Hartford Food System: Project Farm Fresh Start

This website gives an overview of this food systems project and describes the goals of Project Farm Fresh Start: to increase the purchase of locally grown produce by the Hartford school system’s food service and to encourage young people to make high-quality, nutritious food a regular part of their diet.

www.hartfordfood.org/programs/project_farm.html

Wisconsin Homegrown Lunch

This grass roots program’s goal is to enhance the Madison, Wisconsin public schools’ existing meal programs by introducing locally grown food to children. Their website includes news, current activities, and resources.

www.reapfoodgroup.org/farmtoschool

Research and Reports

For more information to support efforts to increase the use of regionally grown foods in school meal programs

Diet and Regional Foods

Wilkins, Jennifer L. and Joan Gussow. “Nutritional Adequacy of Regional Diets.” *Proceedings of the International Conference on Agricultural Production and Nutrition*. (1997) Boston, MA. This research

addressed the question of whether or not regional diets are nutritionally adequate.

www.cals.cornell.edu/agfoodcommunity/afs_temp3.cfm?topicID=204

School Food Purchasing

Gregoire, Mary B. and Catherine Strohbehn. "Benefits and Obstacles to Purchasing Food from Local Growers and Producers." *The Journal of Child Nutrition and Management*. 25 (2) (2002): 62-65. This article discusses one aspect of a project funded by the Leopold Center for Sustainable Agriculture that investigated procurement issues related to the purchasing of locally grown and processed foods.

Strohbehn, C., & Gregoire, M. B. "Innovations in School Food Purchasing: Connecting to Local Food." *The Journal of Child Nutrition & Management* (2001). Discusses innovations in school food procurement.

www.asfsa.org/childnutrition/jcnm/02spring/gregoire/

Institutional and Commercial Food Service Buyers' Perceptions of Benefits and Obstacles to Purchase of Locally Grown and Processed Foods

Final report of a project funded by the Leopold Center for Sustainable Agriculture that investigated procurement issues related to the purchasing of locally grown and processed foods. (PDF: 12 pages)

http://www.extension.iastate.edu/hrim/localfoods/downloads/ISU_localfoods_summary_2002.pdf

International

From the United Kingdom and Wales—information about using local foods in schools

Accessing Local Authority Contracts

The *Somerset Food Links* website includes information about the Food and Young People/School Food Projects. Among the downloadables is this report sponsored by Somerset Food Links that examined the obstacles that appear to prevent local food growers and producers from getting access to school meal contracts. (PDF: 16 pages)

www.somerset.foodlinks.org.uk/

Creative Approaches to Local Food in Schools and Hospitals: Briefing Paper No. 13

The *Local Food Works* website is a gateway to local food networks across England's regions. In addition to news, this site includes information about how to source local produce. There are downloadables, including this document that provides a summary of lessons from Europe about getting local food into schools. (PDF: 4 pages)

www.localfoodworks.org

Food Futures

This website supports the development of a local, sustainable food economy in two neighboring areas of West Yorkshire. The site includes news, a directory of local food contacts, descriptions of their projects, a free newsletter, and links.

www.foodfutures.org.uk/news/latest/july01/somerset.htm

Food Miles

This is a handout for kids on the topic of food miles and why they should buy locally. (PDF: 1 page)

www.face-online.org.uk/resources/factsheets/exploring/foodmiles.pdf

Waste Management

RETHINKING SCHOOL LUNCH GUIDE



Waste Management

RETHINKING SCHOOL LUNCH GUIDE

FOOD FOR THOUGHT

“Often, school districts are unaware of the hard costs of garbage generation and disposal. . . . A recent waste audit in Berkeley [California] Unified School District determined that the district was spending on the average of \$26 per student for waste disposal, or a total yearly cost of \$225,661 for the district. A large part of this figure is waste generated from school lunch. School meal programs, even when lunch is brought from home, are significant generators of solid waste.”

— Janet Brown, program officer for food systems, Center for Ecoliteracy



WHAT'S INSIDE?

RETHINKING WASTE MANAGEMENT: The goal, the challenge, and some key points to remember.

EDUCATION, NATURAL RESOURCES, AND SUSTAINABILITY: **Janet Brown**, program officer for food systems, Center for Ecoliteracy, answers questions about school site waste management programs.

CASE STUDY: Vermicomposting—using worms for composting—provides a way for waste management and reduction to become part of the academic curriculum.

A MODEL SCHOOL DISTRICT WASTE MANAGEMENT POLICY: Current policy of the Berkeley (California) Unified School District.

WASTE MANAGEMENT RESOURCES: Garbage in, garbage out? Change your paradigm. Waste management in schools can be educational, inspirational, and even fun. Learn how here.

RETHINKING WASTE MANAGEMENT

The Goal *To initiate school waste reduction and management programs that help students make connections between the way humans live and the need to conserve natural resources.*

The Challenge *To find ways to reduce levels of waste or to initiate new programs that would reduce future waste streams in schools, helping to conserve resources and the environment.*

Schools generate a great deal of waste, especially as a by-product of food service. Many, of course, have some sort of recycling program in place. The challenge to schools is to make waste management a viable and even exciting part of the total learning experience.

Rethinking School Lunch's farm-to-school model makes lunch a learning experience for students. A student lunch program that uses fresh produce will naturally produce a lot of waste. Instead of simply teaching children and youth to place the waste into the proper receptacle, educators, administrators, and parents have a real opportunity here to teach meaningful and lifelong lessons. Plant waste comes from the earth and returns to it in a new form. Students can learn firsthand how recycling the plants they grow, consume, and discard is part of the ongoing cycle of life.



KEY POINTS

“All Education Is Environmental Education”

David W. Orr, Professor of Environmental Studies and Politics at Oberlin College, is blunt: “All education is environmental education. By what is included or excluded, students are taught that they are part of, or apart from, the natural world.”

Including waste management in the suite of learning outcomes empowers students to consider their personal habits and shared responsibilities in terms of the whole school and the greater community. What is important is how students perceive this recycling and the district’s commitment to include waste management in the learning process.

Waste Management Can Be an Important Part of the Curriculum Waste management, properly incorporated in a school’s curriculum, teaches many lessons. The Policy Advisory Committee of the Berkeley (California) Unified School District states this message strongly: “Good stewardship of our environment includes respect for the entire cycle of life by promoting composting of school food waste; recycling of paper, cans, bottles; and the basics of reuse, reduce, and recycle.”

School site routines in the cafeteria, classroom, and playground may include activities related to recycling, composting, and material reuse that naturally lead students to understanding the need to conserve natural resources. Students can play a role in conducting a waste audit of the cafeteria, leading to curriculum and experiential learning opportunities about energy use and nutrient cycling. Educators can easily link these

to school lunch. For example, classroom lessons can use food scraps in decomposition experiments.

Waste Management Is an Opportunity to Refocus District Policy Waste management is a huge opportunity for revising and refocusing district policies. Policies can do all sorts of things you may not have considered. They can determine the length of lunch periods; eliminate the conflict between lunch and recess; improve students’ role in waste management programs; reduce use of prepackaged food items; rethink waste reduction, recycling, and composting; mandate use of recycled paper, real dishes, and dishwashers; and link composting to school gardens.

Waste Management Can Be a Learning Opportunity Proper waste management at school sites, when it is part of the life of the entire learning community, provides students with important information and learning opportunities. When composting, material reuse, and recycling are modeled at school — along with other healthy foundational experiences in gardens, kitchen classrooms, and dining rooms — the school functions as an apprentice community engaged in education for sustainable living. The message to students is that they are valued: Caring for the environment means caring for their future.

Waste Management Programs Can Save Money School districts may be unaware of the costs of garbage generation and disposal. When utility bills are paid at the district level, individual schools never see the real cost of the waste they

throw away every day. A recent waste audit in the Berkeley (California) Unified School District (BUSD) determined that the district was spending on the average of \$26 per student for waste disposal, or a total yearly cost of \$225,661 for the district. Recycling, composting, and dishwashing programs at a pilot BUSD school reduced the cafeteria waste stream between 30 percent and 60 percent.

Farm-to-School = Less Waste The farm-to-school model of food preparation is a great place to start. Buying food in bulk and preparing more meals from fresh ingredients automatically reduce packaging waste. Giving children a greater element of choice in serving themselves and allowing adequate time to eat and enjoy the meal mean they will make better choices, eat more, and discard less.

Beginning to Think About Waste Management Start now to think about a new waste management program. Consider goals, management, and student participation.

Begin with a waste audit:

- **Good record keeping is essential** to the success of waste reduction programs. Waste audits can shed light on where the district can make the greatest gains in the shortest amount of time.
- **Determine the current level of waste** generation at the district and school sites. How much does the school meal program contribute to the district's solid waste problem? Your findings may surprise you.

- **Learn how the district keeps records** connected to waste reduction. If it does not already keep these records, get a program started right away.
- **Examine the district's garbage bill** to determine the monthly expenses associated with waste disposal. Think about some ways the district can cut down on these expenses.
- **Explore hidden costs** connected with disposable trays and utensils. A dishwashing program—replacing disposables with real dishes and utensils—at an elementary school of 350 students eliminated 12,600 pounds of solid waste per school year. Participation in one pilot school meal program almost doubled when real dishes replaced disposable trays and utensils.

Steps a school can take right away:

- **“Pack it in, pack it out”** Ask children to take home the food waste and paper trash from lunches sent from home to create a feedback loop about lunch and packaging for parents. Bring families in early as an integral part of the program.
- **Use vermicomposting** — worms turning food scraps into compost — as an educational program that also reduces food waste. It costs very little, is easy to do, and produces great benefits. Binet Payne, author of *The Worm Café*, says, “Implementing a successful mid-scale vermicomposting program at your site begins with a

shifting of old paradigms, and with the vision and willingness to make a difference in your community and in the world.” See the case study in this section for more information.

- **Let students in on the process of monitoring** the school’s current waste levels and assessing goals for a new program. Becoming aware of what is thrown away can become the first step toward a new way of thinking about waste.



RETHINKING SCHOOL LUNCH

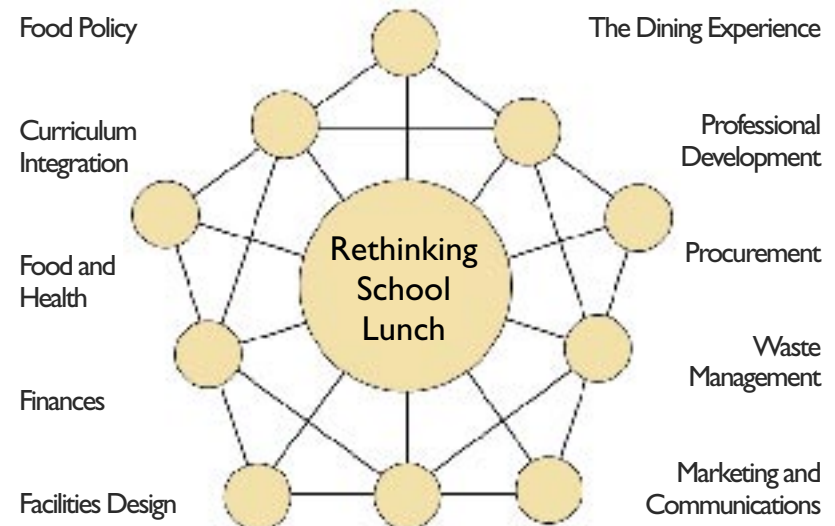
Web of Connections

This document is part of a comprehensive **Center for Ecoliteracy** project that provides helpful information on topics related to redesigning school lunch programs.

The diagram illustrates our systems approach to integrating school lunch programs with curriculum, improving student health and behavior, and creating sustainable communities.

School administrators, food service directors, teachers, and parents will each approach this project from their unique perspective. Readers can begin with the topic that interests them most, then explore the other related topics.

The entire Rethinking School Lunch project is available at: www.ecoliteracy.org/rethinking/rsl.html





Education, Natural Resources, and Sustainability

by Janet Brown, program officer for food systems at the Center for Ecoliteracy with input from members of the Fertile Crescent Network, and Dr. Carolie Sly, executive director of Community Learning Services.

What is the educational responsibility of the district to students regarding proper waste management?

Learning how to live within the limits of the planet's resources is the biggest challenge facing the world's population today. Waste generation and management is at the very heart of that challenge. Students need to begin to make connections between human patterns of living and the need to conserve natural resources. Waste represents enormous stores of energy that can be reclaimed and recycled. Good programs of waste management at schools are powerful and accessible learning tools that begin to make these vital connections for students.

How should schools assess the current level of waste generation at district and school sites?

Often, school districts are unaware of the hard costs of garbage generation and disposal. Frequently, the district's utility bills are batched at the district level so that individual schools never see or realize the costs associated with the waste they are throwing away. One useful place to begin understanding the necessity of reducing waste, and the associated costs of not doing so, is to separate the garbage bills from the rest of the district's operating expenses and to itemize the bills according to expenses associated with individual schools. Once that has been accomplished, a report can be prepared for the superintendent and principals and a plan can be devised to reduce waste at school sites. Awareness of the costs can become a huge motivation to save.

How much do school meal programs contribute to a district's solid waste problem?

A recent waste audit in Berkeley (California) Unified School District determined that the district was spending on the average of \$26 per student for waste disposal, or a total yearly cost of \$225,661 for the district. A large part of this figure is waste generated from school lunch. School meal programs, even when lunch is brought from home, are significant generators of solid waste.

School lunches are often delivered in disposable trays in which each food item, each set of utensils, dishes, bowls, and cups are all individually wrapped and disposable. Frequently lunch competes with recess, making students choose between eating and spending time with friends. The net effect is that they hurriedly consume a favorite or easy to eat item and throw the rest away.

Lunches brought from home are often purchased in disposable plastic lunch boxes that are thrown away at school. Some schools have instituted programs such as "Pack it in...pack it out" by removing trash cans from the lunch area and requiring students

to take home lunch food scraps and trash they brought to school. This has provided a feedback loop to parents about what food is being consumed during lunch, leading to better meal planning, and reducing the volume of trash disposed of at the school site. Schools with several hundred students have estimated the reduction to be about one dumpster per month.

Studies show that when students are given a choice about which entrée they prefer, or are able to serve themselves from a salad bar or family style lunch knowing that they can come back for more, they make better choices, take appropriate portions, and waste less food.

Has the school district integrated its waste reduction and management strategy with that of the municipality of which it is a part?

Usually schools districts are not included in the waste audit of the municipalities of which they are a part. City waste reduction policies do not include school districts and cities are not working with schools to develop mutual goals and work toward them together. Recently, cities have begun to realize that real progress on waste reduction goals will not be possible unless and until schools become full partners in the goals.

From a municipality's point of view, until schools are seen as part of the whole system of waste generation, and, therefore, necessarily part of the whole system of waste reduction, cities are unlikely to reach the ambitious goals of California AB939 that mandates recycling of 50 percent of waste by the year 2000 and 75 percent by the year 2010.

Has the district set goals for waste reduction, recycling and composting that can be revisited from year to year?

School districts can work with their county waste management authority to develop realistic and substantial goals of waste reduction. The county waste authority is equipped to support the

district in setting and reaching its goals. Setting goals and initiating waste audits is a good way to keep track of successes.

Students are a valuable resource in helping the district to sustain its goals and in monitoring progress. As partners in the waste reduction program, students can participate in separating, recycling, and composting programs and can manage waste audits with the assistance of adults. Over time, students come to understand the practice and value of reducing waste and the implications it has for their future.

School lunch programs can reduce waste by ordering in bulk and by preparing more fresh and less prepackaged food. Meal programs that offer more choice allow students to take only what they want to eat, thereby reducing food waste. The cafeteria can also take the lead in making sure that food scraps are composted in the garden.

Schools provide a place for students to share their untouched, leftover food, rather than toss it. Whole fruit, packaged snacks and wrapped sandwiches can be placed on a "giveaway" table so that hungry students can help themselves and good food does not go to waste.

Who will be responsible for managing the program?

Often, the district will rely on volunteers to initiate and manage waste reduction programs. The pitfalls of this approach include volunteer burnout, or in the case of volunteer parents, moving on when their children graduate. In any event, the program tends to disintegrate when it is sustained solely by volunteer labor.

Programs of this type are most successful if waste reduction, recycling, and composting oversight is a district paid position. It may be part of a larger facilities related position, but what is important is that the tasks are institutionalized. That is likely to happen only when the district adopts a policy on waste reduction. On the positive side, early research shows that waste reduction really does save money.

The funds allocated to a part time position funded by the district could potentially be recouped through savings on waste disposal.

What special equipment will the district need and what will it cost?

Often, very little new equipment is necessary to start a waste reduction program. In the case of recycling, the school will need to add trashcans to facilitate the separation of recyclable items.

If vermicomposting is part of the food scrap reduction program, then worm bins will need to be made or purchased. This can easily become a student led project. For example, Laytonville (California) School District initiated a vermicomposting project. The first year, students built four mid-scale worm bins. They cost Laytonville Elementary and Middle Schools \$400 total. In ten month's time, the worm bins eliminated the use of one trash dumpster to save \$6000 in disposal costs.

A good rule of thumb is that all containers need to be designed so that students can manage the chores. Lunchroom staff, teachers or other adults can provide assistance and be available for questions, but the program itself is most effective and sustainable when students run it.

How does the district keep records connected to waste reduction?

Good record keeping is essential to the success of waste reduction programs. Waste audits can shed light on where the district can make the greatest gains in the shortest amount of time. Waste audits are also interesting and instructional. Students are an excellent resource for waste stream record keeping.

In the cafeteria, students can stand near waste bins to inform fellow students of the new program of waste reduction, separation, recycling, and composting. At the end of the lunch period, the same students can assess by weight the amount of aluminum, paper and food scrap waste collected in the bins and identify major sources of waste. Students keep track of amounts and transport food scraps

to the garden for composting. Cafeteria and janitorial personnel can assist students in the audit. At the end of the audit period, students can make a report to the whole school about their findings.

Janet Brown is the program officer for food systems at the Center for Ecoliteracy. Brown is a certified organic farmer and vice president of Marin Organic, an association of nearly 30 organic producers in Marin County working to educate consumers about the value of local food systems. She is founder and chair of the Marin County Food Policy Council. With Zenobia Barlow, she is co-facilitating a five-county network of innovative farm-to-school projects in Northern California, called the Fertile Crescent Network.

Dr. Carolie Sly is executive director of Community Learning Services, a nonprofit organization dedicated to project-based learning. She has worked with students in and out of classrooms for 30 years. Sly holds a B.S. in child development, an M.A. in instructional research and curriculum design, and a Ph.D. in science education. She submitted the final report of The Blue Ribbon Commission for Reducing Waste in Schools to the Alameda County (California) Office of Education in June of 1996.





Case Study

Vermicomposting — using worms for composting — provides a way for waste management and reduction to become part of the academic curriculum.

excerpted from *The Worm Café: Mid-Scale Vermicomposting of Lunchroom Waste—A Manual for Schools, Small Businesses, and Community Groups* by Binet Payne. © 1999 Flower Press.

Today's students are hungry for work that is real, for learning that is meaningful. Project-based learning is a teaching strategy that allows students to take more responsibility for their learning as they make decisions and create solutions to problems that interest them. All subjects can be integrated as students apply their academic, social, and life skills to their work. As schools change, so will our impact on the future. Project-based learning is a teaching strategy that honors students as capable people, readying themselves to be future leaders by giving them chances to be leaders as children.

Today, population growth and changes in society have led to more people and fewer natural resources. It now becomes important

to heed new educational imperatives. Reduce, reuse, and recycle are major economic corollaries of vermicomposting. The organism central to the biological technology of vermicomposting is the earthworm.

Earthworms are animals in a group we know as invertebrates, which have no backbones. They are in the phylum Annelida and are commonly called annelids. Earthworms are exceptionally valuable to the environment. Without their constant burrowing, the soil would lack good drainage and aeration, and their nutrient-rich castings would not be mixed into its upper layer. School vermicomposting projects and school gardens, begun by Laytonville [California] Middle School in the fall of 1987, can demonstrate that communities can reduce their use of local landfills, water, and fossil fuels.

Earthworms did help the elementary and middle schools in Laytonville reduce use of both pesticides and natural resources. Avoiding the use of pesticides on school grounds and in school gardens is possible because nutrient-rich worm castings applied to the soil maintain soil health.

Parents, community members, teachers and students worked together to avoid the use of pesticides on our school grounds. We were concerned about the long-term effects of pesticide use on our students. Some teachers felt there was a connection between some of the systemic pesticides being used on our grounds and an increase in headaches and nosebleeds experienced by some of our students. Using vermicompost as a soil amendment helps improve the tilth, nitrogen, and pH of the soil. The improved tilth causes less leaching of nutrients out of the soil and contributes to a healthier soil full of microorganisms, including earthworms, that help increase the yield of crops grown in our school garden. Soil and crops that are healthy are less likely to be attacked by insects and disease. We have also reduced our use of commercial fertilizer.

Because the schools relied on worms on-site instead of using gasoline-powered trucks for transportation to a recycling plant

25 miles away to process paper wastes, they actually reduced fossil fuel use. Water conservation was another objective of the comprehensive organic gardening program. Mechanical garbage disposal in a kitchen sink requires eight gallons (30 liters) of water to dilute one pound of food waste. Because Laytonville schools no longer wash food waste down the drain and, in addition, reuse rinse dishwater to swish out empty milk cartons before transporting them to the recycling center, they used 103,680 fewer gallons (394,000 liters) of water a year after beginning the program than they consumed the previous year.

Above all, vermicomposting reduces solid waste at its source. Every year people in the state of California throw away 146 million tons, (132,700,000 t) of trash. Each person is responsible for generating about one ton of waste each year. Of that waste, 880 pounds is paper, 200 pounds is glass, 180 pounds is metal, 140 pounds is wood; another 140 pounds consists of cloth, rubber, plastic, and leather; and 460 pounds is yard waste. Schools top the list of sources for discarded paper and food waste. Mid-scale vermicomposting provides a simple, effective, and inexpensive method for processing paper and food wastes that requires no transportation to a central location for further processing. At the same time, mid-scale vermicomposting empowers students to feel they can, and do, make a difference to the positive economies of their town through active stewardship of the natural resources they use.

During the program's first school year, a ten-month period (not a 12-month calendar year), Laytonville vermicomposted 3,600 pounds of cafeteria food waste and fed 9,360 pounds of protein food waste to chickens and pigs. The schools recycled 567 pounds of milk cartons and 654 pounds of tin cans. Adding these numbers shows that more than seven tons of solid waste were effectively diverted from one local landfill.

That first year of mid-scale vermicomposting, the school district saved \$6,000 in dumpster fees by reducing the amount of paper

and food waste collected in commercial dumpsters that eventually went to the landfill. Janitors also spent less time handling trash-can waste. Five years later, this successful vermicomposting program for a school population of 400 students continues to provide a model for student citizenship.

Besides helping reduce the flow of food waste to landfills, mid-scale vermicomposting provides schools with unique study opportunities. An introduction to small business practices arises as staff and students conduct worm workshops and sell both worms and vermicompost to the workshops, and sell both worms and vermicompost to the community. Students also experience mathematical concepts and scientific methods close-hand: measurement, ratio and proportion, area, temperature, observing, predicting, testing, comparing, and contrasting. There is not a better vehicle than a worm bin for the study of a healthy ecosystem.

A vermicomposting bin is an alive and extremely complicated system. Interdependence, flexibility, diversity, cooperation, and sustainability are all represented in a vermicomposting bin. The inhabitants are so interrelated that to study the system in separate parts is impossible. Worm bins are not just collections of plants, animals, and bacteria. Worm bins are communities involved in complex relationships. Within the walls of a worm bin, millions of creatures are dependent on one another for survival, while others are content to share a desired environment or food source. So, to understand the dynamics of worm bins, we must first look to, and understand, relationships.

Our combined vermicomposting/organic-gardening program is successful because it is systemic. In life, we can find many types of systems—health systems, educational systems, transportation systems, and so on. Each system is dependent on its many parts which must be organized and integrated if the system is to survive and flourish. Systems thinking, or systems engineering, focuses

more on coordination of the total system rather than on its individual parts. Systemic programs are methodical, ordered and comprehensive.

Vermicomposting is cyclical in nature. The school, a system itself, is in many ways very much like an ecosystem. Energy and matter move through the school community and, like a healthy ecosystem, many substances are recycled. The understanding of connectedness in this process is invaluable, realizing that we do not make decisions in isolation and that our every action has an equal or greater reaction. Actions of each person directly involved in the cycle guarantee the success of our vermicomposting project which does not depend on special circumstances. It is very simply managed by children with the aid of adults. Vermicomposting has become a part of daily life in our school cycle.

Implementing a successful mid-scale vermicomposting program at your site begins with a shifting of old paradigms, and with the vision and willingness to make a difference in your community and in the world. Always involve as many people in the initial process as you can. Involvement by others will achieve more “buy-in” and a greater long-term success rate for your program.

Binet Payne is an educator and author of *The Worm Café*, which she wrote while teaching at Laytonville Elementary and Middle Schools in Laytonville, California. She is also author of numerous articles in periodicals, magazines, and newspapers and has developed nationally recognized programs to teach ecology. Payne has worked with the Center for Ecoliteracy, the Autodesk Foundation, the Center for Complex Instruction at Stanford University, and for the North Coast Rural Challenge Network, helping students become stewards of their communities.

Checklist for Successful Mid-Scale Vermicomposting

by Binet Payne, author of *The Worm Café*

1. Conduct a waste audit. Parents, community members or a group of students can do this.
2. Get funding. Pacific Gas and Electric gives mini-grants for projects that reduce waste generated on site. The American Association of Nurserymen gives grants to schools. The National Gardening Association in Burlington, Vermont, also gives small grants to schools.
3. Involve all staff from the very beginning of the project. Start with students and staff meeting together to develop a plan. Keep one another informed every step of the way.
4. Purchase the materials and have students assemble bins with staff or volunteers.
5. Start small. Start where you can and build up the program as you go. Don't wait.
6. Set up a schedule for waste flow. Provide clipboards for each bin.
7. Monitor and record the daily health of the bins.
8. Have students report their project to the school board. Invite local news personnel to the school. Have students conduct workshops on vermicomposting for the community.
9. Use the castings to grow vegetables in the school garden or to nourish plants that beautify the school grounds.
10. Know you are making a difference one step at a time.



A Model School District Waste Management Policy

Current policy of the Berkeley (California) Unified School District

Office of the Superintendent

Adopted March 7, 2001

Resolution Establishing a Green Procurement and Sustainable Procedures Policy for Berkeley Schools

WHEREAS, it is important to our society to reuse, reduce and recycle, and rot (4Rs) as much as possible of the abundant waste we generate; and

WHEREAS, the 4Rs saves energy and resources that will directly benefit our communities; and

WHEREAS, the Berkeley Unified School District can follow the example of other large institutions, such as the University of California, Berkeley, and the City of Berkeley, in establishing comprehensive green procurement and sustainable practices and policies; and

WHEREAS, the City of Berkeley provides collection services for bottles, cans, plastic bottles, cardboard, mixed paper and landscape trimmings at no additional cost; and

WHEREAS, a comprehensive recycling program will reduce costs of trash disposal by 30-59%, and

WHEREAS, participation in a green procurement and sustainable practice at schools furthers our goal of educating students to become: "Lifelong Stewards of the Land"

THEREFORE, BE IT RESOLVED, that the Berkeley Unified School District will implement a comprehensive green procurement and sustainable practice plan that will include:

1. Recycling of cardboard, mixed paper, bottles, cans and landscape trimmings.
2. Recycling in every classroom, staff room and administration area of paper and of bottles and cans as feasible.
3. Recycling of bottles, cans and paper if feasible, in cafeterias, snack bars and kitchens.
4. All construction and demolition materials shall be reused or recycled in the appropriate manner, to the greatest extent possible.
5. Promote our use of source reduction and recycled products whenever feasible.

6. To purchase source reduction products and/or recycled products containing the highest amount of postconsumer material practicable, or when postconsumer material is impracticable for a specific type of product, containing substantial amounts of recovered material. Such products must meet reasonable performance standards, be available at a reasonable price and be available within a reasonable time.
7. All equipment, both leased or rented, shall be compatible with the use of source reduction and recycled products.
8. All BUSD departments, in preparing departmental goals and objectives, and action plans, shall include within these goals and objectives and actions plans information on each department's goals and actions in applying this policy.

All departmental evaluations shall include within the evaluation, assessment of each department's effectiveness in applying this policy.



Waste Management Resources

Center for Ecoliteracy Newsletter

Inspiring stories and information that illustrate the efforts of educators and students whose work the Center supports

www.ecoliteracy.org

Food Cycles: Starring The Edible Schoolyard Compost Pile
Spring 2002: Composting at The Edible Schoolyard

www.ecoliteracy.org/pages/newsletter3_compostpiles.html *Learning to Recycle at Edna Maguire Elementary School*

Summer 2003: Waste-free lunch

www.ecoliteracy.org/pages/newsletter5_maguire.html

Quick and Easy Compost

Spring 2002: A recipe for compost

www.ecoliteracy.org/pages/newsletter3_compostrecipe.html

Vermicomposting

For more information about composting with worms

The Worm Café: Mid-scale Vermicomposting of Lunchroom Wastes
Binet Payne

This manual describes how Binet Payne and her students developed a system to compost lunchroom waste with worms and save their school thousands of dollars per year. The book includes earthworm diagrams, bulletin board materials, a sample letter to parents, charts, and more.

www.wormwoman.com/acatalog/Wormwoman_catalog_The_Worm_Cafe_4.html

Worm Woman

Mary Appelhof's website for worm composting resources offers books, videos, resources for classroom studies, and more.

www.wormwoman.com

School Waste Reduction Programs and Resources

For more information about school waste reduction programs and resources to help you start a program at your school

Away with School Waste: A Teacher's Guide to Starting a School Waste Reduction, Recycling & Composting Program

Alyson Chambers, Arlene Kozimbo, Erika Perloff, and Collette Streight

This guide was written for teachers who want to start a school-wide waste reduction program at their schools. Produced by Ecology Action, Life Lab Science Program, and Santa Cruz County Office of Education. (PDF: 12 pages)

www.wastefreeschools.org/PDF/away_waste.pdf

Composting in Schools

The information on this site is drawn from the book *Composting in the Classroom* by Nancy Trautmann and Marianne Krasny. The book offers ideas for high school research projects and a wealth of compost-related information.

<http://compost.css.cornell.edu/CIC.html>

Cornell Waste Management Institute

This institute serves the public through research, outreach, training, and technical assistance programs in solid waste disposal, management, and planning.

<http://cwmi.css.cornell.edu/>

Environmental Defenders Teacher Resource Packet

This packet provides sample hands-on activities to help students learn more about protecting the environment and a list of environmental education resources. (PDF: 16 pages)

www.888cleanla.com/epd/envdef/TEACHER-TeacherPacket.pdf

Food Diversion at Schools

This material provides options and methods for preventing, reusing, and composting food waste in schools. Lists on-line resources and publications available from the California Integrated Waste Management Board. (PDF: 3 pages)

www.ciwmb.ca.gov/Publications/Organics/44203018.pdf

Oregon Green Schools Association

This organization's mission is to assist Oregon schools in setting up and maintaining effective, permanent waste reduction and resource efficiency programs that improve the school environment and community.

www.oregongreenschools.org/about.html

Organizing Cafeteria Recycling Programs in Elementary Schools: A How-to Guide

This document from the Los Angeles County Department of Public Works, Elementary School Environmental Education Program outlines an easy-to-implement school cafeteria recycling program. (PDF: 9 pages)

www.888cleanla.com/epd/envdef/Teacher-PrincipalPacket.pdf

Recycling Manual for NJ Schools

This manual created by the Association of New Jersey Recyclers (ANJR) offers school personnel step-by-step guidance through the process of setting up a comprehensive recycling program. (PDF: 58 pages)

www.state.nj.us/dep/dshw/recycle/njsrpm.pdf

Rethinking Recycling: An Oregon Waste Reduction Curriculum

Oregon Department of Environmental Quality offers activities and lesson plans for students in grades K-5.

www.deq.state.or.us/wmc/solwaste/rethinkrecyc/rethinkrecyc.html

Santa Cruz County Public Schools Resource Conservation Program

This district-wide program is built around the set up, maintenance, and improvement of paper, cardboard and mixed container recycling, food composting, and a wide variety of reuse and reduce systems.

www.wastefreeschools.org/structure.html

Saving Money & Reducing Trash at School

Minnesota Office of Environmental Assistance summarizes the waste problem and offers suggestions for reducing waste. (PDF: 2 pages)

www.moea.state.mn.us/p2week99/99school.pdf

School District Waste Reduction: Purchasing Table

There are several waste reduction considerations to take into account when purchasing school food service items. This table may help identify purchasing options that effectively promote a district-wide waste reduction program.

www.ciwmb.ca.gov/schools/wastereduce/food/purchasing.htm

Schools and Waste

The Natural Resources Defense Council's fact sheets summarize why it's important to recycle in schools and what kids can do. (PDF: 2 pages)

www.nrdc.org/greensquad/

Terry Husseman Sustainable Schools Awards: A Guide to Achieving Sustainability in Your School

Jim Bill

The purpose of this guide is to help schools establish sustainability programs and to provide ideas for improving existing programs. It was developed also to serve as a resource document for schools wishing to compete in Ecology's School Awards program. (PDF: 40 pages)

www.ecy.wa.gov/pubs/0207022.pdf

Waste Audit Program [Earth Flag Program]

This environmental education initiative, sponsored by Ijams Nature Center, facilitates school-wide waste reduction, improvement of school grounds, and reinforcement of classroom concepts through learning environmental responsibility.

www.ijams.org/Pages/ef_audit.htm

wastefreelunches.org

This website includes information on how to pack waste-free lunches and helpful links to other sites.

www.wastefreelunches.org/about.html

Business Recycling and Waste Reduction: What Schools Can Do to Reduce, Reuse and Recycle

Solid Waste Services of Montgomery County, Maryland, offers waste reduction tips to schools and businesses.

<http://solidwaste.dpwt.com/sorrt/busrec7g.htm>

Research and Reports

For information to support efforts to reduce waste in schools

Report on the CIWMB School District Diversion Project (April 2002)

This report by the California Integrated Waste Management Board includes strategy, pilot programs, and background information on efforts to initiate waste reduction in institutional settings. Six school districts participated in the pilot project. (PDF: 240 pages)

www.ciwmb.ca.gov/Publications/Schools/31002008.pdf

International

For information about waste management programs on an international level

Waste Free Lunches

Bramley Frith Environmental Education Centre's information on waste free lunches.

www.bramleyfrith.co.uk/ecocentre/wastefreelunch.htm

Waste Watch Education Services

Waste Watch's education programs include Schools Waste Action Club and WESP (the Waste Education Support Program).

www.wastewatch.org.uk/education/



Marketing and Communications

RETHINKING SCHOOL LUNCH GUIDE

Rethinking School Lunch – a project of the **Center for Ecoliteracy**
2528 San Pablo Avenue, Berkeley, California 94702 www.ecoliteracy.org



Marketing and Communications

RETHINKING SCHOOL LUNCH GUIDE

FOOD FOR THOUGHT

“You can’t devise a campaign before you’ve found out about the attitudes, language, beliefs, and behaviors of the people you’re trying to reach. . . . Get them talking about what they like about food, that descriptive language, so that you can use those very same words to describe the food that you’re planning to serve. . . . You need to get behind the answers to understand what they are really looking for. Do parents really want their kids to get more vitamins, more iron? Or are they really saying that they want their kids to be healthy?”

—Andy Goodman, communications consultant



WHAT'S INSIDE?

RETHINKING MARKETING AND COMMUNICATIONS:
The goal, the challenge, and some key points to remember.

**INTERVIEW WITH COMMUNICATIONS
CONSULTANT ANDY GOODMAN:** Valuable insights
into marketing to students and parents.

MARKETING AND COMMUNICATIONS RESOURCES:
Once the new farm-to-school program is ready to go,
take some time to help parents and students feel just like
you do: It's a great idea! Learn how to successfully market
a farm-to-school approach to school lunch, and explore
general resources on marketing.

RETHINKING MARKETING AND COMMUNICATIONS

The Goal *To help school districts successfully promote healthy meal programs and meaningful learning environments to parents and students.*

The Challenge *Developing a message that helps administrators, educators, parents, and students understand that the farm-to-school model supports their efforts to improve student performance and enhance their well-being.*

The healthy school lunch program has competition. Even though choices are made at the district level, the support of parents, students, and other stakeholders can be crucial in ensuring the success of your program. Food advertisers spend nearly \$7 billion yearly on television advertising. Children see about 21 commercials on TV per hour, or three-and-a-half hours of commercials a week. This means that getting the message across about healthy eating is often a matter of being heard through the noise.

Messages about healthy meals compete for students' attention with messages from commercial food manufacturers promoting high-calorie, low-nutrition foods. That's why it's crucial to do market research about what actually appeals to students, and what prompts parents to enroll their children in healthy programs.

Targeting the message to the specific audience — whether it's the district, whose food policy you want to change; or parents

and students, who need to understand the connection between a healthy school environment and its effect on student behavior, achievement, and health — will help it be heard and accepted.



KEY POINTS

School Boards Can Factor in the Need for Marketing

When adopting a district food policy, school boards can factor in marketing as a necessary part of the launch of the new program. It helps when the school board, district superintendent, and food service director all understand that student acceptance is linked to the way the program is positioned and promoted, and that parent acceptance is highly influenced by student acceptance.

The quality of the dining experience has been shown to significantly influence student acceptance or rejection of school meal programs. That's why many district policies address this issue directly. In addition, district food policies often wisely restrict commercial advertisements and à la carte snack and beverage concessions on school campuses that conflict with or undermine the district's own meal programs and standards.

Enlist Student Input in Marketing Campaigns Students can be effective ambassadors of improved school meal programs, so include them in designing marketing campaigns that promote school lunch to students. With adult support, they can conduct taste tests, videotape interviews with peers, lead student focus groups, suggest selling points adults may not consider, and participate as student members of the district nutrition advisory committee.

Know the Audience When planning marketing campaigns for student meal programs, it's vital to know who the audience is and to understand their needs. As communications

consultant Andy Goodman says, "You can't devise a campaign before you've found out about the attitudes, languages, beliefs, and behaviors of the people you're trying to reach. . . . Once you've heard their language and attitudes, . . . then it's your task to come up with messages that speak their language and encourage what they're hopeful about and speak to what they're concerned about."

Here are some questions to think about:

- **Who is the target audience** for the campaign? Students and their parents represent two separate audiences for messages concerning improvements in school meal programs.
- **How can the inquiry process uncover the most useful information** about student, family, and community attitudes toward school meal service, food preferences, and the dining experience at school?
- **Where do members of the target audience(s) receive information** about school programs that they are likely to trust and use? What opportunity does that present for promotion?
- **Who are the most influential spokespeople** for the program?
- **What are the important messages** to communicate about the new food program and the dining experience, and what messages are right for which audience?

- **What research has been done** with parents and students about pricing of improved meals?
- **Are improvements to the meals** themselves mirrored by improvements to the dining experience?
- **What improvements to the dining venue have the most appeal** to students? (For example: cleaner, nicely painted, softer lighting, more comfortable furniture, more time to enjoy meals and to eat with friends, better presentation of food, a variety of serving styles, music, and so on.)

Interviewing Strategy Is Important Information gathered in focus groups, informal surveys, or peer-to-peer questionnaires can be used to design program improvements. Good interviewing is an art. Andy Goodman offers many valuable ideas later in this section.

Here are some basic points to keep in mind:

- **In a focus group situation**, people often say what they believe the interviewer wants to hear, rather than what they truly believe. Interviewers need to dig deep enough to get to authentic responses.
- **Interviewers should not assume** that they know what a subject is thinking. Instead, they need to listen for information and find ways to elicit honest answers.
- **Subjects are more likely to answer truthfully** when interviewed by their peers and people they trust, and when they are assured that their privacy and confidence will be respected.

Make Sure Communication Continues After the Program Is in Place Successful programs will elicit feedback on a regular basis in order to continually improve their service. A successful marketing strategy will include a variety of approaches, channels, and messages that can be refined as the program grows. Once the program is up and running, it is equally important to revisit the customer base of students and parents to elicit reactions to the new service and to respond to feedback.

Here are some key points to consider:

- **Establish a routine of eliciting opinions** from students and parents about the school lunch program. Food service staff can ask informal questions on a daily basis about student satisfaction with particular menus or with the dining atmosphere itself. Make printed, anonymous questionnaires about food service available in the lunchroom and send parent questionnaires home.
- **Invite students and parents to serve on the nutrition advisory committee** to make certain that student and parent concerns and recommendations are represented.
- **Remember that a student's decision to eat or not eat at school** may have more to do with the total lunch experience than with the lunch itself. In promoting an improved school meal program to students, recognize that social factors often outweigh meal quality in determining preference.

- **Keep in mind that the least expensive form of marketing** is word of mouth. When improvements to school meals are reinforced by improvements to the total dining experience, students will build enthusiasm for the program with their peers and with parents.
- **Taste-testing food with students** is one of the most effective ways of promoting and marketing improvements in school meal programs. Students feel respected when their opinions are solicited as a part of developing new programs, and they invariably contribute good ideas.

- **Students can be prepared to accept improvements** in the school meal program *before* the improvements occur. Students are much more likely to enjoy unfamiliar foods if they have grown them in the school garden or prepared them in a cooking class.

RETHINKING SCHOOL LUNCH

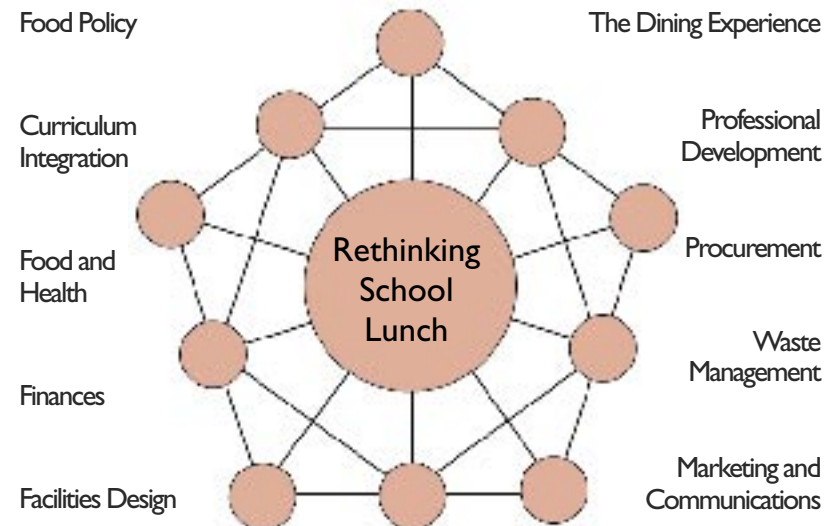
Web of Connections

This document is part of a comprehensive **Center for Ecoliteracy** project that provides helpful information on topics related to redesigning school lunch programs.

The diagram illustrates our systems approach to integrating school lunch programs with curriculum, improving student health and behavior, and creating sustainable communities.

School administrators, food service directors, teachers, and parents will each approach this project from their unique perspective. Readers can begin with the topic that interests them most, then explore the other related topics.

The entire Rethinking School Lunch project is available at: www.ecoliteracy.org/rethinking/rsl.html





Interview with Communications Consultant Andy Goodman

by Janet Brown program officer for food systems at the Center for Ecoliteracy and Michael K. Stone, Center for Ecoliteracy

Center for Ecoliteracy: *Many school districts are hoping to improve school meal services by offering meals prepared from fresh, organic or sustainably grown ingredients, purchased from local farms. How would you advise them to communicate to students and parents about these improvements?*

Andy Goodman: We want to help them position that offer in the best way, so that they don't step into any potholes. I can't give anybody specific advice about the best way to proceed until they've done some preliminary research. You can't devise a campaign before you've found out about the attitudes, language, beliefs, and behaviors of the people you're trying to reach.

First you have to sit down with groups of students and groups of

parents and ask very basic questions to get a much clearer idea of what their attitudes and beliefs are, what they're looking for from school lunches, what language they use around food, and how they react to the terms that we would use.

I think we know intuitively that we don't want to be coming at them with fancy language like "sustainable" this or "organic" that, language that they may not understand or that carries baggage for them.

So you ask them, "What terms do *you* use to describe food that you like?" If you ask, "What's your favorite food?" and they say "Cheeseburger," then ask "Why?" Get them talking about what they like about food, that descriptive language, so that you can use those very same words to describe the food that you're planning to serve. Sometimes, you'll have to drill down a little bit. For example, if they say that they enjoy what is served at the "food court," you need to pursue that answer all the way to what it really means, which might be "multi-ethnic, multi-choice." They may be asking for something that they don't know how to ask for. You need to get behind the answers to understand what they are really looking for. Do parents really want their kids to get more vitamins, more iron? Or are they really saying that they want their kids to be healthy?

Their level of understanding about food and nutrition will determine where you go from there. A lot is going to depend on what the parents and kids tell you. You may have to phase some things in slowly, if you're working in an environment where there's tremendous ignorance, or just deeply ingrained bad habits. If you try to move too quickly to a fully healthy diet, people might reject it simply because they're just not ready.

CEL: *Kids have their own language for talking with each other. How can we get that kind of honesty in the focus group?*

AG: That's a very good question. The research process is fraught with pitfalls where people give you the answer they think you want you to hear, and then do the complete opposite. I'll give you an

example. A department of health was researching an anti-smoking campaign for teens, and hired an ad agency to help. The agency knew that if they put kids in a focus group around a table with fluorescent lighting and adults asking questions, the kids would tell them what they wanted to hear, not what the kids really thought. So the agency hired teenagers, gave them video cameras, and said, “Find kids who are in line at a movie, or at a mall, or just killing time. Explain that you’re collecting opinions about smoking for a project. Ask them some questions.” It was kids asking kids in their own relaxed environment, where they felt a level of privacy and confidence. The answers they got from the kids were extremely candid. That’s where they got their themes for talking to kids about not smoking.

There’s a great focus group story from Sony. Boom boxes used to all be black, but Sony thought, “Let’s introduce some new colors.” So they brought in these “typical teenagers” to talk about boom boxes. They showed the kids some boom boxes in yellow, green and red, etc., and said, “What do you think of these new colors?” And the kids said, “Wow! New colors! Exciting!” After they asked the kids for their opinions, they let each kid choose a boom box to take home with them as a thank you gift for coming. They had a whole lineup of boom boxes in every color set out, and every kid chose black. The researcher said, “That’s where we learned that the answers you get on the survey may not be consistent with what kids really think.”

CEL: *In addition to peer-to-peer questioning, what other ways can interviewers elicit authentic opinions from students?*

AG: Let’s say I’m one kid interviewing another kid. The conversation goes like this:

- Tell me your three favorite things to eat.
- Pizza, cheeseburgers, hot dogs.
- Why do you like pizza?

– It’s greasy. It’s cheesy. It tastes good.

– Why do you like cheeseburgers?

– They taste good.

– Why do you like hot dogs?

– They taste good.

They probably won’t be any more eloquent than that. So I ask them, “Tell me something that your parents made you eat that you were surprised that you liked.” Or, “Tell me about something that someone told you was good for you that actually tasted good.” I try to get them talking about something that they tried that was different, that wasn’t a hamburger or a cheeseburger or a hot dog, and that actually tasted pretty good. That kind of question will start to elicit from them some different things to eat, and maybe some different reasons for why things taste good.

CEL: *What about exploring messages that reach parents?*

AG: The same process goes for parents. If you can create an environment where they don’t feel as though they’re talking to researchers or outsiders, but talking amongst themselves, you’ll get more candid interest there as well.

Try to find some setting such as a dinner party where, on a peer-to-peer basis, the host could pass around a simple survey and say, “I’m doing some research and I need to get 20 friends to talk to me about the foods they like. Could you fill this out for me?” The questionnaire asks questions such as, “Tell me about your last five dinners. Tell me what you ate. Tell me about your last five lunches. Put a check if you prepared it yourself or someone prepared it for you.” It can be fairly tame. See if you can prompt some conversation around that. In a professional focus group setting, the gathering would be taped to listen to afterward.

CEL: *How would you select the parents?*

AG: You have to find people who are hubs, who have a lot of people around them, so that if they have a dinner party, they can get 15 to 20 people around the table. With some thought, you'll know who the leaders are in the community. I know there are just certain parents at my daughter's school who would be right for this. I think you probably know the same thing in your children's schools.

You want to ask some financial questions, obviously. You also want to ask questions like, "If you wanted your kid to have a balanced diet, give me five lunches that you'd say, 'Good, they're getting what they need.'" That will also test levels of knowledge, which will be helpful. You want to get their perceptions about what tastes good and what doesn't taste good. You can be even more directive like, "Have you ever had any organic food? How did it taste?" If you find that parents have the same preconceptions as the kids, it's important to recognize that parent opinion will reinforce the kids' reservations about the food. It's something you'll need to address in the marketing program.

You can ask, "When you were growing up, what kind of food did you have in your house?", "What's your favorite thing to cook?", "Tell me some things you cook for your kids." If they think you're looking for answers that spell a balanced diet, then they'll tailor what they tell you about what they cook. But if instead you are asking about what they enjoy cooking, and it adds up to a very imbalanced diet, you need to know that, because that's the world these kids live in.

Once you've interviewed the kids and their parents, and heard their language and their attitudes, assumptions, likes and dislikes, and so on, then it's your task to come up with messages that speak their language and encourage what they're hopeful about and speak to what they're concerned about.

CEL: *How might that work to promote fresh, healthy food in the school lunch?*

AG: First of all, I don't know to what degree lunch is about food, and it's dangerous to assume. Look at who's successful. Look at McDonald's and their slogans. It's all about the *experience*. There's almost nothing about the food. Burger King will try to sell you on flame broiling, but for a lot of these places the food is considered interchangeable. So you also need to find out from your audience how much lunch is about the experience of lunch, about where they sit, who they sit with, and what's going on. Maybe the food is incidental. If that's the case, then your task isn't about marketing the food as much as *creating an environment where great things are happening*.

CEL: *How much of marketing is really removing barriers—mental barriers or cultural barriers or something that blocks someone from really wanting to do something?*

AG: The question I always ask in a marketing effort is, "Is this a matter of taking something that people believe in and building on it? Or is it taking something that they're concerned about and overcoming it?" It varies from instance to instance.

Take taste, for example. Taste-testing is an important part of the research. If the food doesn't taste good to the kids, that's a barrier. I'm assuming that the food you pick will taste good. If the kids say the food tastes great, that becomes part of your campaign. But what if they basically tell you, "Yeah, the new items are fine. They're a lot like the old items"? If you find that out, then I think the message to your planning team is not to make a big deal about rolling it out. Just phase it in, and don't call attention to it. That will only get people thinking about it.

CEL: *What about the price of the meal?*

AG: I'd want to know what price is a deal breaker for families. If they say, "Look, I can't give my kid \$3.50 a day, five days a week for lunch, no matter what you're serving," you have to deal with that somehow.

CEL: *Often, only the poorest children eat the school lunch, and not even as many as qualify for it. This condition is linked to the poor quality of the food, and also the stigma associated with the free lunch. How can schools improve the program for kids that need the free lunch program and also attract more full-pay kids to the service?*

AG: We have to do things in the launch that make a fresh impression . . . that make lunch fun, cool, and their own thing. But probably no matter how good it is, most campaigns work better with a phase-in where people have a chance to put their toe in and experiment a little before they're fully committed. For example, if you substitute a healthy burrito for an unhealthy burrito that's already on the menu, and no one complains, you're fine. If you can do it without a lot of hoopla, even better, because if the foods have the same name and the same kind of look, then maybe the answer is "Don't make a big deal about it."

CEL: *Assuming that you're figuring out what your message is, and the words in which to express it, how do you decide what medium to use to deliver that message?*

AG: As part of your research, you ask parents, for instance, where they get their information about what's happening at school. "From my kid, from the neighborhood, from the flyer that comes home, from the bulletin board." Then you just get your message into that flow. The same thing with kids: When something's happening at school, how do you find out about it? "An announcement over the loudspeaker. It's on the blackboard. I'm handed something. I hear it from friends." We may have assumptions about how information is transferred, but let's hear what works for them. I think a good general rule is, don't assume anything. Find a way to ask and get an honest answer.

It's the same thing with choosing your spokespersons. Who do parents and kids believe? You ask, "Where do you get information

that you trust most about the school?" or "Whose advice about the school do you rely on?"

I think all of this comes down to being a student of human nature, and knowing what kind of circumstances permit a person to speak most honestly. The task is to create those circumstances, using your own common sense and whatever tools you have. Ask questions in the most neutral sort of way in order to get really honest answers. Parents and kids will tell you what to do in your campaign. They'll give you the answers, if they get the chance to do it candidly.

Andy Goodman is a communications consultant based in Los Angeles, California. His firm, a goodman, helps public interest groups, foundations, and progressive businesses communicate more effectively through print, broadcast media, and the Internet. Prior to forming a goodman, he founded and ran the American Comedy Network, wrote and produced for television, and served as President of the Environmental Media Association (EMA). He is the author of *Why Bad Ads Happen to Good Causes*.



Marketing and Communications Resources

How Food Companies Market

Food Marketing and Advertising Directed at Children and Adolescents: Implications for Overweight

The American Public Health Association passed a resolution in support of curbing food marketing aimed at children. (PDF: 3 pages)
www.apha.org/legislative/policy/2003/2003-017.pdf

Pestering Parents: How Food Companies Market Obesity to Children

A Center for Science in the Public Interest study that documents how children are bombarded everywhere and every day with sophisticated messages promoting high-calorie, low-nutrition food products. Names are named. It also outlines strategies for fighting back. (PDF: Part One, 29 pages; Part Two, 38 pages)

\$10 at CSPI-Pestering Parents, 1875 Connecticut Avenue NW, Suite 300, Washington, DC 20009.

Part One: http://cspinet.org/new/pdf/pestering_parents_final_part_1.pdf

Part Two: http://cspinet.org/new/pdf/pestering_parents_final_part_2.pdf

Wootan, Margo. "Thought for Food." *The Lancet*. 362 (9396) (2003). The United Kingdom Food Standards Agency commissioned a review of the evidence on food marketing's affect on children's diets and health. This November 15, 2003 summary is available in back issues on *The Lancet* website.

www.thelancet.com

Help for Food-Related Marketing in Schools

Changing the Scene: Improving the School Nutrition Environment: A Guide to Local Action

USDA publication intended to help examine a school's nutrition environment and to design and put into action a plan for improvement, including marketing. (PDF: 48 pages)

www.fns.usda.gov/tn/Resources/guide.pdf

The School Environment: Helping Students Learn to Eat Healthy

A brochure from the USDA with basic facts about current nutrition and health problems and recommendations for actions by schools. (PDF: 2 pages)

www.fns.usda.gov/tn/Resources/sebrochure.pdf

How to Talk "Nutrition" to Kids

A checklist from Child Care Choices, Inc. based on the experiences of focus groups talking with children.

www.childcarechoices.net/FoodProgram_NutritionEd_NutritionTopic_TalkToKid.html

Teaching Your Kids about Food Advertising and Marketing

Tips from the International Food Information Council Foundation for helping children become media literate and able to identify the messages behind advertising messages.

http://kidnetic.com/home/bright_papers/bp_cat6_52.html

Perspectives on "Buy Locally Grown" Slogans

A fascinating report from The Food Trust on responses to a variety of slogans proposed to promote buying locally grown food at the Reading Terminal Market in Philadelphia. (PDF: 8 pages)

www.thefoodtrust.org/pdfs/slogans.pdf

Real-Time Marketing

A summary from a National Food Service Management Institute seminar on marketing. (PDF: 11 pages)

www.nfsmi.org/Education/Satellite/ss26/partic.pdf

School Foods Tool Kit

A guide for improving school foods and beverages, from the Center for Science in the Public Interest. Its communications sections are directed more at convincing government and school boards to support healthy school food than at persuading students and parents about the value of eating better food.

Hard copy \$10 from CSPI's School Foods Tool Kit, 1875 Connecticut Avenue, NW, Suite 300, Washington, DC 20009. Available for free on their website.

www.cspinet.org/schoolfood/

General Resources on Marketing

a goodman: Good Ideas for Good Causes

CEL interviewee Andy Goodman's communications consulting firm helps public interest groups, foundations, and progressive businesses reach more people more effectively. His book, *Why Bad Ads Happen to Good Causes*, is available for free on his website.

www.agoodmanonline.com

Focus Groups: A Practical Guide for Applied Research

Richard A. Krueger and Mary Anne Casey

CEL interviewee Andy Goodman recommends this book.

www.sagepub.com/Home.aspx

Spitfire Strategies

This consulting company specializes in promoting positive social change. See "Spitfire Recommends" section on their website for helpful research and ideas.

www.spitfirestrategies.com/

The Spitfire Strategies Smart Chart

A fill-in chart identifying key decision points in a marketing campaign, including "reality check" questions. (PDF: 1 page)

www.spitfirestrategies.com/pdfs/stand_alone_chart.pdf

Cover photo: Tyler/Frog Hollow Farm/Center for Ecoliteracy



About Rethinking School Lunch

RETHINKING SCHOOL LUNCH GUIDE

Rethinking School Lunch – a project of the **Center for Ecoliteracy**
2528 San Pablo Avenue, Berkeley, California 94702 www.ecoliteracy.org



About Rethinking School Lunch

RETHINKING SCHOOL LUNCH GUIDE

by Zenobia Barlow, executive director and Janet Brown, program officer for food systems, Center for Ecoliteracy

How is it that a small foundation in Berkeley, California, dedicated to education for sustainability, came to be involved in a five-year process of “rethinking school lunch?”

Our original motivation for this undertaking was to resolve the inconsistencies between the lessons about food systems, health, and sustainability that students were learning in the enriched environments of school gardens and kitchen classrooms, and the contradictory “hidden curriculum” of waste and haste in the school cafeteria.

What do we mean by “rethinking”? The activity of “rethinking” calls attention to a problem-solving approach that addresses root causes, rather than the treatment of symptoms. The emerging epidemic of diet-related disease in school-age children, for example, is a symptom of profoundly deeper issues: the disconnection of farms from communities, meals from culture, and health from environment.

Beginnings Our commitment to improving the nutritional content and appeal of school meals stemmed from our examination of research into how children learn, and the role of nutrition in brain function and academic performance. We understood that the

links between nutrition and cognition had serious implications for school-age children.

Our experience with the project-based learning environments of exemplary schools we had funded made clear that cooperation and learning increased, and grades and retention improved, when learning was integrated with hands-on experiences in the natural world.

For young people, these experiences were also instrumental in the formation of values, resulting in a sense of responsibility for themselves, their larger communities, and the environment. We came to understand that these values are foundational to education for sustainability.

For these reasons, our involvement in issues surrounding school lunch grew. At the same time, parents and others in our community, concerned with the health of school-age children, were meeting regularly around issues of school gardens, cooking classes, and the quality of meals served at school. It seemed reasonable to us that a better system of providing nourishing meals at school was possible. It seemed likely that experiences of growing food in school gardens, preparing meals in the kitchen classroom, enjoying delicious lunches in the cafeteria, and visiting local, sustainably operated family farms, would contribute to an educational setting in which the connections between diet, human health, the environment and our collective future, were demonstrated.

The Food Systems Project In 1998, the Center for Ecoliteracy founded its Food Systems Project to formalize its engagement with these issues. Since then, the now widely acknowledged epidemic of diet related diseases in school-age children has become front-page news. Despite this emerging public health crisis, many positive signs of change encourage us.

Throughout the nation, boards of education have begun to adopt food policies in order to restore authority for decisions affecting the health of school-age children to parents and communities.

Several states have passed legislation to limit sales of high-fat, high-sugar, highly processed foods at school, and more are considering similar action. Nutritionists and pediatricians are conducting studies and formulating new guidelines related to the nutritional content of school lunches. The World Health Organization has declared childhood obesity to be a global epidemic, and is calling for a worldwide ban on food-related commercial messages aimed at children under 12 years of age.

A systemic approach to change When we began this process five years ago, we naively believed it was possible, despite our theoretical understanding of systemic change, to improve school lunch by focusing on school food service alone. Our experience has shown that improving the food served in schools is a complex, ongoing effort, requiring more than a focus on the food itself. It also requires the total engagement of the administrative cabinet of a school district, its school board, and the parent community, in order to realize sustainable, systemic change.

What is “Rethinking School Lunch?” Rethinking School Lunch is a Web guide that provides encouragement, tools, and innovative solutions from experts in the fields of education, food service, facilities design, communication, nutrition, and systems change. It offers readers the benefit of the experiences and inspiring successes of many practitioners in their own first-hand accounts. The guide is a multifaceted resource with common sense answers to specific problems.

Rethinking School Lunch is comprised of 10 sections intended to revitalize the important connections between learning, health, and ecological literacy. All of the sections are interconnected and mutually interdependent. Together they constitute a whole system, or pattern, for reinventing school meal services. We recommend becoming familiar with all 10 sections, with the understanding that it is possible to begin anywhere in the pattern in order to influence the whole system.

Rethinking School Lunch contains thought-provoking questions in an inquiry approach to problem solving, adaptable to diverse situations. This approach is intended to encourage change agents across the nation to develop their own models, influenced by local bioregions, communities, resources, and needs.

Gratitude and thanks to our partners Throughout these years and experiences, we have met and learned from exemplary leaders who are yearning for a better future for our children. We are humbled by the scope and persistence of the problems and challenges that face us. We have deepened our respect and appreciation for those engaged in food service and education, who daily summon the courage and determination to solve persistent problems in the face of limited resources. We have learned never to underestimate the power of a person or group committed to bringing about needed change. Indeed, it is from these daily demonstrations of optimism, and leadership by example, that we take heart.

We have convened dedicated food service directors, educators, farmers, and parents through our Fertile Crescent Network of farm-to-school projects in six contiguous Northern California counties. The allies in these counties continue to work toward improving the quality of meals served at school and linking cafeterias to core curriculum, kitchen classrooms, school gardens, family farms and public policy. We are indebted to this regional network of innovators, and to the members of our Food Service Directors Roundtable, whose best thinking and practices are a part of this guide. We also want to acknowledge our partners in the statewide network of farm-to-school projects convened by the Center for Food and Justice at Occidental College, as well as our colleagues in the national Food and Society Initiative supported by the W. K. Kellogg Foundation.

We express our deepest gratitude and admiration to our partners and collaborators in this effort to improve the health and learning

outcomes of school-age children, preserve sustainable family farming as a way of life in our region, and protect and restore the ecological communities upon which human communities depend. In particular, we wish to acknowledge the parents, educators, administrators, and students of Berkeley Unified School District for their leadership as a community in the farm-to-school movement.

We are grateful for the generosity of The California Endowment, and our other funding partners, in recognizing the importance of these issue, and in funding the creation of Rethinking School Lunch. We also wish to acknowledge our friend and colleague, Alice Waters, and the staff and students of the Edible Schoolyard and Martin Luther King, Jr. Middle School, through whose collective vision and energy, the progress in linking gardens and farms to schools has flourished.

The partners in this effort share a common vision of sustainability and concern for our children and their future. Together, we recognize a need to understand our place in nature and to know more about food, ecosystems, and the cycles of life, in order to create sustainable communities.

Cover photo: Tyler/Malcom X School, Berkeley/Center for Ecoliteracy

RETHINKING SCHOOL LUNCH

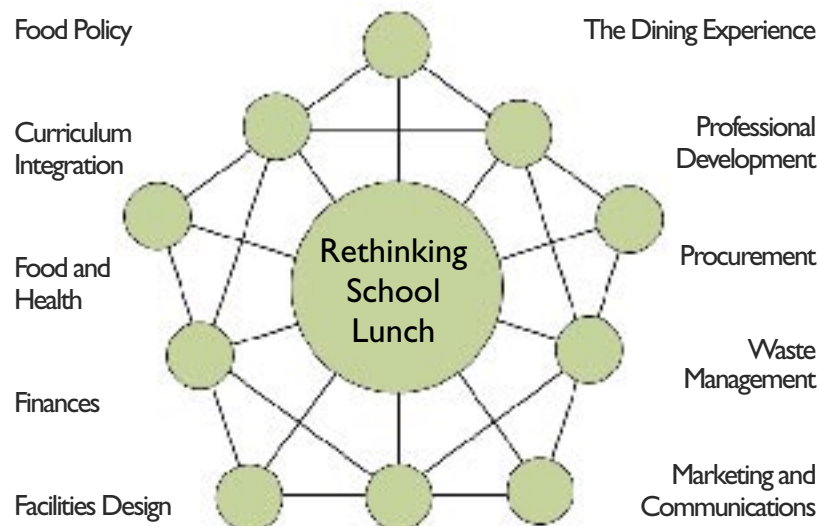
Web of Connections


This document is part of a comprehensive **Center for Ecoliteracy** project that provides helpful information on topics related to redesigning school lunch programs.

The diagram illustrates our systems approach to integrating school lunch programs with curriculum, improving student health and behavior, and creating sustainable communities.

School administrators, food service directors, teachers, and parents will each approach this project from their unique perspective. Readers can begin with the topic that interests them most, then explore the other related topics.

The entire Rethinking School Lunch project is available at: www.ecoliteracy.org/rethinking/rsll.html





Learning in the Real World

©2004 Published by Learning in the Real World®

Learning in the Real World® is a publishing imprint of the Center for Ecoliteracy, a public foundation located in Berkeley, California.

The Center for Ecoliteracy is dedicated to education for sustainable living by fostering a profound understanding of the natural world, grounded in direct experience.

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