

RETHINKING SCHOOL LUNCH

A planning framework from the Center for Ecoliteracy

SECOND EDITION



CENTER FOR ECOLITERACY

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5,500,000,000

Number of lunches served annually in the U.S. National School Lunch Program



OVERVIEW

THE GOAL

To improve school food, teach nutrition, support sustainable food systems, and create an education program focused on understanding the relationships between food, culture, health, and the environment.



31.5
MILLION

Children served per day
through the National School
Lunch Program

11
MILLION

Children served per day
through the National School
Breakfast Program

WHAT IS RETHINKING SCHOOL LUNCH?

By the time today's kindergartner finishes high school, she may have eaten well over 4,000 school meals—4,000 opportunities to strengthen her body and mind, introduce food pleasures that will make her a lifelong healthy eater, and deepen her engagement with the natural world.

The more than 5.5 billion lunches and nearly 2 billion breakfasts served yearly in school programs, along with complementary education programs, can have a profound effect on issues of public health, academic performance, economics, justice, national security, the environment, and community well-being.

Recognizing the importance of improving school food and its potential role in enriching education is one thing. Changing complex food systems is quite another. Rethinking School Lunch, a planning framework for this endeavor, is the outcome of more than a decade of work with school food systems by the Center for Ecoliteracy, a public foundation dedicated to education for sustainable living.

The Rethinking School Lunch framework identifies 10 aspects of school operations that relate to food change—10 pathways that educators, parents, and concerned citizens can follow as they plan for innovation and change in school food. Rethinking School Lunch is based on the realization that change

can begin at any of several points, depending on resources, interests, and opportunities. The change process will eventually lead to the other areas. This Guide is designed to provide an introduction to these 10 pathways, to suggest questions to ask in order to begin thinking about them, and to show how planning in one area can be connected to planning in others.

WHY SCHOOL FOOD? WHY NOW?

School food programs touch every community. About 60 percent of students enrolled in U.S. schools participate in the National School Lunch Program; participation has grown from about 7.1 million children in its first year, 1946, to more than 31.5 million children a day now. About 11 million children participate in the National School Breakfast Program.

School food is implicated in many of the most pressing issues we face today.

IT'S A PUBLIC HEALTH ISSUE

The current crisis in diet-related illness has been well documented. 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. Obesity increases the risk of diseases, including heart disease, diabetes, hypertension, stroke, osteoporosis, and many cancers.

(See Food and Health, pp. 10–15.)

27%

Americans aged 17–24 who are too overweight to be accepted for military service



This crisis is a tragedy. It also presents an opportunity to marshal public support behind efforts to address it. A recent survey commissioned by the Robert Wood Johnson Foundation and the Trust for America’s Health found that 73 percent of respondents, representing a broad geographical and political spectrum, agreed that preventing childhood obesity is an important priority for government. A majority (56 percent) said that investing in a comprehensive program to combat childhood obesity is worth it, even if it would increase government spending by billions of dollars a year during a difficult economic time.

IT’S AN ACADEMIC PERFORMANCE ISSUE

A growing body of research connects better nutrition with higher achievement on standardized tests; increased cognitive function, attention, and memory; and an array of positive behavioral indicators, including better school attendance and cooperation. Hungry teens are more likely to be suspended from school, experience difficulty getting along with other children, and have no friends. Undernourished children are more likely to repeat a grade and require more special education and mental health services. Nutrient deficiencies, refined sugars and carbohydrates, pesticide residues, preservatives, and artificial colorings in food have all been associated with altered thinking and behavior as well as neurodevelopmental disorders.

IT’S AN ECONOMICS ISSUE

In 1960, Americans spent 17.5 percent of their income on food and 5.2 percent on health care. By 2008, they were spending 10 percent on food and 16 percent on health care. Obesity-related medical costs are nearly 10 percent of all annual medical spending—\$147 billion in 2009, double those of a decade before. Kenneth Thorpe of Emory University has projected that the U.S. will spend \$344 billion yearly in obesity-related medical expenses by 2018 if current trends continue. In states that partly determine school funding based on daily attendance, one day of absence can cost a district between \$9 and \$20. Action for Healthy Kids calculates that excessive absences by overweight children may cost an average-size Texas school district \$95,000 a year. Chicago schools could be losing \$9 million, Los Angeles schools \$15 million. (See Finances, pp. 38–43.)

IT’S A JUSTICE ISSUE

School food is disproportionately important to students from low-income families. Nearly two-thirds of the students participating in the National School Lunch Program qualify for free or reduced-price lunches because of their families’ incomes. According to the House Committee on Education and Labor, “For millions of families, the meals their children receive in school or in child care are their only chance at a healthy meal all day. In 2008, more than

1 in 3

Lifetime risk for a boy born in the U.S. in 2000 being diagnosed with diabetes



1 in 2

Lifetime risk for an African-American or Hispanic girl born in 2000 being diagnosed with diabetes



16 million children lived in homes without access to enough nutritious food.”

IT'S A NATIONAL SECURITY ISSUE

The National School Lunch Program was created in part because 150,000 young men had been rejected for service during World War II due to malnutrition, and another 150,000 died during the war because of their weakened conditions. In 2010, a national organization of retired admirals and generals testified before Congress that 9 million young adults—27 percent of all Americans ages 17 to 24—are too overweight to enlist. They reported that the proportion of candidates failing physical exams due to weight problems increased by 70 percent between 1995 and 2010, and that recruiting and training replacements for first-term enlistees discharged for weight problems costs over \$60 million a year.

IT'S AN ENVIRONMENTAL ISSUE

Feeding ourselves has one of the greatest environmental impacts of any human activity. Growing food uses vast quantities of fertilizer and water. Some agricultural practices deplete soil and create dead zones at the mouths of rivers, while others regenerate soil and enhance land productivity. Transporting food uses fossil fuel and creates pollution. Leftover packaging and uneaten food overflow landfills; eliminating waste and practicing

composting allow humans to live more compatibly with nature.

IT'S A COMMUNITY ISSUE

The universal experience of eating builds community in homes, schools, and neighborhoods. Meals are a means to celebrate and strengthen cultural diversity and tradition. The billions of dollars spent yearly on school food represent a substantial resource that can be redirected to support local farming and strengthen local economies. (See Procurement, pp. 29–33.) Developing wellness policies can bring school districts and local communities together to build partnerships around common concerns. (See Wellness Policy, pp. 16–20.)

THE RETHINKING SCHOOL LUNCH VISION

Rethinking School Lunch is a planning framework based on a positive vision: healthy children ready to learn, “food literate” graduates, invigorated local communities, sustainable agriculture, a healthy environment.

One essential feature of Rethinking School Lunch is the farm-to-school approach to improving the nutritional value and quality of school food, connecting students to food sources through meals and field trips, and helping local farmers remain economically viable. A second central element is the

Rethinking School Lunch is the outcome of more than a decade of work with school food systems by the **Center for Ecoliteracy**, a public foundation dedicated to education for sustainable living.

integration of students’ experiences in the lunchroom, activities such as gardening and cooking, and classroom teaching and learning—all with a focus on understanding the connections between food, personal and community health, and the natural world.

Here is the holistic vision that informs the Rethinking School Lunch planning framework:

FOOD AND HEALTH The school food program promotes health through menus that feature a variety of delicious, appealing, nutritious offerings.

WELLNESS POLICY The school nutrition program is guided by a district wellness policy developed and implemented through a collaborative community process.

TEACHING AND LEARNING Hands-on learning, the lunchroom experience, and teaching and learning in the classroom deepen students’ knowledge, skills, and attitudes about food, culture, health, and the environment.

THE DINING EXPERIENCE Students feel welcomed, safe, and valued in an atmosphere that encourages social interaction and healthy eating.

PROCUREMENT The school meal program obtains fresh, seasonal, sustainably grown produce and products from local and regional sources.

FACILITIES The dining facility serves as a learning center, offers fresh food prepared onsite, and reinforces lessons learned in the classroom.

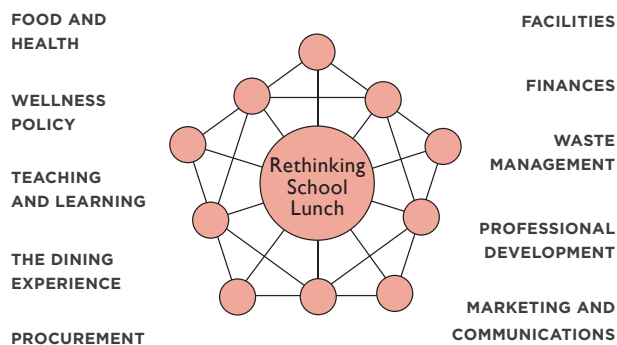
FINANCES Budget planning using real data and creative initiatives makes the shift to fresher, more nutritious food financially viable.

WASTE MANAGEMENT The school food program reduces waste and helps students understand the need to conserve natural resources.

PROFESSIONAL DEVELOPMENT Nutrition services staff and teachers receive the training they need to realize the Rethinking School Lunch vision.

MARKETING AND COMMUNICATIONS Districts take the necessary steps to promote healthy meal programs and meaningful learning environments.

THE RETHINKING SCHOOL LUNCH FRAMEWORK identifies 10 related pathways that you can follow as you plan for innovation and change in school food.



16
MILLION

U.S. children who live in homes without access to enough nutritious food

2/3

Proportion of students in the National School Lunch Program who qualify for free or reduced-price meals because of their families' incomes

HOW TO BEGIN

Each person will approach Rethinking School Lunch from a unique perspective. Perhaps the most effective way to use this planning framework is to start with the topics closest to your areas of interest, and then explore related topics.

- A district administrator might become familiar with theory and practice by reading “Food Policy” and then moving to “Finances,” “Facilities,” and “Procurement.”
- A nutrition services director might begin by reading “Food and Health” and “The Dining Experience” to discover how nutrition services staff can help make lunch a rewarding dining and learning opportunity, and then turn to “Procurement” to become familiar with new options.
- A teacher might read “Teaching and Learning,” followed by “Waste Management” and “Marketing and Communications,” to better understand how to integrate classroom learning into the lunch experience and promote the program to the community.
- A parent might begin with “Food and Health” to learn how nutrition affects health and learning, then move to “Food Policy” to see how to institutionalize change.

IDENTIFY THE PEOPLE WHO SHARE YOUR CONCERNS AND INTERESTS

You’ll accomplish much more if you don’t try to do it alone. Your allies could include students, PTA and PTO members, parents, teachers, the school nurse, school board members, or local businesses. The wider the representation, the better your chances for success. The support of principals, heads of school, and school boards can be crucial. Think about administrators, custodians, nutrition services staff, and others whose work will be affected by your efforts. See if your district has a nutrition advisory committee. These people may already be hard at work and looking for help.

Read the chapters that illuminate the viewpoints of other partners. Understanding the interconnected elements in Rethinking School Lunch will provide a 360-degree vision and help partners see common ground. It may suggest other members to add to your team or spark ideas that lead to creative discussion and better planning.

READ YOUR DISTRICT’S WELLNESS POLICY ALONGSIDE THE POLICY CHAPTER OF RETHINKING SCHOOL LUNCH

Does the policy reflect your beliefs and hopes? Does it evoke the areas you want to address? Does it identify who is responsible for monitoring and implementing the policy?

4,000

Approximate number of school meals a student might eat between kindergarten and 12th grade



MEET WITH THE DISTRICT'S NUTRITION SERVICES DIRECTOR

Begin by assuming that the director cares as much about student and environmental health as you do and is working hard to serve healthy meals in difficult circumstances. Seek to understand the complexities of the school nutrition system and the restrictions under which nutrition services works. Don't just complain. Ask how you can help. Be persistent. Be polite. Listen, but be clear that you're there for the long haul.

IDENTIFY THE LEVELS OF AUTHORITY RESPONSIBLE FOR YOUR AREAS OF CONCERN

The national school food system is a complex hierarchy, with responsibilities stretching from the local campus to Congress. In theory, working from both bottom-up and top-down works best. In practice, you must understand where decisions get made and where authority lies. Consult the Levels of Authority for School Food Systems chart on the Center for Ecoliteracy website. Who makes the decisions that are most important to you?

REVIEW THE KEY POINTS AND QUESTIONS TO CONSIDER. AGREE ON A FIRST STEP.

Start with one achievable project; you can't do everything at once. Return to the framework to understand the wider context for your efforts. Expect some setbacks, and learn from them. Celebrate

your accomplishments and your commitment to some of the most valuable work you could be doing.

For additional tools and resources, see:
www.ecoliteracy.org/downloads/rethinking-school-lunch-guide

1 in 3

U.S. children ages 2–19 who are overweight or obese

3
TIMES

Increase in percentage of obese young people between 1980 and 2008

FOOD AND HEALTH



THE GOAL

To offer nutritious, appealing school meals and effective education about nutrition so that students can achieve their full academic potential and learn to make healthful choices.

New England Journal of Medicine: The current generation of young people may have shorter life spans than their parents, a reversal of two centuries of increasing life expectancy.

Good nutrition in childhood promotes growth, health, learning, and reduced risks for chronic diseases. A well-balanced diet is necessary for children to do well in school and lead healthy and productive lives.

Schools striving to produce increasingly healthy school meals face many challenges, including financial and facility constraints, conflicting government mandates, and students who reject unfamiliar foods. By creatively addressing these challenges, schools can provide meals that improve student nutrition and promote better eating.

KEY POINTS

THE U.S. IS FACING AN EPIDEMIC OF DIET-RELATED ILLNESS

One in three children (31.7 percent) ages 2–19 is overweight or obese. Obesity among young people tripled between 1980 and 2008. There are some indications that rates may have begun to level off for some groups, but they continue to rise dramatically for others, especially American Indian and African-American girls, and remain disastrously high overall. Overweight and obese children are more likely to become obese adults (one study found that obese six- to eight-year-olds were approximately 10 times more likely to become obese adults than those with lower body mass indexes).

The Center for Science in the Public Interest reports that the typical American diet—too high

in saturated fat, sodium, and sugar and too low in fruits, vegetables, whole grains, calcium, and fiber—contributes to four of the six leading causes of death and increases the risk of numerous diseases, including heart disease, diabetes, obesity, hypertension, stroke, osteoporosis, and many cancers. A boy born in the U.S. in 2000 had a one in three chance of being diagnosed with diabetes by the age of 50 (closer to two in five for African American or Hispanic boys). A girl born in 2000 had a two in five chance (nearly one in two if African-American or Hispanic). Some researchers conclude that the current generation of young people may have shorter life spans than their parents, a reversal of two centuries of increasing life expectancy.

HEALTHIER STUDENTS ARE BETTER STUDENTS

“Kids’ brains are high-performance engines,” writes Dr. Alan Greene, clinical professor of pediatrics at Stanford University School of Medicine, “and if we want them to do their best in school, we need to provide them with clean, high-quality fuel. For growing children this means a balanced diet of delicious whole foods, grown in a nutrition-enhancing way without toxic pesticides, and prepared in an appealing manner that also preserves nutrients.” Recent studies indicate that what a child eats directly affects the physical structure of his or her brain, as well as memory, attention, and reasoning skills.

80

Minimum score for a healthy diet—out of a possible 100—on the USDA’s Healthy Eating Index

55.9

Average score on the same index for the diet of a typical U.S. child

Well-nourished students are better students, while poorly nourished students perform less well academically and score lower on standardized tests. School authorities acknowledge as much when they arrange for breakfast for all students on testing days. Optimal cognitive function requires essential vitamins, minerals, fats, and proteins. Iron deficiency has been linked to shortened attention span, irritability, fatigue, and difficulty concentrating. Students who are “food-insufficient” have significantly lower math scores and are more likely to repeat a grade, see a psychologist, and be suspended from school. Undernourished students are more susceptible to infection and more likely to miss school. A study in the *Journal of the American Medical Association* found that severely overweight children and adolescents were four times more likely than their healthy counterparts to report “impaired school functioning.”

AMERICAN CHILDREN’S DIETS DO NOT SUPPORT GOOD HEALTH

According to University of California researchers, “Eating ample whole grains, fruits, and vegetables is thought to reduce the risk of developing diabetes and heart disease, and may reduce the risk of developing obesity. But adolescents in the United States eat only about 3.5 servings of fruits and vegetables a day, compared to the recommended seven to eight servings, and fruit and vegetable consumption often

declines during the teen years.” Forty-one percent of children ages 2–11 and 62 percent of adolescents ages 12–17 drink at least one soda or other sugar-sweetened beverage every day.

The USDA’s Healthy Eating Index reflects the intake of 12 dietary components: total fruit; whole fruit; total vegetables; dark green and orange vegetables and legumes; total grains; whole grains; milk products; meat and beans; oils; saturated fat; sodium; and calories from solid fats and added sugars. The USDA regards a score of at least 80 out of 100 points as indicative of a healthy diet. The average U.S. child scores 55.9.

THE SCHOOL ENVIRONMENT IMPACTS STUDENTS’ FOOD CHOICES

Many factors besides school food affect children’s health, including exercise, food and drink consumed away from school, attitudes and examples set by parents and other adults, and local access to affordable healthy food. Still, in the words of the 2010 White House Task Force on Childhood Obesity, “The school environment impacts the behavior, and thus the health and well-being of students.... Children’s choices depend on what is visible and easily accessible; seemingly small differences in the school environment can have large impacts on what children eat.”

41%

Children ages 2–11 who drink at least one soda or other sugar-sweetened beverage per day



62%

Children ages 12–17 who drink at least one soda or other sugar-sweetened beverage per day

SCHOOLS FACE NUMEROUS CHALLENGES IN PROVIDING HEALTHY MEALS

Nutrition services directors engage in a dance of creativity and compromise to augment the nutritional content and appeal of school meals with seasonal, local, and fresh ingredients while operating with limited resources. Rethinking School Lunch addresses these challenges in each of its chapters. (See for instance, Procurement, pp. 29–33, Facilities, pp. 34–37, Finance, pp. 38–43.)

To take one example, the average school nutrition services department has approximately a dollar to spend on food for a lunch. School Food Focus demonstrates how an elementary school in Portland, Oregon, stretches this dollar in order to feature Oregon-grown wheat, lettuce, and fresh fruit while staying within budget: 30 cents buys a serving of commodity chicken mixed with soy-based textured vegetable protein and other fillers. Add one whole grain roll: 12 cents; steamed corn: 10 cents; a mesclun salad: 12 cents; one fresh pear: 13 cents; milk: 20 cents—for a total of 97 cents.

Nutrition services are challenged by the mixed objectives of the National School Lunch Program. Since the launch of the first national school lunch program during the Depression, programs have been intended simultaneously to support children’s health and to create a market for U.S. agriculture. As long

as the chief nutrition problem was malnourishment, the dual objectives were win-win. Once the problem became too many calories and healthy advice became “eat less,” USDA’s mandate to both support health and promote American agriculture created a conflict of interest that still persists. Some researchers have suggested that school food should be a program of the Department of Education or the Department of Health and Human Services, but agricultural lobbies are powerful (one reason that regulations require some specific items, such as fluid milk). Federal regulations require that meals contain a minimum number of calories as well as minimum levels of certain nutrients, but they do not currently specify maximum numbers of calories. Regulations are met when students are served a required number of food items, whether they are eaten or tossed into the trash.

JUST PUTTING HEALTHIER FOODS ON THE PLATE IS NOT ENOUGH

Simply providing healthy foods in the cafeteria—even if they are offered repeatedly—is usually not enough to inspire students to eat them, especially if the foods are unfamiliar. One federal study showed that in about 90 percent of schools nationwide, a student had opportunities to choose low-fat lunch options, but in only 20 percent of schools did the average lunch actually selected by students meet the standards for allowable amounts of fat.

3.5

Servings of fruits and vegetables the average U.S. adolescent eats per day



6-8

Recommended daily servings of fruits and vegetables for adolescents

The ambience of the lunchroom, the totality of students' dining experience, and creative marketing and communications are all factors in attracting students to healthy school meals. (See [The Dining Experience](#), pp. 25–28, and [Marketing and Communications](#), pp. 54–57.)

Hands-on opportunities to learn about food in school gardens and to cook and eat healthy foods are important for motivating students to eat new, healthful lunchroom offerings. A three-year assessment of the School Lunch Initiative (a project of the Center for Ecoliteracy, the Chez Panisse Foundation, and the Berkeley Unified School District) concluded that a fully developed program that provides cooking and gardening classes taught by paid and trained staff, serves freshly cooked meals, offers fresh fruits and vegetables served in an appealing way during lunch, and integrates learning about food and the environment into the academic curriculum is effective in increasing food knowledge and consumption of healthy foods, particularly fruits and vegetables among elementary school students. (See [Teaching and Learning](#), pp. 21–24, and [Professional Development](#), pp. 48–53.)

QUESTIONS TO CONSIDER

Do school meals model what students should eat for optimal health over a lifetime?

- Experience lunch at your school. Is the food healthy and appealing? Is the lunchroom atmosphere conducive to good eating? Are children enjoying the food?
- Consider the goals (more ambitious than USDA standards) of the Alliance for a Healthier Generation or the HealthierUS School Challenge as benchmarks for success.

Are the learning experiences in the cafeteria linked to classroom teaching, the school garden, and/or a kitchen classroom?

- Does your district wellness policy call for an integrated approach to nutrition and learning?
- Who could take the initiative to create a discussion around a unified approach to the many aspects of school food?

How can you involve different constituents of the school community in reshaping school meals?

- Healthful changes to school meals are most effective and long-lasting when parents, educators, administrators, students, and nutrition services staff are all involved in the process. Engage the different constituents in developing a shared goal for the program. Invite students to submit menu ideas and to taste-test new items.



START WITH SIMPLE CHANGES. Instead of whole or 2-percent milk, consider 1-percent or nonfat. Choose whole grain bread instead of white, fresh fruit instead of canned.

- What health issues would motivate people in your community to work together?

What changes can you make that would be sustainable and have the greatest impact?

- Rather than starting with a sweeping program overhaul, look for small menu changes with a big health impact that you can sustain over time. If your school serves whole or 2-percent milk, switching to 1-percent or nonfat milk is one of the easiest steps toward healthier meals. Consider more nutritious alternatives to what is already on the menu, such as whole grain buns instead of white, or fresh fruit instead of canned. Celebrate each successful change, and look ahead to plan the next one.
- Identify the farm-to-school lead agency for your region and investigate programs that can introduce fresh foods into your school, such as Harvest of the Month.

For additional tools and resources, see:

www.ecoliteracy.org/downloads/rethinking-school-lunch-guide

1999

Year first school food
policy was adopted by a
U.S. public school district

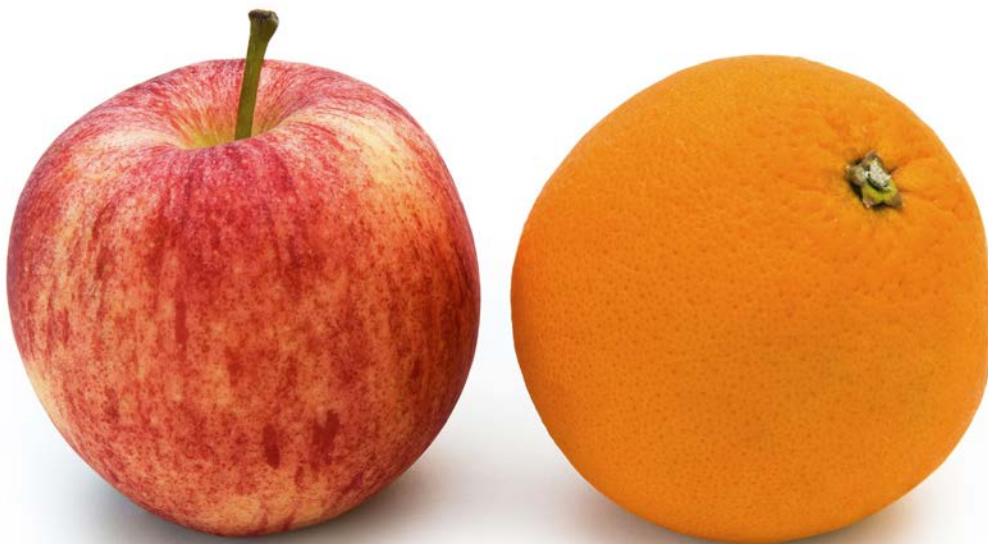
2006

Year by which all schools and districts
participating in federal nutrition programs were
required by Congress to adopt wellness policies

WELLNESS POLICY

THE GOAL

To develop, implement, monitor, and evaluate policies that offer a vision and framework for providing healthy meals as well as teaching about nutrition and the relationships between food, health, culture, and the environment.



Zenobia Barlow, cofounder and executive director, Center for Ecoliteracy:

“Throughout the nation, boards of education have adopted wellness policies to restore authority for decisions affecting the health of school-age children to parents and communities.”

In 1999, the Berkeley Unified School District passed the first school district food policy in the United States. Recognizing the potential value of local policies for promoting the well-being of children, Congress mandated in 2004 that all schools and districts participating in federal nutrition programs adopt wellness policies by 2006. The policies include goals for nutrition education, minimum nutrition standards, guidelines for foods and beverages sold outside school meal programs, and objectives for physical activities.

Because virtually every district is required to have a wellness policy, and the process is a good way to foster community participation, policies provide an excellent starting point for thinking about food in your district. Although policies are now on the books everywhere, there is much room for improvement. A Robert Wood Johnson Foundation program annually evaluates policies across the country; its 2010 report rated the average strength of policies at 35 or below on a scale of one to 100. Less than a third of the districts in a national survey had a process in place for revising policies based on evidence of how well they are implemented or whether their intentions are realized. Some policies include vague goals or suggestions rather than requirements. Some fail to assign responsibility for carrying out their provisions. Most don't indicate how provisions will be funded.

Wellness policies can serve as highly useful tools, especially for districts willing to exceed the minimums required by law. The challenges for educators and citizens concerned about student health lie in monitoring and evaluating their districts' policies, strengthening and updating them as circumstances change, and overseeing implementation. Doing so provides an opportunity for the school and surrounding community to maintain an ongoing conversation about the school's responsibility for student well-being.

KEY POINTS

POLICIES CAN ESTABLISH A LONG-TERM COMMITMENT TO STUDENT HEALTH

A school district wellness policy is a practical means of articulating a shared vision and language about needed change. Innovations that occur at a single school are unlikely to lead to lasting change unless those innovations are institutionalized in a district-wide policy. Superintendents, school board members, parents, and students transition through a district, but a policy declares the district's intentions, independent of particular individuals or their tenures. Shared leadership creates the conditions for a real and lasting change in a district's food policy.

The policy can be a guide for identifying challenges and proposing solutions reached through a process that engages multiple perspectives. When the board of



IT'S ABOUT MORE THAN JUST FOOD. Wellness policies can set goals for overall student well-being, including objectives for physical activity and nutrition education.

education adopts a district wellness policy, the entire community knows that the district is dedicated to improving the school health environment.

WELLNESS POLICIES PUT SCHOOL FOOD INTO A WIDER CONTEXT

A wellness policy provides a rationale for action around all food- and health-related activities in the school district. For instance, according to Marilyn Briggs, codirector of the UC Davis Center for Nutrition in Schools, “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.” A policy is a vehicle for publicly making that connection.

School district policies can promote consistency between what children are taught about health in the classroom and the messages and choices available to them in the lunchroom. They can underscore the conviction that nutrition education, school meal programs, physical activities, and other aspects of health education need to reinforce each other.

Policies can set guidelines for food served outside the lunchroom in settings that range from classroom birthday parties to after-school programs to PTA

fundraising events. The nutrition services director is by default often expected to implement the wellness policy, but he or she usually does not have control over the organizations serving food in these settings; the policy can address this problem by designating responsibility to administrators with appropriate authority.

THE KEY TO AN EFFECTIVE WELLNESS POLICY IS A STRONG, ACTIVE ADVISORY COMMITTEE REPRESENTING A FULL RANGE OF DISTRICT STAKEHOLDERS

The change process can begin anywhere—at the top, with the superintendent of schools or school board, or outside the formal district structure, with parents, health-care professionals, researchers, and others. But in the end, creating long-term reform means that those inside the formal structure of the school district will become internal champions for change.

Innovations must have the support of stakeholders throughout the system. The wellness policy should designate a representative committee (sometimes called a wellness committee, health council, or child nutrition advisory council) charged with monitoring, evaluating, and recommending revisions to the policy. The committee should meet regularly and report annually to the governing board on the district’s progress in implementing the policy.

1/3

Fewer than a third of the districts in a national survey had a process in place for revising wellness policies based on evidence of how well they are implemented or whether their intentions are realized.



Successful committees have included board members, representatives of the superintendent, the nutrition services director and staff, classroom teachers, the athletics department, principals, school nurses, maintenance staff, students, and parents. Because the committee communicates the importance of the wellness policy to various constituencies, it is useful to know which members are influential with different audiences.

DISTRICT WELLNESS POLICIES CAN EMPOWER COMMUNITIES

Ideally, wellness policies are not one-size-fits-all, but are shaped to suit the needs and priorities of their communities. In one community, the most compelling food-related issue might be hunger. In another, it could be diabetes. In a third, it might be food safety. The advisory committee creates opportunities for people to think about and collaborate around the issues that matter to them. They can assist the community and the district to become partners in realizing a healthier environment. Advisory committees can facilitate efforts such as developing city food policies that complement the work of the schools.

Representatives from local hospitals, organizations such as the American Cancer Society or the American Medical Association, local universities, city government officials, and community organizations

have all played significant roles on wellness policy advisory committees. Community representatives can bring expertise in strategic planning and needs assessments. They often have access to data on health indicators and trends, and knowledge about state and federal requirements and programs. They can increase public awareness and validate school districts' initiatives. Community members have helped districts identify and secure funding from outside sources and have led efforts to pass taxes to purchase locally grown food or bond measures to build kitchen facilities.

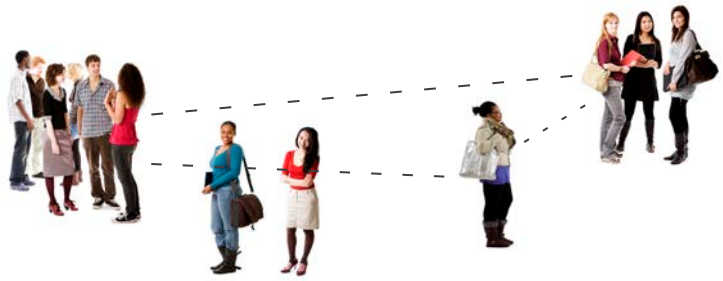
QUESTIONS TO CONSIDER

Does your district's policy embody your hopes for student health and learning?

- Does the policy articulate your understanding of the district's responsibility for student health?
- The process of developing a policy may be as important as its contents. Create an expansive vision of what a policy might include. Consult the Center for Ecoliteracy's Model Wellness Policy Guide for ideas and language to inspire your thinking.

Does your policy represent the concerns of your community?

CHANGE CAN BEGIN ANYWHERE, but to be successful, innovations must have the support of stakeholders throughout the school system.



- What are the pressing food and health issues as defined by your community? Does your wellness policy address them?
- Are there populations within your community that are not represented on your advisory committee? How can you ensure that their needs are included?
- Does the policy respect local cultural values, regional tastes, and food traditions?

Does the policy contain provisions for implementation?

- Does it designate specific administrators with the authority to enforce its provisions?
- Do the people with implementation responsibilities participate in formulating and evaluating the policy?
- Does the policy include a mechanism for regular progress reports to the school board?

How will impacts on student health be monitored?

- Consider partnering with a local health organization to develop a plan for evaluating the effect of your policy.

Does the policy take into account the resources necessary to achieve its goals?

- Work with the nutrition services director and the business manager to estimate the costs of implementing your policy.
- Include provisions for professional development or other expenses that might be required to realize its intentions.
- Ask whether your board of education is prepared to authorize the funding needed by your policy.
- Identify leaders or organizations in your community who can help you raise funds to make your vision a reality.

For additional tools and resources, see:

www.ecoliteracy.org/downloads/rethinking-school-lunch-guide

13
HOURS

Time spent per year by elementary school teachers on nutritional education



50
HOURS

Time recommended per year to facilitate behavioral change

TEACHING AND LEARNING

THE GOAL

To deepen students' knowledge, skills, and attitudes related to where our food comes from; how it is produced; and the connections between our food, our health, and the environment.





THE CENTER FOR ECOLITERACY's *Big Ideas: Linking Food, Culture, Health, and the Environment*, offers ideas drawn from the American Association for the Advancement of Science's *Benchmarks for Science Literacy*, essential questions, and sample activities to guide educators.

Teaching students about food, food choices, and food systems is a key component of rethinking school lunch. With a solid understanding of concepts and the skills needed in order to apply them, students are more likely to make wise food choices that affect their personal health and environmental well-being.

Our society's food habits in the last few decades have taken their toll on both individual and environmental health. Obesity, type 2 diabetes, heart disease, and other diet-related diseases are on the rise. In addition, an increasing percentage of adults do not know where their food comes from, or fail to understand that food represents a web of relationships that sustains all life.

If we are to reverse these trends, we must help young people understand the connections between their food, their health, and the environment. However, elementary school teachers in a U.S. Department of Education study spent an average of just 13 hours a year on nutrition education; that's far less than the 50 hours recommended as the minimum necessary to facilitate behavioral change. Many schools attempting to meet mandates of the No Child Left Behind Act of 2001 eliminated nutrition education, physical education, and recess, while shortening lunch periods.

Linking teaching and learning in the classroom to healthy and sustainable food in the lunchroom will help students develop healthier eating habits. It will

also help support their personal health and lead to a more sustainable future for generations to come.

KEY POINTS

SCHOOLS HAVE A RESPONSIBILITY TO TEACH HEALTH AND NUTRITION

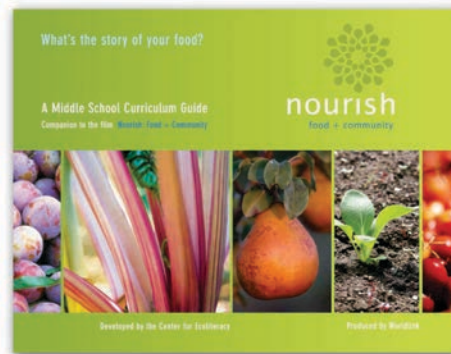
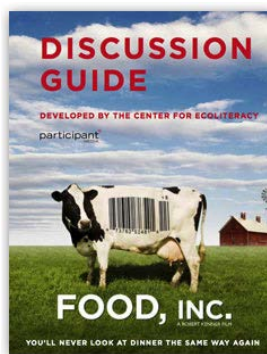
Healthy eating in childhood and adolescence promotes optimal health, growth, and intellectual development, and plays a key role in disease prevention. Schools have a responsibility to teach health and nutrition, providing students with the skills, social support, and environmental reinforcement to adopt long-term, healthy behaviors. By doing so, they also influence the overall well-being of our society.

AN INTERDISCIPLINARY APPROACH IS BEST FOR LEARNING ABOUT FOOD

Food is an interdisciplinary topic that is best presented through an interdisciplinary approach. With food as a lens, subjects like science, health, social studies, and math can come together in an integrated way that has value and meaning outside the classroom. An integrated curriculum helps teach content in a way that is more realistic and relevant to students' everyday lives than a subject-by-subject approach.

FOOD IS AN ENTRY POINT FOR TEACHING ABOUT SUSTAINABLE LIVING

THE CENTER FOR ECOLITERACY has been commissioned to develop food-related curricula—available on its website—for films like Participant Media’s *Food, Inc.*, and WorldLink’s *Nourish*.



The ways in which we grow, process, transport, market, prepare, and dispose of food are critical to central sustainability issues, including resource use, energy, pollution, water and soil conservation, and workers’ rights. Food serves as an ideal entry point for understanding the interrelations of such issues as hunger, trade policy, energy use, and climate change.

NUTRITIOUS LUNCHESES SUPPORT CLASSROOM LEARNING

The food served in the lunchroom can either support or undermine what students learn about healthy living in the classroom. Schools need to “walk their talk” and provide food that models what teachers are teaching about health and nutrition. By offering healthful foods, schools also support student well-being and help improve student performance.

LUNCHTIME IS PART OF THE SCHOOL DAY

Students learn from everything they experience while they are at school—not just in the classroom. In the lunchroom, for example, students form ideas about nutrition and sustainability simply by seeing what food is prepared, how it is served, and how waste is processed. A school that serves nutritious food in commercial-free surroundings and composts kitchen waste teaches very different lessons from those taught by a school that sells junk food and sends its waste to the landfill.

QUESTIONS TO CONSIDER

Linking the classroom curriculum to the school lunch is an important way to teach and reinforce healthful choices and behaviors. As you plan your curriculum, think about:

What should students know about food choices and food production?

- Define what you want students to comprehend and be able to do. Identify the specific knowledge, understanding, skills, habits of mind, and attitudes you want students to develop.
- Use the Center for Ecoliteracy’s *Big Ideas: Linking Food, Culture, Health, and the Environment*, which provides a conceptual framework for examining the health and environmental impacts of our food choices. It offers key ideas drawn from the American Association for the Advancement of Science’s *Benchmarks for Science Literacy*, essential questions, and sample activities to guide educators.

How do the topics of food and food systems fit with academic standards?

- Consider ways to use the theme of food as a vehicle for classroom learning in a wide range of

Marilyn Briggs, codirector, UC Davis Center for Nutrition in Schools: “You need to connect health, through nutrition education, to the whole curriculum. It means making school meals part of the nutrition education program.”

subject areas. In science, for example, students might explore food as energy, as a part of food webs, or as a chemical construct. In math, they might investigate food’s weight, calories, or distance traveled.

- Align food-related learning activities with academic standards in science, health, language arts, social studies, and math. Look at your state’s standards or national standards to find specific connections to the desired learning outcomes.

What strategies are most effective for teaching about food and food systems?

- Build learning through developmentally appropriate lessons. Provide activities and experiences that meet the learning needs of students and enable them to reflect on and communicate what they are learning.
- Incorporate interdisciplinary and project-based approaches, which offer real-world contexts for exploring the content and issues related to food.
- Provide hands-on experiences in the school garden and through food preparation. By growing and preparing their own food, students develop skills and habits that support healthful eating, encounter ecological processes as they occur in nature, and

gain an understanding of how food connects them to the larger world.

- Include authentic assessment tasks that allow you to gauge learning and assist students to deepen their understanding. Tasks may include preparing a dish from a recipe, staging a debate about a food-related issue, creating a portfolio of writings and drawings, or participating in a group project or presentation.

What “lessons” about food and health are students learning in the lunchroom?

- Look critically at both the school lunches being served and the lunchroom itself. Identify what messages or lessons—intended or not—students might be receiving about healthful eating, their connections to the environment, the school’s priorities, and so on.
- Evaluate whether students’ experiences align with what they are being taught in class or your goals for them. If so, consider ways to highlight or enhance the lunchroom lessons. If not, explore ways to change them.

For additional tools and resources, see: www.ecoliteracy.org/downloads/rethinking-school-lunch-guide

19.5
MILLION

Schoolchildren receiving free or reduced-priced lunches in U.S. each day

CONFIDENTIALITY MATTERS. Swipe cards or PIN systems provide privacy for all kids, including those on free or reduced-price meal programs.



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 helps them feel safe and valued at mealtime.

30%

Reduction in plate waste when elementary school students were allowed to have recess before eating lunch



Students often decide whether to eat, or not to eat, at school based on their experience in the lunchroom. Many of us have become so accustomed to the idea of the “noisy cafeteria” that we may assume that it is a fact of school life. But schools around the country have found ways to make the dining experience more pleasant and less chaotic.

The dining experience is 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 decorations, the way food is presented, the attitudes and actions of nutrition services staff, and the quality of social interactions during meals. To underestimate the impact of the eating environment on student enthusiasm for school lunch is to overlook an area that is often as important as the food itself.

KEY POINTS

THE DINING EXPERIENCE IS ABOUT MORE THAN FOOD

As restaurateur and school meal advocate Alice Waters says, “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 school lunch surroundings, as well as the meals, should encourage healthy eating habits and healthy interactions. It is also critical that the experiences at

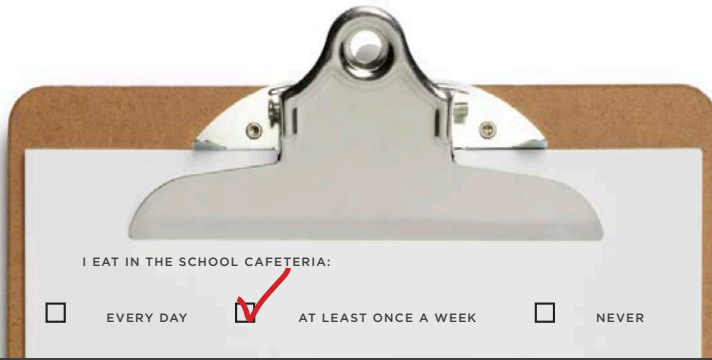
lunch are consistent with what students are taught in the classroom about nutrition and healthy eating habits, good citizenship and participation, and the environment.

THE DINING EXPERIENCE CAN PROMOTE HEALTHY SOCIALIZATION

The social atmosphere in the dining environment is critical to the learning that occurs there. The routines of waiting for everyone to be seated or served, eating and talking together, and clearing the table are important ways to learn and practice respect, patience, and good manners. Over time, the acquisition of these social skills can begin to influence the culture of the entire school.

STUDENT PARTICIPATION INVITES STUDENTS TO EAT LUNCH AT SCHOOL

Students who have a say in choosing the food that is served or who take an active part in preparing meals are more likely to participate in the school lunch program. Students can help with menu planning through focus groups, surveys, and taste tests. (See [Marketing and Communications](#), pp. 54-57.) With assistance from adults, students can also prepare and serve food and do other tasks connected with the dining room. When students can choose portion sizes, entrées, sauces, dressings, or toppings for themselves, they are more likely to look forward to eating lunch at school.



STUDENTS are more likely to use and enjoy their school cafeteria when they have an opportunity to provide feedback on the food and dining environment.

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 and will sometimes skip meals rather than be singled out. To protect the confidentiality of all students, a seamless system for admitting free, reduced-price, and full-pay students (such as swipe cards or a keypad/PIN system) needs to be established. This helps every student to feel comfortable and welcome in the school meal environment.

QUESTIONS TO CONSIDER

The transformation from noisy cafeteria to inviting dining and learning experience presents an exciting opportunity for the school community. Explore the following areas:

What is the ideal school dining environment?

- Form a committee of parents, students, nutrition services staff, and administrators to develop a shared vision and action plan for making improvements where needed.
- Tour dining facilities at other schools and evaluate the dining environment in each location.
- Gather data about the dining experience by spending time eating lunch with students.

What are students' ideas for improving the dining experience?

- Survey students to determine what changes to dining areas they would most appreciate. Discuss noise and lighting levels, social issues, color choices, and food service. Ask them to bring up any other issues you may not have considered.
- Make sure students' voices are represented before making final decisions that affect their dining experience.

Are there any changes that would help to create a more relaxing dining experience?

- Children and youth need time to relax and take pleasure in the sensory and social aspects of a healthy meal. Make sure the lunch period allows ample time for eating and enjoying lunch. Schedule activities such as rallies, clubs, and organizational meetings so that they do not conflict with the lunch period.
- Recess can be scheduled before lunch so that children will come to lunch less distracted and more ready to eat, and have more time to socialize. Elementary school students who ate lunch after recess in a Western Washington University study ate more fruit, vegetables, and milk, and wasted

Chef Alice Waters: “The dining room exists to serve the students. For the students, every day, the dining environment is speaking for the school district. The message should be, ‘We value you.’”

30 percent less food. After John Muir Elementary School in Berkeley made this switch, students ate more, drank more water, threw away less. They also fought less on the playground and returned to class better prepared to learn.

- Offer alternatives to spending so much of lunch waiting in line. Instead of lining up for lunch at Lopez Island School in Washington, children sit at tables that offer bowls of fresh vegetables until their classes are called. The kids are less fidgety, the lunchroom is quieter and more pleasant for everyone, and the vegetables get eaten.

Family-style service can be faster than lunch lines and a more pleasant experience. Some schools have successfully incorporated senior-citizen “table hosts” in family-style settings.

How might the dining experience be made more inviting for the senses?

SIGHT Make sure that the lunchroom is clean and free of clutter. Remove commercial advertising. Consider painting the walls in appealing colors. Invite student committees to be in charge of decorating. Open kitchen designs allow students to see the hard work that goes into preparing their meals.

SOUND If possible, consider adding sound insulation or softer table coverings and flooring surfaces to keep the noise level down. Encourage students to talk in “inside” voices.

SMELL Make sure enticing food aromas aren’t masked by cleaning products or floor wax that leave unpleasant or overpowering odors. Use earth-friendly and biodegradable cleaning products.

FEEL Tablecloths, cloth napkins, and real plates, forks, and knives enhance the dining experience while reducing waste.

For additional tools and resources, see:
www.ecoliteracy.org/downloads/rethinking-school-lunch-guide

1,500
MILES

Average distance
conventionally sourced
food may travel to reach the
school cafeteria

9,000

Approximate number of schools
participating in farm-to-school programs
that establish relationships between
local farms and schools

PROCUREMENT

THE GOAL

To find practical ways to supply the school meal program with healthy, fresh, local, and sustainably grown produce and products.





Distance that may define “local” in regions with ample farmland and long growing seasons



Distance that may define “local” in regions with dense urban populations and/or shorter growing seasons

When schools and school districts are able to procure at least some fresh, local, and/or sustainably grown ingredients, they enhance the nutritional value of student meals, offer food that is often tastier and more appealing, benefit the environment, support the local agriculture and economy, and help ensure better working conditions for food growers and processors.

Procuring such produce presents daunting challenges to nutrition services directors and staff, but the movement to support these changes is growing. According to the National Farm to School Network, nearly 9,000 schools in more than 2,100 districts participate in farm-to-school programs to establish and strengthen relationships between local foods and schoolchildren. Changes in recent years to National School Lunch Program reimbursement and procurement guidelines make it easier to purchase fresh, locally grown produce than in the past.

KEY POINTS

IT IS BECOMING EASIER TO “BUY LOCAL” WITHIN CHILD NUTRITION PROGRAM GUIDELINES

A major source of the food funding for schools in the National School Lunch and Breakfast programs comes from cash reimbursements, largely from the federal government, with some supplementary funding from state and local sources. Until recently, USDA reimbursement requirements made it difficult

or expensive for schools participating in federal meal programs to purchase locally grown produce. The USDA is now outspokenly in favor of the farm-to-school concept. Its 2009 “Know Your Farmer, Know Your Food” initiative and 2008 Fresh Fruit and Vegetable Program, along with a geographic preference option included in the 2008 Farm Bill, help schools procure unprocessed, locally grown foods.

Government commodities, acquired through the USDA Foods program, account for 15 to 20 percent of the food on school lunch plates, including most of the animal protein. Most schools depend on commodities as a supplement to cash reimbursements. Schools can choose from a master list of available commodities, but cannot specify particular regions or preferred brands or producers.

THERE ARE DIFFERENT AVENUES FOR PROCURING FRESH, LOCAL PRODUCTS

While each local food system is different, schools and districts across the country generally procure fresh and local products for their lunch programs through variations on one of two avenues: through a distributor or aggregator, or directly from farmers.

Working with a distributor or aggregator is usually the simpler way to go. With an increased interest in local sourcing, some large distributors and many

WHERE TO BEGIN? Start with the 5 to 10 foods you use most, and investigate local sources for each.



smaller, regional ones will now identify their products by source, enabling nutrition services directors to select locally grown products.

Purchasing directly from individual farmers or from farmer collectives may be more involved, but allows direct communication with growers about the schools' needs. Some schools buy whatever produce or dairy products are available from farmers at a given time. Others enter into contract growing arrangements with farmers to supply specific items at an agreed-upon price.

If your school has a garden or space for one, it might be a supplemental source for some produce, depending on local regulations.

SMALL CHANGES IN PROCUREMENT CAN HAVE A BIG IMPACT

Not all schools and school districts are in a position to make dramatic short-term changes in procurement, but even small changes can make a difference. Since conventionally sourced food may travel 1,500 miles or more from field to cafeteria, procuring even a handful of items locally can reduce the fuel needed for transport, support the local economy, and provide more nutrient-rich produce.

A good place to start: Find locally grown, fresh food that makes the greatest difference to the district's

meals, such as ingredients for a salad bar, fresh additions for sandwiches, or herbs and flavorings that can make soups and sauces distinctive and appealing.

Another relatively simple place to begin is to showcase one or two locally grown foods with high student appeal, like apples or potatoes. Some schools and districts start by seeking local sources for the top 5 to 10 products they use daily. Choosing one locally grown item to feature each month, and pairing procurement with a "Harvest of the Month" education program, has proven to be a successful starting point for local purchasing in many districts.

A VARIETY OF RESOURCES CAN HELP YOU GET STARTED

Talk with your current suppliers about what locally sourced food items they can provide. Learn what other school districts in your region are doing by contacting nutrition services directors in your state or by checking out websites for local farmer groups or organizations like farmtoschool.org.

You might also contact your state's departments of agriculture and education, as well as your local extension office. These agencies can help link interested schools with local farmers and inform you about your state's participation in specific USDA initiatives. Talk with farmers to learn what is available locally or to obtain information about

Ann M. Evans, former mayor of Davis, California, and mother: “If industry and the marketplace were going towards Lunchables, that was beyond what we could tolerate. We decided we were just going to change it, then and there.”

preparation and storage. Find them through farmers’ markets, the county extension service, the local farm bureau, or local restaurants.

QUESTIONS TO CONSIDER

If you are thinking about making fresh, local sourcing a part of your school lunch program, here are some things to consider:

What are your goals for the program?

- Articulating your goals will help guide procurement. It is critical to involve administrators, teachers, parents, and students in setting the goals and building a common vision for your procurement program. The district’s wellness committee is one place to start.
- Define what “local” means in your setting. In some areas, it may mean anything produced within 50 miles. In areas with shorter growing seasons, it might mean anything grown within 300 miles or more.
- Begin to adjust menus to accommodate seasonal fluctuations in produce availability.

How might procurement be different for fresh, local produce?

- Farmers usually plan for planting a year or more ahead of delivery and plant crops months in advance of harvest, so prepare for a longer fulfillment cycle. Because produce is seasonal, schools often must work with different farmers throughout the year.
- Depending on the source, local produce may require more storage and handling. Schools are used to buying carrots and celery in sticks, broccoli in florets, shredded cabbage, etc., but local farmers, particularly if they are smaller-scale, typically do not have the ability to process produce. Determine whether you have adequate storage, work space, equipment, and staff knowledge to prepare meals from fresh ingredients, and consider a professional development program to enhance staff abilities to cook from scratch. (See *Facilities*, pp. 34–37, and *Professional Development*, pp. 48–53.)
- A new procurement relationship will require a commitment to communication and flexibility from both farmers and nutrition services directors. Directors, who are usually accustomed to ordering produce from wholesale distributors, may expect a specific level of quality, a standard pack, and standard appearance for produce items. Local farmers, particularly smaller farmers, may be unaware of these expectations or grow produce



WIN-WIN: Small apples, oranges, and other fruits that are too little to sell at markets provide economical individual servings for the lunchroom. When farms are connected directly to schools in this way, both can win.

that looks different from conventional wholesale produce. Both parties should be prepared to work through difficulties.

What are the budget implications of adding fresh, local food to the menu?

- Healthier, tastier, sustainably grown food may cost more; however, local produce is sometimes less expensive than shipped produce.
- Anticipate any needs for extra staff time and increased labor costs to procure and prepare locally sourced food. Creative nutrition services directors will sometimes adjust their menus to allow for increased prep time for fresh produce by simplifying other parts of the meal production. For example, on days when staff has to cut whole broccoli and cauliflower into florets, the main course might be something quick and simple to prepare.
- Look for ways to stretch your budget. You might buy produce only at peak times when it is less expensive, or plan to highlight fresh, local produce at select meals as you transition to serving it daily. Contract growing arrangements can also make local food more affordable, but you should plan to pilot local produce purchases before encouraging a farmer to commit to a contract. Farmers may

be wary of contract agreements until they see that schools can provide a good market for their produce, and nutrition services directors will want to make sure local farmers can meet their exact needs before offering a contract.

How can you ensure that changes in procurement are sustainable?

- Work to put in place or amend wellness policies in order to articulate your goals and guide future procurement.
- Provide ongoing community and media education about your program. Having school board, public, and community support is critical to making lasting changes in procurement.
- Consider funding sources to offset any additional costs and to develop partnerships with local businesses and organizations. Some parent groups or other community organizations have raised funds. Voters in the Davis, California, school district passed a parcel tax to increase purchases of fresh, local ingredients. Other districts have been willing to subsidize nutrition services out of general funds. (See Finances, pp. 38–43.)

For additional tools and resources, see: www.ecoliteracy.org/downloads/rethinking-school-lunch-guide

80%

Students in a federal study who cited long lunch lines as an issue in school cafeterias



FACILITIES

THE GOAL

To create dining facilities that offer fresh, locally grown food, while serving as inviting places to eat as well as learning centers that support classroom lessons.



50% Students who said school cafeterias are too noisy, according to a federal study

48% Students who cited lack of seating as an issue in school cafeterias

Changing the way we serve food in schools goes much deeper than simply removing soft drink machines from hallways and packaged, processed food from trays. Preparing fresh, seasonal food requires different kinds of facilities. In decisions going back in some instances for decades, many schools sought to save money by abandoning labor- and equipment-intensive preparation of fresh food. As a result, older facilities were not maintained or upgraded, and many new schools were built without the capacity for anything more than heat-and-serve preparation. Today, many school districts are faced with antiquated or inadequate cafeterias, kitchens, dining areas, and storage facilities.

In a federal study, 40 percent of school principals and 50 percent of students regarded cafeteria noise as a problem. Nearly 48 percent of students said lack of seating is an issue, and more than 80 percent cited long lunch lines. A random survey of California high schools revealed that 25 percent did not have indoor dining facilities for students. Researchers observed schools where students had to stand outside in lines (rain or shine) to be served a meal. At some schools, students must crowd into hallways to eat when it is raining or sit on benches or flower boxes because no seats or tables are provided for dining.

The school dining experience should model the school district's commitment to improving student health.

Quality of school meals is one expression of that commitment; the environment and social atmosphere of the student dining hall are others.

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 fuel your new cooking fires.

KEY POINTS

DESIGN YOUR KITCHENS AROUND THE MENUS YOU WANT TO SERVE

Nutrition services often discover that they must adapt the food they can prepare to their facilities and equipment. Begin instead by considering what you want to serve—and what you hope to be able to offer in the future.

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, pay careful attention to the full intent of local district food policies.

A good planning team for food service facilities, says food service consultant Steve Marshall, “includes

White House Task Force on Childhood Obesity Report to the President:

Schools should consider upgrading their cafeteria equipment to support the provision of healthier foods, for example, by swapping out deep fryers for salad bars.

the district’s nutrition services 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.”

Zoning regulations, the proximity of schools and residences, and neighborhoods’ tolerance of noise and traffic from delivery trucks may affect such decisions as choosing between a central kitchen and separate cooking facilities at individual campuses.

Schools sometimes set competing goals, such as providing high-quality food and serving the most lunches in the shortest time.

LUNCHROOMS CAN BE LEARNING CENTERS

Budgeting for improvements to kitchen facilities should also include improvements to the environment and atmosphere of the dining hall. School dining environments can be designed to function as learning centers. (See *The Dining Experience*, pp. 25–28.)

Lessening visual and social barriers between the kitchen and the dining room encourages students to enjoy and learn from their lunchroom experience. An open kitchen design allows students to observe food preparation, leading to the acquisition of practical

skills and knowledge that influence lifelong eating habits.

Consider designing a new facility so that food is easily available and beautifully presented.

Design clean-up areas to facilitate recycling and composting as part of the learning experience.

QUESTIONS TO CONSIDER

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 one 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 one square foot per meal served.
- Adjacent space around an existing 2,000–2,500 square foot kitchen can probably be increased to 4,000 square feet. A bigger expansion will likely require additional land.

50/50

When cooking with fresh ingredients, allow 50% of kitchen space for food preparation and 50% for storage.



- 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 freezers.

What Are Your Needs—For Now and the Future?

How many meals do you expect to serve? What are your projections for future enrollment? If you improve the quality of the meals and students’ dining experiences, how many more meals might you serve?

Do you want to switch to washable, reusable plates, utensils, and trays now or in the future? What equipment or space would that require?

What about Costs?

Do research and obtain information about costs before beginning to plan in earnest. Here are some hidden and not-so-hidden costs (Steve Marshall):

- 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,” such as building permits and sewer hookups, increase construction costs by about 20 to 40 percent. Soft costs include 10 percent for design contingencies and 10 percent for construction contingencies.
- 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.
- Costs can sometimes be reduced by obtaining donations of cooking equipment and utensils from manufacturers, distributors, and local businesses.

For additional tools and resources, see: www.ecoliteracy.org/downloads/rethinking-school-lunch-guide

88%

Nutrition services directors
who cite money as their most
pressing problem

72%

Reimbursable lunches that
cost more to produce than the
reimbursement rate

FINANCES

THE GOAL

To make the shift to fresher,
healthier, more nutritious food
financially viable.



\$1.00

Approximate amount the USDA estimates nutrition services have available to spend on food per school lunch



The single most-often-asked question regarding the shift from prepackaged, prepared meals to fresh, less-processed foods is whether it is financially viable. The answer is yes—but it takes careful planning and a widened perspective. Planning and budgeting tools are available to forecast the impact of innovations on finances. With such tools, nutrition services directors are much more able to determine the economic feasibility of improvements in food service.

A majority of nutrition services directors polled by the School Nutrition Association (SNA) ranked money as the most pressing problem facing their programs. In 2008, SNA surveyed 48 of the largest school districts; 88 percent of them reported that National School Lunch Program reimbursements did not cover program costs. A USDA study determined that 72 percent of reimbursable lunches and 67 percent of reimbursable breakfasts cost more to produce than the reimbursement rate.

Nutrition services income is one of a school district's few unencumbered revenue sources, and school districts often expect the food service to 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 healthy, fresh meals from whole ingredients would be too costly. Some districts rely on sales of “competitive” or “a la carte” snack items—usually

high in fat, sodium, and added sugar—to supplement income from the meal program.

Ultimately, citizens and legislators will have to confront the skewed calculus by which society pinches pennies for school food, then spends billions of dollars to treat nutrition-related illness. In the meantime, children must be fed, and school nutrition services need to employ a variety of strategies for containing costs and increasing income without compromising the quality of the meals offered.

KEY POINTS

OFFERING FRESH, HEALTHY FOOD CAN BE FINANCIALLY VIABLE

According to the USDA, food costs amount to about 46 percent of the total cost of an average school lunch. Labor costs account for about 47 percent, with the balance going for supplies, contract services, and indirect charges. This means that nutrition services have about one dollar to spend on food per meal.

Depending on where they live and what is available, many people find that it is not more expensive to buy locally grown food. 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, vice president for Corporate

Marc Zammit, the Compass Group: “With fresh food, you’re not paying the processor’s labor costs, and you’re saving on shipping and packaging.... Then you save a second time by not having to dispose of all that packaging.”

Sustainability Initiatives and Culinary at the Compass Group, 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. 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.”

A NEW FOOD PROGRAM CAN BRING IMPROVED EFFICIENCY

Implementing a new food program is a good occasion for instituting other changes that produce overall savings. Improving efficiency may require an initial investment in training and management, but total expenses may actually decrease over time. When nutrition services staff view change as an opportunity, efficiencies follow. (See Professional Development, pp. 48–53.)

NUTRITION SERVICES STAFF CAN MAKE THE CHANGE AND BRING ADDED SAVINGS

Given appropriate programs of professional development, 80 percent or more of nutrition services 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 student participation and enough savings to offset higher labor costs.

A strong accounting system, meanwhile, allows the nutrition services director to conduct weekly inventories and profit/loss accounting in order to make adjustments in real time. A purchasing director may realize enough in savings through fresh food purchases 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.

HEALTHY FOOD MAY BE BETTER FOR THE BOTTOM LINE

School districts often assume that they depend on a la carte sales, but that may not be true. An analysis by the Campaign for Better Nutrition, based on USDA research, concluded that schools were underpricing a la carte foods by 39 percent, compared to the actual full cost of providing those foods for sale, and that on average districts were using the equivalent of 20 percent of their federal National School Lunch Program subsidies to offset competitive food losses. After Richland One (South Carolina) School District Superintendent Ronald Depps announced, “Student

\$321,000

Increase in school lunch program revenues in one year resulting from a South Carolina school district superintendent's recommendation that a soft drink contract be rejected and on-campus vending machines be restricted

health is not for sale,” and recommended that the school board reject a soft drink contract and restrict on-campus vending machines, a la carte sales dropped \$272,000 within a year. However, increased participation in the school lunch program resulted in additional revenues of \$321,000—a net gain of nearly \$50,000.

Looking more systemically at the whole picture of school finances may reveal other ways in which supporting student health is good for the balance sheet. In many locations, school funding is based in part on average daily attendance, so absent students mean less income. An Action for Healthy Kids study estimated that New York City schools could be losing as much as \$28 million a year in funding as the result of excessive absences of overweight students.

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 better academic performance and attitudes, going on to become healthy, productive adults.

QUESTIONS TO CONSIDER

Virtually all school districts can begin at some level to improve nutritional content and quality of meals served at school. It is important that nutrition services have the tools to explore the financial implications of different models, using accurate data appropriate to their situations. The Rethinking School Lunch Financial Calculator on the Center for Ecoliteracy website includes Excel spreadsheets designed to assist with budgeting and planning. Here are some areas to explore:

What quality meals does the district want to serve?

- What is specified in the district wellness policy? Might it be strengthened?
- If the quality of school meals improved significantly, how much would student participation increase? How much might staff and faculty participation increase?

Besides improving the meals themselves, how can you increase participation?

- On an average day, 31.5 million children, most of them in public schools, participate in the National School Lunch Program. Nearly 50 million students are enrolled in public schools, meaning that millions of students who might be purchasing

SHORT MEAL PERIODS make it difficult to serve students and leave enough time to eat. In these situations, students may be more likely to rely on vending machines and snack bar items.



school meals are not. Legislation to increase eligibility for free and reduced-price meals would help. How else could you make school meals more accessible and appealing to students and their parents? (See *The Dining Experience*, pp. 25–28, and *Marketing and Communications*, pp. 54–57.)

What are the food and labor costs for different nutrition services models?

- How much would labor costs increase if you used locally purchased ingredients? How much would food costs decrease?
- 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?

What are the capacities of your current facilities and staff?

- What facilities and equipment does the district have for cooking and dining? What changes are required for the envisioned program? (See *Facilities*, pp. 34–37.)
- How amenable are staff members to changes in the school meal program? What professional

development is needed to bring staff skills and motivation into alignment with envisioned improvements?

What are the implications of changes at the district level?

- Is the district prepared to make sweeping improvements? Is incremental change an option?
- Are there notable differences between revenue or expenses 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 nutrition services program?

What other sources of income might you tap to support your nutrition services program?

- Is your district prepared to value student health enough to join the districts that partially subsidize meal programs? How might you persuade the district? An effort begun by a group of mothers in Davis, California, eventuated in voters passing a parcel tax to provide more fresh fruits and vegetables for school meals. Is that an option for you?



THE GARDEN PROJECT at Troy Howard Middle School in Belfast, Maine, provides produce to the dining hall year-round and is self-supporting through the sale of produce and seeds that are marketed in packets designed and hand-printed as student art projects.

- Are there other ways to raise funds? The school district in Riverside, California, services the local Meals on Wheels program and 20 other for-profits, nonprofits, and small private schools. The Garden Project at Troy Howard Middle School in Belfast, Maine, which provides produce to the dining hall year-round, is self-supporting through the sale of produce and seeds. Other schools help underwrite programs by reducing waste-hauling expenses through recycling and composting. Some sell their kitchen compost to the community.
- What community groups share your concerns about student health? The local chapter of the American Medical Association in one California city was so troubled by childhood obesity that it raised funds itself and worked with the district administration to make the construction of a new kitchen a priority use for bond monies.

For additional tools and resources, see:

www.ecoliteracy.org/downloads/rethinking-school-lunch-guide

\$600
MILLION

Estimated amount lost per year
in food waste in the National
School Lunch Program

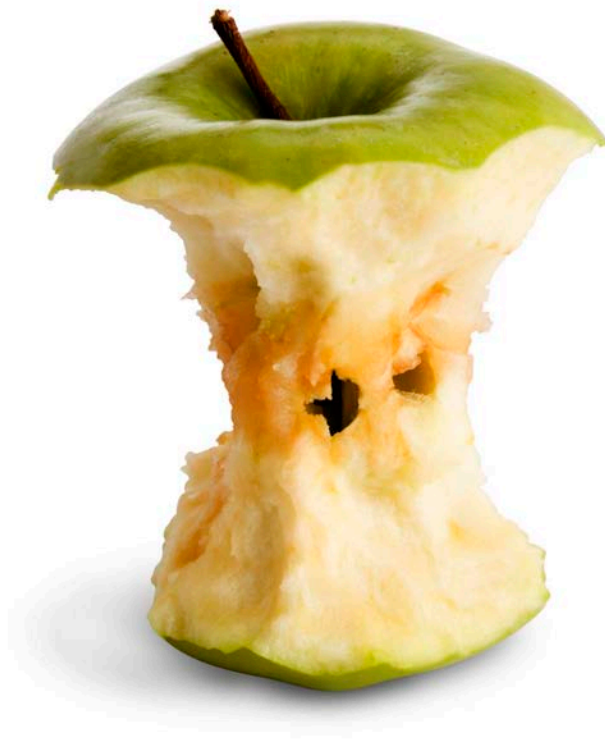
18,670
POUNDS

Lunch trash generated per
year by the average
elementary school

WASTE MANAGEMENT

THE GOAL

To initiate a waste management program for school lunch that reduces waste and helps students understand the need to conserve natural resources.



61%

Monthly reduction in cafeteria waste achieved through recycling by Glenview Elementary School in Oakland, California



One of the biggest problems with today’s typical school lunch program is the mountain of waste it creates. According to the New York State Department of Environmental Conservation, the average American child generates 67 pounds of trash from school lunches every year—or 18,670 pounds per year from the average elementary school.

Nutrition service lunches are often delivered on disposable trays with disposable utensils and dishes and individually wrapped food items. Lunches brought from home are often packed in plastic bags or boxes that are thrown away. If recess competes with lunch, students often hurriedly eat one or two things, and then discard the rest.

Plans for lowering the amount of waste—such as by adjusting the length of the lunch period so students have time to eat more or by reducing prepackaged lunches—go hand in hand with recycling, composting, and other strategies for sustainably managing waste.

The most successful school waste programs also help students make connections between patterns of human living and the need to conserve natural resources. They help students understand that humans must live within Earth’s limited resources and that “waste” represents stored energy and materials that can be reused and recycled.

KEY POINTS

WASTE MANAGEMENT PROGRAMS CAN SAVE MONEY

Many school communities are unaware of the real costs of waste disposal. Particularly when utility bills are paid at the district level, individual schools may never know how much money is spent to get rid of lunch packaging, food scraps, and other waste generated at their site, not to mention the cost of discarded food. A 2002 USDA study estimated a direct economic loss of \$600 million a year in food waste in the National School Lunch Program. By reducing waste at the school level, districts can often see significant cost reductions. Districts across the country are reducing cafeteria waste by 40 to 60 percent through various practices, including recycling, composting, eliminating disposables, and decreasing the amount of uneaten food that students throw away.

SMALL CHANGES CAN MAKE A BIG DIFFERENCE

Comprehensive changes in waste reduction may require long-term planning, district involvement, or capital outlay. However, even small steps can significantly reduce waste and lead the way to more widespread changes. For example, many schools have found success with “no waste lunch” days. These may start as once-a-month events that often evolve to once a week and help students form new everyday habits.

\$400

Amount spent by the Laytonville, California, school district to build worm bins to compost food waste



\$6,000

Savings on waste disposal in just 10 months by the same school district

Growing numbers of secondary schools are joining the colleges that are going trayless, limiting students to the food and drink they can carry to their tables. Even with return trips for seconds allowed, waste is significantly down, and there are no trays to manage.

Students in the Laytonville (California) School District built four worm bins that cost a total of \$400. Over 10 months' time, the worm bins eliminated the need for one trash dumpster, saving \$6,000 in disposal costs.

REDUCING WASTE CAN BE A LEARNING OPPORTUNITY

When the school models composting, material reuse, and recycling, it demonstrates ways in which children, families, and institutions can practice resource conservation every day.

Schools can use waste management as a way to teach meaningful, lifelong lessons about composting and the lifecycles of the many products we consume. Including waste management as a learning outcome empowers students to consider their personal habits and shared responsibilities in terms of the whole school and the greater community.

QUESTIONS TO CONSIDER

How much waste is currently being generated?

- Determine the cost of garbage generation and disposal for each school in a district. Separate the garbage bills from the rest of the district's operating expenses and itemize the bills according to expenses for individual schools.
- Conduct a waste audit at individual schools to shed light on where you can most quickly make the greatest gains. Involve students in the audit, having them put waste in separate bins; weigh the aluminum, paper, and food scrap waste; and identify major sources of waste. Find out what proportion of the solid waste comes from the school meal program and what proportion comes from lunches brought from home.

What can be done to reduce waste?

- Use the results of your waste audit to identify ways to reduce waste. For example, you might implement a program that encourages reusable containers from home, recycles packaging, composts food scraps, and decreases meal portions.
- Devise a plan and present it to school administrators. Remember that lowering the high cost of waste management can be a huge motivator. Through a cafeteria-recycling program,



WHEN students are allowed to choose their entrées, or serve themselves from a salad bar or family-style lunch, they make better choices and waste less food.

Glenview Elementary School in Oakland, California, reduced average trash per month by 61 percent and cut trash-hauling costs by more than half in two years.

WHAT NEW EQUIPMENT WILL BE NEEDED, AND WHAT WILL IT COST?

- Often, very little new equipment is necessary to start a waste management program, but you will want to consider what is required. To start a recycling program, for example, the school may need to add trash bins to facilitate the separation of recyclable items.
- A good rule of thumb is that all containers should be designed so that students can manage the chores. Lunchroom staff or other adults may be available to assist, but programs are most effective and sustainable when the containers are clearly labeled and conveniently placed so students can do the jobs themselves.

Who will be responsible for managing the program?

- The most successful waste reduction, recycling, and composting programs are usually overseen by paid personnel, rather than relying solely on volunteer labor.

- The job may be part of a larger facilities-related position, but it is important that waste reduction tasks are clearly identified and have adequate time budgeted for them.
- Custodial staff whose responsibilities will be affected by new programs should be included in planning and decision-making from early in the process.

How can you involve students?

- A key way to reduce waste is to motivate students to change behaviors. Involve students in monitoring waste levels and assessing whether program goals are met. Consider other ways to raise students' awareness of what they consume and throw away.
- Support students in making less wasteful choices. For example, when students are allowed to choose their entrées, or serve themselves from a salad bar or family-style lunch, they make better choices and waste less food.

For additional tools and resources, see: www.ecoliteracy.org/downloads/rethinking-school-lunch-guide

80%+

Food service staff members who can probably transition to improved and more demanding food preparation models, given appropriate programs of professional development



PROFESSIONAL DEVELOPMENT

THE GOAL

To provide nutrition services staff and teachers with the professional training and support they need to offer meals featuring fresh and local food and to teach students about the relationship between food, health, and the environment.



Georgeanne Brennan, cookbook author and teacher: “If you allow the expertise that’s already in your kitchen staff to come to the foreground, you’re not only empowering them, but you’re enriching the rest of the staff.”

Professional development is a key strategy for changing institutions. The changes envisioned in Rethinking School Lunch create both challenges and opportunities for nutrition services and teachers. No two staffs or situations are identical; effective professional development builds on what your staff members already know and can do.

New menus based on cooking from scratch may demand different skills from those currently required. Some staff members will already have many of the necessary food preparation skills. Others had skills that have atrophied from disuse. Some will need basic instruction and practice.

Teachers may have limited knowledge of the physical and emotional health benefits of fresh, locally produced fare. Others may have limited experience teaching material that crosses disciplines. Most can benefit from collaborating with colleagues to design lesson plans focused on the universal experience of food.

KEY POINTS

PROFESSIONAL DEVELOPMENT FOR NUTRITION SERVICES STAFF

Professional development can help make staff members’ jobs more satisfying

According to food service finance specialist J.P. Dozier, 80 percent or more of nutrition services

staff members can make the transition to an improved and more demanding model, given appropriate programs of professional development. Employees find their jobs to be more rewarding when the work is less routine and allows them to make use of a larger set of physical and mental skills.

Professional development can also help staff members recognize that they merit appreciation as part of a valued group. For example, in Davis, California, nutrition services personnel were invited to join chefs from leading local restaurants on a very successful farmers’ market “Chefs’ Walk,” where they were treated as peers with other professionals. Inviting authors, chefs, or teachers from prominent local institutions to lead professional development sessions can enhance staff members’ self-esteem.

Professional development can expand nutrition services’ versatility

Cooking from scratch offers opportunities for imaginatively combining locally sourced ingredients, producing new recipes, and adding variety to menus based on a foundation of a few basic dishes. A professional development program focused on exploring food and flavor can empower staff members to discover and cultivate their own creativity.

The higher labor costs of cooking from scratch can be offset by the greater efficiencies attained through



NUTRITION SERVICES EMPLOYEES find their jobs to be more rewarding when the work is less routine and allows them to make use of a larger set of physical and mental skills.

maximizing the more varied skills of employees.

(See *Finances*, pp. 38–43.)

Hands-on, real-world professional development increases its effectiveness

People learn much more by doing than by listening to a lecture or watching a demonstration. Smaller classes that invite everyone’s involvement, conducted in real kitchens with the kinds of equipment and ingredients with which they will be working, inspire learning that will last.

Developing menus and meals to be served in the cafeteria is better for learning—and for stimulating problem solving—than completing exercises in a classroom setting. When the work they do produces results participants can taste, and when they know that nutrition services intends to use the new dishes and recipes they create, the effort feels worthwhile and important.

Nutrition services staff members should be recognized as educators

Students “learn” what the school believes about the importance of food—and how the school regards its students—from the behavior and attitudes of the people serving them, as well as the respect shown to the nutrition services staff by teachers, administrators, and other staff members.

Professional development can help staff members learn more about the food they’re serving and why it’s healthy, giving them expertise that they can share with students. This enhances the significance of their jobs and contributes to students’ understanding.

PROFESSIONAL DEVELOPMENT FOR TEACHERS

Food integrates content areas

Learning about food and food systems can be a starting point for understanding health and nutrition, cultural diversity, and environmental issues. Food is so central to human survival and experience that almost any subject can be approached through it—science, health, history, social studies, art, economics. The ways we grow, process, transport, market, prepare, and dispose of food are critical to central sustainability issues. (See *Teaching and Learning*, pp. 21–24.)

Many teachers lack experience in teaching across content areas or working with food

Because food-related concepts and skills span content areas, many teachers can benefit from training in the ways to use food as a unifying theme in their instruction. They can also benefit from professional development that takes an interdisciplinary approach and addresses state and national standards.

RESPOND TO STUDENT INPUT: Professional development should listen to students’ voices, such as those expressed in reports on cafeteria performance by Kids Rethink New Orleans Schools—a group of students and supportive adults from across New Orleans.



Our collective food habits have shifted dramatically over the past 40 years. Through professional development that gives them a chance to taste, cook, and eat together, teachers participate in the fundamental act of nourishing themselves and are inspired to share those kinds of experiences with their students.

Professional development should model effective teaching

The most successful professional development programs for classroom teachers model the learning experiences we advocate for students. From taking farm tours to spending time in the garden, working with compost, or practicing in the kitchen, teachers engaged in professional development learn best by doing.

Professional development is an opportunity to demonstrate a variety of teaching strategies for students with different learning styles. It’s an occasion to involve participants in hands-on activities of learning and discovery, create an atmosphere of purposeful conversation and reflection about complex issues, introduce topics in a developmentally appropriate and motivating manner, illustrate methods for managing materials, and model techniques for expanding student thinking beyond the lesson. In order to mirror class sizes likely to occur in schools,

professional development providers will want to develop sample lessons that can be replicated by a teacher with a class of approximately 30 students.

Teachers need planning time

Teachers need time to incorporate new ideas into their instructional plans. Provide time for them to reflect on and talk with colleagues about what they have learned and to consider ways to modify new ideas for their particular students. Arrange for them to collaborate with other classroom teachers as well as garden and cooking instructors at their schools to develop concepts and themes that build from year to year.

QUESTIONS TO CONSIDER

FOR NUTRITION SERVICES STAFF

What are your professional development needs?

- Inventory the skills that will be needed for the menus you want to offer. Think about how you can broaden your offerings by using professional development to explore and expand menu options.
- Discover skills and knowledge that your staff members may already have but are not being used. What did they learn while growing up, in previous



INTEGRATED CURRICULUM: On its website, the Center for Ecoliteracy offers *Rethinking School Lunch: A Visual Guide*, which provides a vision for how to integrate classroom learning with student experiences in lunchrooms, kitchen classrooms, and school gardens.

jobs, or in life outside of work? What knowledge of different cultural cuisines or cooking styles do they bring?

What do your nutrition services staff members want to learn?

- Engage the staff while planning professional development programs. What do they want to know or be able to do better? They will be much more enthusiastic about professional development—and the program will be more focused—if their needs are addressed.
- Think about transferable skills that will enhance staff members' professional standing or qualify them for higher pay or other advantages that they find appealing.

What does the law require?

- Before designing a professional development program, find out if the school district or state has any professional requirements for nutrition services workers. Some states offer professional development tied to their requirements. The California Department of Education, for example, offers courses related to food service at colleges and universities around the state.

Who can offer the professional development your staff needs?

- Think of a variety of sources to lead professional development for nutrition services staff. Georgeanne Brennan suggests looking to cookbook authors, Les Dames d'Escoffier (an association of women professionals in food), chefs active in Slow Food and Chefs Collaborative, or local restaurateurs.

FOR TEACHERS

How can we inspire and motivate teachers to address food in their classrooms?

- Offer a mix of experiences that expand teachers' content knowledge and their ability to incorporate hands-on learning, such as food tastings and simple preparation of delicious, healthy foods. Take advantage of the inherent ability of food to foster enjoyment and camaraderie.

What should we emphasize in professional development for teachers?

- Start with what teachers are required to teach at each grade level and across disciplines. Become familiar with state and national standards (e.g., science, health, social studies, history) as well as the Center for Ecoliteracy's publication, *Big Ideas: Linking Food, Culture, Health, and the Environment*, which is keyed to the *Benchmarks for Science Literacy* from the American

TEACHERS can take advantage of the inherent ability of food to foster enjoyment, health, and camaraderie.



Association for the Advancement of Science.
Choose core concepts and skills that address food and food systems across the disciplines and make those explicit throughout the trainings.

- Look for ways to integrate classroom learning with student experiences in school gardens, lunchrooms, recycling activities, and kitchen classrooms if your school has them.

How will teachers fit another topic into an already crowded curriculum?

- Assure teachers that they do not need to invent a whole new set of topics and lessons.
- Review teachers' current curricula with them and help identify ways to weave food and food systems into topics that they already address. For example, in history and social studies, students can learn how a particular culture or country cultivated the land, traded food products with others, and contended with natural and human threats to their food supplies.
- Whenever possible, offer professional development in multiple sessions over time. Like other learners, teachers acquire knowledge and skills through reflection, reconsideration, and repetition.

For additional tools and resources, see:
www.ecoliteracy.org/downloads/rethinking-school-lunch-guide

\$10
BILLION

Amount spent yearly advertising
food and beverages that are
marketed to children

7,600

Television food advertisements
the average child aged 8-12
watches every year

MARKETING AND COMMUNICATIONS



THE GOAL

To help school districts successfully promote
healthy meal programs and meaningful learning
environments to parents and students.

90%

Television food ads aimed at children that promote products high in sugar, fat, and/or sodium



Like any initiative, the healthy school lunch program must compete for attention. Even though choices are often made at the district level, gaining the support of parents, students, and other stakeholders can be crucial in ensuring the success of your program. According to the FTC, nearly \$10 billion is spent yearly advertising food and beverages that are marketed to children. Children ages 8–12 see an average of more than 7,600 food ads in a year (Kaiser Family Foundation). Ninety percent of these, reports the Institute for Health Research and Policy at the University of Illinois at Chicago, promote products high in sugar, fat, and/or sodium. Getting the message across about the value of healthy school meals is often a matter of being heard through the noise.

It's important to do market research about what actually appeals to students, and what prompts parents to support particular programs. Targeting the message to the specific audience will help attentions and acceptance. That is true whether the audience is the district, whose food policy you want to change; students, whom you want to encourage to eat school meals; or parents, who need to understand the connection between school meals and student behavior, achievement, and health.

KEY POINTS

FACTOR IN THE NEED FOR MARKETING

When adopting a new policy or program, be sure to factor in marketing as a necessary part of the launch.

It helps when the school board, administration, and nutrition services staff all understand that student acceptance is linked to the way the program is positioned and promoted, and that parental support is highly influenced by student acceptance.

KNOW YOUR AUDIENCE

When planning marketing campaigns for student meal programs, it's vital to know who your 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." With this information, you can address both their hopes and concerns in a meaningful way. Also consider how and where members of your target audience receive information that they are likely to trust about school programs, and use those channels as opportunities for promotion.

ENLIST STUDENT INPUT IN MARKETING CAMPAIGNS

Students can be effective ambassadors, so include them in designing 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.

TASTE TESTS are an effective way to promote and market improvements in school meal programs.



CONTINUE THE COMMUNICATION AFTER THE PROGRAM IS IN PLACE

Successful school lunch programs seek feedback on a regular basis in order to continually improve their service. An effective marketing strategy includes 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 return to students and parents to elicit reactions to the new service and to respond to feedback.

QUESTIONS TO CONSIDER

Effective marketing can make all the difference for the success of your program. Take into account the following considerations as you plan your marketing campaign:

Who is the target audience for the campaign?

- Students and their parents represent two separate audiences for messages concerning improvements in school meal programs.
- Consider what message you need to communicate about the new program to each specific audience.

How can you learn about your audience's food preferences and attitudes about the school dining experience?

- Information gathered in focus groups, informal surveys, or peer-to-peer questionnaires can be used to learn about your audience and to design program improvements.
- 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. (See [Dining Experience, pp. 25–28.](#)) Recognize that social factors often outweigh meal quality in determining preferences.
- Include in your research an assessment of the impact of meal pricing.

How can you involve students in marketing and promotion?

- Students feel respected when their opinions are solicited as a part of developing new programs, and they invariably contribute good ideas.
- Taste-testing food with students is an effective way of promoting and marketing improvements in school meal programs.
- Students are more likely to try foods that they have grown and prepared.
- Word of mouth is the least expensive form of marketing: when students experience



STUDENTS are more likely to try foods that they have grown or prepared themselves.

improvements, they will build enthusiasm for the program among their peers and parents.

What is the best medium for delivering your message?

- Ask kids and parents where they get their information about school, and use those channels for delivery.
- In choosing your spokespeople, ask parents and kids to tell you whose advice or information about the school they trust most.

What ongoing promotional strategies can you employ?

- Invite students and parents to serve on the nutrition advisory committee to make certain that student and parental concerns and recommendations are represented.
- Establish a routine of eliciting opinions from students and parents about the school lunch program. Make printed, anonymous questionnaires about food service available in the lunchroom and send parent questionnaires home. Offer parents samples of school meals at back-to-school nights.
- Provide teachers with incentives to eat in the lunchroom; seeing teachers eating the school lunch sends a powerful message.

- Nutrition services staff can ask informal questions on a daily basis about student satisfaction with particular menus or with the dining atmosphere itself.

What Strategies Make for Successful Interviews?

Good interviewing is an art. 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 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 confidentiality will be respected.

For additional tools and resources, see:
www.ecoliteracy.org/downloads/rethinking-school-lunch-guide

About Rethinking School Lunch by Zenobia Barlow, cofounder and executive director, Center for Ecoliteracy

How is it that a small foundation dedicated to education for sustainability came to be involved in “rethinking school lunch”—a process now in its second decade?

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 much 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.

Our involvement in issues surrounding school lunch grew for these reasons. At the same time, parents and others in our community, concerned about the health of school-age children, were meeting regularly around issues of school gardens, cooking classes, and the quality of meals served at school. We believed that a better system of providing nourishing meals at school was possible. It seemed likely that the 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 activity of ‘rethinking’ calls attention to a problem-solving approach that addresses root causes, rather than the treatment of symptoms.”

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 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 adopted wellness 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-salt, 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 younger than 12 years of age.

A SYSTEMIC APPROACH TO CHANGE. When we began this process more than 10 years ago, we naively believed, despite our theoretical understanding of systemic change, that it was possible 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. Changing children’s attitudes, knowledge, and behavior in relationship to food requires a comprehensive approach that encompasses improvements in school food, the academic curriculum, and hands-on experiences such as school gardens and cooking. Realizing sustainable, systemic change also requires the engagement of the administrative cabinet of a school district, its school board, parents, and often the local community.

THE RETHINKING SCHOOL LUNCH GUIDE. The Guide provides encouragement, tools, and innovative solutions from experts in the fields of education, nutrition services, facilities design, communications, nutrition, and systems change. It offers readers the benefit of the experiences and inspiring successes of many practitioners in their own firsthand accounts. The Guide is a multifaceted resource with common-sense answers to specific problems.

The Guide presents a planning framework that offers multiple pathways for engaging the whole school food system. It comprises 10 chapters intended to illuminate the important connections between learning, health, and ecological literacy. All of its sections are interconnected and mutually interdependent. 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. Taken together, the 10

“Changing children’s attitudes, knowledge, and behavior in relationship to food requires a comprehensive approach that encompasses improvements in school food, the academic curriculum, and hands-on experiences such as school gardens and cooking.”

sections will help you identify those individuals or groups with whom you will eventually need to work, what their viewpoints and challenges are likely to be, and how you may be able to collaborate with them.

The Rethinking School Lunch Guide contains key points and thought-provoking questions to consider. It is the basis for an inquiry approach to problem-solving, adaptable to diverse situations. We hope that the Guide will be a resource that will 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 all of us. We have deepened our respect and appreciation for those engaged in nutrition services and education, who summon daily the courage and determination to solve enduring 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. It is from these daily demonstrations of optimism and leadership by example that we take heart.

We express our gratitude and admiration to our partners and collaborators in this effort to improve the health and learning of school-age children, preserve sustainable family farming as a way of life, and protect and restore the ecological communities upon which human communities depend.

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.



Zenobia Barlow

Cofounder and Executive Director
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100%

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Facilities Students in line: istockphoto 10840897, urbancow; Pot and whisk: istockphoto 9852169, SasPartout; Squash: “Vegetables” CD, fotosearch

Finances Beans: istockphoto 6976271, tfazevedo, and istockphoto 13857466, PicturePartners; Lunch tray: istockphoto 726982, kcline; Candy bar: istockphoto 9955389, lurii; Seed packets: courtesy Troy Howard Middle School

Waste Management Apple core: istockphoto 2811095, ranplett; Recycle bins: istockphoto 7972778, Maica; Food containers: istockphoto 8542750, JackJelly; Worms: 3413288, Viorika

Professional Development Whisk: istockphoto 11983424, Tsuji; Wooden utensils: istockphoto 2491966, vasiliki; Dishes: istockphoto 3475154, Vasca; Spoon: istockphoto 9393244, LdF; Cafeteria report: Kids Rethink New Orleans Schools; *Rehtinking School Lunch: A Visual Guide*: CEL; Boy: Anne Ackermann/Getty Images

Marketing and Communications Girl: RubberBall; Sign: istockphoto 9196301, pkline; Lettering: istockphoto 9310951, manley099; Donuts: istockphoto 12950109; Fork: istockphoto 13086830, ugrhan; Boy: istockphoto 3274856, nicolesy

Acknowledgments Hands: istockphoto 9311779, urbancow

About the Center Girl: RubberBall; Apple: istockphoto 11678589, fotogaby



ABOUT THE CENTER FOR ECOLITERACY

The Center for Ecoliteracy is a nonprofit dedicated to education for sustainable living. Known for its pioneering work with school lunches, gardens, and integrating sustainability into K–12 curricula, the Center has worked with schools and organizations in more than 400 communities. Through its Rethinking School Lunch initiative, the Center promotes the essential connection between healthy school food and teaching about food systems and choices, especially in terms of their impact on health, academic achievement, and the environment. Through its Smart by Nature™ initiative, the Center supports educators advancing sustainability in food practices, building and resource use, community connections, and teaching and learning. The Center offers seminars, consulting, curriculum development, and numerous books and guides, including *Smart by Nature: Schooling for Sustainability*; *Big Ideas: Linking Food, Culture, Health, and the Environment*; and the *Food, Inc. Discussion Guide*.

Visit www.ecoliteracy.org

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