

CULTIVATING

20

YEARS OF
ECOLITERACY

CENTER FOR ECOLITERACY





we

are pleased to share this celebration of the Center for Ecoliteracy's twentieth anniversary. Since 1995 we have had the privilege of working with thousands of dedicated educators who share a commitment to smart, vital, and hopeful ecological education. Our collaborators in the projects have inspired and informed our work. We admire their expertise, wisdom, and imagination. Through them, students are developing wonder and love for the natural world, and gaining understanding and skills for creating resilient communities. Their devotion keeps us motivated, and we are honored to contribute to the advancement of education responsive to the challenges of our time.

—Zenobia Barlow, Peter Buckley, and Fritjof Capra
Cofounders, Center for Ecoliteracy



Twenty years ago...

... when founding the Center for Ecoliteracy, we asked ourselves what children need to know in order to be good citizens of planet Earth. Inspiration came from Wendell Berry's expanded definition of health, which encompassed not only one's own health, but that of one's place, community, and the wholeness of life. Over these 20 years, we have learned together how education can guide our children to lead meaningful, sustainable, and healthy lives. The Center knows that social change takes time and is committed to its vision of life-affirming education. The need for the kind of education that the Center for Ecoliteracy advocates has grown even more urgent over the years. Seeing the Center grow and become a distinguished leader in the "sustainability education movement" has been gratifying, but much remains to be done. Please consider supporting the work of the Center; as we often say, education is a community practice.

—Peter Buckley, Center for Ecoliteracy cofounder and board member



The great challenge of our time...

...is to build and nurture sustainable communities, designed in such a way that their ways of life, businesses, economies, physical structures, and technologies respect, honor, and cooperate with nature's inherent ability to sustain life.

The first step in this endeavor must be to understand how nature sustains life. Over billions of years of evolution, the Earth's ecosystems have evolved certain principles of organization to sustain the web of life. Knowledge of these principles of organization, or principles of ecology, is crucial for designing sustainable human communities. In the coming decades the survival of humanity will depend on our ecological literacy—our ability to understand the basic principles of ecology and to live accordingly.

We need to teach our students, as it were, the fundamental facts of life—that one species' waste is another species' food; that matter cycles continually through the web of life; that the energy driving the ecological cycles flows from the sun; that diversity assures resilience; that life (as suggested by Lynn Margulis and Dorion Sagan) did not take over the planet by combat but by networking.

Ecoliteracy involves a new kind of “systemic” thinking—thinking in terms of relationships, connectedness, and context. It means seeing the living world as an integrated whole, and recognizing that the major problems of our time are systemic problems—all interconnected and interdependent. They need corresponding systemic solutions—solutions that do not solve any problem in isolation but deal with it within the context of other related problems.

Teaching ecoliteracy is the great challenge for education in the twenty-first century. It is an enterprise that transcends all our differences of race, culture, or class. The Earth is our common home, and creating a sustainable world for our children and for future generations is our common task.

—Fritjof Capra, Center for Ecoliteracy cofounder and board member



At the Center for Ecoliteracy...

...our work is centered geographically at the confluence of the Pacific Ocean and the waters of the San Francisco Bay-Delta, a vast watershed stretching from the Cascades to the Tehachapis, and from the Sierra to the sea. Our impact radiates out from the Bay Area, reaching throughout the Golden State, across the nation, and—through our publications, web presence, and speaking engagements—around the world.

Our work is centered conceptually at a confluence of powerful streams, including the wisdom of indigenous people, systems theory, an understanding of schools as dynamic communities, and place-based education—all of which embrace an ecological perspective. The convergence of conceptual streams forms ecological literacy, a pattern of educational innovation and integration.

A confluence of streams has been understood since ancient times in India as a place of great power and mystery in the landscape. At such a confluence, a sangam in Sanskrit, yet another stream is implied. It is a mystical or metaphorical river that runs beneath. In the work of the Center for Ecoliteracy, the deeper stream of reverence is evoked. Awe, and a profound respect for the mystery of life—for the intricacy of the web and our intimacy with it—are essential dimensions of ecological understanding.

—Zenobia Barlow, Center for Ecoliteracy cofounder and executive director



LATITUDE 37.74°

JUL	
AUG	
SEP	
OCT	MAR
NOV	FEB
DEC	JAN

6
7
8
9

10
11
12

2

Systems Change

When I joined the Center for Ecoliteracy in 1995, we worked on local projects. We supported hiring a garden coordinator, built a rammed earth toolshed, and helped integrate the Edible Schoolyard into the curriculum of a Berkeley middle school. We helped create the nation's first school district food policy and established salad bars and gardens at each Berkeley elementary school. We stewarded fourth-graders planting willows along a creek to restore their watershed and protect endangered species. We wrote great books.

Twenty years later the soil and seeds we planted have matured. Our reach extends throughout California, across the entire nation, and beyond. Education for sustainable living is blossoming as a movement.

These days our work nourishes much more than one local middle school. Today the Center for Ecoliteracy supports a statewide network of school districts that collectively serve 250 million school meals a year. We have "greened" many campuses, embedded ecoliterate curricula, and taught many teachers. We have written many more great books.

I am honored to be part of a nonprofit that is a role model for sustainable living, that collaborates effectively, and that nurtures thoughtful ecoliterate children who will lead us into a sustainable future.

—Wendy Williams, Center for Ecoliteracy board member

We learn from study of living systems that keys to systems change include fostering community, cultivating networks, and working at multiple levels of scale, from the creek to the watershed, from the campus to the district to beyond.

The school community can be a laboratory for learning the skills needed to act effectively, collaborate, and promote change in an interdependent world. Learning comes alive when students are engaged in projects with consequences for people and the natural world. All of schools' actions, such as around food and energy, and the impacts of their decisions on the world beyond their walls, become occasions for teaching and learning.



From Principles to Practices

The Center’s fundamental principles, as articulated by cofounders Peter Buckley, Fritjof Capra, and Zenobia Barlow and current board chair Wendy Williams, and augmented by insights from other respected thinkers including David W. Orr and Jeannette C. Armstrong, have remained remarkably constant. This report highlights their application between 1995 and 2015.

The Center for Ecoliteracy promotes ecological education for K–12 students to experience and understand how nature sustains life and how to live in light of that understanding. We encourage schools to both teach and model sustainable practices.

Our work is grounded in several affirmations about learning. Among them: (1) Schools teach—whether they are conscious of it or not—by how they make community decisions, invest their resources, and provision themselves with food, energy, materials, shelter, transport, and water. (2) Understanding emerges at the juncture of experience and conceptual knowledge. Neither is sufficient alone; together they form a whole greater than the sum of its parts. (3) Learning is

simultaneously social, emotional, cognitive, and ethical.

(4) Learners become competent agents of change by applying and testing their understanding in real settings with concrete consequences. As Michael Fullan says, “It is only through action that we come to understand and develop the skills and clarity to actually make change successful. . . . Knowing what constitutes success is not the same thing as achieving it in a new situation.”

In our book *Smart by Nature* we identify four Smart by Nature Guiding Principles that arise from reflecting on our work:

Nature Is Our Teacher. From nature, we learn the principles, processes, and patterns that sustain ecosystems. We learn the ingredients of healthy living, the importance of systems thinking, and the dynamics of change in living systems. If we choose to pay attention, nature teaches us both limits and possibilities. We can also learn from traditional and indigenous societies that have persisted for centuries by attending to those limits and possibilities.



Sustainability Is a Community Practice. Many ecological principles are variations on the insight that nature sustains life by creating and nurturing communities. Qualities that keep natural ecosystems vibrant and resilient, such as diversity and interdependence, shape healthier communities. When school communities decide and act collectively, students practice leadership and decision-making skills to convert ecological understanding into effective living.

The Real World Is the Optimal Learning Environment.

In schooling for sustainability, students connect with the natural world and human communities through project-based learning that inspires them to learn in order to accomplish something they care about. Whether restoring the habitat of an endangered species, tending a school garden, or addressing a town council on behalf of changing environmental policies, students learn about acting effectively in rich, complex environments.

Sustainable Living Is Rooted in a Deep Knowledge of Place. The world reveals itself in its fullness in particular places, and students who immerse themselves in a place can develop a sense of kinship and a commitment to caring for it. Increasingly, environmental problems will need to be addressed by solutions that build resilience in local communities.

In our early years, the Center was primarily a grantmaking public foundation. We scouted in our Shasta bioregion for exemplary schools that integrated curriculum around the environment and that functioned as learning communities. Among the schools selected were Tule Elk Park School in San Francisco; King Middle School in Berkeley, site of the Edible Schoolyard; Brookside Elementary in San Anselmo, home to the Freshwater Shrimp Project; other innovators in the San Francisco Bay Area; and a four-district network in Mendocino County.

Other noteworthy grantees included the River of Words project, Occidental Arts and Ecology Center in Sonoma County, Literacy for Environmental Justice in the Bayview–Hunters Point neighborhood of San Francisco, and films and publications such as Michael Ableman’s *Beyond Organic* and Ernest Callenbach’s *Ecology: A Pocket Guide*.

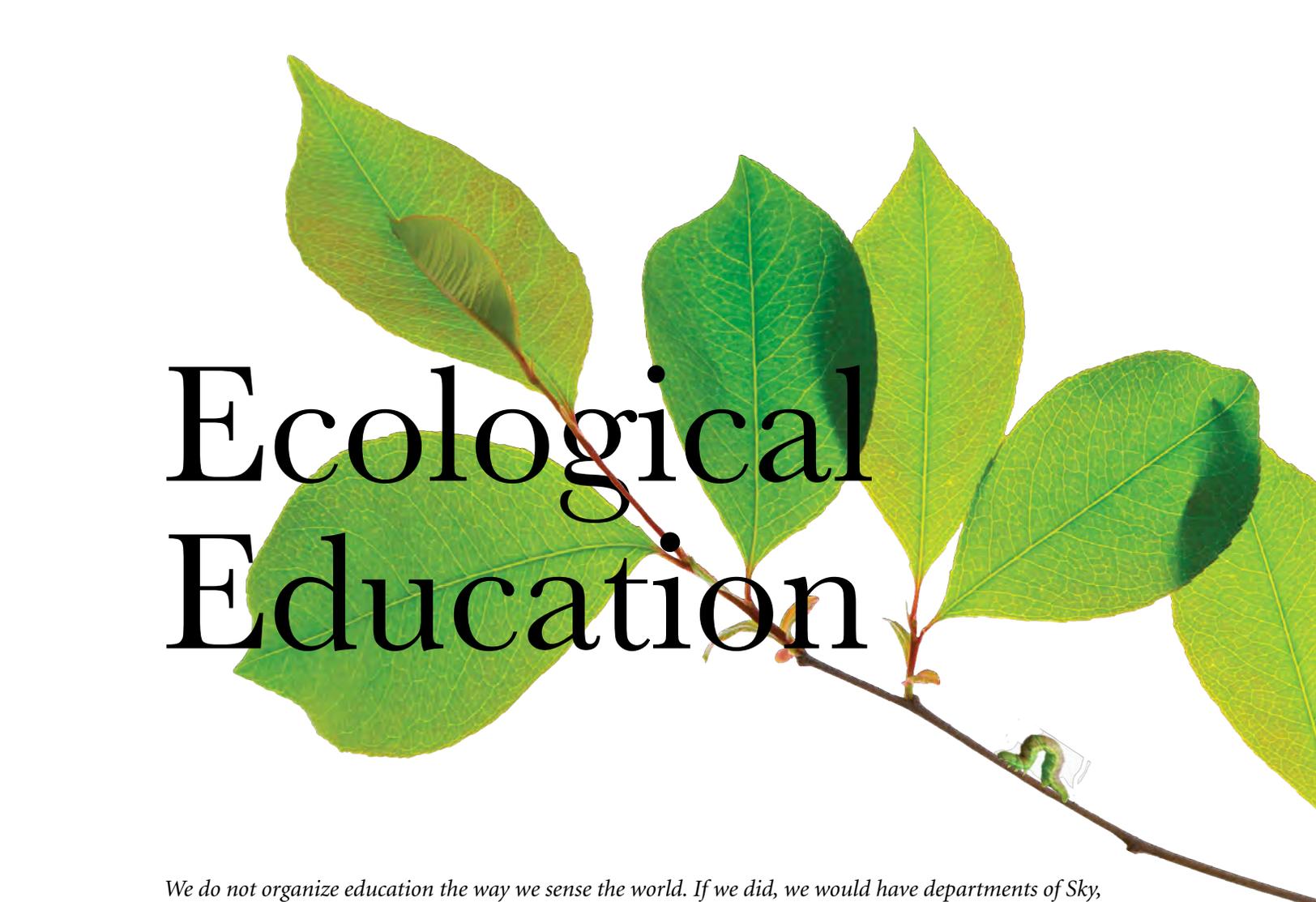
With nature as our teacher, we have applied core ecological principles and patterns, such as networks and nested systems, to the practice of ecological education. For example, we began early to convene networks of our grantees for meetings, seminars, and events and to give preference to seminar applicants participating as teams.

The Center has evolved to take a more active role as a participant and consultant. We have offered a Schooling for Sustainability Leadership Academy, convening individuals selected for their potential as leaders to study ecological principles and leadership strategies and design projects for their schools.

In a longer-term engagement the Center helped shape the change process at Marin Academy (MA) in San Rafael. Mark Stefanski, first holder of the Thoreau Faculty Chair at MA, cites the Center’s “huge influence” in bringing about ecological consciousness that continues 10 years later. Paul Chapman, the former head of school at Head-Royce School in Oakland, calls collaboration with the Center a “turning point” in the school’s drive to become a model green school.

Whether offering direct consultation and professional development, publishing through our imprint *Learning in the Real World*, or developing resources for educators, the Center has maintained a consistent vision: resilient communities living harmoniously with the natural world.





Ecological Education

We do not organize education the way we sense the world. If we did, we would have departments of Sky, Landscape, Water, Wind, Sounds, Time, Seashores, Swamps, and Rivers. Instead we've organized education like mailbox pigeonholes, by disciplines that are abstractions organized for intellectual convenience.

I suggest that at all levels of learning K through Ph.D. some part of the curriculum be given to the study of natural systems roughly in the manner in which we experience them. The idea is hardly novel. It is an old idea going back at least as far as the belief that natives have something to teach us. The idea is simply that we take our senses seriously throughout education at all levels and that doing so requires immersion in particular components of the natural world—a river, a mountain, a farm, a wetland, a forest, a particular animal, a lake, an island—before introducing students to more advanced levels of disciplinary knowledge.

—David W. Orr, Center for Ecoliteracy board member

David Orr asserts that the ecological crisis is in every way a crisis of education. Over the past 20 years, the Center for Ecoliteracy has worked with many thousands of educators to promote the understanding that education for sustainable living does not mean adding one more topic to overburdened teachers' schedules, but lies instead in returning to the real basics: experiencing the natural world; understanding how nature sustains life; nurturing healthy communities; recognizing the consequences of how we feed ourselves and provision our institutions; knowing well the places where we live, work, and learn.



1999

Center cofounds STRAW
with The Bay Institute

40,000+

Students who have
participated in STRAW

35+

Miles of creek banks
restored

STRAW Project

“You’d think they had seen a movie star,” says Laurette Rogers of the first time her fourth-graders saw the tiny endangered shrimp they had come to love and were dedicated to saving.

Their quest had begun with a question, “What can we do?” after a film on rainforest destruction. They found that the best way to help vulnerable species is habitat restoration, and launched an environmental project-based learning effort, championed by their principal, Sandy Neumann. They studied local ecology and the life cycle of the shrimp, which they learned are one strand of a web that includes trees, insects, songbirds, creeks, estuaries, and the San Francisco Bay. They also discovered that the problem could be addressed only by nurturing a network of people and organizations who sometimes see themselves as adversaries—ranchers and environmentalists; for-profit companies and public officials; teachers, students, and parents.

The Freshwater Shrimp Project evolved into STRAW (Students and Teachers Restoring a Watershed), a project cosponsored by The Bay Institute and the Center for Ecoliteracy, which recognized in STRAW many hallmarks of successful environmental project-based learning. Classroom teaching

and hands-on experience are integrated. Students encounter nature’s complexity as found in particular places. They are engaged because their learning applies to making a real-world difference.

STRAW celebrated its 500th restoration in March 2015. Since 1992, some 40,000 students—kindergarten through high school—have restored over 35 miles of creek banks.

In the face of climate change and drought, STRAW’s restoration efforts now include planting up to 20 drought-resistant species and conducting monitoring to learn which are most successful under changing conditions.

Says Rogers, now STRAW’s program director in its home at Point Blue Conservation Science, “Through institutes, publications, and dialogues about the principles of ecology, the qualities of effective education, and development of successful networks, the Center gave STRAW much of the life-giving cultural aspects that undergird our program to this day. We are extremely grateful to the Center for being a guiding light, connecting ecological principles to effective ways to operate as humans in the world.”



School Gardens

Especially in cities, gardens may be young people’s best connection to nature, opportunities to understand—by experiencing—ecological concepts like flows of energy; cycles of water and seasons; and interdependence within the web of life. Students are physically active, apply different learning styles, and literally dig in to learning that transforms their relationship to food.

The Center supported school gardens early, before becoming the first funder of the Edible Schoolyard (ESY) at Martin Luther King, Jr. Middle School in Berkeley in 1996. “Their grant was the catalyst,” said ESY founder Alice Waters. “The Center sees a very big picture, and has understood deeply what we are trying to do.” The Center offered teacher training at King for a decade.

That engagement set the pattern for later garden projects, especially the emphasis on integrating experiences in gardens, cooking classes, and cafeterias with classroom learning. The Center provided release time and teacher consultation, created and reviewed curricula, and illustrated

ways to address academic standards through garden-based learning.

In 1997, the Center moved to a larger scale by underwriting and designing a “Vision of a Garden in Every School” conference that helped launch a statewide initiative by the California Superintendent of Public Instruction. With Life Lab Science Program, we published *Getting Started: A Guide for Creating School Gardens as Outdoor Classrooms*, which the California Department of Education distributed to 25,000 schools. In 2014, we wrote *Gardens of Goodness* for Annie’s Homegrown and produced *Interactions in the Garden*, a film for educators cultivating ecological literacy in urban children.

The Center’s influence on garden education keeps spreading. We encouraged foundational strategies and offered professional development for the nascent Hawai’i Island School Garden Network, which utilizes Center articles, website materials, and publications. Now some of the teachers who were part of the first Hawai’i Island cohort are taking garden education to the island nations of the South Pacific.

1996

The Center is first funder of the Edible Schoolyard

5

Types of school gardens explained in *Gardens of Goodness*

25,000

Schools receiving copies of *Getting Started* from California Department of Education





Food Systems



For me a hallmark of the Center is its systems approach to food. The Center engages with the folks in our schools who decide what food to purchase, how to prepare that food, and what about food is included in school curriculum. They are providing children in our schools interactions with food and the environment through meals, gardens, cooking, and in the classroom.

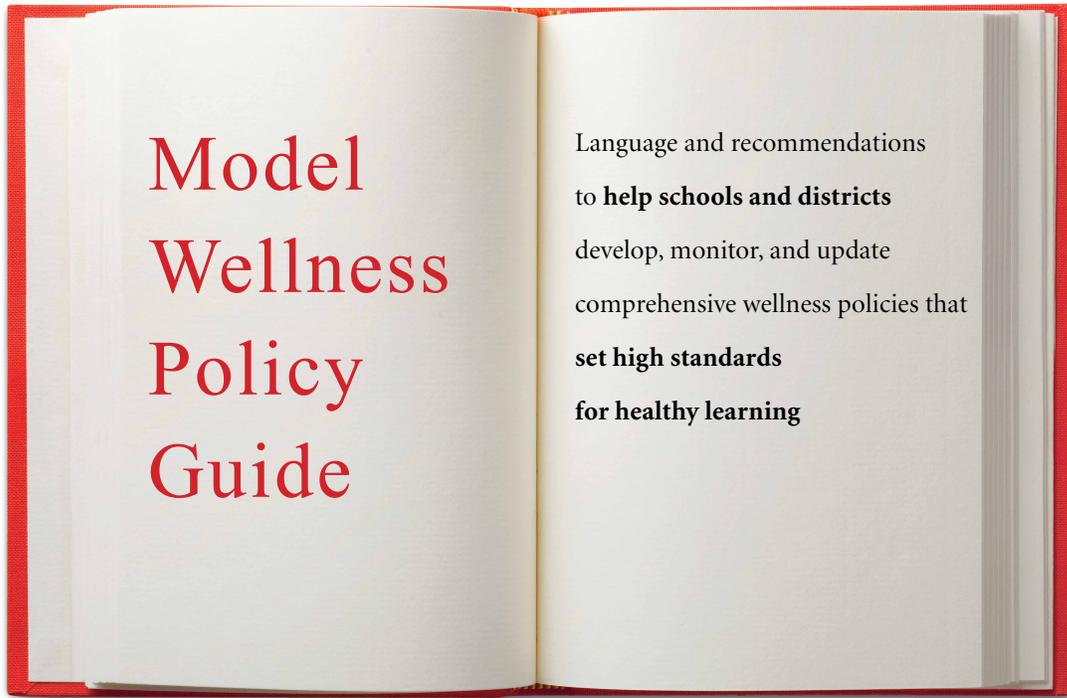
As a culture we are very disconnected from our food—where it comes from, how it is produced, what makes us healthy. How food impacts our water and air quality and the health of the soil, the very concept that soil is a living thing, those are invisible notions to most people. The Center's support of school meal programs gives the Center entrée into affecting how schools teach about food and food systems.

I'm especially attracted to the Center's work in Oakland. The Center is working with OUSD on its new food center, designing it to incorporate students and learning through the preparation of meals and an instructional farm.

—Nancy Skinner, Center for Ecoliteracy board member

Within ecological education, the Center has placed a special emphasis on food systems. Food, a shared daily experience, is integral to sustainable living. The ways we grow, transport, process, prepare, and serve food and manage waste affect many of the ecological and health challenges and opportunities of our time. Food offers a positive and delicious starting point for teaching ecological principles and beginning conversations about important issues.

Over the last 20 years, the Center has addressed school food issues at every level of scale and in a wide range of contexts: gardens at single schools and at San Francisco's Juvenile Justice Center, district-wide food service department redesign, multidistrict collaborations, a network of districts spanning California, and publications and seminars that have reached audiences from around the world.



1998

USDA Community Food Security Projects grant

100%

Berkeley elementary schools with gardens and salad bars by completion of grant

31 million

Children in National School Lunch Program benefiting from district wellness policies

Community Food Security: The Food Systems Project



In 1998, the Center convened 17 community-based organizations in Berkeley and applied for a three-year grant from a new USDA Community Food Security Projects program. USDA consultant Zy Weinberg called the proposal “visionary ... one of the best” submitted. He was impressed by the breadth of community

participation, the school district’s commitment, ambitious goals for increasing food procurement from local sources, and attention to large-scale systemic change.

The resulting Food Systems Project (FSP) catalyzed, among other accomplishments, the first school food policy in the nation, a citywide food policy, establishment of gardens and salad bars at every Berkeley elementary school, a revamping of the school district’s food service, and support for a bond measure—garnering 83 percent “yes” votes—to fund school kitchen and cafeteria construction.

Tom Bates, who became the project’s director after completing a distinguished 22-year career in the California Assembly, had recommended establishing a school district food policy to institutionalize practices and principles that would remain in place when the individuals creating them had moved on. The BUSD policy’s first goal: “Ensure that no student in Berkeley is hungry.” Its provisions included promoting maximum participation in the district’s meal program; improving school meals’ nutritional value; eliminating food additives; reducing waste; and integrating experiences in the cafeteria, gardens, and classrooms.

The BUSD policy is widely credited with helping to inspire a federal mandate that every US school district implement a wellness policy. To assist districts creating wellness policies, the Center consulted with national experts and produced a downloadable *Model Wellness Policy Guide*, which has been used by thousands of districts across the country and downloaded more than 30,000 times from the CEL website.



2004

*Rethinking School Lunch
Guide*

10

Dimensions of school food
operations addressed in
the *Rethinking School Lunch
Guide*

55,000+

Downloads of *Rethinking
School Lunch Guide*

Rethinking School Lunch

The movement to improve school food is an opportunity to promote lifelong health, support academic achievement, teach children where food comes from and how it reaches the table, and demonstrate strategies for effecting institutional change. After a decade of engagement with food system reform in school communities and the six-county Fertile Crescent Network, the Center used its considerable experience to create a planning framework for school food innovation. Rethinking School Lunch (RSL) identifies 10 interrelated aspects of school operations: food and health, wellness policy, teaching and learning, the dining experience, procurement, facilities, finances, waste management, professional development, and marketing and communications.

RSL recognizes that change can begin at any of several points, depending on resources and opportunities, and the process will eventually lead to the other areas. A downloadable *Rethinking School Lunch Guide* (2004, revised 2010) provides an introduction to these pathways and illustrates the connections among them. “I get asked all the time for help in changing school meal programs,” wrote leading food systems expert Marion Nestle. “This guide is a good place to start.”

The RSL framework became the basis for a suite of projects, including Rethinking School Lunch Oakland and California Food for California Kids®. It provided the foundation for seminars that attracted participants from more than 40 states and from Africa, Asia, Europe, and Latin America, and introduced the Center to people and institutions that remain valued supporters and partners.

Concurrently, the School Lunch Initiative (SLI) emerged as a collaboration among the Center, Chez Panisse Foundation, and Berkeley Unified School District. One of the first comprehensive school lunch reform efforts, it tested the idea that students who grow, cook, and share fresh, healthy food while learning about it in the curriculum will be more likely to develop healthy eating habits and values. A three-year longitudinal study by the Center for Weight and Health at UC Berkeley confirmed that SLI was effective in improving nutrition knowledge, preference for healthy food, and attitudes about the taste and value of school food.

The expertise demonstrated by the Center led to requests from organizations including the California School Boards Association for resources to explain to superintendents, school boards, and other decision makers the benefits and rationale for improving school meal programs. In response, the Center created “Making the Case for Healthy, Freshly Prepared School Meals,” a set of tools including a video, a PDF file presenting extensive research, a PowerPoint that users can customize for their audiences, and an at-a-glance infographic. Together they demonstrate that fresh, healthy meals are good for students, good for learning, good for the environment, and frequently very good for school finances. “I turn to the amazing ‘Making the Case’ materials often,” says Curt Ellis, cofounder and chief executive officer of the Food Corps. “Thank you for this amazing resource for our field.”



FARM FRESH PRODUCE

SWEET CORN
PEACHES
BEANS
TOMATOES

FARM STAND

Rethinking School Lunch Oakland

This multiyear project is the culmination of a scan of local school districts' readiness for systems change. Oakland Unified School District (OUSD) met several readiness criteria: a history of efforts to improve school food; visionary, committed leadership; linkages to the wider community; a new strategic plan emphasizing social, emotional, and physical health; and recognition of school meals' role in creating equitable learning opportunities.

In 2010–2011, in partnership with the TomKat Charitable Trust and with support of the S.D. Bechtel, Jr. Foundation, the Center commissioned a team of expert consultants to conduct a comprehensive feasibility study, in collaboration with OUSD, of its Nutrition Services Program. The study, based on the 10 dimensions of our Rethinking School Lunch planning framework, examined the assumption that the district's capacity to deliver fresh, healthy meals was stymied by inadequate and antiquated facilities.

The study's core recommendations included construction of a central kitchen facility, classrooms, a teaching kitchen,

and an urban instructional farm and greenhouse, as well as refurbishing existing satellite kitchens. The recommendations were unanimously adopted by the Oakland Board of Education in 2012 and incorporated into the district's Facilities Master Plan.

Zenobia Barlow and Ruth Woodruff, founder of the grassroots Oakland School Food Alliance, cochaired the subsequent campaign for Measure J, a ballot measure that received 84 percent yes votes and authorized \$475 million in bonds to improve school facilities, including about \$42 million for kitchen and dining facilities.

The Center has remained significantly involved through the transition of three superintendents in strategizing and planning for the new central complex on the Marcus J. Foster School site, with special attention to developing food, education, and community programs in schools, gardens, and market stands and exploring learning opportunities with the potential to create a national model of standards-based experiential education and career development.

2011–2012

Rethinking School Lunch
Oakland Feasibility Study

84%

YES votes for Measure J

\$475 million

Measure J bond funds
(\$42 million for kitchen and dining
facilities)



This Thursday
we are serving
California Food for
California Kids™

RETHINKING

California Food for California Kids: California Thursdays

“You fixed that for *us*?” exclaimed an excited student at an Oakland taste test of new recipes. The California Food for California Kids® (CFCK) initiative had gained another convert.

In partnership with TomKat Charitable Trust, we inaugurated CFCK in 2011 with the cookbook and professional development guide *Cooking with California Food in K–12 Schools*, which presents a framework and recipes for dishes that children prefer, while honoring California’s cultural heritage. Called “a great resource” by the California School Nutrition Association’s president, it has been downloaded more than 50,000 times. A subsequent publication includes nutrition analysis and recipes for reimbursable school meals, scaled to meal-service quantities.

We recruited a network of food service directors who were leaders in cooking healthy, freshly prepared school meals;

hosted three statewide conferences; showcased recipes and strategies; and recognized noteworthy achievements with CFCK Innovation Awards.

In 2012 we documented the potential for much greater local sourcing with our study *Are California Kids Eating California Food?*

In 2013 the Center piloted a “bite-sized” CFCK strategy, California Thursdays®, to test the hypothesis that one meal a week featuring California ingredients could provide a manageable transition to freshly prepared meals. Following success in Oakland, the Center expanded the program, with USDA and California Department of Food and Agriculture support, to a network of 15 districts in 2014 and 42 districts, serving more than 250 million meals a year, in 2015.

2011

*Cooking with California
Food in K–12 Schools*

50,000+

Cookbook downloads in English
and Spanish

250 million

Meals served annually in
California Thursdays network
districts



RETHINKING SCHOOL LUNCH



CALIFORNIA FOOD FOR CALIFORNIA KIDS™

CENTER FOR ECOLITERACY

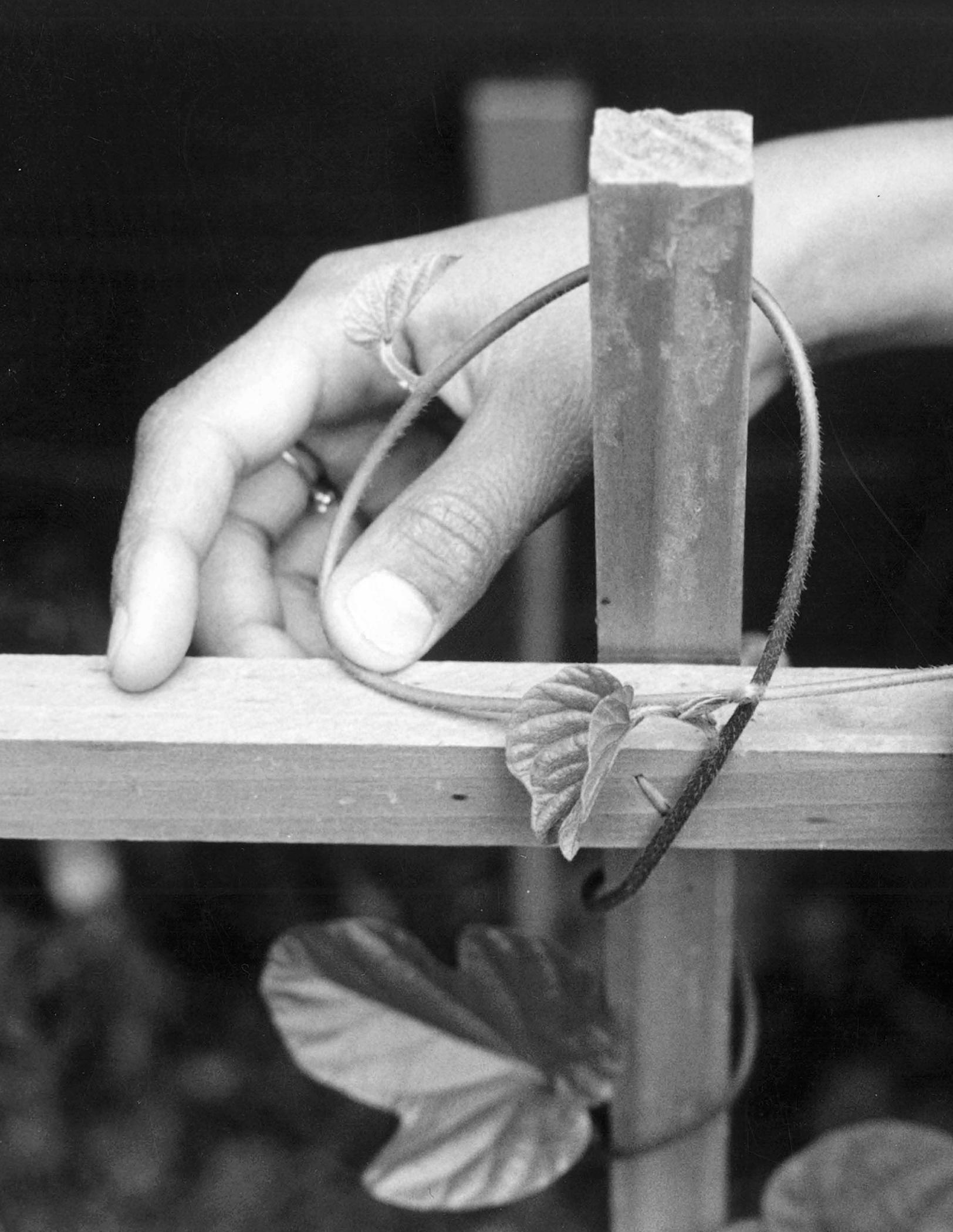


In April 2015 the Center celebrated the program’s expansion by hosting a gala reception on the south lawn of the California capitol building for state legislators; local, state, and federal officials; and school district leaders. Elk Grove and Natomas school districts prepared a delicious meal of the sort now served in their cafeterias. Speakers included Karen Ross, California Secretary of Agriculture; Sandip Kaur, Director of the Nutrition Services Division of the California Department of Education; Ronna Bach, USDA Regional Director of Food and Nutrition Services; Assemblymember Susan Eggman; and former Assemblymember and Center board member Nancy Skinner. Assemblymember Eggman introduced HR 15, which had 74 cosponsors and was passed unanimously. It read, in part, “Resolved . . . that the Assembly proclaims April 23, 2015 as ‘California Thursday’ and commends the Center for Ecoliteracy and participating districts for advancing health and

academic achievement, investing in California agriculture and California’s economy, and benefiting the state’s environment; and urges all California schools to participate in ‘California Thursdays.’”

The Center convenes the network and maintains a much-appreciated online forum for problem solving and sharing best practices. We offer professional development and assistance with menu planning. We’ve provided media training and support from a leading public relations firm and created high-quality marketing, promotion, and communications materials for use by districts.

California Thursdays has energized food service staffs, generated media coverage, and spread beyond the state with the institution of Minnesota Thursdays, whose creators credit it as their inspiration.





Advancing Ecological Education

The whole school change process involves structure, culture, and community; three components that are totally interdependent. For example, if you begin to shift instruction, assessment, and the curriculum, then you are also going to have to change the way the school community works.

—Gay Hoagland, Center for Ecoliteracy emeritus board member

I have been proud to support the Center for Ecoliteracy's creation of inspiring and effective resources to promote education for sustainable living. I always welcome the opportunity to introduce new readers to the Center's elegant, thoughtful, and timely publications. Its seminars and conferences bring together leading thinkers and practitioners and attract participants from around the world. Its mission is critical to our children's and grandchildren's future. I am glad to be part of the Center family.

—Nancy Schaub, Center for Ecoliteracy emeritus board member

Student achievement depends as much on the vitality of the school environment as on the textbooks and curricula. When the school models sustainability as a community practice, it shows students that this goal is worth the effort, and demonstrates that a community working together can make a significant difference. Schools become “apprentice communities,” in the words of Geoffrey Caine and Renata Numela Caine, for living in an interdependent world.

The Center supports educators and school communities through professional development, consulting, seminars and workshops, presentations at conferences, extensive online resources, and a growing collection of publications.



Sunflower
petals

marigold

chard

NATURAL PIGMENTS

peppermint

bachelor
buttons.

headlands
brown.



Resources for Educators

The Center’s resources for educators, particularly for K–12 classroom teachers, include:

- **Our Big Ideas series of books.** *Big Ideas: Linking Food, Culture, Health, and the Environment* (2008) offers a conceptual framework for integrated learning, with key concepts drawn from the American Association for the Advancement of Science’s *Benchmarks for Science Literacy*, essential questions to engage students, and a rich assortment of sample activities. *Big Ideas: Linking Food, Culture, Health, and the Environment, a New Alignment with Academic Standards* (2014), created in collaboration with National Geographic Society Education Division, aligns key concepts with standards including Common Core State Standards and Next Generation Science Standards. The Center contracted with the San Francisco Public Utilities Commission in early 2015 to prepare a third Big Ideas volume, centered on water and energy.
- **More than 150 articles on the Center website.** Among the authors: Michael Ableman, Fritjof Capra, Robert Gottlieb, Susan Griffin, Joan Halifax, Paul Hawken, Richard Heinberg, Frances Moore Lappé, Joanna Macy, Gary Paul Nabhan, David W. Orr, Jeremy Rifkin, and Vandana Shiva.
- **“Thinking outside the Lunchbox.”** Forty articles on food systems by writers including Marilyn Briggs, Janet Brown, Joan Dye Gussow, Wendy Johnson, A.G. Kawamura, Fred Kirschenmann, John C. Mohawk, Marion Nestle, Michael Pollan, Janet Poppendieck, Sandra Steingraber, Alice Waters, Mark Winne, and Margo Wootan.
- **Discussion and instruction guides for books and films.** They include *Ecological Intelligence* (Random House), *Food, Inc.* (Participant Media), *Nourish* (WorldLink), *The Last Mountain* (Uncommon Productions), and *Elemental* (Go Project Films).
- **Downloadable lessons and activities for different grade levels.** Each contains background information, materials required, and instructions for preparing, conducting, and following up after the activity. Among the titles: Designing a Resilient Community, Oak Woodland Learning Activity, Food Traditions, Jobs in a Biotic Community, The World’s Flavor Profiles, The Migration of Food, and A Comparative Tasting of California Fruits and Vegetables.

1995

Founding of Learning in the Real World publishing imprint

150+

Articles on Center website

300,000+

Downloads of Center online educational resources

fresh/dark, plump, waxy, glossy
 dried - shriveled, dry, loss of color, cream
 low moisture
 1 sm. }
 10 sm. }
 1/2 strawberry -
 1 sm. }
 2 half med. sm. }
 4 sm. }



<p> <u>Fresh</u> brighter red juicy the plump glossy </p> <p> 1/2 large = 10g 1/2 sm = 4g 2 sm = ' </p>	<p> <u>Dehydrated</u> darker red dry shriveled chewy </p> <p> 1/2 large = 1g. 1/2 sm ? </p>
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Seminars and Conferences

Seminars are opportunities to deepen understanding of ecological education, model effective pedagogy, and widen the community of Center partners. Says professor Alejandro Rojas of the University of British Columbia and founder of Think & Eat Green @ School: “The style of the leadership, the conversational opportunities, the aesthetics ... all that was so beautiful and so inspiring, and had a direct impact on the way we ran our own summer institute.” Wrote another participant, “I had a spark of interest. Now I have a flame.”

Some Center seminar titles: The Systems View of Life; Making Learning Come Alive; Leading Your School to a Sustainable Future; Food, Culture, Health, and the Environment; Education in an Age of Ecological Uncertainty; Connecting Art, Science, and Design.

On several occasions, the Center has been privileged to welcome Okanagan wisdom keeper Jeannette Armstrong and other indigenous leaders to facilitate multiple-day sessions adapted from the En’owkin council process. One of the practices that have helped traditional societies survive for

millennia despite meager resources, En’owkin is designed to assure that the needs of the whole community, as well as of the land and nature, are fully considered when making decisions. Years later, former participants still speak of being changed by this powerful experience. The multiple perspectives of En’owkin have shaped our own work, including the books *Ecological Literacy* and *Smart by Nature*.

The Center receives many invitations to address regional, national, and international meetings, and chooses those most strategic to our mission. They have included the Green Schools National Conference, North American Association for Environmental Education, World Environmental Education Congress, National Science Teachers Association, Community Food Security Coalition, Biennial of the Americas, Bioneers Conference, School Nutrition Association, National Association of Independent Schools, California School Boards Association, Biennial Childhood Obesity Conference, International School Grounds Alliance, and School Food FOCUS.

1995

The Center’s first seminar,
“Ecoliteracy Dialogue”

5,000+

Participants in Center seminars
and workshops

5

Continents (and 40 US States)
represented by seminar participants

Publications

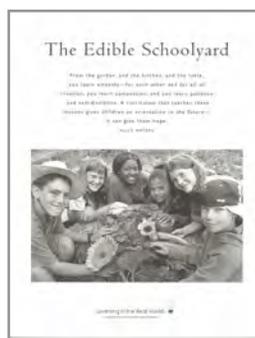
The Center for Ecoliteracy writes and publishes works by board and staff members as well as selected colleagues and experts in order to share information about the theory and practice of ecological literacy with readers around the world.

Learning in the Real World (the Center's imprint) Publications

Learning in the Real World®



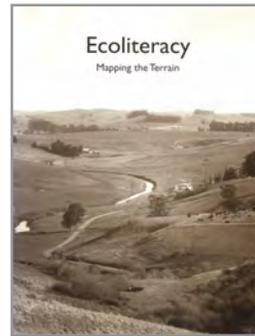
Guide to Ecoliteracy: A New Context for School Restructuring (1993, 1995). A presentation of the work and thinking that led to founding the Center for Ecoliteracy.



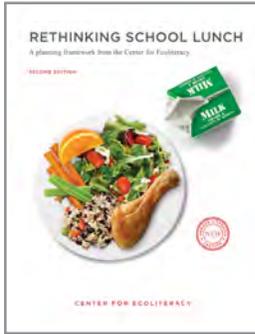
The Edible Schoolyard (1999). Places the garden and cooking program at Martin Luther King, Jr. Middle School (the Center was its first funder, and provided professional development to King teachers) within the context of ecological education.



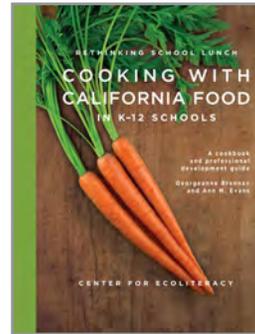
Getting Started: A Guide for Creating School Gardens as Outdoor Classrooms (1997, 2006). Published in collaboration with Life Lab Science Program and distributed to thousands of schools by the California Department of Education.



Ecoliteracy: Mapping the Terrain (2000). Uses the Center-supported STRAW Program (Students and Teachers Restoring a Watershed) as a starting point for exploring diverse aspects of environmental project-based learning.



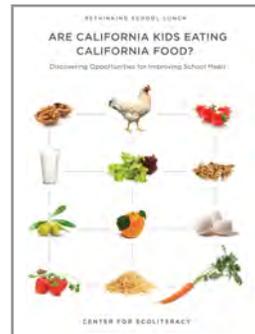
Rethinking School Lunch Guide (2004, 2010). A comprehensive planning framework that explains the rationale for better school meals and explores 10 interrelated pathways to school food reform.



Cooking with California Food in K-12 Schools (2011). A cookbook and guide to menu planning and professional development for devising healthy and appealing menus that honor California's agriculture, rich history, and cultural heritage. More than 40,000 copies have been distributed or downloaded to date.



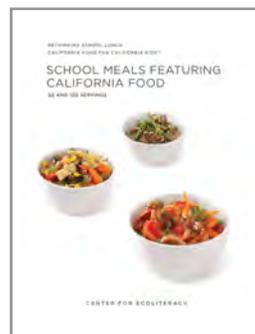
Model Wellness Policy Guide (2006, 2010). Provides model language and recommendations to help districts develop and update policies that set high standards for healthy learning.



Are California Kids Eating California Food? (2012). Explores the extent to which selected California crops are being used in California schools.



Linking Food, Culture, Health, and the Environment: A Visual Guide (2006). How an enriched school environment can enhance understanding of well-being and the natural world.



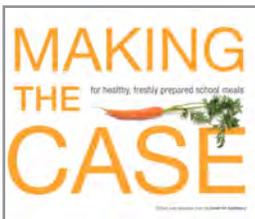
School Meals Featuring California Food (2013). Recipes and nutrition analysis for reimbursable school meals, scaled and tested for quantities of 50 and 100.



Big Ideas: Linking Food, Culture, Health, and the Environment (2008). Provides a conceptual framework for integrated learning based on key concepts from the American Association for the Advancement of Science's Benchmarks for Science Literacy.

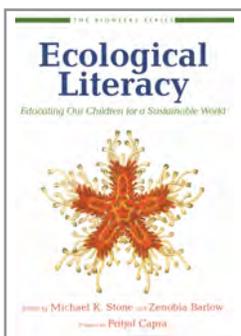


Big Ideas: Linking Food, Culture, Health, and the Environment, a New Alignment with Academic Standards (2014). Written for publication on the National Geographic Education website, it aligns key concepts with standards including Common Core State Standards and Next Generation Science Standards.

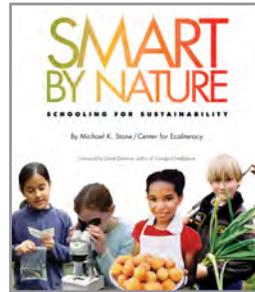


Making the Case for Healthy, Freshly Prepared School Meals (2014). Tools including a video, customizable PowerPoint, extensive research document, and infographic for promoting fresh, healthy school meals with district decision makers.

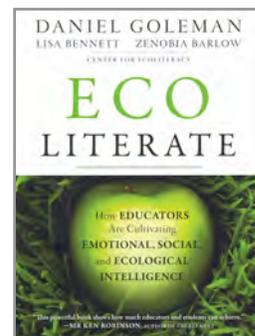
Works Written or Produced for Other Publishers



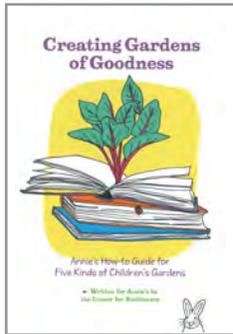
Ecological Literacy: Educating Our Children for a Sustainable World (2005, Sierra Club Books). Documents significant Center projects and thinking basic to the Center’s work, with essays by writers including Jeannette Armstrong, Wendell Berry, Fritjof Capra, Malcolm Margolin, Donella Meadows, and David W. Orr. Called “important” by Frances Moore Lappé and “the best book of its kind” by Michael Pollan.



Smart by Nature: Schooling for Sustainability (2009, Watershed Media). Illustrates the Center’s guiding principles and portrays the growing sustainability movement in K–12 education through inspiring stories of public and independent schools across the United States. “A must for educators interested in schooling for sustainability,” according to the National Science Teachers Association. Winner of the Green Prize for Sustainable Literature.



Ecoliterate: How Educators Are Cultivating Emotional, Social, and Ecological Intelligence (2012, Jossey-Bass). A collaboration with Daniel Goleman that builds on social and emotional learning to address critical ecological issues. Called “powerful and persuasive” by Sir Ken Robinson and the “one book on education that needs to be read by every teacher on the planet” by Laurie Lane-Zucker.



Creating Gardens of Goodness: Annie's How-to Guide for Five Kinds of Children's Gardens (2012, Annie's Homegrown). Detailed advice for designing, creating, and maintaining educational gardens of all sizes.

An issue of *Resurgence* magazine, guest-edited by the Center (2004); chapters for books including *Social Learning towards a Sustainable World* (2007), *Earthrise: The Dawning of a New Civilization in the 21st Century* (2008), *The Post Carbon Reader* (2010), *Learning for Sustainability in Times of Accelerating Change* (2011).

Our Circle of Support

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