

balance

A NEWSLETTER FOR EDUCATORS



SELF-SUMMER INSTITUTE
July 10 - 14, 2006
registration form inside

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INAUGURAL "STUDENTS FOR A SUSTAINABLE FUTURE EXPO" BRINGS TOGETHER 700 STUDENTS, TEACHERS AND EXHIBITORS

Ignites Student Interest In Sustainable Products And Processes

Summer Rayne Oakes (right), creator of EcoFashion101 curriculum, discusses the connection between purchasing decisions and the economy, society and environment.



Students from Chappaqua, NY, Seven Bridges Middle School (left) display their "Wheel of Sprawl," showcasing the interconnections and impact of rural land development on society, the economy and the environment. The Wheel was designed as part of their enrichment studies on sustainability led by science teacher, Ray LoGiudici.

"The EXPO was a triumphant success and it was a great pleasure to participate."

— corporate exhibitor WCI Green Communities

Manhattan's School of the Future students (right) complete an "EXPO QUEST" while visiting exhibits ranging from compressed natural gas vehicles (Honda), to photovoltaic panels (The Solar Center), green roof technology (The GAIA Institute, Greener by Designs), organic cotton fashions (Eileen Fisher, Patagonia), Socially Responsible Investment (Smith Barney), and Fair Trade displays (Equal Exchange, WHOLE FOODS).



A student from the Hackley School in Tarrytown, NY (left) exhibits his project in collaboration with The GAIA Institute. The project demonstrated how a mixture of recycled ground-up polystyrene (packing) peanuts and several natural ingredients creates the perfect planting medium for lightweight rooftop gardens that significantly reduce storm-water runoff and provide an inviting habitat for many species.

"The idea behind this conference is amazing. I just finished a paper on how the youth in America does not have a direct connection to the environment because they do not KNOW the environment. Introducing the environment, and sustainable options, to children at a young age is the only answer to "the death of environmentalism."

—Pace University student, Department of Environmental Studies

Sustainability in Schools ... Collaboration is KEY!

As the end of the school year draws near, we are reminded of the ancient African proverb, "It takes a village to raise a child." It took a huge collaborative effort—a global village of concerned citizens—to pull off CELF's initiatives for children this year. We are very thankful for all the participants who have enabled CELF to best serve the teachers, students and communities with whom we conducted programs for sustainability over the past year. Some of those instrumental in our success include: P/NW BOCES Center for Environmental Education; Scott Beall Educational Consulting; PACE University; Creative Change Educational Solutions; Gunter Pauli (ZERI); Alliance for Green Schools and Communities; Federated Conservationists of Westchester County and Westchester Environmental Student Council; Columbia University's Earth Institute; NY State Environmental Business Association; North American Association for Environmental Education; the U.S. Partnership for the Decade of Education for Sustainable Development; our committed volunteer staff; and the dozens of individual

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"How wonderful it is that nobody need wait a single moment before starting to improve the world."

— Anne Frank

teachers and administrators who have helped enable CELF to bring sustainability education to our schools.

In this edition of Balance, you'll find an educator's reflections on exposing teachers to sustainability education (SE), an example of a successful and highly regarded project-based SE curriculum in use in the Brewster, NY school district, and coverage of CELF's inaugural "Students for a Sustainable Future" EXPO. The EXPO showcased examples of inspiring school environmental projects, businesses that are turning environmental priorities into business objectives, and organizations that offer a wealth of knowledge and assistance for schools wanting to implement sustainability projects.

Here is a sampling of some other accomplishments CELF can lay claim to this year:

- Made more than two dozen presentations to schools, governmental and non-governmental organizations, conferences and businesses on the merits of integrating SE into core K-12 curricula

- Received three grants toward our 2006 Summer Institute for Sustainability Education including: the Clarence E. Heller Charitable Foundation, the Heller Charitable & Educational Fund, and a Special Legislative Grant from Assemblyman Adam Bradley. (See insert for details and registration form for the July 2006 Summer Institute at BOCES in Yorktown Heights.)

- Sponsored student seminars on topics including: "greenwashing," the "Re-Use-A-Shoe" program and product "upcycling", and photovoltaic energy

- Established a teacher internship program to assist in CELF's School Outreach initiative

- Participated in national and regional radio, television and newspaper interviews

- Participated regularly in corporate seminars and international conferences as part of our own professional development and to understand corporate leaders' perspective on "What qualities will students need to develop to become the best global citizens?" and "How are businesses communicating sustainable development to their employees and shareholders?" Professional development has included: the Wall Street Green Trading Summit, Green Building Council meetings, Environmental Business Association Green Salons, and the State of the Planet Conference at Columbia University, and the North American Association Environmental Educators Conference in New Mexico—for the first time dedicated entirely to the topic of sustainability.

The key to a sustainable future is education. Formal and informal education will arm students with an understanding of the fundamental principles of—and interdependencies among—natural and human systems and the ability to design integrated solutions for a bright and challenging future. To this end, CELF will continue to play its role in providing educational opportunities for teachers and students throughout the Lower Hudson Valley region—and across the country. We will continue to follow related work being done by schools throughout our nation and around the world, by corporate businesses, and by universities and NGOs, and pledge to share their stories and ideas through professional development opportunities to encourage others to get involved.

We encourage all teachers and administrators to seek ways to pursue the principles and processes of sustainability—systems learning, citizenship and entrepreneurship, multiple perspectives, future-oriented learning, ecological literacy—and integrate them in their students' school experience for more relevant, more in-depth, and more collaborative and joyful learning.

Best wishes for a wonderful, relaxing summer!



Katie Ginsberg
Founder and Director



Engaging Educators: Do We Talk Crisis or Opportunity?

BY CARMELA FEDERICO

Generally, as sustainability educators, we believe that a profound transformation in what is taught and how it is taught needs to occur, if students are to leave us armed with the knowledge and the skills necessary to create a more sustainable world. We know it, but what is the best way to convince others? How do we persuade the decision-makers—the standards setters, curriculum supervisors and classroom teachers—that the interrelationship between humans and the environment has to become a central concern of education? There are several ways to make the case; which is the most effective?

First, there's plain old pedagogy. Many environmental and sustainability education approaches are great ways to teach established, agreed-upon knowledge and skills. Much "EE" and "SE" curricula are inherently interdisciplinary and relevant to the real world, and often are inquiry-based, hands-on and experiential. Many curricular offerings have been developed to foster a variety of skills and are embedded with the best thinking about how children learn. They've been developed by master teachers and extensively field-tested and refined. This certainly helps; our job would be much harder if we had inferior units with limited educational utility to offer. However, these sterling traits exist in many curricula that do not directly address sustainability. Being a pedagogically sound unit is by no means a slam-dunk path to its use.

This places us on the horns of a

dilemma: To win more SE converts, do we focus on the environmental crisis already affecting us, and threatening even more dire consequences, or do we stress the positive benefits that an SE curricula can bring? The environmental concerns that we (and most scientific researchers) deem a crisis can leave people feeling overwhelmed, hopeless and recoiling from the enormity of the problem. Indeed, for more than a decade, Joanna Macy has made a living offering counseling workshops to those whose work involves confronting this crisis. So is it wise or useful to plunge teachers into this numbing litany of distressing facts?

Here's another reason to avoid dwelling on our current grim environmental situation: Asking people to form opinions as to whether we are facing an environmental "blip" on our journey to a better world, or a major environmental crisis, requires them to examine their underlying assumptions of justice, economics and progress. I will make a small oversimplification and say that people generally fall into two camps in their thinking about the state of our environment: They either believe we have a system of market forces and technology generation that will cook up solutions automatically, without massive and conscious transformation of the general society, or they believe that our institutions have to be significantly

transformed to support decisions that protect the environment that we need for food, water, air and security.

It's not very effective to toss out "doom and gloom" statistics without offering an educational opportunity for people to examine these assumptions and their underlying thinking. These concepts cannot be addressed quickly

The interrelationship between humans and the environment has to become a central concern of education.

or lightly. "Business as usual" boosters ridicule environmentalists for doubting that market-driven innovations will get us over our current environmental glitches. Witness *New York Times* columnist John Tierney, who counsels environmental doomsayers that, "The most practical way to combat global warming is not through asceticism but through technology—the way we averted the famines and energy shortages forecast on past Earth Days." ("Cheer Up, Earth Day is Over," *New York Times*, April 23, 2006.) Alternately, those of us who are alarmed at the state of the environment and the social systems in which we make decisions feel that sustainability requires some rather profound changes—in what markets count, in how capital is defined (to include, for example, social and natural capital), in how progress is envisioned and assessed, and in how investment decisions are made. Needless to say, delving into all these subjects, and into our feelings

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Engaging Educators: Do We Talk Crisis or Opportunity?

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and existing mental models, takes skill and time—time to reflect, to cover all the bases, and time to get over discomfort and establish the trust needed for true sharing and growth.

In raising these issues, we needn't convince teachers that we are in the midst of an environmental crisis. It is up to us, however, to demonstrate to them that enough brilliant thinkers and experts surmise we are having such a crisis—one that poses profound risks to our children and grandchildren's quality of life—that this question of what to do about it must

be broadly addressed, by our society and our generation. Thus, preparing stu-

dents to have rich, informed answers—equipping them with the cognitive skills, research abilities, content knowledge, and experience to formulate sophisticated answers—should be a central educational goal of our school systems. Equipping them with the emotional and psychological maturity to engage with this question—which involves hope, efficacy and concern for the generations to come—likewise needs to be a goal.

The sessions I spend with educators don't necessarily begin in this gloomy place, but I don't feel I've done my job until I've raised questions, and generated some personal reflection on why the educators in the room think one way or another about our current environmental problems. Some teachers don't need to

engage in this profound self-assessment, but instead jump right in and find a piece of the sustainability puzzle to make their own—a multidisciplinary school garden, an engagement with ongoing community issues, an immersion in the real-world difficulties of developing communities, a regular monthly neighborhood wetlands exploration—because it works for students and works for their educational goals. Many others, however, will be motivated to change their curriculum only to the degree that they accept that educators must prepare students to fully understand their connection to the natu-

We seek a world with smarter innovation, wiser resource allocation, and more real happiness.

ral world and to play a role, whatever their career choice, in advancing sustainability. We also need to let folks know that,

instead of deprivation, we seek a world with smarter innovation, wiser resource allocation, and more real happiness. Lightening up our resource-intensive lifestyle needn't be all about sacrifice and loss; many of the changes sustainability advocates are recommending aren't painful, and indeed are in keeping with diverse views of a good and ethical life. As reads one of the slogans for the Center for a New American Dream: More Fun, Less Stuff. Indeed, each day more sustainable practices become cost-competitive, and others help us regain or enhance many sources of pleasure and sanity.

So when I reach out to educators, I try to do it all—sound pedagogy, serious possibility of

crisis, and the better world we could all create—and I usually have to do it in a few hours! It's a tall order, but in many ways, educators are a great audience. They truly care about their students, and the many talented and experienced ones want to address the question, What Is Education For? As concern about climate change becomes more mainstream, and as energy prices soar, the efforts of sustainability educators will hopefully find more real-world data and experience in our audiences to back our claims and to motivate teachers to consider the questions we pose.

Easy or not, what we see, what we fear and what we hope will continue to make us seek to inspire educators to equip their students to create a more sustainable world.

Carmela Federico is the Sustainability Center Coordinator at Ramapo College in Mahwah, NJ. She is happy to support CELF and Westchester schools in any efforts they undertake to implement education for sustainability and to "green" their facilities' practices.

CELF Student/Teacher Seminars

Throughout the school year, CELF offers seminars led by professionals from across related fields, arranged through our network of partners. This year's seminars are reviewed below.

Sustainable Energy in the Home: How to Make the Meter Run Backwards

On a brisk Saturday afternoon in March, CELF hosted a solar energy on-site seminar for students, teachers and parents. Gathering at CELF Board Member Chris Hall's Chappaqua, NY solar-powered home, an audience of over 30 learned the significance of switching to energy-efficient bulbs, shutting off a single light, a PC, and other items on their bills, even the use of bio-diesels. Rising energy costs' impact on gasoline, heating, and electricity bills was discussed and an elegant match between sustainable energy

practices and reducing expenditures was presented. They learned how solar panels work, what it takes to install them, and watched the electric meter rolling backward as energy was sold back to the grid (the electric company). A consultant for The Solar Center, Inc. and the system's installer, Lee Streisfeld-Leitner, was the co-presenter.

By installing a solar photovoltaic (PV) or solar thermal energy system, a small two kilowatt PV system could provide 10-25 percent of a family's energy. With net metering laws

(which allow the PV system owner to connect to the grid and sell their surplus electricity back to the utility) the solar electricity produced reduces the family's electricity bill, effectively paying a tax-free dividend on a risk free basis (risk free—the sun comes up every day). The PV system allows the owner to hedge their electricity costs and lower their bill by selling excess electricity produced back to the grid.

Green Advertising: Greenwash or a True Reflection of Marketing Strategies?

Greenwashing is the misuse of the principles of environmental marketing and means that consumers cannot trust the content of advertisements. CELF brought together high school students from the Westchester Environmental Student Council with a representative from Cameron-Cole, LLD. (national corporate social responsibility consulting firm) to explore whether or not green advertising reflects environmentally sound strategic and structural-level decisions. The students analyzed several advertising campaigns,

from BP, Exxon Mobil, Ford Motor Co., Toyota, and others.

According to student participants, some things they learned from Cameron-Cole at the CELF "Greenwashing Seminar":

- To look for environmental claims that are specific and to evaluate these claims.
- To look for product labels with specific information about the products or its packaging. For example, if a label says "recycled," check how

much of the product or packaging is recycled.

- Be wary of overly broad or vague environmental claims. Just as specific information about the environmental merits of products can be helpful, overly general or vague claims provide little information to help you make purchasing decisions. Labels with unqualified claims that a product is "environmentally friendly," "eco-safe," or "environmentally safe" have little meaning.

Reuse-A-Shoe Seminar

CELF's two "Reuse-A-Shoe" seminars led to an impressive exhibit at the EXPO. Chappaqua, NY, Bell Middle School students collected over 350 pairs of dirty old athletic shoes to be "upcycled" into sports surfaces through the National Recycling Coalition's program with NIKE. "Upcycling?" asked one student before taking on the task of handling dozens of stinky sneakers ... The whole idea

took on a new level of interest when he learned that upcycling turns a low value item (old sneakers) into a neat new product (a new field or court) for underprivileged schools. Mamaroneck, NY High School students also



participated in a seminar and created collection boxes for their school and communities. Over 600 pairs were collected in all, including those brought to the Reuse-A-Shoe booth at the EXPO.

CELF looks forward to hosting many new sustainability student seminars. If you are a teacher or a professional in a related field and are interested in leading a CELF student seminar, please contact us: info@celffoundation.org. Seminars are open on a first come basis. Please check our website for future meeting dates and times! www.celffoundation.org.

Middle School Students Do It Right

By SCOTT BEALL

There are myriad ways that the values and principles of sustainable development can be woven into students' learning in schools, from the adoption of school-wide mission statements of stewardship and green-school goals, to interdisciplinary project-based curricula that reaches out to the community. As a worldwide movement however, sustainability education must also include the education of working citizens, business institutions and society at large. This article explores the success of DoRight™ Enterprises, Inc., a curricular model engaging all of these dimensions, which was piloted in the H.H. Wells Middle School Enrichment Program in Brewster, New York, during the 2005-2006 school year.

It is a Monday morning in October 2005 at Henry H. Wells Middle School. Students file into their 7th grade enrichment class.

"Good morning class, please take your seats. Today I have a very special announcement."

The class quiets down to low murmur, shuffling books, settling in.

"Starting today, you are no longer students at H.H. Wells Middle School, and I am no longer your teacher."

The class is now quiet, the students intrigued. Is this another silly teacher game?

"From this day on, when you enter this classroom, you are employees of 'DoRight Enterprises, Inc.' This classroom is your office, and I am the chief executive officer (CEO) of DoRight Enterprises. I'm your boss."

The silence is commanding. A boy in the back offers cautious approval: "Cooooooool..."

"Welcome, and congratulations. DoRight Enterprises, Inc., is a business that makes money by selling 'consulting' services to 'clients.' The purpose of DoRight is to help businesses learn how to increase their profits by reducing their impact on the environment and natural resources. DoRight also specializes in political action, so as a DoRight

employee, you will have the choice of which department you would like to work in: consulting or lobbying.

"You will each become an expert in your field during the DoRight Training program, which begins today, and will last for four

Brewster pilots an interdisciplinary, project-based curricula to the advantage of students and local businesses

weeks. After your training you will be ready to work. As a consultant, your job will involve making sales calls to local businesses to find a willing client (please bring in your cell phones); setting up an appointment to conduct a sustainability assessment; visiting your client's site to conduct the assessment by inspecting the operations and interviewing managers; analyzing your findings back here in our office; sending letters recommending changes; and finally, following up with your clients for support.

"Your sustainability assessments will

measure various aspects of your clients' energy use, waste management, procurement policies of goods purchased and sold, green building features, cleaning chemicals, landscaping practices, and water use. As DoRight lobbyists, you will research bills pending, conduct letter-writing campaigns, and make phone calls to U.S. Congress members and/or hold fundraisers for other political action groups. Any questions?"

An enthusiastic student responds, "Awesome! How much are we going to get paid?"

"In our school, DoRight Enterprises, Inc., is a 'not-for-profit' corporation. We will be offering our services to our clients in the community free of charge, and you, being in training, will not be paid. If, however, you pay close attention and master the skills and knowledge involved with this project, you could potentially create your own business in high school that could bring in a paycheck. Seriously ..."

And so began the maiden voyage of DoRight Enterprises, Inc. At the time, it felt like taking a giant curricular bungee jump—the unknowns were huge.



CELf shares its national spotlight on SIRIUS Satellite/LIME Radio with students from the DoRight™ Enterprises program at H.H. Wells Middle School, Brewster, NY

Would these kids and I be able to pull this off? Would businesses take them seriously? How would the logistics work? By the end of the year, these fears would prove moot. If I learned one thing, it is to never underestimate the ideas, energy and creativity of youth.

Since October 2005, nearly 300 students have conducted on-site sustainability assessments and made recommendations for nearly 30 local businesses in Brewster; raised hundreds of dollars for the World Wildlife Fund and Defenders of Wildlife; and sent dozens of letters to U.S. Congress members and state legislators. In the process, our classroom more resembled the newsroom of the *Washington Post* than Room 242 at H.H. Wells Middle School, with students working independently, making phone calls to Washington, D.C., calling local clients, writing letters, analyzing data, and more. The purpose-driven learning caused student engagement to soar; there was clearly something very special going on. Students' recommendation letters to their clients became "real world" tests, each detailing how various proposals could save money by lowering costs and/or increasing market shares, and outlining the connections between their clients' actions and environmental degradation, responsible consumption and global issues.

As a model of sustainability education in action, DoRight Enterprises utilizes teaching strategies that are highly effective for standards-based academic classrooms, as well as enrichment programs. Its application at H.H. Wells is a classic example of an interdisciplinary, project-based curriculum design with a community-action component. Such designs begin with a context: a real-world problem, question or project that generates the need to learn a particular set of knowledge and skills. In the case of DoRight, the need for students to be effective consultants or lobbyists leads them through advanced study in all the school disciplines. Geometric sum formulas are learned to calculate and understand the

depletion of global oil reserves. Algebraic models are derived to explain input/output and stock-level dynamics of sustainable systems. An enhanced understanding of the structure and function of government and the legislative process is required. Professional letter writing skills must be honed. Principles of economics need to be learned. And last but not least, ecosystem science and the interdependence of living systems and the human-built world are examined, leading to the study of ecological footprints, supply-chain analysis and more.

Interestingly, the most challenging preparation for some students is gaining the confidence and professionalism to make cold sales calls to prospective clients. From start to finish however, in spite of the time spent on project-based elements, students spend most of their time applying and learning skills in their academic subject areas, with a highly relevant and motivating sense of purpose.

What did the clients have to say? Christine Reger, of the Brewster Sports Center, commented, "The students were remarkably professional and knew exactly what they were doing. They were able to point some things out that had gone unnoticed by us. As a result, we have substantially redesigned and expanded our recycling program. I think it's fabulous to have these students engaged with us like this."

When reflecting on the richness of the academic learning in DoRight, I've been equally struck by the development of character, values, confidence and maturity in my students. Many of my middle-school students feel disempowered, as though they have little say in the direction and design of the world they will inherit. The DoRight project gives them confidence, skills and the belief that their ideas are worthy and can translate into action that can make a difference.

Many students at this age are also struggling with a need to individuate from the adult world. The DoRight project capitalizes

on this adolescent dynamic and provides a constructive vehicle for them to be experts, giving them license and a legitimate forum to responsibly speak truth to power in the adult world, to make vital contributions. Students receive respect for their ideas, and their local community becomes connected to the process of education like never before. As I explain to my students, "When you are done with this training, you will know more about these topics than 80 percent of the adults in your world." (A recent Roper Center study found that 80 percent of Americans cling to incorrect and outdated environmental myths.)

This idea is transformative and empowering for young people. Echoing the sentiment in Margaret Mead's famous quote, "Never doubt that a small group of dedicated citizens can change the world. It is the only thing that ever has," one student, in her DoRight summary report, commented, "Our actions in this project will help, because if enough people make a big deal about it, the government will eventually do something about it."

If the results of DoRight Enterprises, Inc., are any indication, the dedicated citizens who will change the world in our era could be our teenagers, if we have the vision and courage to let them.



Advisory Committee and middle-school enrichment teacher at H.H. Wells Middle School in Brewster, NY. Mr. Beall is also a lecturer, author and international education consultant. He has consulted and lectured in school districts and universities from Central America to Kazakhstan.

Ss

SROI (Social Return on Investment) \n\ : The measure of an investment's ability to produce social value in a community or broader society. An attempt to monetize social value in order to help investors assess potential investments based on returns outside of traditional financial measures.

self-reg-u-la-ting sys-tem \n\ : A complex system that regulates its own performance so that it never gets too far off balance and can bring itself back into homeostasis.

ser-vice e-con-o-my \n\ : An economy which places greater value on delivery and receipt of services for economic benefit and growth than on the acquisition and consumption of products and materials. This shift away from an economy of products can place greater emphasis on relationships and can promote resource productivity (if the service provider maintains responsibility for the means of providing that service).

so-cial en-tre-pre-neur-ship \n\ : The act of creating, organizing and managing an income-earning venture to serve an explicit social purpose. The primary mission of a socially entrepreneurial organization is to create value that benefits the health and well-being of individuals, society or the natural environment, rather than to create wealth for shareholders.

sprouts \n\ : A selection of consumers defined by the Roper ASW Green Gauge Report as consumers undecided about environmental issues when it comes to buying and using products and services. These customers represent 31 percent of the total American consumer population and often evaluate environmental issues one at a time, comparing each to their personal benefits or costs.

stew-ard-ship \n\ : Responsible caretaking; based on the premise that we do not own resources but only manage them, and are responsible to future generations for their condition. Making decisions regarding the care of our environment with the goal of passing healthy ecosystems onto future generations.

SUS-TAIN-ABILITY \n\ : Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

sys-tems think-ing \n\ : Rather than studying something by breaking it into its constituent parts, systems thinking looks at how the thing interacts with other constituents within a larger framework. Particularly useful in the study of complex problems, or situations involving the considerable interdependence of elements.

The above is reprinted from the "Dictionary of Sustainable Management," created by the following MBA students at Presidio School of Management in San Francisco who will graduate in June 2006: Corina Beczner, Bob Gower, Ruth Katz, Nathan Shedroff. Please visit www.sustainabilitydictionary.com for an alphabet of sustainability terminology.



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