

Sustainability teams expand role

By Dawn Wakeley

Students who have worked hard to help Tahoma schools reduce energy usage, increase recycling and composting and conserve water now have an expanded mission and a new name: Sustainability Ambassadors.

While we still focus on all the elements connected to more traditional Green Teams, including waste reduction and recycling, promoting green practices, water conservation, and other efforts aligned with national and local Green programs students realized they have broader aims. It's more than just Green practices, it's about making conscious efforts to help others understand what's at the heart of making a difference in our world. We and the students decided that Sustainability Ambassadors better captures that.

Here is some of the work we are focused on:

Our experience this summer at Camp Snowball was energizing and humbling. We were inspired by all the amazing work going on at so many of the schools represented at the conference and we brought back many new ideas. Each of our building teams have been working on recruiting new members and getting going on new initiatives at our individual schools. If you want to check out some of the activities we've been focused on please visit our district sustainability blog.

A Community Challenge

Our Sustainability Ambassadors in each school are making a pitch to our school



Sustainability education and practices play an increasing role in the daily lives of Tahoma School District students, including these elementary students who are recycling after lunch.

board in January to sponsor a district-wide Waste-Free Wednesday. We've had a number of our schools sponsoring a waste-free lunch and we'll expand that to all our schools on Wednesdays. We will also be working to educate parents, staff and students about waste practices, encouraging everyone in our school system to work toward a zero-waste day. Part of our pitch to our school board will be a challenge to

our community – let's all work toward a Waste-Free Wednesday. If you've done something similar in your school district please let us know of any suggestions you might have that would help us.

Dawn Wakeley is the Tahoma School District associate director for Teaching and Learning. Contact Dawn via email: Dwakeley@tahomasd.us

Funding offered for student leadership projects

The SoLED partnership is willing to provide a small amount of money to fund some student leadership ideas and projects.

Tahoma School District's team is willing to take the lead to organize a structure that allows us to share ideas and develop a small cross-district grants team that allows us to review and support innovative student sustainability ideas. We know that a small investment can make a big difference when coupled with great student ideas and passion to make a difference! Contact Dawn Wakeley, associate director for Teaching and Learning, by email at Dwakeley@tahomasd.us



Cleveland (sustainably) rocks

Community, schools embrace green practices, systems thinking

If you haven't visited Cleveland in a while, you might be interested to hear about the French woman who recently set out to discover the heart of America, and decided to forego the lights of New York and San Francisco on the off chance that she might catch a glimpse of America's future along the south shore of Lake Erie. She was not disappointed, and neither will you be once you catch the spirit of the locals who are pursuing a vision of a "Green City on a Blue Lake." Of course, visitors still come to see the Rock & Roll Hall of Fame, the Great Lakes Science Center, the Greater Cleveland Aquarium, the Botanical Gardens and the historic theaters of Playhouse Square, among other attractions. However, if you should happen to stop by, make sure to ask for directions to the "Sustainable Cleveland" office on Public Square, where you will learn directly from the Mayor's staff about a ten year program for greening the city and Cleveland's burgeoning network of urban farms; or public learning events offered by the Corporate Sustainability Network, a consortium for sharing green business practices. You will hear about the group of civic leaders who formed the Great Lakes Biomimicry Collaborative, a regional business cluster dedicated to innovation inspired by nature.

Most exciting of all, the Cleveland area schools are undergoing a transformation with a vision of sustainability in mind.

In addition to passage of a new levy, the first in 16 years and a reflection of the transformative leadership of Cleveland Municipal School District (CMSD) Superintendent, Eric Gordon, support for whole system transformation among Cleveland Area schools is growing



Students concentrate on assembling a hoop house, under the leadership of Carlton Jackson, co-founder of Tunnel Vision Hoops, as part of the Gardens That Teach Challenge.

and extends beyond Cleveland proper. Local businesses, public agencies, non-profits, and foundations are rallying to support the teachers and students of northeast Ohio. For their part, Cleveland's public, charter and independent schools have launched complementary initiatives for sustainability education, setting the stage for collaboration and synergy. This broad-based effort has coalesced as the Cleveland Educators for Sustainability (CES). Founded in 2009, CES is a K-12 learning initiative positioned to bring together educators and stakeholders throughout northeast Ohio for the purpose of fostering education for sustainability, including systems

thinking, ecological literacy, STEM education, integrative design and other innovations to transform K-12 education and prepare students to thrive in the 21st century knowledge economy. In collaboration with the Fowler Center for Sustainable Value, the Cloud Institute and the Society for Organizational Learning, and with the strong support of CMSD Board Vice Chair Louise Dempsey and other leading citizens, CES is building capacity for collaboration across district boundaries, across sectors of the community, and across disciplines, with a primary aim to engage, inspire and support teachers as learners. Firm in the knowledge that excellent teachers are

deeply committed to advancing their professional knowledge and expertise, CES was organized to serve as a catalyst for innovative programming and action-based research.

Here is a sampling of current activities centered on education for sustainability and systems thinking in Cleveland:

- After attending SolEd's second annual Camp Snowball educator's conference in Tucson, AZ, two innovating Cleveland teachers, Janeen Shaw (grade 4) and Zeara Pratt (kindergarten) with support from Principal Cheryl Taylor from the Daniel E. Morgan school (pre K-8), joined the SolEd Deeper Learn-

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ing and the Common Core State Standards learning initiative during the fall of 2012. Working closely with Sheri Marlin and under a personal coaching arrangement with Sam Sims (teacher at Camp Sunshine), these two Cleveland teachers assumed a direct role in building capacity at their school by presenting an overview of systems thinking to the entire school faculty, demonstrating the application of Behavior Over Time Graphs as an effective classroom strategy grounded in the habits of the systems thinker. As a result, other Daniel E. Morgan teachers have adopted the use of BOTG in teaching literature and other subjects at their school. Zeara also extended this learning to parents during two outreach sessions, where she explained her use of systems thinking tools and encouraged the parents to try them at home as they read to their children, or as a way of helping students better understand the relationship between actions and consequences.

- Students of the Cleveland Early College High School (CEC), in collaboration with CES and Case Western Reserve University, participated in an exploration of the STEM fields through a hands-on sustainable energy project, using high bandwidth video conferencing technology to investigate the energy performance of two “smart houses” on Hessler Road in Cleveland. CES co-director Brett Joseph, who also serves on the CEC Advisory Committee, collaborated with teacher John Fellenstein (CEC’s earth, space science teacher), by leading 12th grade students through lessons on the use



Assembling a hoop house for food production is a step toward sustainability in the Gardens that Teach Challenge.

of wireless technologies to create a systemic feedback loop, allowing for remote data collection and analysis. Inspired by this project, other CEC faculty have explored other avenues to collaborate and generate life-altering experiences for their students. Most notably, during the fall of 2012, John Fellenstein and fellow teacher Sara Humphrey-Bekhouche, again collaborating with CES, introduced new lessons in biomimicry and, under the leadership of Principal Carol Lockhart, launched an international partnership for the study of climate change. Using weekly video conferencing, Cleveland’s student scholars worked with American University of Paris students as equal members on a joint research project. In early December 2012 the project culminated in a student-led transatlantic conference viewed by Academic Deans and other faculty at AUP, where three teams of Cleveland students formally presented to an international audience their research on the scientific, moral and ethical implications of climate change, and their analysis potential solutions.

- Teachers from the CMSD spent a week this past summer in Silverthorne, CO, learning how to integrate scientific research into the study of the environment in their classroom instruction. Lucy Komichak, a science teacher at Whitney M. Young Leadership Academy, and John Fellenstein, Cleveland Early College, were two of 30 teachers from nine U.S. states and Quebec, Canada, who attended the Key Issues Institute, sponsored by the Alcoa Founda-

tion. This training employed an unbiased, inquiry-based, and interdisciplinary framework of coursework to promote a collaborative approach to scientific investigation and problem solving, allowing the teachers to involve their students in a variety local environmental issues.

- With funding from the Cleveland Foundation, CES co-director Anne Juster is leading a process to design the prototype for a new public high school for the CMSD themed on urban agriculture, place-based education and sustainability.

- Linda Alexander, a member of the CES advisory board, educational systems consultant, and attendee at the first Camp Snowball, collaborated with CES, the Cleveland Mayor’s office and several other local organizations to launch the Gardens that Teach Challenge, together with a new web site (<http://www.gardensthatteach.org/>) providing a wealth of resources and links for classroom teachers and administrators to use in teaching the importance of local food and related sustainability concepts to their students. The winning school will obtain a new hoop house for use with their school garden, donated by local business collaborator Tunnel Vision Hoops. The ultimate goal of the project is to encourage schools, community organizations, businesses and individuals to continue to seek better ways to “eat real” and promote safer, healthier, local diets.

- At the request of teacher Steve Warner

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District Facts:

- Number of students: 48,871
- Cost per student: \$15,072 per year
- Number of Schools: 99 -- one K-3; two K-5; one K-12; one 2-12; 68 PreK-8/K-8; 26 high schools.
- Cleveland has 9 public charter schools, serving about 2,000 students.
- Cleveland has 70 charter schools total, serving 28% of Cleveland students.
- Percentage of Free and Reduced Lunch: 100
- More information: <http://www.cmsdnet.net/en/AboutCMSD/Facts.aspx>



Intergenerational School students enjoy time in the garden.

Cleveland

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(high school earth sciences, Cleveland Hts HS) CES co-director Brett Joseph joined with members of a citizen-led sustainability committee established under the auspices of the Cleveland Heights-University Heights Board of Education, for the purpose of developing recommendations for integrating education for sustainability curriculum and training components with “green school” enhancements at each building in this large suburban school district. The recommendations will inform the District’s comprehensive facilities planning process.

- At the Intergenerational School, a high performing Cleveland K-8 public charter school, Principal Cathy Whitehouse, along with her husband and school co-founder Peter Whitehouse, have initiated the development of a school-based health program (Interwell) that integrates sustainability education with food literacy, brain health, intergenerational mentoring and other synergistic elements. The program responds to a community health survey and presents

a holistic framework that teaches students, staff, parents and members of the school community about the relationship between human and ecological health. The pilot stage of this project is supported by grants from the Case Sustainability Alliance and University Hospitals, with CES co-director Brett Joseph serving in a consultative role.

Other notable initiatives in education for sustainability are underway at Carl and Louis Stokes Central Academy (CMSD); Urban Community School (ecumenical-catholic); St. Martin DePorres HS (catholic), Hathaway Brown (private-girls), Hawkens School (independent), the Near West Intergenerational School (public-charter), and other Cleveland area schools. Meanwhile, the Cleveland Educators for Sustainability is developing web resources for teachers and is conducting outreach with other regional entities, such as the Lake and Geauga Counties Educational Assistance Foundation and the Great Lakes Biomimicry Collaborative to explore ways to connect teacher-led initiatives with supportive policies at the system level, and to further leverage private and foundation support for teacher cohort learning, working in collaboration with members of the

SolEd governance council.

Let there be no doubt, Cleveland schools have suffered from a declining tax base, shrinking state budgets, past fragmentation and many other challenges. However, Cleveland already has turned the corner in its struggle to bring down the old silos and transcend its rust belt past. Today Cleveland is coming together as a regional system strengthened by its diversity and having a common vision. Take notice! Cleveland is in a strong position to emerge as a globally significant hub of innovation, with education for sustainability and systems thinking high on the agenda.

SoLutions

This newsletter is published by the SoL Education Partnership. To contribute or comment, please contact Mike Maryanski, Tahoma School District superintendent, Maple Valley, WA

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Snowball

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building at every level that engages administrators, teachers, students, parents, school boards and communities. The CCSS are clear in that their intent is to specify what skills students need to learn, not how to teach them, leaving wide open the opportunity for helping educators develop the strategies that they will need and the skills to accomplish these strategies.

The core hypothesis is that emerging know-how in whole system change and high-leverage capacity building, combined with innovation in curriculum, pedagogy, and assessment can deepen and accelerate the efforts of school leaders intent on utilizing the CCSS to initiate and sustain transformational change in public education. We do this through the application of strategies, tools, and ways of thinking that have been tested for over 30 years in a wide variety of systems.

This hypothesis is grounded in the understanding that a whole systems approach is a radical departure from the pedagogical paradigm that has held sway for more than a hundred years, in which learning comes from dissecting the whole—whether a frog or a sentence—into its component parts. But parts alone are not enough to enable us understand the whole. Systems thinking is essential for improving student achievement and for closing the achievement gap.

This project has three phases: a prototyping

phase that allows us to test and refine our approach in approximately 12-15 districts and three content areas while beginning the development of a scalable social architecture (see drawing) that will enable the capacity building model we are implementing to become widely available and more usable; a controlled scaling phase that will engage 15-50 additional school systems and additional content areas; and an open enrollment phase that will involve a minimum of 100 districts in total and rely more on the social architecture's technology platform.

The project launched this fall and the first group of participating school districts include SoL Ed Partnership members Hewlett-Woodmere UFSD, Hewlett, NY; Winston-Salem/Forsythe County Schools, Winston-Salem, NC; Tahoma, School District, Maple Valley, WA; Cleveland Public Schools, Cleveland, OH; Pima County Schools, AZ (Catalina Foothills and Tucson Unified School Districts); Maplewood Richmond Heights School District, Maplewood, MO; as well as Denver Public Schools, Denver, CO; Adams -12 School District, Thornton, CO; Portland School District, Portland, OR; Sacramento Public School District, Sacramento, CA; and Carlisle Schools, Carlisle MA. Sheri Marlin from the Waters Foundation is the program director.

During the Prototyping Phase we will focus on three particular key challenges posed by the CCSS: early reading, middle school math (algebra, ratio and proportion), and comprehension of complex non-fiction texts in high school. In the Controlled Scaling Phase, we will add more content areas.

The scalable social architecture focuses on community development, capacity building, applied learning, and product development. We will be developing curriculum units, a technology platform, and learning networks for all stakeholders using present and distance learning. We will focus both on classroom innovation and building learning-oriented school cultures. And we will ground capacity building in best practices and in continual assessment of progress.

Our approach is based on clear success examples from earlier work and the most recent learnings and new insights we (and others) have gained. We have long known, for example, that personal change is inseparable from organizational change, so our capacity building and support structures focus on personal mastery in a deep way.

This work is not about helping school districts strictly implement the Common Core State Standards. There are many organizations out there doing just that. We are transforming the larger system through which the intention of the Common Core can succeed. We are creating the conditions that will enable teachers to reach their highest potential and effectiveness thereby increasing what all students can do and become. We are developing a culture of ongoing innovation.

For more information regarding the Deeper Learning and the Common Core State Standards Project, please email LeAnne Grillo (leanne@spaces-for-change.com) or Sheri Marlin (smarlin@pimaregionalsupport.org.)

Students

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as a tumor suppressor in humans and controls light-dependent development in plants," said competition judge Dr. Hanjo Hellmann, Assistant Professor, School of Biological Sciences, Washington State University. "The team looked at a germinating fern and studied how it develops

in the light and dark, showing for the first time that COP1 plays a role in its development. Understanding COP1's precise role in the cell may help in developing multiple applications in plants and animals in the future."

"We were impressed by the enthusiasm of the students and by the fact that they carried out their research entirely with the resources available at their high school laboratory."

The team was mentored by Dr. Terrence Bissoondial, a biological research teacher

at Hewlett High School. According to Dr. Bissoondial, a major factor in the judging was the students' understanding of systems thinking. Bissoondial asked the students how they could integrate their study into the whole global picture of the organism studied.

He believes that their ability to not only see the system as a whole, but to communicate that thinking to the panel of twelve of the best judges in the field, made all of the difference.

Footprint

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- They conduct an audit of the school based on prescribed criteria
- They create an action plan including documentation.
- The team supports the design of a

student-led project to reduce and improve the school's carbon-footprint

- They participate in cross-site webinars for the purpose of supporting, sharing and learning from the other SoLEd sites.

The Sol Ed Partnership will support your efforts during this challenge by providing webinars, resource guides, and ongoing guidance during the project. Teams that participate will have a chance

to meet each other and share their work at Camp Snowball this summer in Winston-Salem, NC.

Join the ECO-FOOTPRINT COOL SCHOOL CHALLENGE!!

For more information please contact Elayne Dorsey 941-504-7545 or elayne@spaces-for-change.com to sign up for this exciting opportunity.