

SENCER E-Newsletter

Volume 7, Issue 1 November 2007

SENCER Grants Implementation Awards to Strengthen Teaching and Learning

SENCER has chosen to fund a promising group of projects that emerged from discussions at the 2007 SENCER Summer Institute. Teams of 4-6 people who attended SSI 2007 were eligible to submit applications for a \$3,000, two-year SENCER-NSF sub-award. The team plans represent thoughtful, intriguing initiatives in teacher education, courses for non-science majors, courses for STEM majors, undergraduate courses, clusters, and faculty development workshops. We expect many of the projects to evolve into model courses over the next several years. The topics covered are diverse, ranging from organic chemistry to traffic, infectious diseases, pharmaceuticals, water quality, food, entomology and public health. Brief descriptions of all of the funded projects will appear in a future issue of the e-Newsletter. Thank you to all SSI participants who submitted applications!

Applications are now available for the expanded Washington, DC Symposium and Poster Session. SENCER and NCSCE invite alumni to apply to attend the spring event, planned for April 13-15, 2008. Page 3, 5.

The SENCER New England Center for Innovation Steering Committee invites alumni and newcomers to a Symposium on January 8-9, 2008, hosted by Southern Connecticut State University. Page 4-5.

Debra Meyer, SENCER backgrounder author, is honored by two South African newspapers for her extensive community service and education work. Page 2.

NCSCE prepares for the publication of the second issue of *Science Education and Civic Engagement: An International Journal* in December. Page 2.

Scholarship opportunities for talented undergraduate and graduate students are available from the Henry J. Kaiser Family Foundation and the University of Maryland. Page 2.



SSI 2007 participants in discussion during the Sunday plenary session on 'Planning the Further Assessment of the Effectiveness of SENCER'

Debra Meyer Honored For Community Service and Leadership



Debra Meyer at SSI 2007

Debra Meyer was honored by two newspapers, the *Rapport* and the *City Press*, as one of the most inspirational South African women of 2007. The ten Prestige Award recipients were celebrated at the eleventh annual event in early October, a ceremony attended by hundreds of members of the press and community. Debra was recognized in particular for her extensive community service, activism, and leadership. She is currently an associate professor in the biochemistry department of the University of Johannesburg as well as a weather presenter on television, and will soon begin a new post at the University of Pretoria. Her research efforts focus on vaccine development or identifying natural products that combat HIV/AIDS. In addition to her laboratory work, Debra also participates in HIV/AIDS education and prevention projects in a variety of community and school settings. She has been an active member of the SENCER community for several years, serving as both a visiting scientist and a senior scholar. She is the author of a backgrounder, *HIV/AIDS and Education in Africa*, and an article in the debut issue of *Science Education and Civic Engagement: An International Journal* on the same topic.

Debra can now be contacted at debra.meyer@up.ac.za at the University of Pretoria.

SENCER News, Dissemination, and Opportunities

Health Policy Scholarship Opportunity for Students

The Henry J. Kaiser Family Foundation is now accepting applications for its Barbara Jordan Health Policy Scholars program, a nine-week Washington, DC experience for college seniors and recent graduates who are interested in health policy. Scholars will learn about the formation and implications of health policy by attending seminars, going on site visits, and working in congressional offices. If you know of a student who may be a good candidate for this program, please refer him/her to the project website, <http://www.kff.org/minorityhealth/bjscholars/index.cfm>, which contains more detailed information on the opportunity and an online application. All applications are due by December 14, 2007.

New Graduate Fellowship Program in Science Education Research

The University of Maryland has launched a new graduate fellowship program in the field of science education research, and is looking for talented students to participate in the program. Students will receive a \$30,000 stipend plus tuition and benefits each year for five years. Over the duration of their time at UMD, they will have the opportunity to lead a course for future K-12 teachers, participate in innovative projects on the teaching and learning of science, and perform graduate-level coursework in their science disciplines. If you know of a student who would be a good candidate for this program, please ask him or her to email elby@umd.edu for more information. The application deadline for the program is January 15, 2008, and the program's website is accessible at <http://www.education.umd.edu/Science/DESEP/>.

Science Education and Civic Engagement: An International Journal

The editors of *Science Education and Civic Engagement: An International Journal* are delighted with the high quality of the papers submitted for publication in the Journal's December issue. They have received enough papers to fill several future editions, and are currently refining the second issue of the Journal.

The editors plan to release the next issue in December 2007, before the end of the fall semester. We encourage all readers to consider submitting an article for the next issue of the Journal. If you have an idea for an article and would like to discuss the possibility of publishing in the Journal, please contact the editors, Trace Jordan (trace.jordan@nyu.edu) or Rich Keeling (rich@keelingassociates.com).

Issues of *Science Education and Civic Engagement: An International Journal* are posted online at www.secej.net.



SCIENCE EDUCATION & CIVIC ENGAGEMENT
AN INTERNATIONAL JOURNAL

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SENCER



Mission Statement

The mission of this journal is to explore constructive connections between science education and civic engagement that will enhance both experiences for our students. In the 21st century, mathematical and scientific reasoning is an essential element for full participation in a democratic society. Contributions to this journal will focus on using unsolved, complex civic issues as a framework to develop students' understanding of the role of scientific knowledge in personal and public decision making, along with examining how such knowledge is embedded in a broader social and political context. Since many pressing issues are not constrained by national borders, we encourage perspectives that are international or global in scope. In addition to examining what students learn, we will also explore how this learning takes place and how it can be evaluated, documented, and strengthened. By exploring civic questions as unsolved challenges, we seek to empower students as engaged participants in their learning on campus and as citizens in their communities.

NCSCE and SENCER Invite Applications for the 2008 Washington Symposium and Capitol Hill Poster Session

Event Dates: April 13-15, 2008

Applications available at www.sencer.net, Due January 18th

We invite all members of the SENCER community to consider participating in the 2008 Washington Symposium and Capitol Hill Poster Session, scheduled for April 13-15, 2008. The Symposium is an annual, invitational event.

We have designed this event to serve the needs of alumni in our community, many of whom have expressed a desire to report on their innovative efforts in STEM education reform, but who have been frustrated by the lack of venues. The Symposium is an opportunity for alumni to connect with colleagues and congressional representatives to share their accomplishments. We plan to invite representatives from federal and other agencies that have substantial databases and academic resources that may be useful to participants in their courses.



2007 Symposium participants converse during the poster session on Capitol Hill

Based on participant feedback, we have extended the agenda this year to include more speakers and a workshop to prepare participants for meetings with congressional representatives and staffers. Speakers will be announced on our website and in the e-newsletter as we confirm their participation.

Events will begin on Sunday, April 13th with a workshop and welcome dinner. Monday's schedule will consist of plenary addresses and panel discussions on issues of interest to the SENCER community. Panel discussions will include participants selected from the applications for the Poster Session and representatives from relevant federal agencies. The Symposium will close with a Poster Session and reception on Tuesday, April 15th in the Rayburn House Office Building. Once again, the Poster Session will be sponsored by Congresswoman Tammy Baldwin, representative from Wisconsin and member of the NCSCE-SENCER National Advisory Board. To view a tentative schedule of events, please visit www.sencer.net.

Meetings with representatives, senators, or staff members will be arranged for Symposium participants throughout the day on Tuesday. These representatives and their staff members will also be invited to attend the Poster Session and accompanying lunchtime reception. The Symposium and Poster Session will adjourn early enough on Tuesday that participants will be able to travel home that afternoon and evening.



2007 participants during roundtable discussions at the Charles Sumner School in Washington, DC

We will organize optional tours of popular museums and other destinations around Washington, DC for participants on Tuesday afternoon or Sunday morning (more information available upon registration). Family members who travel to DC with participants are welcome to take part in the tours.

How to Apply to Participate

We plan to limit the number of people invited to participate in this event to 100. In an effort to accommodate people with different reasons for attending the event, we have designated two ways to apply to participate:

- (1) Apply to present a poster on Capitol Hill **and** participate in the Symposium, or
- (2) Apply to participate in the Symposium activities and Poster Session **without** displaying a poster on Capitol Hill.

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SENCER New England Announces Symposium at Southern Connecticut State University

The Future We Create: Science Education for a Scientifically Literate Future Third Annual New England SENCER Symposium

January 8-9, 2008

At unprecedented levels, on both local and global scales, humanity is facing serious threats to its future. From global warming to global pandemics, from local natural disasters to local unsustainable planning efforts, our responses to these threats require an active and engaged citizenry capable of understanding and meaningfully addressing these crises. An enormous burden is being placed on our academic institutions—educators, administrators, and students—to create the leadership necessary to forge a path toward a sustainable future. These complex problems call for novel approaches to teaching and learning that are capable of addressing issues from multiple disciplines and educating students to become the next generation of scientifically-literate decision-makers. The theme for this symposium focuses on the role of science education in creating a sustainable future and seeks to address the following questions:



Southern Connecticut State University
www.southernct.edu

- Where lies the future of science and science education?
- How do we enhance scientific literacy in the decision-makers of tomorrow?
- How do we engage students in the big issues facing our communities?
- How can we sustain ourselves in our teaching, our research, and our institutions?

You are enthusiastically invited to participate in the Third Annual SENCER New England Regional Symposium to be held January 8-9, 2008 at Southern Connecticut State University, in New Haven. Our goal is to provide a forum that engages all levels of academia—scientists, non-scientists, educators, administrators, students, and faculty developers—in planning a future course for science education. We hope this year's theme and corresponding questions will spark new ideas and inspire novel approaches to teaching and learning about scientific topics of broad societal importance.

We invite proposal submissions for:

- Formal papers (15-30 minutes)
- Panels and Workshops (75 minutes)
- Informal Roundtable Discussion Topics (75 minutes)
- Posters

Sessions are invited on a variety of topics including, but not limited to:

- Successful pedagogical and assessment strategies
- Energizing the role of science in general education
- Creating the next generation of science teachers (pre-service/in-service programs)
- Interdisciplinary approaches to science with the arts, humanities, and social sciences
- Using local issues or global topics in course development
- Engaging faculty and administrators in science education reform
- Attracting students to SENCER and science education
- An introduction to SENCER and the nuts and bolts of developing SENCER initiatives

The New England Symposium will offer opportunities for people new to SENCER to learn more about our approach and to meet SENCER alumni and staff. Information on upcoming staff development activities, as well as new and existing resources, will be presented. As is our tradition, the Symposium will also serve as a forum for alumni to share their work, re-connect with one another, meet new colleagues, and plan new ventures. Please visit the SENCER regional network page at <http://www.sencernet.net/Meetings/regionalnetworks.cfm> to download a registration form and/or to submit your idea for a poster, panel, paper, workshop, or session. The deadline for proposals is December 15, 2007.

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**NCSCE and SENCER Invite Applications for the
2008 Washington Symposium and Capitol Hill Poster Session**

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In either case, we strongly encourage that faculty invite at least one student to attend. Students from all majors and levels of study who have participated in past Symposiums and Poster Sessions have found the experience to be extremely valuable.

Since space is limited, we will give preference to people applying to present a poster on Capitol Hill.

Applications are available for download from the DC Symposium 2008 page on the SENCER website: <http://www.sencер.net/Meetings/dcsymposium08.cfm>. Completed applications should be emailed to danielle.kraus@sencер.net by **January 18, 2008**. Applicants will be notified by early February of their status.

Applicants will be asked to submit the title of the poster and a brief abstract. **Please limit the abstract to 200 words.** Participants will have a chance to revise the information provided on the application before it is published in the program materials. When writing the abstract, remember that the purpose of the Poster Session is communicating information about your project in a succinct way. Keep the language clear and easily understandable by someone who may not be familiar with the topic of your poster.

Program Fee and Lodging

Participants will have to pay a fee of approximately \$195 each to attend the events. This covers the cost of an individual's food and most materials. The National Center for Science and Civic Engagement covers all other program costs.

We have reserved a block of rooms at an area hotel, where many of the symposium activities will also take place. Participants will receive the hotel information necessary to make a reservation with the notice of acceptance to the Symposium. The cost of the hotel is not included in the program fee, and while we cannot subsidize the cost, we have worked to make costs as manageable as possible.

Background

The most recent Symposium and Poster Session (March 2007) included a series of roundtable discussions and plenary addresses on the relationship between STEM education and the development of a 21st century workforce. Emily DeRocco, assistant secretary for employment and training, and Jennifer McNelly, director of the business relations group, both of the Department of Labor, and Deidra Lewis, vice chancellor of academic affairs for the City Colleges of Chicago, joined us for discussions on the importance of quality STEM education for society. To view materials and photos from the 2007 Symposium, visit <http://www.sencер.net/Meetings/dcsymposium07.cfm>.

SENCER New England Announces Symposium at Southern Connecticut State University

January 8-9, 2007

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Financial support from the Center for Excellence in Mathematics and Science at Southern Connecticut State University and the National Center for Science and Civic Engagement has enabled us to offer this symposium at no registration cost to participants. However, all participants will be responsible for the cost of his or her own lodging. Anyone needing overnight accommodations should contact the Clarion Hotel, Hamden, CT, where a block of rooms has been reserved. The room rate is \$99 per night plus taxes. The hotel is located about 15 minutes from SCSU.

For more information, please contact the SENCER New England Steering Committee:
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DonnaJean Fredeen, Dean of Arts and Sciences, SCSU: fredeend1@southernct.edu
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Sponsors: Center for Excellence in Mathematics and Science (SCSU), National Center for Science and Civic Engagement (NCSCE), SENCER, and the New England SENCER Center for Innovation (SCI) at the University of Southern Maine

Reflections on Science and Children and SENCER

Susan Mooney

Associate Professor of History and Philosophy of Science, Stonehill College

On the last day of the Summer Institute in Portland, a group of educators gathered to discuss one future direction for SENCER work. To quote the SENCER home page, we explored “using the SENCER approach to attract more students to pre-service teacher education (especially at the elementary school level) and exploring the feasibility of developing primary and secondary school SENCER course and curricular projects in college-level courses.”

I participated in two forums that day related to this theme. At 1:30 on Monday afternoon, a symposium on SENCER and K-12 education convened – though challenged by a frigid indoor climate, and interrupted by a fire alarm, we made some progress in considering ways colleges and universities could foster improved science teaching in the early grades. Earlier (7:30 am!), faculty from a surprisingly large number of institutions gathered with Ellen Mappen to discuss SENCER’s participation in a NOAA grant opportunity. The goal is to increase environmental literacy, and in particular, ocean literacy in K-12 classrooms. Many colleagues shared current efforts and future hopes related to this goal, primarily via working with our students who will become teachers but also through direct work with schools and school children. Our lively discussion led us to identify several ways in which the SENCER network would offer NOAA unique opportunities, including the possible establishment of a travel network among our institutions. Through exchanges of expertise, accommodations (dorms?), transportation (campus vans?), we could offer inexpensive, accessible ways for our students (and perhaps current K-12 teachers with whom we work) to learn the science of aquatic habitats beyond their geographic limits.



Of course, there is much we can do to enhance the learning of science within our geographic limits. I was thinking of such possibilities two weeks ago, surrounded by squealing third graders while crouching in a tidal pool, mining a large blue crab out of the sand. These children live in Brockton, which borders the Stonehill College campus; a city struggling economically, with many families new to the United States seeking a better future for their children. Though living less than 20 miles from the Atlantic coastline, many of the children had never explored an intertidal zone - and some had never even seen the ocean. College sophomores roamed with their charges, clusters of 3 or 4 children armed with collection buckets and curiosity, watching hermit crabs battle for shells, feeling the tough rockweed, smelling the salt air, realizing that the cluster of periwinkle snails is consuming that sheet of algae, and noticing barnacles sending out tiny feeding feathers as the tide returned.

Our photos are still tied up in the permission-to-publish process, but here are some quotes from the children that provide a picture for you:

“This is great, it’s like school because we’re learning about stuff, but it’s like the beach, because we’re at the beach. This is the best!”

“I feel like a real scientist exploring in the ocean. I’m gonna go look for a great white shark, I’ll be over there.”

“My mom gets mad when I go outside and get all dirty. Do you think she’ll get mad that I’m getting wet today?”

“Even though the ocean is really big and there are so many animals here, we can’t take them home because if we did that and then everyone else did it, there would be no more science for the next kids to play with.”

“I hope the hermit crabs remember us, because I’m going to remember them!”

Just outside the gates of each of our campuses, there are many such children. Children who have not had the chance to experience the natural world directly, not had the chance to see, hear, feel scientific study as exciting and relevant. Children taught by teachers who are either intimidated or bored by science, housed in schools that have either eliminated field trips all together, or only venture to indoor presentations by experts. As we all know, children (and adults) need to actively create knowledge for it to last – and outdoor science is a perfect way to foster that activity.

Our discussions in August were informed by the research captured in [Taking Science to School](#) through conversations with Richard Duschl, an editor of this volume just published by National Academy of Sciences. Just as our own teaching is informed by the NRC’s [How People Learn](#), SENCER institutions should incorporate this research on K-8 learners of science into our work with the future teachers and parents of the next cohort of potential scientists/science phobes. Addressing the inequities in access and quality of pre-high school science education is not only the right thing to do, but it aligns with our collective interests in the future of science as a domain of human endeavor and creativity essential to the solution of our societal problems.

Important Dates and Upcoming Events

November 12: Applications available online for the Washington Symposium and Capitol Hill Poster Session

December 3: Senator Casey (PA) hosts a press conference to announce the National Science Foundation's recent funding of the SENCER project to the National Center for Science and Civic Engagement

December 14: Applications for SSI 2008 available online

December 14: December SENCER e-Newsletter release

December 15: Deadline to submit a proposal for a presentation or poster for the New England Symposium (details and application materials available at www.sencer.net)

January 8-9, 2008: SENCER-New England Symposium at Southern Connecticut State University

January 18: Deadline to apply to attend the SENCER Washington Symposium and Capitol Hill Poster Session

Early February: Applicants to the Washington Symposium and Capitol Hill Poster Session notified

Spring 2008: SENCER Leadership Fellow program launched, applications available online. (Rolling Deadlines)

Spring 2008: Launch of the SENCER Centers for Innovation (see more information on the SCI's in the September issue of the e-newsletter, available at www.sencer.net.)

April 13 - 15: SENCER Washington Symposium and Capitol Hill Poster Session

August 8 - 11: SENCER Summer Institute 2008, hosted by Santa Clara University (California)



University of South Carolina Sumter team



SSI 2007 participants at a plenary session



All photos of SSI 2007 were taken by Katie Shade, a member of the on-site staff.