

The BSCES Public Awareness and Outreach Committee created this pamphlet for the engineering community.

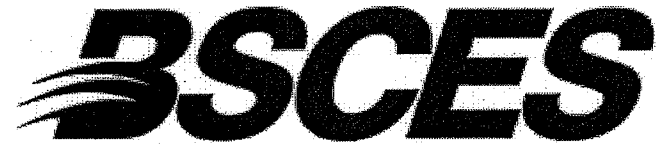
Please feel free to give this pamphlet to a colleague who may be interested in volunteering their time to these worthy organizations. You could also post this pamphlet on a bulletin board at your office so that your co-workers are aware of these opportunities to support their community.

Check the Web Site at www.engineers.org for more volunteer opportunities.



To find out how you can volunteer your services, contact the representatives identified in the pamphlet or contact:

The Boston Society of Civil Engineers
 The Engineering Center
 One Walnut Street
 Boston, MA 02108
 617/227-5551
www.engineers.org



*Boston Society of Civil Engineers Section
 American Society of Civil Engineers*

**Public Awareness and Outreach Committee
 ENCOURAGING ENGINEERS
 TO LEAD BY EXAMPLE**

OUTREACH ORGANIZATION GUIDE



West Point



MATHCOUNTS



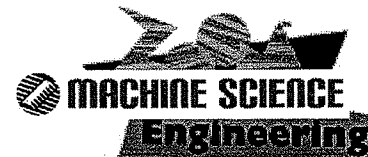
Bridge Design Contest



ENGINEERS WITHOUT BORDERS



Habitat for Humanity



the Science Clubs for Girls



BSCES Public Awareness and Outreach Committee

The BSCES Public Awareness and Outreach is actively seeking out all Outreach organizations that share the same goal: **to emphasize the importance of engineers in society by encouraging engineers to get more involved in their communities and their profession.**

This pamphlet was created by the committee to introduce engineers to some of the many organizations within the Boston area that need the support of the engineering community. The organizations included in this pamphlet include: the Massachusetts Pre-Engineering Program, the Museum of Science, MATHCOUNTS, Kites over New England, Rebuilding Together Boston, Tufts University Center for Engineering Educational Outreach, BSCES/ASCE/West Point Bridge Design Contest/Ralph Salucci Online Bridge Contest, BSCES Infrastructure Group Model Bridge Contest, WGBH (Building Big and Zoom into Engineering Programs), Miscellaneous robotics competitions, RE-SEED, Future City, The Science Club for Girls, American Institute for Aeronautics and Astronautics, and Habitat for Humanity. The work performed by these organizations ranges from helping to stimulate an interest in math, science and engineering in our local schools to alleviating the shortage of quality affordable housing in Massachusetts neighborhoods.

Please take a moment to read this pamphlet to find out how you can utilize your leadership and engineering skills to help improve your community.

- Reed Brockman, PE
BSCES Public Awareness and Outreach Committee Chair
Reed.Brockman@dmjmharris.com

BSCES Outreach Program

Volunteers in the program visited 42 schools and over 2,200 students around Massachusetts. **BSCES' Outreach program is recognized nationally by ASCE as one of the best in the country.** We also have received grant funding to expand the program. This means we need more volunteers, such as yourself. By helping out with the BSCES Outreach Program, you can fulfill the challenge of shaping society as a mentor and a role model.

We visit all grades from kindergarten through high school and college. Presentations to high school students typically discuss career opportunities and the preparation necessary to become an engineer. Presentations to younger students include hands on activities from the **WGBH Building Big and Zoom Into Engineering Programs.** In addition, we have flyers, handouts, PowerPoint slides and videos for the program. We also supply a flyer on how to do an outreach visit. This was prepared to answer many of your questions about going out to the schools.

Join the numerous engineers in the Boston area who have taken a small amount of their time to make a big difference in the life of a student.

BSCES Outreach Program Contact Information

Web Site:
www.engineers.org

Phone Number:
617/227-5551

Representatives:
Sylvia Lee
sylvia.lee@mwhglobal.com



BSCES Infrastructure Group

Model Bridge Competition

The **Model Bridge Competition** is jointly sponsored by the Infrastructure Group of the **Boston Society of Civil Engineers Section (BSCES)** in collaboration with the **Massachusetts Highway Department (MassHighway).**

Model Bridge Competition Contact Information

Web Site:
www.engineers.org

Phone Number:
617-371-4462

Representative:
Reed Brockman
reed.brockman@dmjmharris.com

Participants in the competition construct a model bridge to a given set of specifications using various materials. Participants in the 2004 contest used manila folders. Over 200 students dedicate months of effort to design and build their model bridges. The competition culminates with a panel of local experts judging and testing the bridges for aesthetics, strength and efficiency.

In the 2004 competition, over 30 volunteers from BSCES acted as mentors, volunteers and judges. **The coordinators of the Model Bridge Contest are looking for engineers to serve as mentors and assistants for next year's contest, as well as sponsors.**



MassPEP Contact Information

Web Site:
www.masspep.org

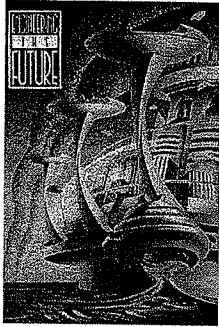
Phone Number:
617-840-5266

Representative:
Bonita McAllister
bmc@mail2President.com

Massachusetts Pre-Engineering Program

MassPEP's mission is to increase the number of minority and female students entering and succeeding in science, mathematics, engineering and technology careers. **MassPEP is a collaborative organization** composed of colleges, universities, industries, school systems and various community groups. It provides students with the opportunity to explore the world of science, math and technology through interactive engineering projects, both local and national competitions, hands-on curricula, guest speakers, special programs and field trips. Activities allow students working in teams to investigate the real world in a meaningful way. It provides classroom teachers with training and support so they are encouraged to become facilitators of the learning process.

Volunteers are needed to arrange work site fieldtrips, make after school classroom presentations on engineering, to assist hands-on project developers, to assist with fundraising and to serve as mentors and/or judges in various annual competitions such as the National Engineers Week Future City Competition and the BSCES Model Bridge Competition.



Future City Contact Information

Web Site:
www.futurecity.org
Phone Number:
781-275-0494
Representative:
Lisa Freed
lafreed@verizon.net

Future City

Now in its second decade, the National Engineers Week Future City Competition is a program developed for seventh and eighth grade students to help them discover and foster interests in math, science and engineering.

Student teams design a city on a computer and use a blueprint to build a model of a city section. The teams use SimCity™ software, donated by Maxis computer software company and provided by MassPEP, E Week in Boston, and Northeastern's NUPRIME. The students also write an essay about their project and present their model to a panel of judges. The regional competition is held in early January. Regional winners from around the U.S. proceed to the national finals in Washington, DC during National Engineers Week in February.

We are always looking for engineers to serve as mentors to the student teams or recruit new schools to participate. Engineers can also serve as judges during the regional competition. Contact Future City to find out how you can get involved in next year's competition.

West Point



Bridge Design Contest

Ralph Salvucci Online Bridge Contest Contact Information

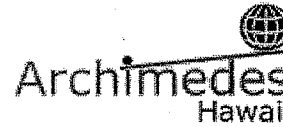
Web Site:
[www.bsces.org/
studentcontests.htm](http://www.bsces.org/studentcontests.htm)
Phone Number:
617/371-4462
Representative:
Reed Brockman
[Reed.Brockman
@dmjmharris.com](mailto:Reed.Brockman@dmjmharris.com)

BSCES/ASCE/West Point Bridge Design Contest

Known locally as the **Ralph Salvucci Online Bridge Design Contest**, this nationwide competition aimed at **promoting math, science and technology education in U.S. elementary and secondary schools**. Entrants download a free design program and attempt to create the lowest price bridge capable of carrying a truck. Anyone is welcome to compete in the competition, but to be eligible for national prizes you must be a U.S. student age 13 through high school senior. The BSCES held its first annual local contest within this nation-wide competition in 2004. The local competition is open to all K-12 students in Massachusetts. Hundreds of prizes and certificates are given out to students from all corners of Massachusetts. The contest concludes with a large banquet (6/1 this year). The BSCES / West Point Bridge Design Contest has the following goals:

- Provide participants with an opportunity to learn about engineering through a realistic, hands-on design experience.
- Provide participants with an opportunity to use the computer as a problem-solving tool.
- Provide engineers with an opportunity to share their knowledge and experience with students.

Volunteers are needed to assist with mentoring and administration of the local contest.



Archimedes Project

Information technology is the defining technology of our age. Its promise for dramatically improving peoples' lives is unprecedented. Today, however, millions impacted by the so-called digital divide remain disenfranchised from using computers and computer-based information appliances. This leaves them at a grave disadvantage, affecting not only their employment prospects and productivity but also their ability to control and navigate their environment and access information that enhances or even saves their lives. The Archimedes Project is addressing these inequalities by developing technologies that make information appliances accessible regardless of individual needs, abilities, preferences and culture.

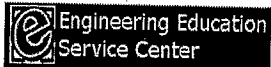
Archimedes

Web Site:
archimedes.hawaii.edu

Phone Number:
808-222-2128

Representative:
Neil G. Scott
ngscott@hawaii.edu

Believing that information technology holds enormous promise for improving human lives, the Archimedes Project is dedicated to helping realize that promise through original and collaborative research, education, and studies; and projects involving companies, organizations, and nations.



Engineering Education Service Center

Maximize your Impact on Engineering, Math and Technology Education! We are a full service engineering education support center and our goals are to help you meet or exceed your goals. The mission of the center is to provide, or help you provide, information resources to promote, guide, and stimulate interest in science and engineering. We seek to diversify the types of engineers in society by exposing large numbers of students to the capacity they will have to benefit society. The Engineering Education Service Center (EESC) provides technical writing, desktop publishing, product development, presentations, workshops, curriculum integration/enhancement, grant documentation, CDROM development, website assistance, engineering resources and promotional literature and products for pre-engineering, math and technology K-16 projects, camps and events. The EESC has 6 years experience writing books, manuals, grants and newsletters to support programs that encourage, motivate and inspire our youth to consider careers in engineering, math and technology. The EESC can help you meet or exceed your goals, increase the sustainability of your program and make a lasting impression on the minds and hearts of your participants.

Web Site:
www.engineeredu.com

Phone Number:
877-644-6337

Representative:
Celeste Baine
celbaine@aol.com



EDC's CENTER FOR SCIENCE EDUCATION

Education Development Center, Inc. (EDC), Newton, Mass., is one of the world's leading nonprofit education research and development organizations. Since 1958, when a group of MIT scientists joined forces with teachers and technical specialists to develop a ground-breaking high school physics curriculum known as *PSSC Physics*, EDC has been developing exemplary elementary and secondary science curricula for both formal and informal education. Over the past decade, the Center for Science Education (CSE) within EDC has continued this prominent role in addressing STEM (science, technology, engineering, and mathematics) issues nationally, focusing on pre-K through grade 12. Recently, CSE has developed several outstanding technology design curricula, including *A World in Motion II*, funded by the Society for Automotive Engineers (SAE), which targets middle-grades students in school, and *Design It!*, funded by the National Science Foundation, which targets students in grades 2-5 in after-school programs. Each of these programs includes extended investigations that encourage the development of basic engineering principles, exemplifies the design process, and nurtures problem solving and creativity. While SAE distributes its own curriculum, EDC invites other corporate sponsors to underwrite the dissemination of the *Design It!* program, which could have a widespread impact on the engineering skills of young people in after-school programs in New England.

EDC's CENTER FOR SCIENCE EDUCATION

Web Site:
<http://cse.edc.org/>

Representative:
Bernie Zubrowski
617-618-2573
bzubrowski@edc.org



Salem Cyberspace

Salem CyberSpace is a non-profit community technology center with a mission to bridge the digital divide for low-income families by providing training in technology that will help them effect positive change in their lives. To achieve this mission, Salem CyberSpace offers free Internet and computer access to the community, adult community technology training, technical support and training for other non-profit organizations and a teen after-school program, CyberYouth that addresses the low academic performance among low-income Hispanic teens and engages them in enrichment projects in science and technology.

Enriching Lives Through Technology
affiliate of NSCAP

Web site:
www.salemcyberspace.org

Phone number:
978-740-6667

Representative:
Linda Saris, Director
lsaris@salemcyberspace.org

The mission of CyberYouth is to engage low-income, primarily Latino youth from middle school and early high school in an out-of-school math, science and technology program designed to encourage them to become active learners and to provide them with the support, advocacy and tools necessary for them to succeed in school and persist in education beyond high school. Our goal is to encourage these students to aspire to careers and education that they may not otherwise aspire to particularly those fields that require a solid academic background in technology and science. The CyberYouth plan includes the active engagement of parents in their children's academic success, advocating for students within the school systems and exposing students through a variety of experiential learning projects and career internships that they would not otherwise be exposed to in their day-to-day lives. Our long-term mission is to develop a replicable model so that our CyberYouth programs can be offered across Salem as well as in organizations in Essex County.

Projects include electronics, bridge-building, robotics, web design, digital photography, video club. Last year, we started a teen business doing web design for area non-profits.