



Figure this. Imagine that.

Dear Joe:

As you know, Massachusetts is not graduating enough students qualified in science, technology, engineering and math (STEM) to continue its tradition of scientific discovery and technological innovation. The science and technology industry needs more students in the STEM pipeline to fill the jobs that are being created now and in the future. We believe that our best chance for success is to work with schools to reinforce the importance of math and science education and to introduce the variety of career opportunities available to students in STEM fields.

Organized by six Massachusetts science and technology associations*, the DIGITS Project seeks to increase middle school student interest in science, technology, engineering, and mathematics (STEM) subjects and careers by partnering STEM professionals – individuals who work in science and technology companies - with the schools in the Commonwealth that have a sixth grade.

We are actively seeking volunteers who work in STEM jobs to participate in the DIGITS Project. After the STEM professional volunteers, he/she will participate in a 60-minute training session by phone (before or after regular business hours) and will then be matched to a school near where he/she lives or works. Each volunteer is asked to visit a minimum of two math/science classes per school.

Important Role of Volunteers

The role of STEM professionals/volunteers– called STEM Ambassadors in the DIGITS Project - is a crucial one. Their project training prepares them to:

- **Deliver a message** to students that by taking math and science throughout school, students will have a variety of careers that will be open to them;
- **Inspire students** with their personal stories and their enthusiasm for their work; and
- **Motivate students** to pursue math and science careers by emphasizing the benefits and rewards that STEM careers offer.

Last year, during the inaugural year of the project, 154 volunteers from 44 companies/agencies, visited classrooms in 118 schools in 79 cities and towns across the state, and motivated more than 10,000 students to study math and science. Volunteers were representative of a wide range of STEM sectors including software/robotics, telecommunications/wireless, engineering, biotech, clean energy, and medical devices. Volunteer demographics included 41% women and 23% minority. An independent evaluator reported that:

- Teachers gave the DIGITS **message, materials, and volunteers** a high or very high rating.
- 97% of the teachers surveyed would **recommend the DIGITS Project** to others.
- Students showed a **statistically significant increase in their interest in math/science** as a result of the classroom visits and the DIGITS presentation.

Volunteers in the Classroom Make a Difference by Inspiring Students

Science Magazine says that the biggest determinant for kids choosing STEM careers is not their performance/grades in math and science – but whether or not their interest has been “sparked.” Volunteers have the potential to spark that interest.

All participating volunteers are prepared by the DIGITS Project for a successful classroom experience. Prior to entering the classroom, volunteers are:

- **Coached on best practices** in presenting to middle school students,
- **Provided with** a detailed set of talking points/script, visual materials and interactive exercises - **all the materials they will need to deliver the program,**
- **Matched to schools** within a reasonable distance from where they live or work.

Recruiting Volunteers – Next Steps

We are now in the process of recruiting volunteers to serve as STEM Ambassadors in the middle school classrooms of Central and Western Massachusetts for the Fall of 2010. **Due to the projected number of sixth-grade students in Central and Western Massachusetts, we are asking you to recruit between 6-8 volunteers.**

To assist in the recruitment process, we are asking you to:

1. Identify individuals in your company who have expressed an interest in volunteering.

The key characteristics we are looking for in volunteers are:

- Currently engaged in a STEM job
- Approximately 5-10 years out of college or graduate school,
- Enthusiastic about their work,
- Skilled public speakers,
- Able to relate to children,
- Representative of the workforce as a whole – including women and minorities.

2. Send this e-mail to them to provide them with the details about this program.

3. Ask your volunteers to go to the DIGITS Project website at www.digits.us.com to register for the program as soon as possible. Volunteers should use the Sign Up button for Company/Volunteers in the upper right hand corner of the homepage. The registration process entails filling out a brief survey to get some basic information to assist in the school matching process. We are particularly interested in your help in recruiting volunteers with diverse ethnic backgrounds and who would be willing to work in designated areas of the state.

Thanks for your Help

We are very appreciative of your willingness to help us recruit volunteers for this project. We know that when a volunteer gives a **little** time, it makes a **big** difference in the lives of students. Attached is a fact sheet describing the project in greater detail. If you have any questions, please feel free to contact us at the addresses and phone numbers below. Thank you for your interest. We look forward to working with you.

Sincerely,

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*The DIGITS Project was created by six leading industry associations: The Engineering Center (host organization); Massachusetts Technology Leadership Council; Massachusetts Biotechnology Education Foundation, affiliated with the Massachusetts Biotechnology Council; the Massachusetts Network Communications Council (now a part of the Mass Tech Leadership Council); Massachusetts Medical Device Industry Council; and New England Clean Energy Council. The Project is being implemented in partnership with the Department of Elementary and Secondary Education, Massachusetts Association of School Superintendents, Massachusetts of Elementary School Principals Association, and the Massachusetts Secondary School Administrators' Association. Originally funded by the Massachusetts Department of Higher Education's STEM Pipeline Fund and the Mass Technology Leadership Council, the initiative is now underwritten by STEM companies including The MathWorks, Analog Devices, Verizon, PTC, Cisco, and IBM.



THE DIGITS PROJECT

Six leading Massachusetts science and technology industry associations collaborated on the design of a project to address a common problem - the lack of students in the STEM pipeline.

- The Engineering Center (www.engineers.org) (host organization)
- The Massachusetts Technology Leadership Council, (www.masstlc.org)
- The MassBioED Foundation, (www.massbioed.org)
- The Massachusetts Network Communications Council, (www.massnetcomms.org) - now a part of the MassTLC
- The Massachusetts Medical Device Industry Council, (www.massmedic.com)
- The New England Clean Energy Council, (www.neccec.org)

WORKING WITH VOLUNTEERS

The Project works with these associations to recruit volunteers called STEM Ambassadors to visit sixth grade classrooms across the state. In addition, the Project will:

- Provide training for Ambassadors on best practices on presenting to middle school children
- Invite schools and teachers to opt-in and host an Ambassador in their classrooms
- Match volunteers with schools near where they live or work.
- Provide all materials needed for the classroom experience

WHAT WE ARE ASKING OF STEM AMBASSADORS

Once an Ambassador is selected we will ask him/her to:

- Read the background materials on middle school students and the guidelines for the class visit that we have prepared.
- Participate in a training session (via conference call) conducted by the Project leaders to review the classroom presentation format and suggested topics that the Ambassador should cover in his/her remarks.
- Talk to the teacher before the classroom visit to describe the program, discuss what the class is currently studying and invite teacher participation in the exercises.
- Be prepared to talk about his/her personal story – job and career – with two sixth grade math and science classes.
- Schedule the classroom visit

WHAT THE CLASSROOM VISIT WILL INCLUDE:

During the approximately 45-minute classroom visit, STEM Ambassadors will:

- Do two interactive exercises with the students. The exercises developed for this project are designed to broaden student interest in and awareness of STEM careers. They also help students visualize themselves in a STEM career.
- Tell their personal stories: where they work and what they do at work (i.e. design the next generation of cell phones, do research on a cure for cancer), what subjects they were good at and which ones gave them a hard time, how they use what they learned in school in their jobs, who or what inspired them to go into their field, and why they like their work.
- Talk about the advantages and benefits that come with their STEM-related jobs. Our research on middle school students indicates that they care about the following characteristics in a job/career: team work, good salaries, travel, flexibility, and making the world a 'better place.' These are generally present in STEM careers and we would like Ambassadors to deliver that message.

For further information please contact:

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