K-12 STEM Education
MIT Club Volunteer Briefing
Why K-12 STEM Education?

• Significant alumni interest:
  – 2008 MIT study indicates that 75% of alumni surveyed believe that alumni involvement in STEM education is important.

• Potential to engage new audiences:
  – Family friendly and education activities will inspire parenting age alumni involvement. In addition, young alumni and the cardinal & gray alumni are enthusiastic participants.
What should we do?

• Name a K-12 “Inspire Volunteer” for the Club.
• Select from a menu of K-12 activities and/or create your own, meeting the needs of the local market.
• Gather interested alumni to determine the right programs and begin implementation.
Tools for Volunteers

- **K-12 STEM Online Toolkit**
  - http://tinyurl.com/yjc3b kp

- **K-12 STEM Education Network**
  - Sign up online, get customized reports of alumni in your club area
  - https://alum.mit.edu/k12/signup-mentor.dyn

- **K-12 STEM Education Network on Facebook**
  - Become a fan at
  - http://tinyurl.com/yh4b8d5

- **K-12 STEM Education Network on Linked In**
  - http://tinyurl.com/yk5jat7
Programs

• FIRST Robotics (http://usfirst.org)
  – Hands-on education for 6 to 18 year olds
  – Mission is to inspire young people to be science and technology leaders, by engaging them in exciting mentor-based programs that build science, engineering and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.
  – Clubs can host special events at regional FIRST programs, such as MIT VIP receptions
  – Clubs can work with local FIRST staff to organize alumni gatherings with topic of “How to Form a FIRST Team”
  – FIRST can be Club’s community service effort
Programs

• MIT Inspirational Teacher Award
  – The MIT Inspirational Teacher Award recognizes outstanding secondary school teachers who inspire in their students a love of learning, encourage them to pursue excellence, and give them the skills and enthusiasm they need to make a positive difference in the world.
  – Clubs can encourage undergrads from their area to nominate teachers.
  – Clubs can celebrate teachers locally both at the teacher’s school and at a club event.
• **Lemelson-MIT InvenTeams**
  
  – The InvenTeam initiative, created by the Lemelson-MIT Program, offers an unparalleled opportunity for high school students to cultivate their creativity and experience invention. InvenTeams are teams of high school students, teachers, and mentors that receive grants up to $10,000 each to invent technological solutions to real-world problems. Each InvenTeam chooses its own problem to solve.
  
  – Clubs can encourage local high school students to apply.
  
  – Clubs can mentor a team selected in their area.
  
  – Club can provide funding for a team to attend Eurekafest! on campus.
Programs

- Science and Engineering Program for Teachers
  - mission: to show teachers the latest developments in biology, chemistry, physics, mathematics, technology and engineering; to provide them with a perspective on the interface of science, technology and society; and to help spark a lifelong interest in science in their students
  - Clubs can sponsor teachers from their local area.
  - Clubs can start a SEPT Fund and raise money to support teachers from alumni.
Programs

• Highlights for High School
  – Highlights for High School is a guide to MIT courses selected specifically to help high school students prepare for AP exams, learn more about the skills and concepts they learned in school, and get a glimpse of what they'll soon study in college.
  – Clubs can promote to local high schools and teachers.
  – Clubs can sponsor study groups utilizing the online materials.
Many programs are web-based or can be initiated locally. Clubs can also encourage local students and teachers to attend on-campus programs.

Find out more at http://web.mit.edu/outreach/
Other Opportunities

- Clubs can create their own programs for tutoring, mentoring or in-classroom activities; or partner with local science fairs and competitions.
- Clubs may want to partner with organizations leading K-12 STEM opportunities, such as National Lab Day. http://www.nationallabday.org/
Support and Giving

- Alumni can contribute to K-12 STEM education research and outreach programs at MIT
  - http://giving.mit.edu/k-12/index.html
- Clubs can encourage giving among local alumni
Volunteers in Action

• MIT Club of Northern California

Multi-faceted program including science fair judging, local high school award, and involvement in FIRST Robotics

http://tinyurl.com/yg9q8vw
Volunteers In Action

MIT Club of New York

• Several events supporting mentoring with FIRST Robotics

• MIT VIP Alumni event at FIRST Regionals

• Supporting MIT Inspirational Teacher Program
Volunteers In Action

MIT Club of San Diego – Survey of Local Alumni

1. MIT Club Of San Diego K-12 STEM Education Survey

Thank you for your interest in completing the following brief survey of alumni attitudes toward K-12 STEM Education support. The MIT Club of San Diego is considering enlisting alumni volunteers to help improve K-12 education and stimulate more pre-college students to choose a career in science and technology.

MIT has engaged in a variety of K-12 educational activities, including student outreach, teacher training, and curriculum development. MIT alumni could volunteer to support these initiatives and develop programs that would engage young minds in their local communities.

The purpose of this survey is to determine if there is sufficient and serious interest locally in a K-12 project that would engage alumni to participate. This survey is entirely voluntary. You may answer as few or as many questions as you wish. Your responses will be confidential. At the end of the survey, you can provide your name if you would like to see the results. Please be assured that your responses are of interest, and is not a commitment at this time. Unless you provide your information at the end of this survey, giving us permission to contact you.

We estimate this survey will take five minutes or less to complete.

How much time might you be able contribute as an alumni volunteer for this initiative?

None

1-5 hours per month

6-10 hours per month

11-15 hours per month

16-20 hours per month

More than 20 hours per month

From: BLUMBERG, BOB

Subject: Making Contact

Hi! Let me introduce myself. I'm Bob Blumberg, an alumnus of MIT (EE 84, SB 90, SM 95), and local to San Diego. You may recall that we sent out a survey a few weeks ago, concerning possible interest in working with local schools and K-12 students, to try to encourage more kids to follow an educational path in STEM (Science, Technology, Engineering, and Math). If you are receiving this mailing, you not only responded, you indicated you are interested in learning more, and perhaps volunteering to participate.

Thank you! We are very excited that we got 55 folks who wanted to hear back, and were possible volunteers. That's enough to make an impact!

We wanted to get back to you, to let you know that we appreciate your interest, and there is an active group working to make something happen here. Who are "we"? Several of us who are active in the local MIT Club started pushing the idea, and have formed a committee to organize--there's really a lot of preparation necessary. We've also had some local teachers join, all of whom attended MIT in the SEP program, to further develop their ability and enthusiasm to teach STEM subjects.

Our goal is to be ready with volunteers (hopefully including you) when school starts this September, 2010, to work with schools and students in one of the three modes available, either as a tutor, working with after-school activities such as First Robotics, Biology Clubs, etc., or bringing some MIT-designed and age-appropriate hands-on experiments to the classroom, working with the regular teacher. We will honor your preferences from the survey.

That's all for now. We just wanted to keep you informed, and let you know that work is underway. We'll try to communicate often, as long as we have made some progress to talk about. Next message will introduce the other Committee Members, tell you how we are getting
Volunteers In Action

Clubs recognize their local MIT Inspirational Teachers
Contacts

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