Engineers Go Rural

Many rural youth seek jobs that are close to home while others seek more information about careers beyond their communities. Engineering and technology-oriented jobs offer a myriad of options that both serve community needs and provide meaningful work beyond their communities. According to recent Department of Labor statistics, one of the top ten jobs for rural areas is civil engineering.

Last April under the sponsorship of the Maine Math and Science Alliance, and with financial support from the IEEE and Texas Instruments, we held a highly successful STEM Ambassador's training session for 6th grade teachers in conjunction with engineers in Greater Portland. After the training session, the engineers spent a couple hours in 6th grade classrooms doing an engineering-like project and talking with students about what we as engineers do. Texas Instruments and the IEEE have committed resources to continue this program again this year.

Now we are seeking to extend the program to Maine's rural counties. To this end, we seek a $75,000 grant from the Honda Foundation. This project will spread the word to Maine's schoolteachers and children about the many exciting, fun, and rewarding technology-oriented careers.

The project will develop a clear, easy-to-implement model to bring engineers and technical professionals to rural middle school classrooms to co-lead exciting technical activities with teachers, and to make technology careers more visible and relevant for geographically isolated students. The first step is to recruit rural engineers and technical professionals, many of whom work in smaller companies or government services, and perform a range of roles from designing better infrastructures for their towns to improving rural broadband services, to running the IT infrastructures of businesses. Next, we will prepare them to work with students, tell their technology stories in concise, engaging ways, and co-lead "Try Engineering" activities already developed, tested, and proven by IEEE.

In each region, we'll convene in-person meetings of technical professionals and teachers, and make matches between technical professionals and local schools. In the meetings, plans will be made for classroom visits, and resources (including inexpensive activity kits) will be distributed. Each of 55 teacher-technical pairs (an average of 5 per county) will then meet virtually to plan the classroom visit. Each technical professional will visit classrooms for two hours, during which time s/he will describe his/her work and background, discuss the preparation needed to be pursue a rewarding technical career, and engage in an engineering design challenge with students. Approximately, 2200 students will be reached.

The specific tasks we ask of each volunteer are described in the attached Commitment Form that we ask each volunteer to return to:

> Dr. Ronald O. Brown
> Ronald O. Brown Consulting
> 864 Quaker Ridge Road
> Casco, ME 04015
> 207-655-7685 (l)
> 781-665-6269 (m)
> www.ronaldobrownconsulting.com
> ron@ronaldobrownconsulting.com

Having commitments in hand prior to submitting our application to the Honda Foundation will greatly enhance our chance of receiving the grant, so we ask that you respond by mid-July.

For answers to your questions about participating in the project, please contact me or Jan Mokros at MMSA, jmokros@mmsa.org.

I look forward to your participation,

Thank you,

Ron Brown

Ron Brown

Commitment for *Engineers Go Rural*

By committing to this project during the 2014-15 school year, I will engage in the following work with a teacher in my area, which will take about one to two days of work. I will work with the teacher I am paired with to:

- Attend a half-day workshop to learn how to work with students on an already developed engineering design challenge (see www.tryengineering.org for a list of possible activities).
- Partner with a teacher from my community, and develop a plan (with the project staff's assistance) for visiting his/her classroom and co-leading the activity I've tried out at the workshop.
- Develop my elevator speech on how I became a technology professional; what skills, qualities, and interests I built upon; what I do, and why it's rewarding.
- Go into the classroom and co-lead the activity with the teacher, who will set everything up and introduce me.
- Give the project feedback about how it went and what can be improved.

I understand that there is flexibility in scheduling the classroom visit.

In return, I understand that the project will provide logistical support, help me learn to work with middle school students, give me some excellent educational resources, and provide a gas card to support my travel to schools.

Through this project, I commit to helping develop the next generation of technology professionals in rural Maine.

Name: _____

Signature: _____

E-mail: _____

Position: _____

Employer: _____

Professional Affiliations: _____
(AIA, AIChE, ASCE, ASME, IEEE, MTUG, NSPE, etc.)

Please return to: Ron Brown, ron@ronaldobrownconsulting.com