Good Points in “Student-Scientist Partnership in Molecular Biology”

My name is Andrea Shogren and I plan on becoming a high school science teacher when I graduate. I was reading the March, 2004 issue of The American Biology Teacher and I thought the article written by Beverly Clendening, “Student-Scientist Partnership in Molecular Biology,” had many good points. It is important for high school science students to take part in “real” science and go through the steps a scientist goes through. It will get them excited about science and show the possibilities that a career in science can hold for them. I encourage schools that plan to participate in this partnership to find women and people of all races to work with. There are many misconceptions that all scientists are white men; we need role models for all students to look up to. Listed below are other research articles discussing the importance of positive role models and hands-on science. I wish these opportunities had been available to me when I was in high school. I did not believe that I had a place in science because I was a woman. All of my teachers were white males. When I become a teacher, my first goal will be to change the views of many students toward science. Working with women and people of all races is a big step towards that goal.

Sincerely,
Andrea Shogren

K-12 Science Education Partnerships

Two examples of the value of partnerships between K-12 schools and institutions of higher education were nicely described in the last two issues of The American Biology Teacher (Feldstein & Benner in Vol. 66, No. 2, p. 144, February 2004 and Clendening in Vol. 66, No. 3, p. 183, March 2004). That vertical educational collaborations benefit students and scientists alike encourages those in science education to look beyond our own walls in designing and implementing curriculum that stimulates and interests children in classrooms.

The National Science Foundation (NSF) "stepped up to the plate" by funding creative partnerships many years ago, as these articles explain. Among a long list of benefits, teachers gain classroom resources such as expertise, equipment, supplies, professional development, and validation; students can gain confidence in doing current science while the university or college partners gain value in sharing resources while appreciating the role and learning classroom interaction from the K-12 teacher.

Boston University joined a number of higher education institutions across the country in an NSF sponsored program bringing graduate and undergraduate students into the collaboration between faculty and K-12 teachers. Students in Ph.D. and undergraduate degree programs work with K-12 classroom teachers to enrich their classrooms and learn classroom pedagogy from the teachers as well as the challenge of making science stimulating. "Near-peer" teaching and mentoring can bring science that much closer to young people’s lives 1.

Partnership funding has also been forthcoming from the National Institutes of Health, National Center for Research Resources, Science Education Partnership Award or SEPA 2 and the Howard Hughes Medical Institute (HHMI) 3. Classroom teachers have paired not only with university faculty and staff but with science centers and museums to enrich their curriculum and pedagogy. Hundreds of projects nationwide have built successful collaborations that continue beyond external funding. These projects, in many cases, have been institutionalized, cementing the community of learners. The challenge is to maintain and nurture these partnerships despite budget cuts, staff changes, and external impositions on the curriculum. Teachers also need access to learning about partnerships in which they can become a partner.

Continuing to strengthen science education is the biggest challenge, and number one priority. So it’s imperative that we work toward improving communication between and among K-12 education, museums and science centers, and institutions of higher education.

The National Association of Health Science Education Partnerships or NAHSEP 4 was formed in 1999 to bring all the science education partnerships to one table. We have developed a Web site that takes the viewer to all of the SEPA and HHMI projects nationwide in the hopes that the model partnerships will be replicated and disseminated.

Our mission is to strengthen science education—K to Gray—by helping form partnerships that we all find beneficial to everyone involved. Our activities for the coming year are focused on improving project evaluation, equity and diversity issues within projects, program

Resources


1 http://www.bu.edu/lerntech/GK12/
3 www.hhmi.org/grants/
4 www.nahsep.org