Program Overview

About the STEM Ambassador Program

The STEM Ambassador Program (STEMAP) addresses the need to create and sustain bridges between science and society. STEMAP is a research and public engagement training program funded by the National Science Foundation and based at the University of Utah. STEMAP differs from most public outreach programs by training scientists to serve as direct “Ambassadors” for science to people who do not normally encounter science in their daily lives.

STEMAP guides scientists to engage with the community by establishing common ground between a scientist’s research, scientific discipline, or personal characteristics with the interests, professions, or hobbies of community groups. STEM Ambassadors deliver engagement events outside of classrooms and museums, in the venues of where community members live, work, worship, or play. This approach forges innovative and authentic bridges between science and society while creating opportunities for community members to provide scientists with new insights and ideas.

Benefits of STEMAP’s Public Engagement Activities

The following are benefits to both scientists and community members participating in STEMAP activities:

- increased public access to science and scientists, especially for people who do not normally encounter science in their daily lives;
- new insights and fresh perspectives on research problems from the public to the scientist;
- broader participation in science, which strengthens the scientific enterprise;
- innovative Broader Impacts for grant proposals, improving the scientist’s chances for research funding; and
- improved public understanding and stronger support of science.

Building Community Connections

To establish connections between scientists and community groups, STEM Ambassadors distill their research, scientific disciplines, and personal characteristics to create a list of keywords. STEMAP staff and Ambassadors use this list to brainstorm potential connections to specific community groups. Ambassadors then explore these connections through an “immersion event,” in which they visit the venue of the community they wish to engage and make observations to shape engagement activities. They then co-design appropriate activities with community members, implement them in the community venue, and carry out evaluation. Results and contacts are placed in the STEMAP database to serve as an engagement program that benefits scientists and the public "in the aggregate".
Workshops and Training

STEMAP training is delivered in four forms:

1. **Cohort Training**: STEM faculty, post-docs, and graduate students are selected through a competitive application process. The cohort receives STEMAP training and staff assistance to identify community groups and implement engagement events. STEMAP staff documents outcomes and impacts of the engagement activity for the scientists and the community.

2. **Workshops**: STEMAP provides workshops at conferences and academic institutions (2 to 4 hr), training STEM researchers or public engagement professionals.

3. **Individual or collaborative group consultations**: STEMAP provides individualized or research group consultations in person or online to create and facilitate evaluation of innovative Broader Impacts and public engagement activities.

4. **Online (coming soon!):** STEMAP is in the process of creating online training materials to be available at www.stemap.org.

Sample Engagement Events

A microbiologist whose hobbies include fermentation cooking, discussed the role of microbes in making sauerkraut and kimchi during a fermentation cooking class at a local grocery store. The microbiologist learned new recipes while participants gained an understanding of the science behind fermentation cooking.

A hydrologist spoke to a local government community council about his research on local water supplies. The community council learned about current relevant science; the scientist learned about water policy issues in the community.

A virologist partnered with an artist to create a coloring book for publication based on 3-D images of viruses derived from electron microscopy. The virologist beta-tested a prototype of the coloring book with youth in a residential treatment center. Youth learned about viruses and provided the scientist with feedback on the coloring book.

Contact Us

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