

The Leonard Gelfand Center for Service Learning & Outreach supports activities that enable Carnegie Mellon students, faculty and staff to use their energy and expertise to improve the quality of life, motivate learners of all ages, or solve problems in the community. We assist with partnership development with individuals, school districts and organizations in Pennsylvania and beyond to design and implement programs and service learning course activities. STEM education outreach programs are our priority.



Program example: **What is Research?**

Summer and Academic Year Program for Educators

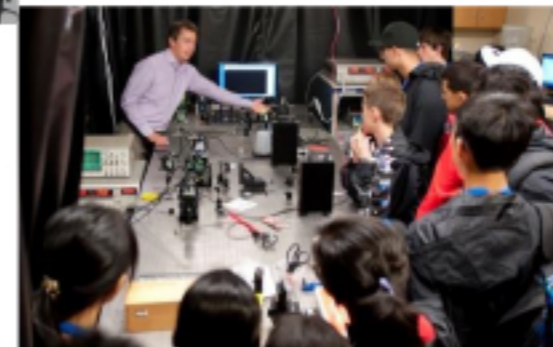
Prior to submitting NSF proposals, faculty members present a workshop to middle and high school educators who teach subjects aligned with the research. Educators provide advice about the proposed Broader Impacts strategy and ways that the research can be integrated into the school curriculum to enhance learning and motivate students to pursue STEM careers. After this program, participating teachers and districts are better prepared to be partners when NSF funding is awarded.



Broader impacts strategies include,

but are not limited to:

- Student lab tours and workshops
- Teacher professional development workshops
- Research experiences for teachers
- Career talks at local schools
- Ask the professor interactions
- Graduation projects for HS students
- Curriculum development for K-12 schools
- Science fair judging
- Table demos at community events



A Win-Win Broader Impacts Strategy Development Process

Faculty Member Wins

Practice in presenting information about complex research to a novice audience

Advice from experts [the teachers] about best methods to present their research to K-12 students

Assurance that their educational outreach plan targets the most appropriate grade(s) and subjects

Introduction to potential partners for program implementation

K-12 Educator Wins

First-hand interactions with faculty who explain the real-world application of content that is taught in the classroom

Career information about STEM fields as all presenters explain the education pathway that brought them to their current position

Accurate knowledge about cutting-edge research that can be shared in the classroom to motivate students



www.cmu.edu/gelfand