



Imagining the Future of Undergraduate STEM Education

*The National
Academies of*

SCIENCES
ENGINEERING
MEDICINE



#STEMFuturesHigherEd

Authentic Learning Experiences

- **Meaningful work** that is valued by and situated in communities.
- Meets students where they are and involve topics that are **motivating**
- Emphasize the value of each student's **lived experience**
- Involves **interdisciplinary** problem solving



Excited about...

- How students **build skill** in the “4Cs” through this work:
Communication, Collaboration, Critical Thinking and Creativity



- Catching students **early** with repeated opportunities for problem-based learning
- Creating opportunities for **community college** students

Challenges that keep us in status quo

- Scale, Partnerships, Inclusion, and Assessments: all are necessary for these programs to develop, but all are hard to institute and maintain
- Teaching this way is **intensive** and *not currently valued* appropriately for T&P
- Need more professionals to **support students** in this type of learning effort both at the institution and in partner organizations
- How can we **scaffold** experiential learning into our curricula?
- How do we create opportunities that are **inclusive**, especially for students with different abilities?