

Gene Team

University of Pittsburgh



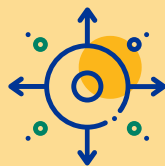
Member of the
STEM PUSH
Network, an
NSF INCLUDES
Alliance

The Gene Team program provides an opportunity for students from our urban Pittsburgh Public Schools district to learn science content, laboratory skills, and to develop associated scientific thinking skills by active engagement in authentic scientific research. Participants contribute directly to cutting-edge research from a research lab within the Department of Biological Sciences at the University of Pittsburgh.

The essence of Gene Team is doing authentic science with products (mutants, plasmid constructs, clones, etc.). Data is returned to the parent lab for further study. Gene Team participants learn science by actually doing science.

Gene Team emphasizes & develops several targeted outcomes, including:

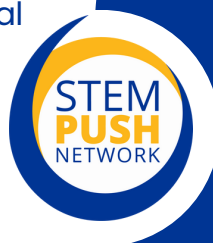
- Biological research skills
- Critical thinking skills
- Scientific reasoning skills
- STEM communication skills
- STEM identity & sense of belonging



Students demonstrate these skills through working collaboratively on a current research project from a lab in the Department of Biological Sciences.

About STEM PUSH

STEM PUSH, an NSF INCLUDES Alliance, is a national network of pre-college STEM programs who are engaging youth historically underrepresented in STEM to learn & do in-depth, authentic science, and ultimately to persist in STEM through college & beyond. More information available at stempushnetwork.org.



Program Features

STEM Focus
Biological Research



Four-week
summer program

120 hours per summer

18-20 high school students from urban Pittsburgh-area schools served each year

Stipend & transportation

to labs at the University of Pittsburgh provided for all participants

Program Results

99% of Gene Team alum **attend college** after participating in the program

98% of alum **earn undergraduate degrees**

50% of participants are **underrepresented in STEM**

Alumni have attended the following institutions:

- University of Pittsburgh
- Carnegie Mellon University
- Penn State University
- Yale University
- Harvard University
- Princeton University
- Allegheny College



College prep sessions offered

twice per week, featuring content about how to apply to and be successful in a STEM major

~30% of applicants are selected to participate in Gene Team each summer

Science-based communication skills

refined with written abstracts & presentations to an audience of scientists

Gene Team summer programming is held at a **university research lab**

Gene Team

Gene Team was established in 2006 at the University of Pittsburgh's Department of Biological Sciences. Gene Team builds a community for diverse individuals interested in STEM to learn and explore science in culturally sustaining ways. Students are immersed in an authentic biological research project from one of the research labs in the department.

In addition to summer programming, an after school program is offered each spring at the University of Pittsburgh's Community Engagement Centers (located in two traditionally underserved areas of the city) to deepen Biology content knowledge and build lab skills for students to build confidence prior to applying for the summer program.

"The program was fun and made science approachable, but it was rigorous! It wasn't like anything I had done in school. I really felt like a scientist by participating in Gene Team."
-2018 Gene Team Student

Students work collaboratively on aspects of a research project while learning how to:

- independently follow protocols
- analyze data
- communicate their experience in both written abstracts and a final presentation for the department's scientific community
- hone biology and critical thinking skills
- work productively in small groups

Connect with Gene Team!

Contact Gene Team Director Dr. Becky Gonda at reg11@pitt.edu to schedule a visit.

More information about Gene Team is available at biology.pitt.edu/k-12-outreach/gene-team.

