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The Hill District Community Engagement Center, the Oakland Planning and Development Corporation, and faculty at the University of Pittsburgh have an ongoing partnership to deliver youth programming to engage students in activities highlighting various professions within healthcare and science. This poster will describe recent expansion of these programs.

#### INTRODUCTION

- The University of Pittsburgh is committed to community engagement through place-based partnerships.
- Initial planning for a STEAM studio at the Hill District CEC, developed in partnership with the Hill Community Development Corporation, began in 2016.
- During one of four planning sessions, STEAM leaders from community presented their programming and engagement strategies- this sparked a conversation between faculty at Pitt and leaders from School2Career and M-Powerhouse. A shared goal was formed- to build on the existing foundation of community organizations, and address the shortage of underrepresented populations in healthcare fields.
- A virtual healthcare showcase was held in the spring of 2021. One of the sessions, "Analyze an Outbreak," led by the Department of Biological Sciences, generated a full partner program in the spring of 2022.

#### **OBJECTIVES**

To engage youth by providing exposure to careers in healthcare and science through interactive sessions



To develop and sustain partnerships between representatives from university and community who share similar goals

To evaluate youth programming to facilitate long-term planning and expansion of offerings



# Building programs to engage youth in health sciences: a community and university partnership





#### **Types of activities**



Above: Social medicine fellows (medical students at the University of Pittsburgh) created a game to lead a discussion on the social determinants of health.

## **Biology Gene Team**

The Gene Team after school program was designed to engage students in common Biology concepts and techniques used in biotech research.



Right: Students began by learning how to micropipette, which measures volumes less than 1 milliliter. This technique is used weekly in their experiments

#### Weekly Schedule:

	Background	Lab activity
Veek 1	Lab Safety, Lab Math	Micropipetting practice
Veek 2	Prokaryotes vs. Eukaryotes	Model Organisms
	Use of Bacterial Plasmids in	
Veek 3	the Lab	Plasmid Preps
	Restriction Enzymes and Gel	<b>Restriction Digest/Run</b>
Veek 4	Electrophoresis	gels
		Strawberry Caper (PCR
Veek 5	DNA structure and Replication	analysis)
	Genetic Engineering of	GMO Foods (PCR
Veek 6	Plasmids	analysis)
	Control of Eukaryotic Gene	
Veek 7	Expression	pGLO transformation

Each week builds on what the students learned in previous weeks. By the end of the program, students will have performed a number of common biotech research techniques such as PCR, gel electrophoresis, restriction digests, and bacterial transformations.





Above: participants work through experiments to cut DNA using enzymes (left) and visualize the DNA through gel electrophoresis (right).













## CONCLUSIONS

The STEAM studio planning sessions sparked new conversations between community and university.



Communication between all parties, and flexibility to pivot when needed, are critical to SUCCESS.

Youth appreciate hands-on learning, especially when online learning has been prevalent during the pandemic.



### **NEXT STEPS**

• The last session for students currently enrolled in the after-school healthcare showcase program will take place on March 14, 2022.

Feedback from spring 2022 sessions will help to inform how to update program offerings for next year.

Students will be encouraged to apply for the summer Gene Team research program held on Pitt's campus.

• Since the virtual showcase in spring 2021, the School of Pharmacy has also led youth programs at the Homewood CEC, including partnerships with Learn and Earn, PittEnrich, Y-Achievers, and HYPE.

Sustainable partnerships between university and community collaborators provide valuable youth engagement.

#### CONTACT

For more information on how you can be involved with youth programming, email Catherine Rebitch at <u>car184@pitt.edu</u>.

For more information on programming at the Hill District CEC, email Kirk Holbrook at kdh52@pitt.edu.