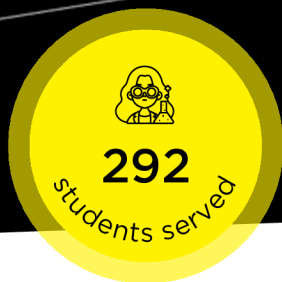


FirstHand™

2023 Impact Report



FirstHand offers free year-round supplemental STEM learning for middle and high school students. Our curriculum is designed to provide skills-based career exposure through real-world, hands-on experience. Our FirstHand Lab connects students from surrounding neighborhoods to the entrepreneurial and innovation ecosystem in Philadelphia.



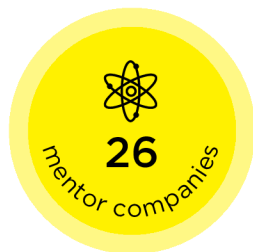
"FirstHand is a window to the world for my students. The program provides exposure to something beyond their norm, encouraging the children to wonder about what could be."
DR. SPENCER, PRINCIPAL AT MCCLOSKEY

"I never liked science in elementary and middle school, but then I got to FirstHand and I started understanding it more. I went out of my comfort zone - I feel as though that is what I needed in my life."
JACKIE, 10TH GRADER

10 SCHOOL PARTNERS

- Alain Locke Elementary
- KIPP West Philadelphia Preparatory Charter
- James Rhoads Elementary
- S. Weir Mitchell Elementary
- John F. McCloskey Elementary
- Martha Washington Elementary
- Science Leadership Academy Middle School
- Tilden Middle School
- William C. Longstreth Elementary
- Young Scholars Charter

**Plus high school students from 26 other schools*



mentor companies include:



- Future Techstyles ● Biotech
- Philly Data Miners ● NFTE BizCamp

"It is rewarding to think that one of these experiences might be the thing that starts someone down a path toward a scientific career."
FIRSTHAND MENTOR, 2023



UNIVERSITY CITY SCIENCE CENTER <> FIRSTHAND

FirstHand is an initiative of the Science Center, a mission-driven 501(c)(3) non-profit and Philadelphia's premier catalyst of entrepreneurial activity, healthcare innovation, and economic growth. Beyond providing best-in-class startup support, we recognize that the success of Philadelphia's growing life sciences industry hinges on our collective ability to grow and diversify the STEM talent pipeline.



CURRICULUM

MIDDLE SCHOOL

POLYMER PLAY

Create, test, and design biodegradable polymers while gaining an understanding of what it really means to be a materials scientist.

DNA SELFIE

Understand the structure and many functions of DNA through microscopy and gel electrophoresis, the same technologies that biotechnology companies use every day.

BIOMAKE

Create genetically modified organisms (GMOs) and then design, bake, and market a snack utilizing the GMOs. Developed in collaboration with Penn researchers.

HEALTH HACKERS

An introduction to coding and app development through an empathy-based design lens. Co-developed with Children's Hospital of Philadelphia computer scientists.

FUTURE TECHSTYLES

Apply design thinking principles to prototype new uses for e-textiles and wearables that have meaning to them. Subject-matter experts from the Navy serve as mentors throughout the program, and introduce students to soft robotics.

HI-5

Five days, five STEM career paths. Hi-5 highlights careers in microscopy, material science, taste and smell research, and more. FirstHand alumni serve as mentors by helping to develop student activities and supporting facilitation of the sessions.

MAJOR FUNDERS

cencora



Christian R. and Mary F. Lindback Foundation



Fulton Bank



THE HAMILTON FAMILY CHARITABLE TRUST



The McLean Contributionship



ThermoFisher SCIENTIFIC



WEXFORD SCIENCE+TECHNOLOGY



FirstHand is supported through philanthropic gifts and grants. To learn more about how you can support FirstHand and the Science Center or make your contribution, visit sciencecenter.org.

HIGH SCHOOL SPRINTS

8-week (16-hour) curricula that are co-designed and co-delivered by the mentors and the FirstHand team to reflect the skills and topics of the emerging industry while centering the needs of Philadelphia students.

BIOTECHNOLOGY

Learn alongside scientists from Philadelphia companies, and practice essential lab skills.

NFTE BIZCAMP

Learn to think like an entrepreneur, develop an entrepreneurial mindset and apply the fundamentals of entrepreneurship to develop and pitch a business.

CYBERSECURITY

Apply information security workplace skills through hands-on activities and challenges.

PHILLY DATA MINERS

Explore the world of data science by analyzing Philly-centric data sets to reveal the story behind the numbers.

HUMAN CENTERED DESIGN

Identify a problem to be solved and then design a human-centered technology solution (app or otherwise) that will help solve the issue.



2023 MILESTONES

PECO Internship

Natalie Sanchez, a student who participated in the Cybersecurity Sprint in spring 2023, found her love for computer science during the program, and went on to complete a paid internship with PECO. So impressed with her work, PECO extended Natalie's internship and she helped to co-develop and co-deliver FirstHand's newest sprint, Philly Data Miners, alongside professionals from PECO and CHOP in the fall.

Future Techstyles Launched

In 2022 FirstHand was awarded \$599,195 from the Office of Naval Research (ONR) STEM Education and Workforce Program, to fund an innovative e-textiles and wearable technology curriculum for middle school students. The resulting curriculum, Future Techstyles, was launched in summer 2023 and quickly became a student favorite!

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