



BioBuilder
Educational Foundation

UNLOCKING SCIENCE IDENTITY



**IMPACT
REPORT
2024**



Focused on our Future Scientists

A message from BioBuilder's Founder & Executive Director

Building a science identity is one of the most powerful gifts we can offer students. By inspiring them to go beyond book learning – to grow into creative thinkers and problem solvers using that knowledge – is how the team at BioBuilder is empowering our next generation of scientists.

Since launching this organization 13 years ago, we have been privileged to witness the evolution of young scientists in real time. We've seen how our work opens academic and career opportunities for our BioBuilder students, and how we are helping to supply the talent needed to fulfill the promise of the bioscience industry.

There are so many who have helped us get to where we are today, but I'll start by acknowledging three: our BioBuilder team, whose passion drives our mission forward; our students, who inspire us with their curiosity and growth; and our partners and supporters, who make this work possible.

Thanks to this incredible community, BioBuilder has accomplished so much – but there's always room for more at the table. We have exciting plans for growth in the coming year, and I invite you to join us as we nurture that sense of innovation, spark the drive that generates new ideas, and provide young adults with the opportunity to create their own individual science identity.

Notche Kullback



Instilling Confidence at the Bench



Angel Muthemba
BioBuilder Alum
Emmanuel College '24

As a first generation Kenyan-American, Angel Muthemba is driven by educational accomplishment. She credits her some of her interest in science to growing up in a household with parents working in clinical fields. She thought nothing of a Christmas wish list that included a set of graduated cylinders and beakers.

Angel was lining up her life to lead in the medical or scientific world, but when she struggled with an AP class she wondered if she had what it takes. She found that confidence when she entered the BioBuilder program, the youngest in the cohort, never having taken chemistry before. BioBuilder is where she built confidence, remarking "I felt a sense of purpose."

It was more than the curriculum at BioBuilder that inspired her to strive in science; it was Natalie Kuldell herself.

"Natalie had such confidence in me and helped me know my worth," said Angel. "I aspire to be like this woman."

Angel has gone on to secure summer internships in her field and build her professional network. She graduated from Emmanuel College in May with her Bachelors in Neuroscience and Data Analytics, and worked as a researcher at Unravel Biosciences, and this fall will start a Master's program in Nanomedicine at Northeastern University.

Building on Critical Skills



A transformation happened when Nicolas Rojas Toborda put on a white coat at BioBuilder. “It took me a long time to think of myself as a scientist. It was BioBuilder that started it,” said Nicolas.

As a student at Revere High School, his interest in science began to percolate. Working with his guidance counselor, he applied to the BioBuilder program, taking the chance to pursue his interests for the first time.

Learning critical lab skills, new terminology, and lab etiquette was just the beginning for Nicolas. The team at BioBuilder connected him to Boston University where Nico became a summer research intern. Nicolas then put his BioBuilder skills to work when he founded the first high school team from the Boston area to participate in a worldwide synthetic biology competition (iGEM). When traveling to Paris, France, to present his project, Nico found himself referring to the skills he acquired during his BioBuilder experience.

“The skills I learned through BioBuilder are versatile. I can apply them to so many things I am doing. When I walk into a lab, I know what to do because of BioBuilder.”



Nicolas Rojas Taborda
BioBuilder Alum
Revere High School '24

Focus on Educators

When Billy Carrier steps in front of his high school classroom in rural Tennessee, he is empowering his students with lab skills he didn't learn until college. He is a part of the region's strategy to meet their significant biworkforce needs, and Billy is preparing his students with lab and life skills that ready them for the jobs of the future.

And he is making science cool.

By all accounts, the skills being taught in Billy's classroom are inspiring and educating his students. Billy has seen them learning to identify as scientists, to ask "why," and to understand how bioscience matters to them. Equally valuable are the skills he sees students apply to life outside of the classroom. Lessons in problem solving, team work, and data analysis fit into every student's future.



William 'Billy' Carrier
Science Teacher at Volunteer High School in
Churchill, Tennessee with Natalie Kuldell

***There is opportunity
right in front of us...
BioBuilder is helping us
prepare students for jobs
right out of high school.***

- William 'Billy' Carrier

BioBuilderClub

**BioBuilder
Apprentice
Challenge**

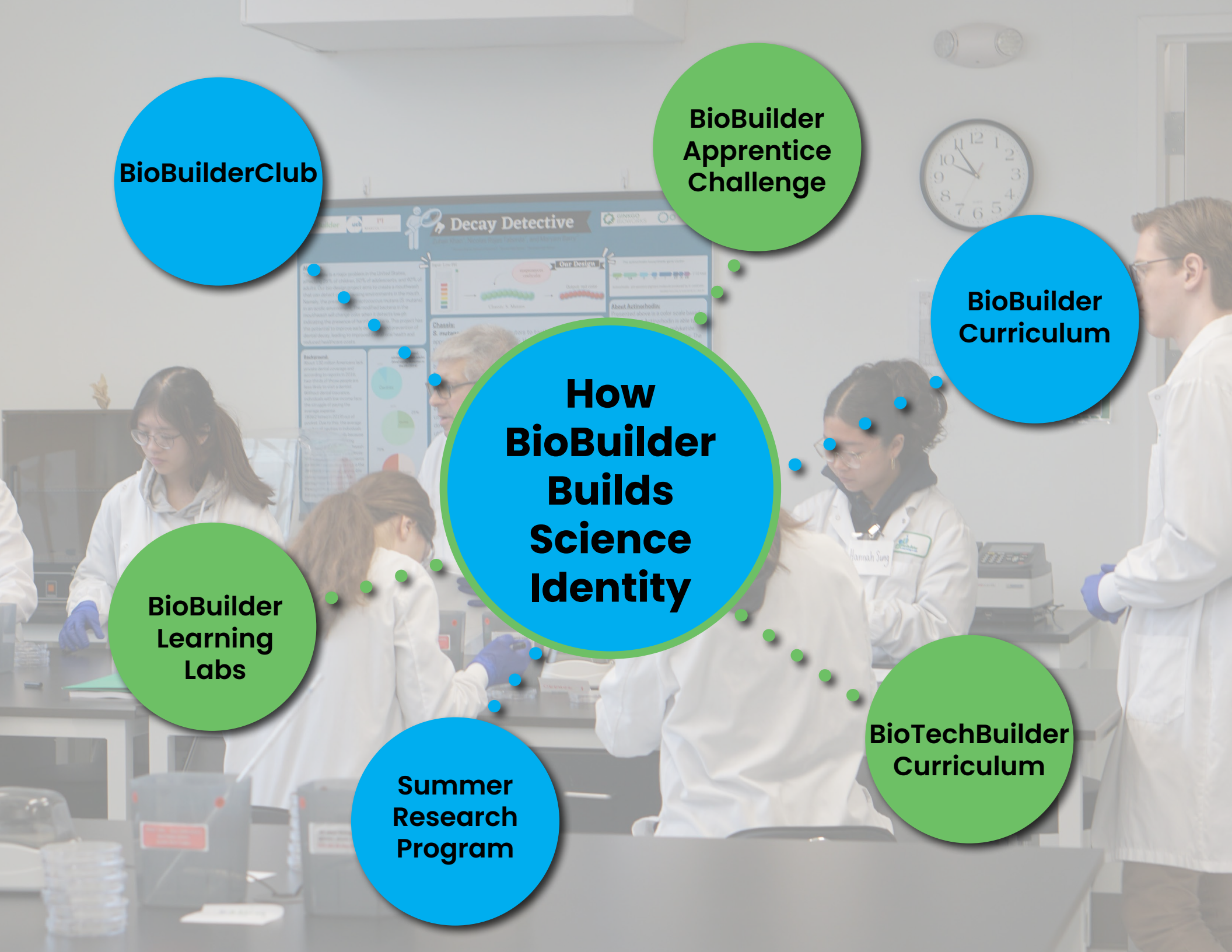
**BioBuilder
Curriculum**

**How
BioBuilder
Builds
Science
Identity**

**BioBuilder
Learning
Labs**

**BioTechBuilder
Curriculum**

**Summer
Research
Program**



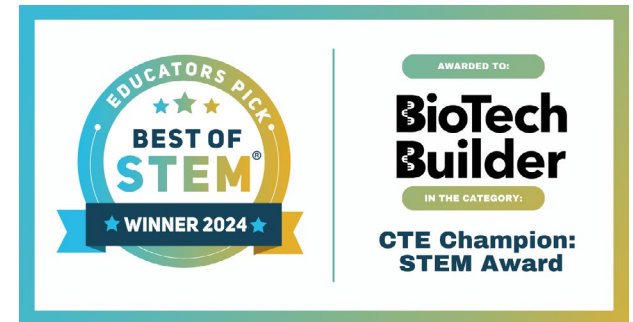
Transforming Science Education



Science never stops, and we are constantly asking, “What’s next?”

Over the last few years, more companies are hiring for STEM-related manufacturing jobs that require technical skill but not always a college degree. This has created an urgent need to teach essential lab skills for entry-level jobs in life science.

Our newest curriculum, BioTechBuilder, is an award-winning approach that helps students take our training from the classroom straight into the workplace. This unique curriculum gives high school students a competitive edge by training them with skills for academic research in college or to start their science careers immediately after completing high school.



Catapult X and the Teich Group awarded BioTechBuilder the Educators Pick Best of STEM® 2024 Awards, the only awards program judged by STEM educators.



BioTechBuilder has truly set a new standard in biotechnology education with its hands-on curriculum focused on skill-building, perfectly aligned with the needs of the biotech industry.

- Lance Bard, Best of STEM Awards judge



BioBuilder Leadership

BioBuilder
Educational Foundation



Natalie Kuldell
Founder / Executive Director



Keira Krausz, Board President
Chief Marketing Officer, Purple



Drew Endy
Professor, Stanford University



David Golden
CEO, ETSU Research
Corporation



Theresa Lynn
CEO, Girl Scouts of Central
and Western Massachusetts



Donald Shobrys
Director, MIT VMS



Bridget Stewart
Head of Clinical Operations,
Remo Health

Making Headlines

BioBuilder is popping up everywhere.

This year we have made an intentional effort to increase our outreach to engage even more students and educators with our programs. This has been amplified by our supporters who continue to share our success within their own networks.



PODCASTS



DIGITAL MEDIA



BROADCASTS





Key Elements: Partnerships



Strategic Partners



Lead Partners



JAMES B BOSKEY MEMORIAL FOUNDATION



Sustaining Partners



We Invite You to be Part of the Momentum

BioBuilder Impact Since 2011

65,000 STUDENTS

179 APPRENTICES

600 EDUCATORS
TRAINED

ACROSS

49 STATES

AND IN

66 COUNTRIES

Empower Educators and Our Future Scientists

- ❑ **Your gift of \$500** brings a BioBuilderClub to the school of your choice
- ❑ **Your gift of \$2,000** supplies one teacher with all the curriculum and lab materials to teach BioTechBuilder Lab Skills
- ❑ **Your gift of \$10,000** provides a week of BioTechBuilder teacher training to all life sciences teachers at the school of your choice
- ❑ **Your gift of \$27,000** can transform the school of your choice; it will provide curriculum, consumables and necessary lab equipment so 100 students can test for industry-recognized microcredentials and launch their careers in life science



Investing in the Future

Your support is needed to continue this important work.

Thirteen years into this work, and we see the results every single day.

The BioBuilder Educational Foundation depends on the support of donors, corporate partners, and stakeholders to meet our mission.

You can be confident in making your gift. BioBuilder has achieved a Four Star rating from Charity Navigator, an independent organization that evaluates the financial health, accountability, and transparency of US-based charities.

**DONATE
TODAY**



*Every gift is an investment
in our future scientists and
their ability to address the
complex issues of our world.*





BioBuilder
Educational Foundation

BioBuilder Educational Foundation
501(c)3 Organization
TIN: 45-3844761

Visit us at BioBuilder.org

Individuals and Foundations are vital partners in BioBuilder's educational mission. We encourage you to make BioBuilder part of your philanthropic giving. For more information contact: Natalie Kuldell, Executive Director, at natalie@biobuilder.org

