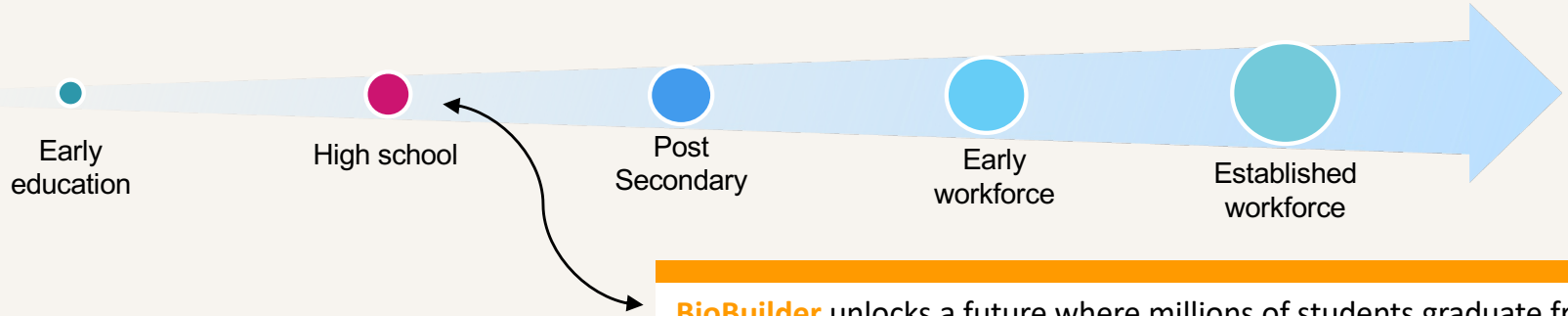
BioBuilder
Educational Foundation

Tapping Every Student's Potential for a Future in Science

To Mobilize a Community, How Do You Decide Where to Start?

- There are ~25,000 public high schools in the U.S., far outnumbering colleges and universities, which we see as the only scalable channel for meeting workforce needs.
- Over 3 million students graduate high school every year, and while nearly 80% want to plan their careers before graduating, only 13% feel prepared, which we see as a critical readiness gap for young people.
- About 80% of young adults stay within 100 miles of their high school, which we see as proof that building community where students already are creates a durable pathway to opportunity.



BioBuilder unlocks a future where millions of students graduate from high school with the skills, knowledge, and professional network to advance into biotechnology career opportunities, post secondary education, and long-term economic mobility in the bioeconomy.

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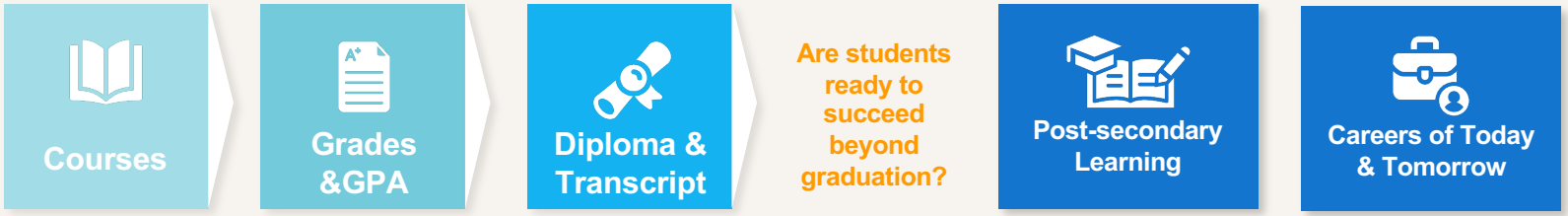
Today's Classrooms Aren't Designed to Prepare Students for Real Workforce Demands

Theory-heavy teaching and "cookbook" science labs fail to build college readiness and workforce skills.



Traditional science education leaves students as spectators, not problem-solvers.

- Minimal hands-on lab experience
- Little or no understanding of biotechnology
- Limited exposure to industry-relevant skills and tools hampers innovation.

BioBuilder empowers students to tackle today's global challenges by building scientific confidence.

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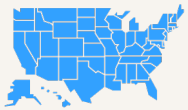
BioBuilder's Scalable Model Fosters Future Innovators

- BioBuilder modernizes biology education through its hands-on curriculum grounded in real-world science to make learning accessible and engaging for every student.
- Programming fosters a purposeful career pathway for students, whether they choose postsecondary education or directly enter the workforce.
- Educators receive comprehensive training and resources to ensure effective implementation.

The support we receive fuels results.

BioBuilder programs double students' science identity, drive a 91% boost in STEM interest, and open doors to college and careers.

Outcomes grow with every dollar invested.



All 50 States

87 Countries

94,000+ Students

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Leadership Team

Natalie Kuldell
BioBuilder,
Founder and Exec. Dir.

Keira Krausz
Chair, CMO, CRO

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SVP Biotech,
Applied Research Inst.

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Stanford Univ.

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Micheal Sheets
Scientist, Sunflower

Racquel Kim Sherwood
Regional Director, Avantor

Justice Toshiba Walker
Professor, Univ of MD

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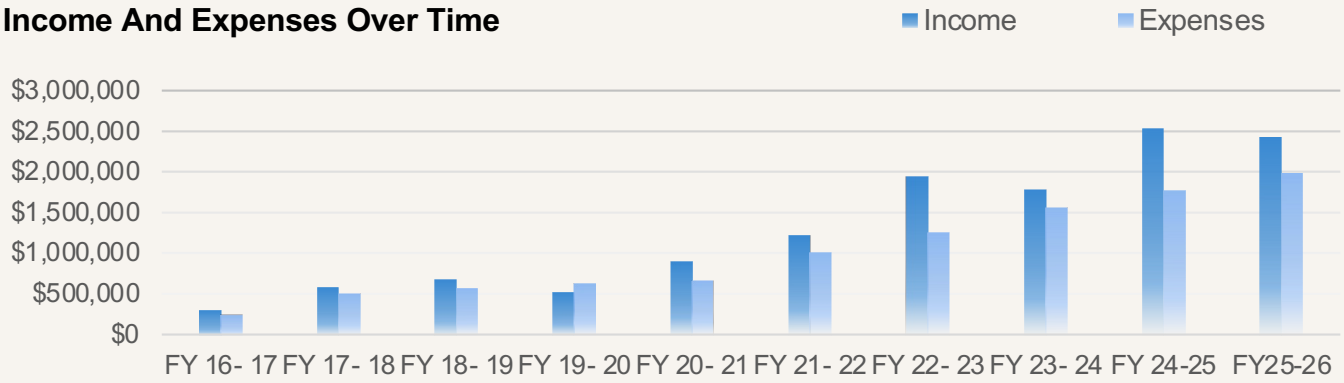
BioBuilder Financial Snapshot

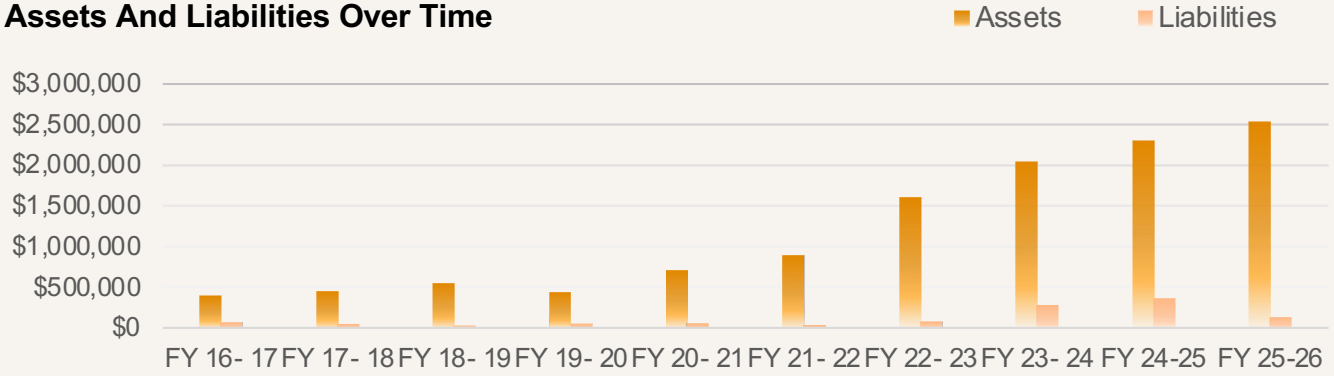
Some Current and Past Support

EASTMAN · GINKGO BIOWORKS · ucb · arbor biosciences · New England Biolabs · SCHMIDT FUTURES · CITY of BOSTON · Massachusetts Life Sciences Center · BioMADE · National Science Foundation · NEO PHILANTHROPY

Income And Expenses Over Time



Assets And Liabilities Over Time



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Tailored Pathways to Futures in Life Sciences

BioBuilder adapts to regional context whether entry comes through curriculum, workforce development, or student program participation

Curriculum-Led

Classroom adoption anchored by published curriculum + commercial lab kits

- Lab kits sold via Carolina
- O'Reilly textbook
- Teacher PD online on demand and in-person summer opportunities
- BioBuilder Learning Labs

50 states + 87 countries

Workforce-Led

Industry identifies talent gap → funds curriculum embedded in required coursework

- Pilot program grew to 1,400+ students, 7 high schools in 4 years
- Access starting in 9th grade
- Financially supported through state-approved CTE pathway
- Builds cross-sector coalition of local stakeholders

$100 ROI per $1 invested in TN

Program-Led

BioBuilderClub program as 'tip of the spear' that grows into regional ecosystem

- Pilot program in one school grew to 20 in 3 years.
- University partnerships, e.g. Frugal Science Academy at Georgia Tech
- Regional Finals in Northeast, Southeast, and in 2027 Midwest
- Legislative efforts for expansion, e.g. H.R. 8268 Biotech for All HS Students Act

8× growth in GA in 3 years

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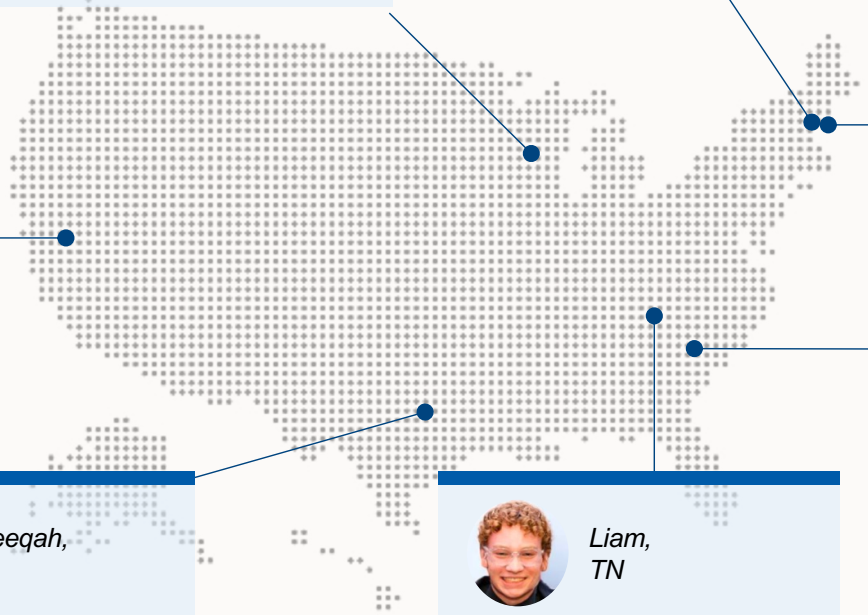
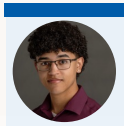
Bridging Regional Talent Gaps





Keaton, IL

"I enjoyed learning about others' projects, which helped to expand my imagination for what could be possible in a high school setting using synthetic biology."

Nicolas, MA

"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."

Yesenia, MA

"I am so glad that BioBuilder was available to me in high school, it has really been a catalyst for pursuing my dream of being a scientist."

William, CA

"The BioBuilder summer program was the most influential experience in shaping my interest in synthetic biology—working with a team on a shared project showed me what real biotech problem-solving looks like. Touring Ginkgo Bioworks was my first real exposure to the biotech industry and helped shape my path to bioengineering at Stanford."

Nafisha, GA

"I learned what it truly means to conduct research. The program showed me that important scientific discoveries don't require expensive equipment, especially for underprivileged schools like mine."

Hadeeqah, TX

"I honestly attribute so much of where I am now to BioBuilder welcoming me into my first-ever lab experience with open arms. You truly set me up for success and were such a pivotal part of both my life and career path."

Liam, TN

"BioBuilder has forever changed my life. What started as a school project fostered a passion for synthetic biology."

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Case Study: BioBuilder in Rural Appalachia

East Tennessee began producing future-ready biotech talent from within by investing in teacher training and embedding BioBuilder into student's 9th grade biology classes.

Philanthropy was the catalyst for systemic change.

Wendy Courtney - STEM specialist

"Students realize that they can do real science—not just read about it. They start to see themselves as part of something bigger.

Vicki Kirk, Niswonger Foundation

"We need a large funnel on the front end—by making biotechnology part of required coursework, we can reach every student. And on the back end, we want a wide range of opportunities, from entering the workforce straight out of high school to pursuing a PhD.

David Golden, retired SVP Eastman Chemical Company

"We needed to do what we could to deploy BioBuilder in the education system where we live—because biotechnology is becoming a strategic workforce priority, and building that talent is a long-lead 'supply-chain' challenge.

Dr. Linda Latimer, former ETSU Trustee

"The belief that biotech is for everyone has been central to how we're building the pipeline here in Northeast Tennessee. That's why we've worked to elevate bioliteracy at every level. We want our young people to grow up understanding biology and biotechnology the way previous generations understood computers and the Internet. They need it to be a source of opportunity. When our students see biotech as something they can understand, they can see it as something they can shape. That's why the introduction of BioBuilder in the kindergarten through 12th space is so brilliant.

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The Time to Scale is Now

The model is proven – what's needed is capacity to reach every school

WHY NOW

- **Accelerating Demand:** Schools and industry partners are actively seeking stronger biotech talent pipelines
- **Revenue model taking hold:** BioBuilder curriculum, training, and credential-aligned programs are seeing growing adoption.
- **Vast opportunity for students:** PhDs are needed for only ~2% of jobs in some biotech ecosystems. High school graduates can enter fulfilling career pathways into the industry.

HOW YOU CAN HELP

- **Expand nationally:** Enable BioBuilder to enter new regions where demand is high but resources are limited.
- **Strengthen infrastructure:** Fund teacher training, data systems, and AI-enabled tools so growth is rapid, durable, and equitable.
- **Ensure long-term impact:** Sustain and expand what's proven effective so more students access real biotech career pathways.

Philanthropic organizations can partner with BioBuilder to build opportunity within a given community or by strengthening our capacity for widespread impact.

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Let’s Strengthen Science Education as a Public Good

For more information on partnering with BioBuilder,
email info@biobuilder.org or natalie@biobuilder.org

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Thank You!

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