A Message from the Biogen Foundation

As students, families and school systems continue to navigate the challenges brought on by COVID-19, the Biogen Foundation STAR Initiative has been a strong anchor for those impacted the most across Cambridge and Somerville, MA.

The STAR Initiative was designed to address the roots of racial inequities in STEM professions by ensuring students who have historically been underserved are reached well before college. One of the most critical components of being able to effectively reach and serve these students is the involvement of school districts. To support and optimize the connection between the work of schools and STAR grantee organizations, Biogen Foundation funded two new part time STAR Data Specialist positions who work for Cambridge and Somerville public school districts. Having positions embedded in the districts will maximize data sharing among all the stakeholders and enable us to analyze multiple angles of STAR’s impact.

Please read on to learn about additional highlights from STAR’s impact over the last several months.

For more information, visit biogen.com/foundation
About STAR

Launched in 2018 by the Biogen Foundation through a 4-year, $10 million investment, the STAR Initiative drives STEM education equity in Cambridge and Somerville, MA. Through STAR (Science, Teacher support, Access & Readiness), the Biogen Foundation is investing in six high performing nonprofits and coordinating a multi-stakeholder network that centers serving students historically underrepresented in STEM college and career pathways - notably, students of color.

“\textit{The work that we do at YPP is revolutionary for students and for workers. I love that we can create a fun learning environment with a multi-layered curriculum of STEM literacy. And most importantly, be able to mentor many students from my community and see them achieve greatness.}”

SHAWN, College Math Literacy Worker, Leading Programming,
YOUNG PEOPLE’S PROJECT

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STAR Updates

Despite declines in school attendance and participation across the nation because of the challenges presented by COVID-19, STAR grantees have served 1,898 students and 204 educators across Cambridge and Somerville in the first half of the 2020-21 school year. Collectively, their programs continue to provide crucial academic and social-emotional support for students and families through the challenges of virtual learning and other COVID-related hardships. Below are some highlights from STAR grantee organizations’ work.

**Breakthrough Greater Boston**

Following a successful pilot virtual summer program, Breakthrough Greater Boston continues to support their students through innovative virtual supports. This fall, they launched a virtual advising program to maintain consistent touchpoints with students, provide resources around academic progress and mental health, and give information on community resources – food, mental health, and tech access. Additionally, each week students attend their remote After School Program where they participate in hands-on learning through explorations like: “Controlling the Blaze: Our Role and Response to the Climate Emergency”, and “How to Become a Citizen Scientist: The Intersection of Social Justice and Science.”

**Citizen Schools**

This fall, Citizen Schools launched virtual STEM apprenticeships and offered 10-week STEM related classes covering topics such as 3-D Printing, Web Design, and coding with the support of their volunteers. They have compiled a library of career pathway conversations with their volunteers to further students’ access to learn about STEM pathways. Please visit the events section below for information on their upcoming speaker series Elevating Voices for Equity.

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**Enroot** Following their successful pilot virtual **summer workshops**, Enroot continues to support students through their now-virtual high school program which provides academic support and STEM enrichment through digitized Career Fairs, Career Days, and job-shadowing to ensure that students have access to STEM career exploration opportunities. Due to heightened social-emotional and basic needs among students during this time, Enroot adopted a more robust coaching model for all students, including more frequent 1:1 meetings and closer collaboration with mentors.

**Lesley University** has been busy helping educators across Cambridge and Somerville adjust to and gain confidence in teaching remotely. They **hosted several workshops** over the summer serving over 140 in and out of school educators, including a cohort of Citizen Schools teaching fellows, and continue to provide workshops throughout the school year that are responsive to teachers’ evolving needs. Recently, Lesley worked with Somerville teachers to create hands-on STEM learning kits to send home to 250 students. **You can read more about that initiative below.**

**uAspire** continues to provide students with the support they need to plan financially for postsecondary opportunities through virtual counseling. Beyond their traditional program model, uAspire advisors have provided an array of additional support to help students including addressing digital connectivity issues and connecting them to mental health resources. **Check out our events section below** to learn more about upcoming information sessions about FAFSA (Free Application for Federal Student Aid) completion.

**The Young People’s Project** adapted most of their programs to virtual formats and continue to center student agency and peer-to-peer teaching in their programming. They expanded programming to their first Somerville school, Argenziano, which serves grades K-8. Recently, they held a special online event called “What’s the Big Idea Math Challenge” as part of the 2021 National Math Festival. Students had the opportunity to participate in the judging panel and assessed how well six mathematicians conveyed a big or deep idea in math.

“I have really looked forward to Breakthrough because it’s just such an amazing community to be part of. It makes me feel a lot happier, like I belong, and like I have someone to talk to and that I can trust will be there for me.”

**EMELY, 9th Grade, Somerville, Ma.**
STAR’s overarching goal is to strengthen STEM education ecosystems through collective action. The involvement and investment in the initiative by Cambridge and Somerville school districts is a vital component of this work. Through the STAR network, all of the stakeholders have increased their communication and organic collaboration to better serve students. Below are highlights from two of these innovative partnerships that have come about through STAR.

### Somerville Public Schools Science Kits

Lesley University worked with six 6th grade science educators from Somerville Public Schools to create hands-on, inquiry-based activities related to their curriculum and develop portable learning kits for each of their activities. These science learning kits were distributed to teachers to disseminate to their students in time for February vacation week. Some of the activities include mummification and papyrus (paper making), experiments with yeast to understand biological systems like the respiratory and digestive systems, and an activity related to building a model of a hand and understanding the structural systems of bones, muscles, and blood flow. This initiative reached 250 middle school students across 4 Somerville schools.

### Math in the News: What Story is Being Told?

Back in November, STAR grantees Enroot and Lesley University partnered to design and run an interactive workshop for high school students to help them see themselves as mathematicians by identifying math in everyday life. The workshop focused on analyzing polling data from the November 2020 presidential election and reviewing the presentations of this data on various news sites. Students discussed the logistical, legal, and operational aspects of elections, clarifying things like what role individuals can play in voting and the qualifications to hold office (citizenship, age, etc). Students examined how to access voting data, the voting process, and the stories and perspectives that are hidden in data projections. Thinking as mathematicians, students looked beyond the data with a critical lens.
Upcoming Events

Read below to learn more about and register for upcoming events hosted by our STAR grantees.

CITIZEN SCHOOLS

Developing Meaningful Student Work During Remote Learning

If you find yourself ready to employ maker-centered learning for authentic and meaningful engagement in your classroom, this webinar will be perfect for you. This session will offer real-world examples from the Makers + Mentors Network Fellows who are working at education sites throughout the country.

March 18, 2021, 1-2 PM ET | To register, please visit PATHFINDERS ONLINE INSTITUTE

Elevating Voices for Equity

Please join us in a virtual three-part speaker series, where we will learn, engage, and bring together members of our community to uplift voices that have been traditionally marginalized. Our speakers will share ways that government, industry leaders, and other community members can take action to support K-12 students for postsecondary preparation, workforce placement, and social mobility. The third in the series will cover entry and transition into the workforce and how we can help BIPOC students persist in these pathways.

APRIL 6, 2021, 12-1 PM ET | REGISTER TODAY

uAspire

uAspire is hosting virtual Financial Aid Help Events to help students and families complete the FAFSA (Free Application for Federal Student Aid) and CSS Profile (College Scholarship Service Profile), compare financial aid offers, and more. We'll answer your questions and walk you through the financial aid applications and process.

These events are FREE and open to everyone. | REGISTER TODAY

High school seniors will begin to receive financial aid offers from colleges. They can use our College Cost Calculator for free. uAspire's College Cost Calculator is a free online tool that helps you decipher and compare financial aid offers and know what college will really cost you.

For more information, visit biogen.com/foundation
The Biogen Foundation STAR initiative was designed based on research of what’s working in STEM education nationally. STEM ecosystems cultivate relationships across stakeholders and maximize each stakeholder’s unique contribution. Typically, these networks have one backbone organization, or network manager (Root Cause in the case of STAR), that facilitates collective action amongst stakeholders, which can include: schools and districts, out-of-school-time programs, leading STEM institutions (i.e. higher education, industry leaders, science centers, etc.), the private sector, other community-based organizations, young people, and their families. A highly functioning coordinated network has the potential to provide a seamless pathway for ALL students to have equitable access to STEM learning opportunities that prepare them for STEM careers—something that is virtually impossible to achieve when stakeholders work independently from one another. The Biogen Foundation has made a visionary commitment through STAR. There is no better place poised to lead the way in building a strong local STEM education ecosystem than the Greater Boston area, home to Kendall Square—one of the world’s most powerful life sciences and technology hubs.

**Root Cause** is a purpose-driven consulting group that exists to enable more people and families to achieve lifelong success. Root Cause partners with foundations, nonprofit organizations, businesses, school districts, and public agencies to develop, implement, and measure strategies that improve people’s lives. Since 2004, the Root Cause team has pioneered evidence-driven approaches to strategy, measurement, learning and improvement, and collective action to ensure more people achieve lifelong success. We have helped more than 400 partners improve people’s health and well-being, increase education and youth development outcomes, and strengthen the economic security of people and families nationwide. Learn more at rootcause.org