



Science • Technology • Engineering • (A)rt • Math



Since 2014, Community Guilds has focused on delivering an innovative, gap-closing approach to education through its mobile makerspace, STE(A)M Truck, targeting elementary and middle school students.

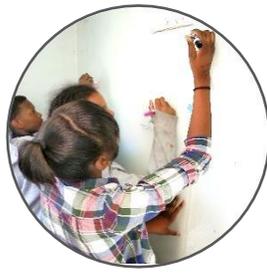
The STE(A)M Truck experience is anchored by a rigorous, experiential learning-based curriculum, which is brought to life in a mobile maker-space with the support and collective expertise of the local community. STE(A)M Truck creates a community of adult role models – “maker-mentors,” STEM designers, and local artists– and connects them closely with youth; together, they tackle real problems, design solutions, and build things.

What students and teachers are saying



“A lot of times adults, instead of teaching you how to use tools wisely and safely—they’re scared you’re going to hurt yourself so they don’t teach you at all. Something fun about STE(A)M truck is they let you it experience it yourself. So you really learn how to do something without help.”

-Kindezi 6th Grader



“The STE(A)M Truck allows kids who are hesitant or nervous about science and math to engage in a unique way. Kids who weren’t interested or invested the classroom were out here in love with what they were doing every day...it was hands-on, real-world, and they could own the decisions.”

-KIPP Science Teacher



“I learned a lot about how you need a team to get things done—we talk about teamwork all the time in school, but here I actually needed my teammates to help me to be successful—we all had to try our best to figure this out.. This will definitely help me work in the future, in school and in life.”

-KIPP 8th Grader



I liked how even though most of these tools are used by adults, we got a chance to actually use them and got to make cool objects and learn how things work. This will help me all my life because STEAM is everywhere. What I learned I can use anywhere.

-Kindezi 3rd Grader

Opportunity Gap

African-Americans, American Indians, and Latinos combined represent only 12 percent of all undergraduate degrees in technology and engineering, and research proves that those students who graduate without access to STEM skills and programming are less likely to have the problem-solving and critical thinking skills necessary to be successful in a range of career paths (both within and outside of STEM careers), the need for Community Guilds and STE(A)M Truck in Atlanta area schools is more critical than ever.



Community Guilds

Community Guilds is a Georgia non-profit committed to closing the opportunity gap in public education by providing transformational, hands-on apprenticeships and maker space experiences. Through high-interest, hands-on, collaborative work, Community Guilds engages youth to tackle real problems, design and build innovative solutions using real tools and modern technologies under the guidance of community experts and local artists. This experience provides authentic access to STEAM content while building the non-cognitive skills necessary for college and career success, ultimately allowing every student to thrive.

One example

At KIPP WAYS STE(A)M Truck worked with 8th grade science teacher Kelvin Smith as part of his Renewable Energy Unit of Study. Over the 20 visits, students learned basic tool safety and usage while continuing to dig deeper into his driving question: **“How can we live a more sustainable life?”**. Mr. Smith and his students built and designed solar powered blue tooth speakers, bicycle powered blenders, and a Rube Goldberg machine that reminds visitors to “Turn off the Lights!”. His students had access to “real-world” resources and tools, from laser cutters and 3-D printers to simple hammers and nails, and learned 21st century skills in an authentic setting. They tackled a real problem and, with community experts, built something together.

The STE(A)M Truck curricular cycle is organized into five main components, which are: **Spark**- whole school visits the Truck and tools, **Explore**- students learn how to use the tools and see community experts at work, **Design**- students collaborate to solve a problem using a design thinking approach, **Build**- construction of the solution, and **Share**-student led exhibition for the whole school community.



“One thing STE(A)M Truck taught me is how to improve in a process—do something over and over again to make it better and better each time you try. I would totally do this again because I need a new toolbox—my parents keep trying to steal mine!”

-Kindezi 6th Grader



Sparking Atlanta Students' Interest

In order to kick off the KIPP WAYS project (and all STE(A)M Truck programming), the truck opens its doors to the entire school, providing an opportunity for every student to explore the tools on the truck and artifacts from other schools' projects. The STE(A)M Truck features more than \$100,000 worth of equipment ranging from power tools to a computer-operated laser engraver. Students are unlikely to have ever encountered many of the more high-tech tools, so the opportunity to test them out, learn how they work, and discuss how they might be used provides a means of sparking students' interests in tools and trades of which they may never have even heard.

STE(A)M Truck Solutions

The research has been clear that access to hands-on building, tinkering, and the kinds of curriculum offered through STE(A)M Truck can increase access to STEM careers for students and build the skills critical for long-term success; however, the tools, expertise, and time needed to utilize these types of strategies are usually unavailable in public schools and especially so in public schools serving low-income communities. Community Guilds, and the STE(A)M Truck program specifically, leverage the research to meet the articulated need in Atlanta by providing access to materials, expertise, and curriculum that can reach every student in the city on their own campus. More, because the program provides capacity-building for teachers and a chance for schools to explore an innovation lab without building one, schools are able to explore the tools and curriculum that may work for their students and staff, and teachers receive professional development and access to an array of tools that would otherwise be cost prohibitive for most schools. Through the STE(A)M Truck, Community Guilds provides programming critical to building STEM readiness and interest for students in even the least resourced schools, while saving time, space, and money for the schools served.



Closing the Gap in Atlanta

Community Guilds' programming has helped build students' non-cognitive skills – and awareness of a breadth of life opportunities – they need to be successful:

Non-cognitive skills

- 97%+ of students improved non-cognitive skills
- 90%+ of students performed at satisfactory competency levels on non-cognitive skills
- Increased student interest and willingness to take risks and try new things in learning
- Improved classroom behavior (e.g., significant decline in discipline referrals)

STEM skills and awareness

- 87%+ of students have improved applied STEM skills
- As high as 90% of students perform at satisfactory competency levels on STEM skills
- 73%+ of students have increased interest and confidence in pursuing a STEM career.





Bringing STE(A)M Truck to Teachers Throughout the Metro Atlanta Area

In addition to refining its student engagement model, Community Guilds has deepened its approach to engaging teachers. The goal is to build teachers' capacity, knowledge, and resources to incorporate design thinking and experiential learning into their everyday classroom practice and scale the transformative impact of STE(A)M Truck. Our 20 day program will work directly with a teacher(s) and their class(es) and identify ways to integrate hands-on/ making work into their day-to-day instruction..

Fee Structure For Schools Classroom Model

The STE(A)M Truck fee provides:

- ⌋ A ratio of 1 adult to every 5 students with STE(A)M team Maker Mentors, STEM Designers and Artists in Resident onsite.
- ⌋ A 20 day curricula integrated with teachers' scope and sequence
- ⌋ Projects aligned to grade level STEM standards
- ⌋ Use of fully-equipped truck as a design lab with normal wear and tear
- ⌋ Set up, take down and clean up
- ⌋ Procurement of all materials, supplies and consumables
- ⌋ All overhead, insurance, gas, and other misc. costs

½ Day In-School at \$15,500

50 students served, 3.5 hours of daily programming

- 20 half day visits serving two classes and/or two teachers
- Includes \$2,000 for artist in resident stipend
- Includes up to \$2000 for materials and consumables

Full-Day In-School at \$26,500

125 students served with up to 7 hours of daily programming

- 20 full days of programming serving 5 classes and/or teacher per day
- Includes \$3,500 for artist in resident stipend
- Includes up to \$4,000 for materials and consumables

Note: mileage fees are extra and calculated from our location to yours.

Curricular Assumptions:

- Entire classroom served
- 2-6 classrooms served pervisit
- 60-120 minute lessons
- 20-lesson curriculum
- Curriculum can be implemented over semester or shorter period (as few as 4 weeks for daily programming)
- School-wide SPARK event kicks off each semester
- Community invited to final SHARE event



Community Guilds can tailor STE(A)M Truck programming to fit the needs of most any school. The packages outlined here are designed to provide a complete 20-day cycle that includes the full five phases of the curriculum. The ratio of adults to students provides one-on-one, intensive engagement and full access to the tools and technologies each session.

As a 501(c)3 non-profit most schools find corporate or philanthropic support to cover the cost of our programming.

For more information contact Jason Martin at
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