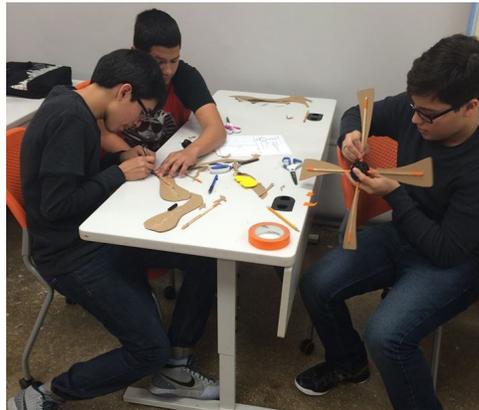




2017 Impact Report



Advocacy



Education



Connectory

LETTER FROM THE CHAIRMAN



Dear Friends and Supporters,

I'm honored to share this letter with you, introducing SASTEMIC's results in 2017, sharing some thoughts about the importance of STEM education in San Antonio, and describing how SASTEMIC has positioned itself to support STEM in San Antonio for many years to come!

In 2017, we continued our core mission of inspiring San Antonio students toward STEM education and STEM career fields. Through the Geekbus™, we served over 16,000 students and teachers, teaching the students about engineering, 3D printing, coding, and even MagLev vehicles! More important than the content, though, is the energy and enthusiasm of students when they program a 3D-printer to create an end product, or write a few working lines of code. We want to leave a lasting impression with these students, impressions that have a positive impact on their future choices. Our surveys tell us we are being successful delivering inspiration, opening a world of content, and getting students thinking about STEM careers. I hope you'll continue reading this report to learn more about our detailed results in 2017.

STEM is a community effort, and 2017 was also a year we helped develop STEM capacity in others and built partnerships for the future. In the summer, we conducted summer camps with partner schools and provide STEM training for teachers. In August, we organized a partnership to bring the statewide CS4TX (Computer Science for Texas) program to San Antonio, with support from Congressman Will Hurd. Throughout the year, we partnered with the San Antonio Museum of Science and Technology (SAMSAT) to develop their STEM capacity and deliver events. We value these relationships with our partners, knowing we are stronger and have greater impact when we work together.

I'd also like to share some behind-the-scenes accomplishments. We know that a sustainable organization needs a strong and self-renewing Board of Directors. Over the last two years, we expanded our Board beyond its five founding members, bringing in a diversity of talent and perspectives. As we engaged our new Board members, we also reviewed our vision, mission, and internal structures, and made changes intended to support the organization over the long term. We are confident our Board, along with our strong community partnerships, will serve us well in the years ahead.

We are deeply appreciative of the sponsors who choose to serve the community through SASTEMIC. Andeavor has been our major Geekbus sponsor for three years. Our capacity is greatly enhanced as a result. USAA and Rackspace provided additional support for our 2017 programs. From us, and on behalf of the students, teachers and families we serve, we say "thank you!"

As I was writing this letter, I was also watching Mayor Nirenberg in a Facebook Live chat with astrophysicist and science advocate Dr. Neil deGrasse Tyson, in town to speak at the Tobin Center. I was reminded of the outsized role STEM plays in building economies and creating quality of life. STEM is an opportunity for teachers, students, and citizens to exercise their curiosity about the world. It's an opportunity for students to get a great education, and for them to find rewarding careers. In a city expecting 1.1 million new citizens in the next 20 years, our future development demands a qualified STEM workforce. The staff and board of SASTEMIC are privileged to be part of ongoing efforts to build a future city we can be proud of.

Best Regards,

A handwritten signature in dark ink, appearing to read "Cliff Zintgraff". The signature is fluid and cursive, written in a professional style.

Cliff Zintgraff, Ph.D.
2017 Board Chair, SASTEMIC



2017 Highlights

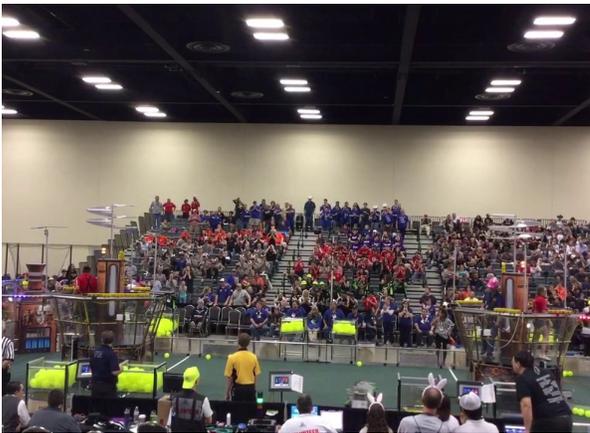


22,756 Community Members Served

SASTEMIC's programs provided STEM engagement to 22,756 parents, students, teachers, and other community members in 2017. These community members joined our programs and other community partners in advancing STEM education in San Antonio and surrounding areas.

104 STEM Events

2017 was a great year to bring STEM events to local schools, community centers, libraries and other community outreach events. Our 104 STEM events supported local initiatives to advance our community into the 21st century with skills in coding, robotics, renewable energy, and engineering.



Partnerships

In 2017, SASTEMIC continued their partnership with FIRST-Alamo Region as the official affiliate partner. SASTEMIC was also fortunate to have available funding from Andeavor, Rackspace, and USAA to help grow and further STEM education initiatives in the community.



SPONSORS MAKE GREAT THINGS HAPPEN

SASTEMIC would like to thank ALL of our sponsors for their generosity and support of our programs, with a very special thanks to our programs' major sponsors:



SPONSORS MAKE GREAT THINGS HAPPEN

Complete list of 2017 sponsors

Geekbus

- Andeavor
- USAA
- Rackspace
- Accenture Federal

Alamo-FIRST

- CPS Energy
- Rackspace
- Andeavor
- Pharr Economic Development
- U.S. Air Force
- Toyota
- Texas Workforce Comission
- ARM
- U.S. Army
- NRG
- Booz Allen Hamilton
- Akemeka
- Whataburger
- Spacex
- Waco
- U.S. Navy
- UTSA Engineering



ABOUT SASTEMIC



EDUCATION

ADVOCACY

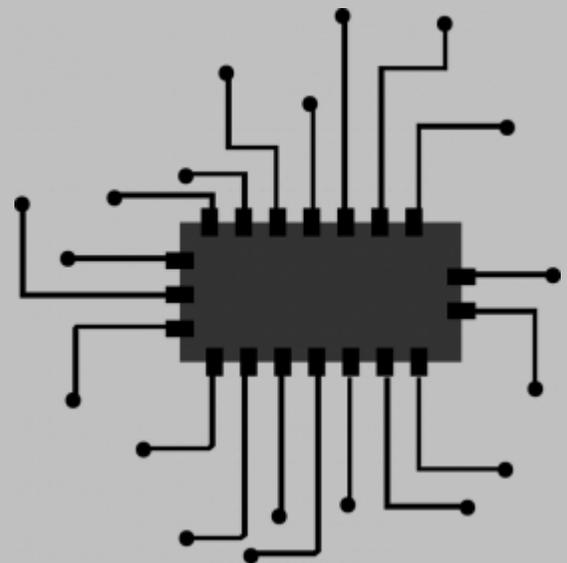
CONNECTORY

Mission

SASTEMIC delivers services focused on creating a capable STEM workforce, advocating for STEM, and connecting stakeholders across the San Antonio community.

We value

- The students we serve and their families
- Strategic thinking
- Action
- Collaboration
- Diversity that reflects our community
- Long-term positive community impact



SASTEMIC PROGRAMS



Geekbus

A high-tech mobile makerspace dedicated to bringing industry aligned STEM education experiences to area schools and community outreach events.

Professional Development

STEM education experts provide a variety of services for improving STEM education needs including Project Based Learning and Coding in the Classroom.

FIRST-Alamo Region

Hosting the largest K-12 robotics competition in the United States, FIRST-Alamo Region engages students to become leaders in science and technology through a “Sport of the Mind.”

Camps

Our STEM camps combine our high quality educational Geekbus programs and extend our basic exploratory Maker activities to provide students continual learning throughout spring and summer breaks.



About the Geekbus

The Geekbus is a mobile makerspace that travels to schools and other organizations to provide STEM educational experiences in their classrooms. Our goal is to spark students' interest in Science, Technology, Engineering, and Math (STEM). With the explosive growth of STEM careers in San Antonio, our programs aim to inspire the next generation of local STEM talent by focusing on schools and other educational programs that focus on underserved populations.

Geekbus Impact

Total Community
Members Served

16,072

Schools and Centers
Visited

84

STEM Events

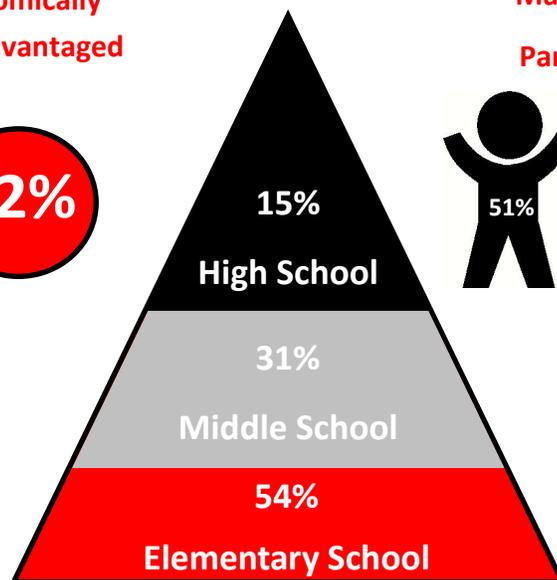
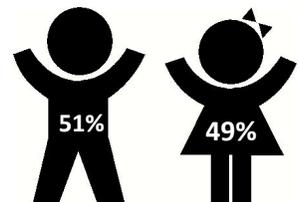
42



Economically
Disadvantaged

82%

Male/Female
Participation



GEEKBUS SURVEY DATA

Since the spring of 2015, we have implemented an initiative to measure the impact of Geekbus programs on students who have attended a direct instruction session. To collect quantitative data, we developed a simple survey which students complete after each instructional visit. The survey asks questions which measure impact: 1) Did students learn more about STEM Careers? 2) Did students learn more about technology and engineering? 3) Were students inspired to learn more STEM? 4) Were students engaged and excited about STEM?

Percent of students who agree or strongly agree the Geekbus increased:

ENGINEERING AND TECHNOLOGY
CAREER AWARENESS

79%

INSPIRED TO
CONTINUE
LEARNING STEM

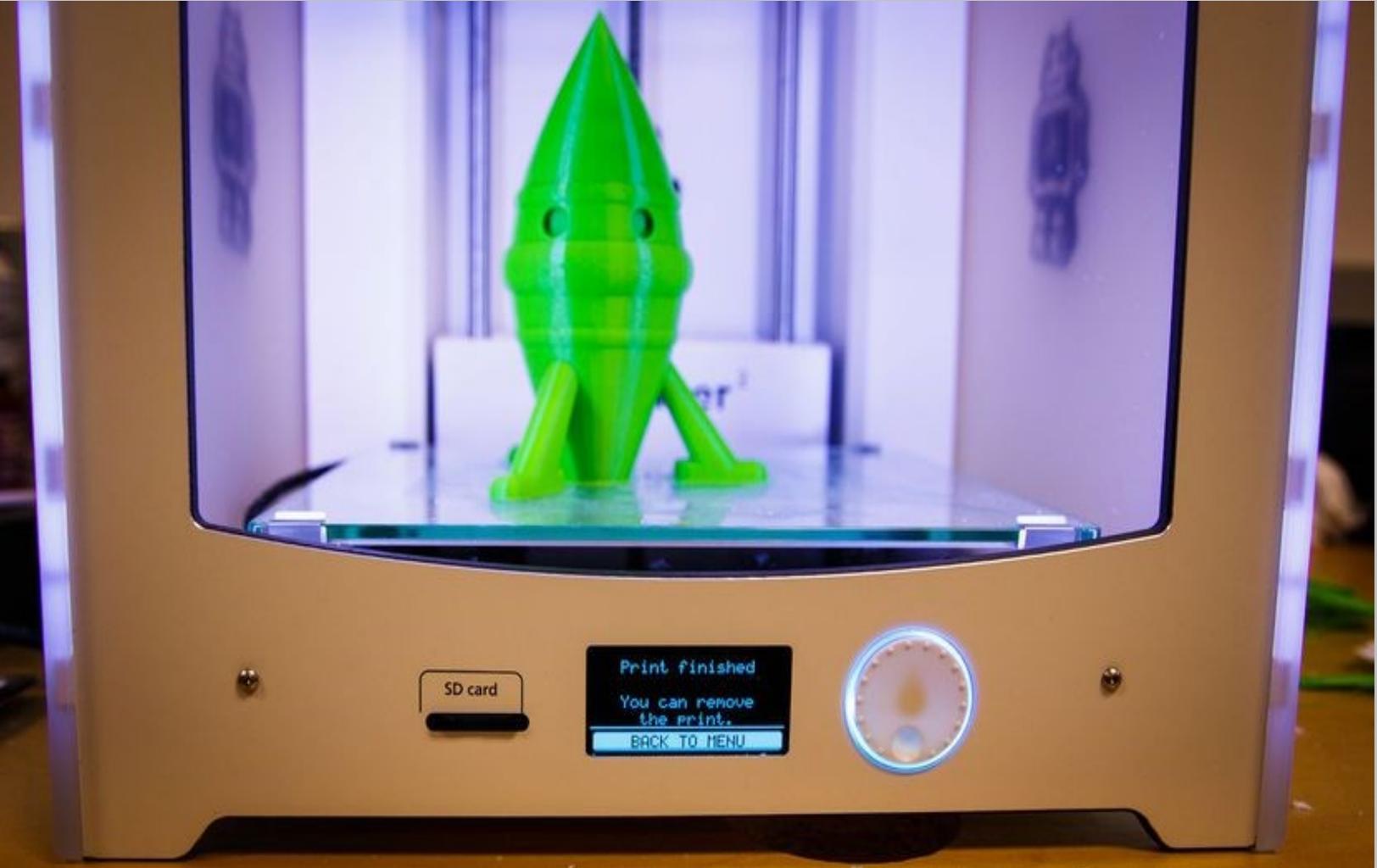
72%

ENGINEERING AND
TECHNOLOGY KNOWLEDGE

79%

STUDENTS
EXCITED AND
ENGAGED

85%



70 Professionals Trained

During the spring and fall semesters of 2017, SASTEMIC provided 4 single day professional development opportunities for teachers and other educators to train them on implementing STEM education in the classroom. Our professional development specialists pride themselves on using the highest quality and most up to date standards for each topic, helping to ensure that STEM is utilized on a wider scale in the classroom and during after school programs.



Advancement in Curriculum

In 2017 the SASTEMIC team worked to expand the curriculum topics offered with the Geekbus. This year we added 8 new topics to our curriculum which are MagLev, micro:bits, Geospatial Analysis, Engineering Design Process, Structural Engineering, Straw Rockets, Stop Motion Animation, and Makey Makey. While creating new topics the SASTEMIC team also updated the original 6 sessions, ensuring students get the most modern STEM experience possible when participating in a Geekbus lesson.

About FIRST-Alamo Region

The mission of FIRST-Alamo Region is to inspire young people in the local area to be science and technology leaders; engage them in exciting mentor-based programs that build science, engineering, and technology skills; inspire innovation and foster well rounded life capabilities including self-confidence, communication, and leadership.

Alamo-FIRST's Local Impact

K-12 Students

6,144

Teams

640

Schools

368

South Texas Cities

38

Percentage of title 1 School

Participation



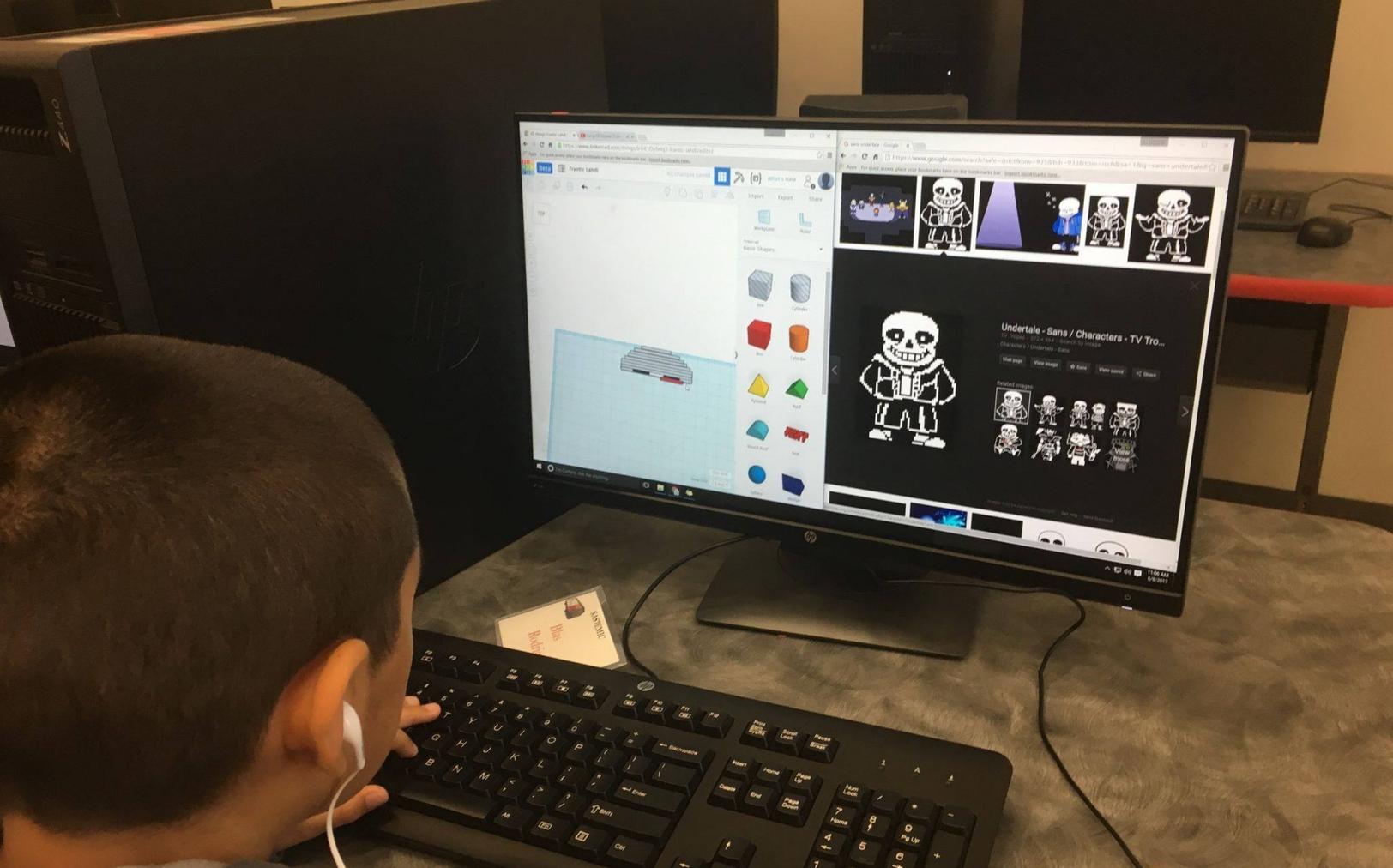
27%



53%



40%



STEM Camps

In 2017 SASMIC partnered with local school districts and colleges to host **5 STEM camps** with a total of **393 students** participating. Our

STEM camps combine our high quality educational Geekbus programs and extend our basic exploratory Maker activities to provide students continual learning throughout spring and summer breaks.



45 students were served in all SAMSAT events in 2017

Primary reasons for SAMSAT are:

1. Putting San Antonio on the map for science and technology
2. Assisting economic development activities
3. Assisting STEM Education
4. Increase San Antonio tourism by creating a destination spot
5. Provide a science and technology research platform
6. Teaching our students and citizen at large to become knowledgeable stewards of our environment and technology.

SAMSAT will be a world-class science center, an innovation incubator and home to a major collection of never-before-seen technological artifacts, the new hub for today's dreamers in San Antonio and beyond.

SAMSAT explores fascinating root of technology we use every day promoting STEM education for the high-skill jobs of our knowledge economy and increase interest in science and tech careers.



32 educators and industry
representatives came
together to advance this
initiative.

About CS4TX

CS4TX is a statewide group making computer science education available to all Texas K-12 students, through community building, advocacy, and professional development.

SASTEMIC BOARD OF DIRECTORS

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