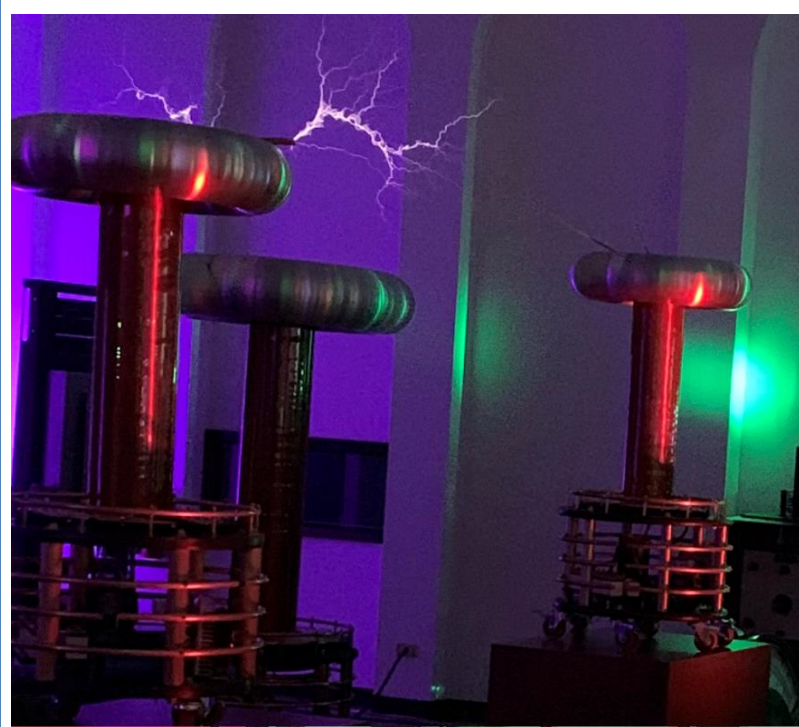




San Antonio Museum of Science and Technology

2019 Impact Report

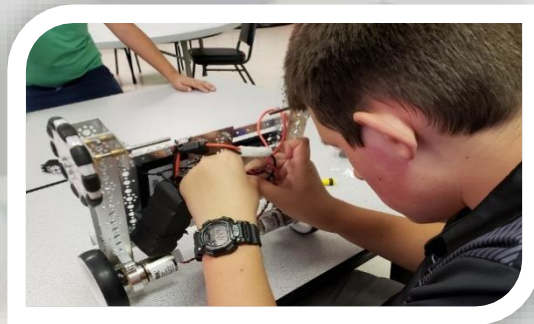


Mission, Vision and Values

drive our daily activities and long-term plan.

Mission

Inspiring minds to
innovate through STEM



Vision

The premier organization for
transforming communities
through STEM



Values

Innovation, Teamwork,
Stewardship, Accountability,
Diversity, and Integrity



2019 Highlights

14,078 Community Members Served

SAMSAT's programs served students, teachers, administrators, and parents in our K-12 school programs, and adults from our community through SAMSAT Family Days, our lecture series, and special events.

126 School Visits

We took STEM lessons to local schools, and we hosted area schools at SAMSAT for tours, hands-on activities, summer camps and special events.

Partnerships

SAMSAT built on existing partnerships with The Boeing Company, the San Antonio Housing Authority, Bibliotech, and Communities in Schools of San Antonio. We built new partnerships with Impact San Antonio and with UTSA's Center for Infrastructure Assurance and Security. SAMSAT and SASTEMIC completed a merger, and the Museum of Computer Culture donated their artifacts and more to SAMSAT.



Keeping It Real World

Whether it's our museum content, educational programs, lecture series, or special programs, our philosophy is to use the real-world to inspire minds to innovate through STEM.



Authentic Education Experiences
Robotics design challenge



Authentic Artifact
WWII German encoder



What's Happening in the World
*Lecture on active projects
in space exploration*



**School to
College to Career**
*Promoting the STEM high school
diploma endorsement to 8th graders*



Real-World Challenge
*SA Smart pitch panel,
addressing challenge's
from San Antonio's
SA Tomorrow plan*

Saturdays are

SAMSAT Family Day

Why did Edison make a light bulb using horse hair?

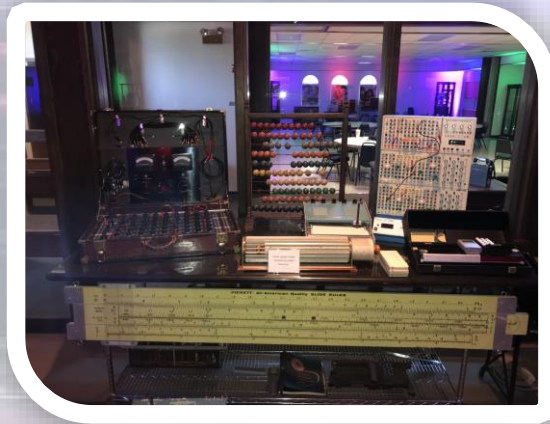
Why did Edison and Tesla argue about how to distribute electricity?

Why was Dynamo Tender a 1910 STEM job?

Why does a Tesla coil spark and make a bulb light up?

Was the personal computer really invented in San Antonio?

Visitors to Family Day, every Saturday at SAMSAT, get more than answers to these questions. They learn lessons about the innovation mindset and about the education opportunities and STEM careers available in San Antonio.



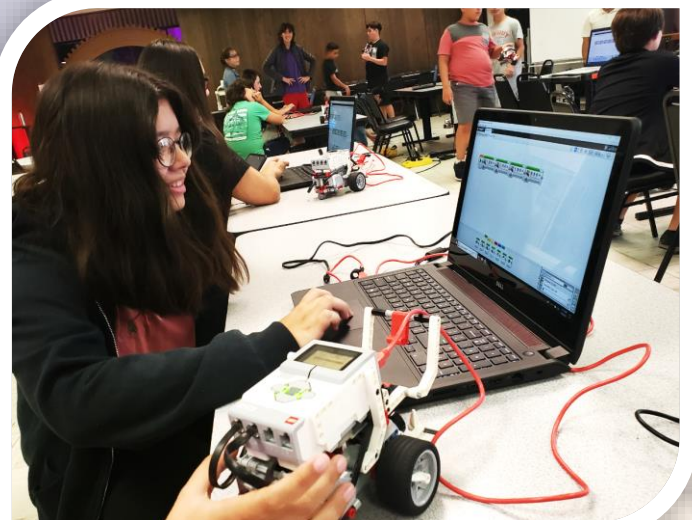
SAMSAT welcomed 5,473 Family Day visitors to the Museum Preview Center in 2019, 3,306 adults, and 2,167 children.



Explore and Do™ Tours

Innovation and invention...who's done it before? What's the mindset and important lessons? How does coding, building a robot, capturing wind energy, or securing a computer network relate to invention and innovation? What further education is available, and can students get a job that uses these skills in San Antonio? (Yes!). Students learn these things in our Explore and Do™ tours. They hear lessons of invention and innovation and participate in complementary hands-on STEM activities.

1,361 students joined
Explore and Do™ tours
in 2019



The Geekbus™

and delivering lessons in schools



The Geekbus™ is SAMSAT's outreach vehicle and mobile STEM space. Since 2012, the Geekbus has visited schools in the Greater San Antonio area and throughout south and central Texas. Anytime we visit a school, we also visit classrooms and deliver hands-on STEM lessons to students.

5,855 students were served by the Geekbus and by SAMSAT school visits in 2019.



Museum and Geekbus™ Curricula

Wind energy

Finch

micro:bit Block Coding

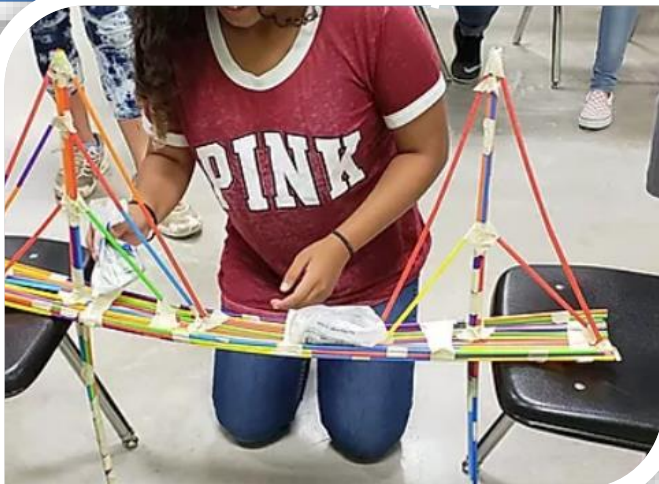
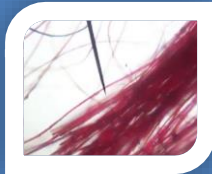
Cyber Threat Defender

Sphero Robots

Forensics

Drones

Structural Engineering



MagLev

Video Game Design I

Zu3D

Cyber Security

EV3 Robotics

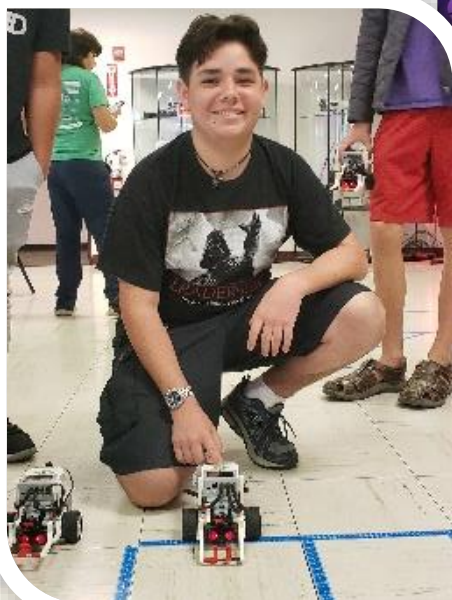
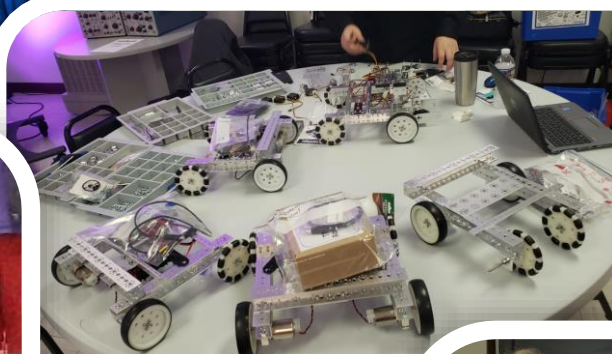
Rockets



SAMSAT STEM Camps

SAMSAT operated 10 STEM Summer Camps at the museum in 2019. Topics were: *Space Camps*, *STEM to STEAM through 3D Geometry*, *Robots!*, *Let's Communicate*, *Breaking the Code*, and *Movie Making*. Many other camps were conducted at school partner sites.

1,389 students attended one-week summer camps in 2019.



SAMSAT Lecture Series

In 2019, SAMSAT started its monthly Lecture Series. The first theme was Space Exploration. Among the things attendees learned...humans on the Moon and Mars is becoming more and more real thanks to work happening in San Antonio.

Deep Space Exploration from a Personal Perspective

Ms. Susan Pope, Director, Department of Space Instrumentation, SwRI

Space Architecture

Mr. Samuel W. Ximenes, Space Architect

50 Years of Lunar Exploration

Dr. Cesare Grava, Research Scientist



Events @ SAMSAT

SAMSAT was the venue for dozens of adult events—*lectures, company meetings, celebrations, birthday parties, military promotions...even a fashion show!* Adult events at SAMSAT strengthened the networks between people and organizations, inspired adult's interest in science and technology, and spread the word about the importance of great STEM education experiences and the availability of high-wage jobs in San Antonio.



Geekbus STEM Club

with The Boeing Company and the
San Antonio Housing Authority

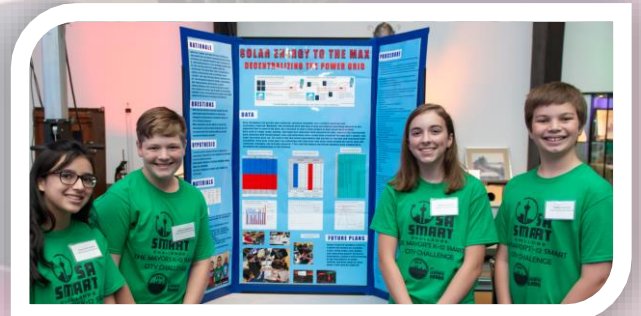
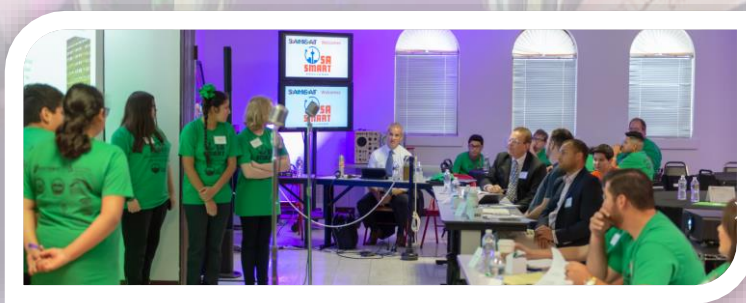
Recent studies suggest San Antonio is one of the most economically segregated cities in the United States. What is SAMSAT doing about it? We are partnered with The Boeing Company and the San Antonio Housing Authority (SAHA), and we made 24 visits to SAHA properties in 2019 as part of the Geekbus™ STEM Club. We want these students to know they can become scientists, engineers, or anything they put their mind to, and if they do, there are great opportunities for education and careers in San Antonio.



SA Smart: The Mayor's K-12 Smart City Challenge

A partnership with the San Antonio Office of the Mayor, Communities in Schools of San Antonio, and many more

Over 100 students learned there is a plan in San Antonio—the *SA Tomorrow Plan*—and they conducted technical research, market research, developed a pitch, and shared their ideas for addressing challenges with a Mayor's Blue Ribbon panel.



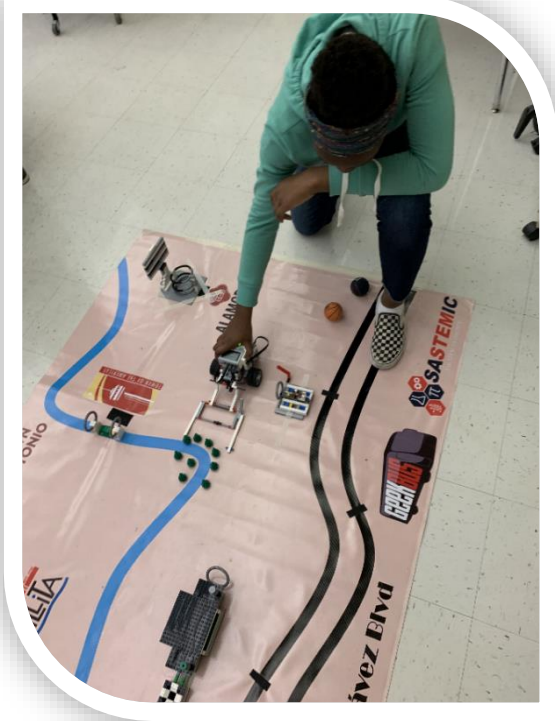
More Metrics

Elementary	13%
Middle School	42%
High School	45%
Economically disadvantaged	91%
Female	51%
Male	49%
Post-event:	
<i>Engaged by STEM content</i>	87%
<i>Interest in STEM Careers</i>	78%
<i>Interest in STEM Content & Tech</i>	79%
<i>Want to learn more STEM</i>	72%

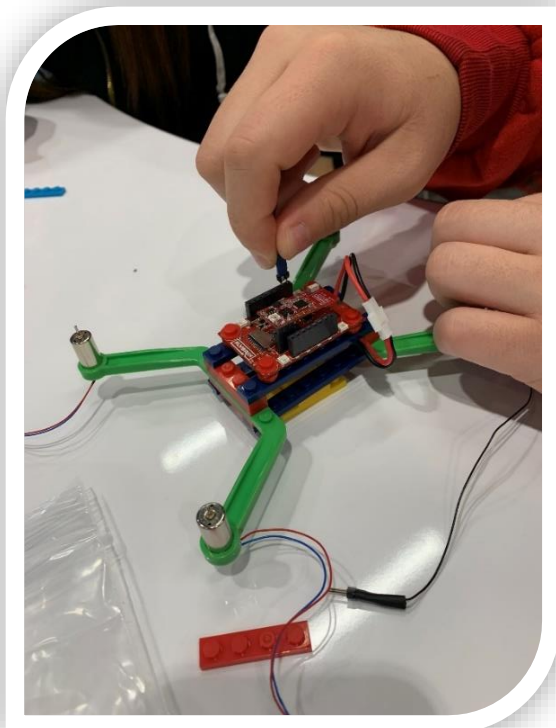


New Curriculum

We **added** five new topics to our curriculum:
Drones, **Forensics I**, **Forensics II**, **Cyber Security**,
and **Ev3 Robotics Programming**



Drones: Students work in teams to design and build a working drone that can lift off and fly.



Ev3 Task Mat: Students use their programming skills to work in teams to complete various tasks. Ev3 Robotics Programming is a mandatory prerequisite to this session.

In the News

www.samsat.org/news



San Antonio Museum of Science and Technology Centerpiece of Port San Antonio Innovation Hub



TECH SA: SAMSAT adds two more Tesla coils, KSAT 12 receives exclusive look



SA Museum offers free science & tech exhibits, events



Rey Feo pushes science, technology at SAMSAT



Boeing, SAMSAT Expanding Geekbus STEM Club to Serve More Low-Income Students in San Antonio

Thank you to our SAMSAT 2019 Sponsors



Dr. David Crouch and
Cactus Communications



EH Concepts LTD.

Chris Cheever



and to our SAMSAT 2019 Partners





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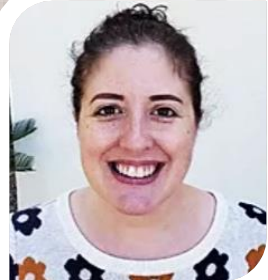
Instructor, Lutheran High School
of San Antonio
FIRST Affiliate Partner, Alamo Region



Meet SAMSAT's Staff



Cliff Zintgraff, Ph.D.
Executive Director



Jennifer Ireland
Director of STEM Education



Jorge Amodio
Technology Manager



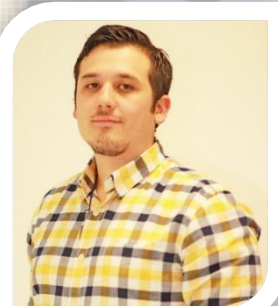
Tomie Escobar
STEM Coordinator



Mark Brooks
Lead STEM Educator
Social Media Manager



Sandra Shreve
Events Manager



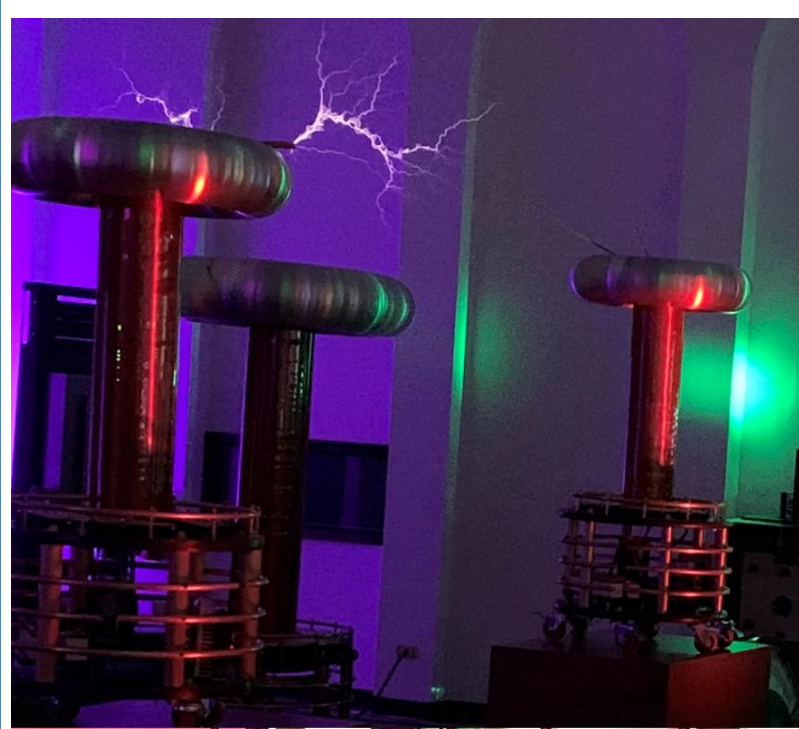
Nathan Kimball
STEM Educator



Corina Zamora
STEM Educator



Richard Gonzalez
STEM Educator



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