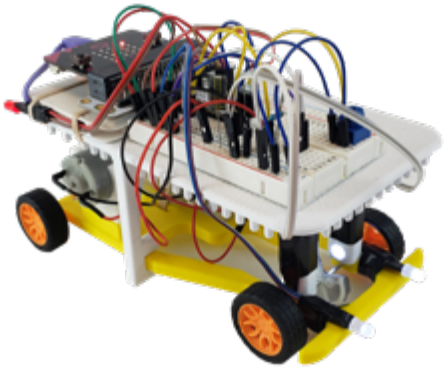
STEM Education Works®

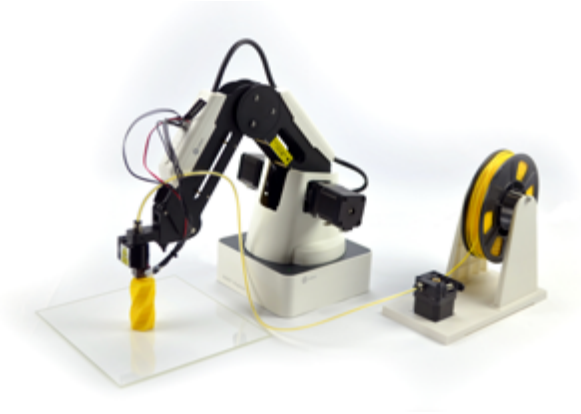
BEAUMONT INDEPENDENT SCHOOL DISTRICT

WHO THEY ARE

Beaumont Independent School District serves students across southeast Texas with a vision that extends far beyond classroom instruction. Under the leadership of STEM Coordinator LaChandra Cobb-Eaglin, the district has transformed STEM from a standalone experience into a connected learning pathway that begins in elementary school and continues through graduation.



Rather than treating STEM as an elective or enrichment opportunity, Beaumont ISD has developed a districtwide strategy to expose every student to science, technology, engineering, and computer science at an early age. Students begin with STEM clubs and hands-on experiences in elementary school, move into STEM electives in middle school, and enter high school prepared to pursue engineering, computer science, and other career pathways.

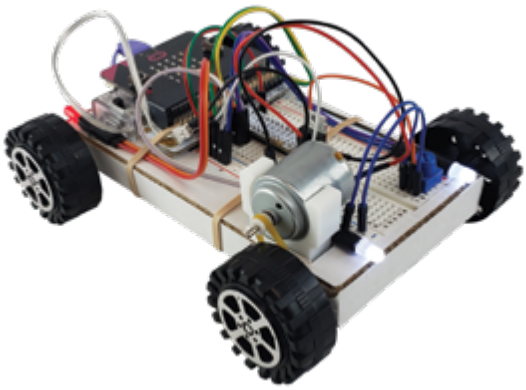


“My goal is to bring it into full immersion,” Cobb-Eaglin explains. “I’ve been very intentional about the experiences I give them at the elementary level so they’ll tie into what students experience in middle school. By the time they’re in eighth grade, they know whether STEM is for them.”

This intentional progression helps students build confidence, develop technical skills, and explore future careers long before graduation.

THEIR GOALS

When Cobb-Eaglin assumed leadership of Beaumont ISD’s STEM program, she spent her first year observing existing programs before making changes. What she found was a program with dedicated educators but limited resources for authentic engineering experiences.



Students often spend valuable class time creating classroom materials rather than engaging in engineering design.

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“It was more of the bare minimum,” she says. “There was a lot of cutting cardboard, finding recycled materials, and drawing gears. I felt students needed more time embracing the engineering design process.”

Her vision centered on three priorities.

First, create a true K-12 STEM pathway in which each grade level builds on the previous year’s learning.
Second, provide students with authentic engineering experiences using the same tools and technologies used in today’s workforce.

Third, equip teachers with complete instructional resources so they can spend more time teaching and less time preparing materials.

“I think students should start learning in elementary school, seeing where their interests are, whether it’s computer science, engineering, or technology, and then keep building on it at each grade level. By the time they reach high school, they’re confident. They know the language. They know the vocabulary. They know the tools.”

THEIR SOLUTION

To bring this vision to life, Beaumont ISD partnered with STEM Education Works to expand hands-on STEM learning across multiple grade levels and programs.

One of the district’s first implementations was the Build Smart EV Micro-Kart curriculum, part of a Bridge to STEM program for middle school students. The Saturday program combined math, reading, and STEM instruction, using electric vehicles as the central theme to connect academic concepts with real-world applications.
Instead of seeing STEM as just another class, students quickly made it the highlight of their day.

“The kids loved it,” Cobb-Eaglin recalls. “They wanted to stay in STEM instead of going to math and reading. They wanted STEM to be longer.”

By connecting classroom learning with engineering challenges, students gained a deeper understanding of how math and literacy support problem-solving in real-world careers.

The district also expanded robotics instruction with Dobot robotic arms to expose students to industrial automation. Located near major employers in manufacturing and automation, Beaumont ISD wanted students to experience the same robotic systems they might encounter in local industries.

“What VEX didn’t give us was a more realistic experience,” Cobb-Eaglin explains. “Students are seeing these types of robotic arms in industry. I wanted them to program robots to perform jobs they would actually have in the real world.” Because the curriculum accompanies the technology, teachers had everything needed to begin instruction immediately.

WHY STEM EDUCATION WORKS

As Cobb-Eaglin evaluated STEM vendors, she focused on one priority above all others: complete instructional solutions.

Rather than piecing together equipment, curriculum, and training from multiple vendors, she wanted a partner who could provide everything teachers needed in one package.

“It was an inclusive package,” she says. “It had the curriculum. It came with the kits. Even the tools students needed to build. If you didn’t have certain equipment, there were other options built into the curriculum. The more inclusive something is, the more time students spend learning.”

This turnkey approach reduced teachers’ preparation time while allowing students to begin authentic engineering work immediately.

Instead of building classroom materials from scratch, educators focused on teaching design thinking, engineering concepts, and problem-solving.

PARTNERING WITH STEM EDUCATION WORKS

Today, STEM learning is woven throughout Beaumont ISD.

Elementary students participate in STEM clubs and receive consistent experiences across campuses.

Middle school students transition into engineering electives supported by hands-on technologies and curriculum.

High school students continue into advanced engineering and computer science pathways with a strong technical foundation already in place.

The district also extends STEM beyond the classroom.

Each year, Beaumont ISD hosts one of the largest Family STEM Nights in Texas. After beginning as a traditional school event serving approximately 200 attendees, Cobb-Eaglin envisioned something much larger.

She partnered with ExxonMobil to create a district-wide community STEM celebration.

Today, the event fills Ford Park Arena and attracts more than 5,000 participants. Every campus hosts interactive STEM experiences while community organizations and industry partners showcase career opportunities and emerging technologies. STEM Education Works technologies, including Dobot robotics, have been featured in these experiences.

The event demonstrates what happens when schools, families, industry, and community partners work together to inspire the next generation.

BUILDING A SUSTAINABLE STEM FUTURE

For Beaumont ISD, STEM is not a single classroom, a single teacher, or a single program.

It is a long-term commitment to preparing students for college, careers, and the modern workforce.

Each year, the district continues to expand its STEM pathway, adding new opportunities while strengthening connections between grade levels.

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“I think if we want students to see their future and the possibilities of careers, it shouldn’t be a one-time thing,” Cobb-Eaglin says. “They should continue building those experiences every year.”

By combining intentional planning, teacher support, industry-relevant technology, and an engaging curriculum, Beaumont ISD has created a sustainable model that continues to grow with its students.

RESULTS AT A GLANCE

- District-wide K-12 STEM pathway with connected learning experiences
- STEM clubs and engineering experiences beginning in elementary school
- Real-world robotics and automation instruction using Dobot technology
- Build Smart EV Cart curriculum integrated into special STEM programming
- Turnkey curriculum and classroom resources that reduce teacher preparation time
- More than 5,000 community members participate annually in Beaumont ISD’s Family STEM Night

ABOUT STEM EDUCATION WORKS

STEM Education Works partners with schools and districts to create engaging, standards-aligned STEM learning environments. From curriculum and classroom technology to professional development and ongoing implementation support, STEM Education Works helps educators build sustainable STEM programs that prepare students for future careers.