

Richardson Independent School District



STEM for All Transformation Helps Students Grow, Learn,
Succeed

The next generation of problem-solvers are making new connections in STEM-focused PreK–12 classrooms throughout Richardson Independent School District.

Richardson ISD is a satellite of Dallas, and home to a diverse population of more than 39,000 students, hailing from more than 100 different countries across the world, and speaking 86

different languages. Those factors make it one of the ten most diverse districts in Texas. In order to ensure that achievement gaps don't stratify their students into groups, Richardson ISD's leadership sought to create a streamlined STEM for All learning community, where students in every grade level are afforded high quality STEM learning opportunities.

“Richardson ISD has a deep-seated commitment that ALL means ALL,” said **Tabitha Branum**, Deputy Superintendent of Richardson ISD. “STEM is a vehicle to allow us to achieve that.”

After a thorough nationwide search, Discovery Education was chosen as a partner to provide Richardson ISD's students with digital solutions like Experience, Techbook, and STEM Connect paired with professional learning that can uplift educators into STEM teacher leaders. These are the experts who would institute an inspirational culture of STEM throughout the Berkner Learning Community, a network of 16 K-12 campuses within Richardson ISD. Berkner was selected as the right feeder pattern to implement this STEM vision, due in part to the success around Berkner High School's STEM Academy, founded in 2007.

Now in year two of their STEM for All journey, district leaders have been pleased to see some notable milestones in their transformation within the Berkner Learning Community:

- Teachers are implementing problem-based learning in classrooms
- Students are seeing STEM connections between subjects
- Campuses have started new extracurricular clubs, such as Girls Coding Club, and Robotics Club
- Teachers are incorporating the 4Cs (communication, critical thinking, creativity, and collaboration) into daily activities, ensuring even the youngest students are immersed in STEM culture
- Teachers have been honing their skills in professional learning sessions with Discovery Education, building the capacity to deliver quality STEM instruction.

“It has been delightful to watch this STEM transformation!” said Branum. “The level of engagement, collaboration, communication, and problem-solving has increased throughout the school, therefore there has been an increase of academic performance throughout.”

Seeing milestones like these manifest, enthusiasm is building within central office about how to scale the STEM journey in Berkner's schools to the rest of Richardson's students. Over the next two years, there are plans to enhance communication of the STEM vision and convene a group of early adopters from other schools in the district to begin planning and designing what that implementation will ultimately look like.

The passion for seeing the STEM culture come to life is shared by **Kyndra J. Johnson**, executive director of STEM and Innovation at Richardson.

"I would love for the district to take this model as a blueprint and watch it make collective impact," said Johnson. "I would love for us to permeate the other feeder patterns with some of the pillars of this plan hoping to make the same impact on students' lives that we're making now with the Berkner STEM learning community."

Likewise, teachers in the Berkner learning community said this new approach to STEM instruction has given students exciting opportunities to grapple with new concepts and discover connections between subjects. Students are learning how STEM impacts their daily lives, and what careers are within their grasp.

Brandon Handy, a third-grade teacher at Berkner elementary school, was chosen as a STEM innovator for the district, affording him a front-row seat for the exciting changes Discovery Education was bringing his school. Handy said he's excited when his students see how everything they're learning now in their STEM-focused lessons, can be applied to jobs later in life—something he said was missing from classrooms in the past.

“I was blown away by what Discovery Education had to offer. It's changing the way I teach,” said Handy. “Students are beginning to understand that all of the things we're learning about are tied together, and that's been very eye-opening for them.”

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Kyndra J. Johnson
Executive Director, STEM and Innovation
Richardson ISD



Kristi Burson, a fifth-grade teacher in Richardson, said STEM Connect, in particular, has been a vital tool in surfacing relevance in her daily lessons. It's provided a window for students to see different career paths they might not otherwise know about.

“With what they’re learning in STEM Connect, they get why it is relevant. You’ll never hear them ask, ‘Why am I learning this, and how am I going to use it in the real world.’ They totally can use it, and that’s what I bubble over about,” said Burson.

The STEM journey at Berkner is blossoming beautifully, and the seeds for future growth are already being planted throughout the district at large. It is all adding up to the beginnings of a vibrant community of learners, able to develop solutions to real-world problems. Branum said much of this work is thanks to the partnership created between Richardson ISD’s leadership and Discovery Education’s staff.

“Access to rich digital content, proven effective leadership development training and coaching, along with high quality STEM teacher PD, are just a few of the ways that Discovery Education has helped us bring this initiative to life and ensure we are purposefully engaging students in STEM and positively impacting student achievement,” she said.