

California district uses innovative STEM program to help close pandemic-related achievement and engagement gaps

Invention Project®, a new program from the National Inventors Hall of Fame®, uses hands-on activities that encourage exploration and collaboration

After learning disruptions during the pandemic led to achievement and engagement gaps among its students, the Escondido Union School District turned to an inventive new program—literally.

Invention Project, an engaging and customizable program developed by the National Inventors Hall of Fame (NIHF), is a PreK-8 education program that engages students in collaborative hands-on activities that promote engagement with STEM and the development of 21st century skills. The program also helps students build creative problem solving and social-emotional skills, build competency in decision-making and self-management, and practice empathy.

“Engagement is definitely the foundation for helping students to get to their highest potential,” says Rick Oser, Director of Extended Learning, Intervention and Enrichment for the California district. “Some of the challenges that most school districts are experiencing after the pandemic not only involve learning gaps, but also student engagement gaps,” Oser says. “Escondido USD was purposeful in selecting the NIHF curriculum to address both the achievement gap and the engagement gap.”

“Visiting classrooms and seeing a high level of engagement among students and teachers, with students excited about learning, excited about the curriculum and working collaboratively with their peers shows us that we’re heading in the right direction.”

Adaptive and turnkey

Invention Project contains 25 modules that can be tailored to different learning styles and adapted to the amount of time a school or district might have

available—two weeks in the summer or an afterschool program. The program meets national and state education standards and integrates 21st-century skills to help develop what the NIHF calls an Innovation Mindset™ in students.

Step-by-step curriculum guides and online resources reduce prep time for teachers, and pre- and post-tests track student progress. The lessons can also be used as a resource in asynchronous learning in school, after school or during summer programs.

“The program and materials have definitely helped shape students’ creative skills,” says Shannon Fralish, Coordinator of Expanded Learning in the district’s department of Educational Services. “Being more kinesthetic and hands-on has helped them get excited for everyday inventions. It is expanding our students’ love of learning and inspires them to have a great experience in the classroom.”

Fourth-grade teacher Claudia Ramirez of Oak Hill Elementary agrees. “The materials provided to students help them think outside of the box,” Ramirez says. “The teacher support has helped me with planning. It is also helpful that I am supplied with both the curriculum and the script.”

‘Breath of fresh air’

Nicole Koncur, a fifth-grade teacher at Glen View Elementary, also says she appreciates the ease of implementation and turnkey design.

“The curriculum was very organized and easy to follow. I love the units and different themes,” Koncur says. “It was a breath of fresh air, because it let students explore, be creative and just have fun learning. I have taught for 12 years, and this is one of the best experiences I’ve had as a teacher.”



NIHF, founded in 1973, partners with the U.S. Patent and Trademark Office to honor the spirit of innovation and promote inventors as role models. It also partners with more than 2,400 schools and districts.

Fun with a purpose

“Every single teacher has said that they are enjoying teaching the curriculum,” Oser says. “When teachers are having fun, that translates to students having fun. But the program is not just fun. It’s meaningful and purposeful, and our students are learning. They are excited to come to school.”

And, Fralish says, the program costs can be mitigated. “Now is the time,” Fralish says, “to use the unprecedented pandemic relief funding available to schools to ensure that our students can engage in learning that is fun and prepares them with the skills they’ll need in the future.”



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