



STEP IMPACT REPORT

2025

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FISCAL SPONSORS



26 years - Thank you!

As we mark the culmination of STEP's 26th Anniversary celebration, the STEP Board extends its sincere gratitude to the Sponsors and Partners whose support sustains our mission. On behalf of the tens of thousands of students and educators across the Inland Empire who have benefited from STEP programs, we offer our deepest appreciation. Your continued investment in our STEM outreach initiatives enables us to inspire young people and open pathways to meaningful, rewarding careers across a broad spectrum of STEM disciplines.

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Special thanks!

We extend our sincere appreciation to our many In-Kind Sponsors whose generous contributions of volunteer time, nourishing meals, and valuable educational materials play an essential role in our success. Your involvement enriches our programs and strengthens our ability to highlight meaningful career pathways for the young people we serve.



STEP PROGRAM OVERVIEW

The Mission of STEP is to inspire K-12 students to pursue STEM educations and careers. STEP achieves its Mission by providing at no cost for our participants a variety of hands-on STEM education experiences and interaction with professionals who use STEM to improve their job safety and effectiveness. STEP achieves its Mission through an array of programs, which we are pleased to highlight for you:



Student STEPCon25, Entering Science-on-Stage, Riverside CA



Student STEPCon25, Using the Trading Cards @ the Science-on-Stage,, Riverside, CA

STEPCon STUDENT

held each October, provides STEM experiences to K-12 students and their teachers, which include the STEP Science Show, STEM exhibit booths, hands-on demonstrations, and small-group workshops.

STEPCon EDUCATOR

provides teachers and administrators with tools to make STEM subjects more interesting and relevant for their students.

STEPCon COUNSELOR

provides counselors with STEM education roadmaps to guide students in preparing for STEM educations. The roadmaps are focused on math, “the language of STEM.”

STEM Summer Learning Labs

are week-long STEM summer camps, which provide extended learning experiences for ninth grade to twelfth grade students to learn about STEM careers in their community in the areas of policing, firefighting, emergency medical technician, public utilities, manufacturing, university level R&D, and defense.

STEM In Defense

(STEM ID) is dedicated to engaging students in information technology, artificial intelligence, 3D imaging & printing, and the use of drone technologies.

STEM Academies

create a “STEM learning pipeline” for elementary and middle school students to prepare for the STEM Summer Learning Labs in high school. PATTERNS, PUZZLES, & PRACTICES (P3) is dedicated to 5th & 6th grade students and focuses the students on inventing games using math. STEM FUNDamentals teaches 7th & 8th grade students the skills they will use in the STEM Summer Learning Labs, when they are in high school, especially the use of math in most STEM career paths.





STEP PROGRAM HISTORY

For more than 26 years, the STEP Conference has provided K-12 students with meaningful opportunities to engage directly with STEM professionals and explore career pathways throughout Riverside and San Bernardino Counties in the Inland Empire. What began as the STEP Conference has evolved into STEPCon – STUDENT, a dynamic, high-impact experience designed to expose students to the breadth of STEM-driven industries shaping our regional economy.

A signature component of STEPCon – STUDENT continues to be the Science-on-Stage, conducted by engineers from General Atomics in San Diego. Through high-energy demonstrations, fundamental scientific principles and engineering applications are presented in ways that are both rigorous and accessible to audiences of all ages. In addition, students engage with interactive exhibit booths representing careers in the Navy, law enforcement, fire service, public utilities, engineering, advanced manufacturing, environmental sciences, education, healthcare, and emerging technologies. At each station, students interact directly with industry professionals and gain first-hand insight into how STEM competencies are applied in real-world careers.

Prior to COVID-19, STEP was conducted as a two-day, in-person event serving approximately 2,500 students per day from across the Inland Empire. In 2020, during pandemic-related school closures, STEP pivoted to a fully virtual format—STEPCon20 – STUDENT—requiring rapid investment in digital platforms, audiovisual production capabilities, livestream broadcasting, YouTube archiving, and regional digital marketing. The results were extraordinary: participation expanded to nearly 15,000 students and educators, significantly increasing STEP’s geographic reach and accessibility.

In the post-pandemic environment, STEP adopted a streamlined, single-day in-person model serving approximately 2,000 students, while maintaining live broadcast capabilities to extend access to additional schools and underserved districts across the region’s two large counties. With the successful implementation of STEPCon25 – STUDENT, we continue to refine a hybrid-access approach that maximizes both in-person engagement and digital reach.

The STEPCon – EDUCATOR conference, originally a half-day program, was expanded in 2017 to a full-day professional development experience to deepen instructional strategies and STEM classroom integration. While paused during 2020 and 2021 due to its interactive, hands-on design, the conference resumed in 2022 with strong participation from educators eager to reconnect and collaborate.

In 2023, STEPCon – COUNSELOR was introduced to provide K-12 counselors with structured academic and career pathway roadmaps aligned to STEM fields. This specialized convening equips counselors with current labor market information, postsecondary planning tools, and course-sequencing guidance to better support students’ long-term academic planning. Both the EDUCATOR and COUNSELOR conferences feature keynote speakers from across the nation, as well as regional leaders in education and industry. A highlight of these events is the recognition of STEP Student Scholarship recipients, who share how educator and counselor mentorship has shaped their pursuit of STEM degrees.

Complementing STEPCon, the STEM Summer Learning Labs were launched in 2017 in partnership with the Riverside Police Department, beginning with STEM in Law Enforcement and Public Safety (STEM LEAPS). Since that time, STEP has expanded to offer multiple week-long, immersive programs, including:

- **STEM in Law Enforcement and Public Service (STEM LEAPS)**
- **STEM in Public Utilities Learning Labs (STEM PULL)**
- **STEM in Advanced Manufacturing (STEM IAM)**
- **STEM in Defense (STEM ID)**
- **STEM Solutions**
- **STEM Fundamentals**
- **STEM P³**

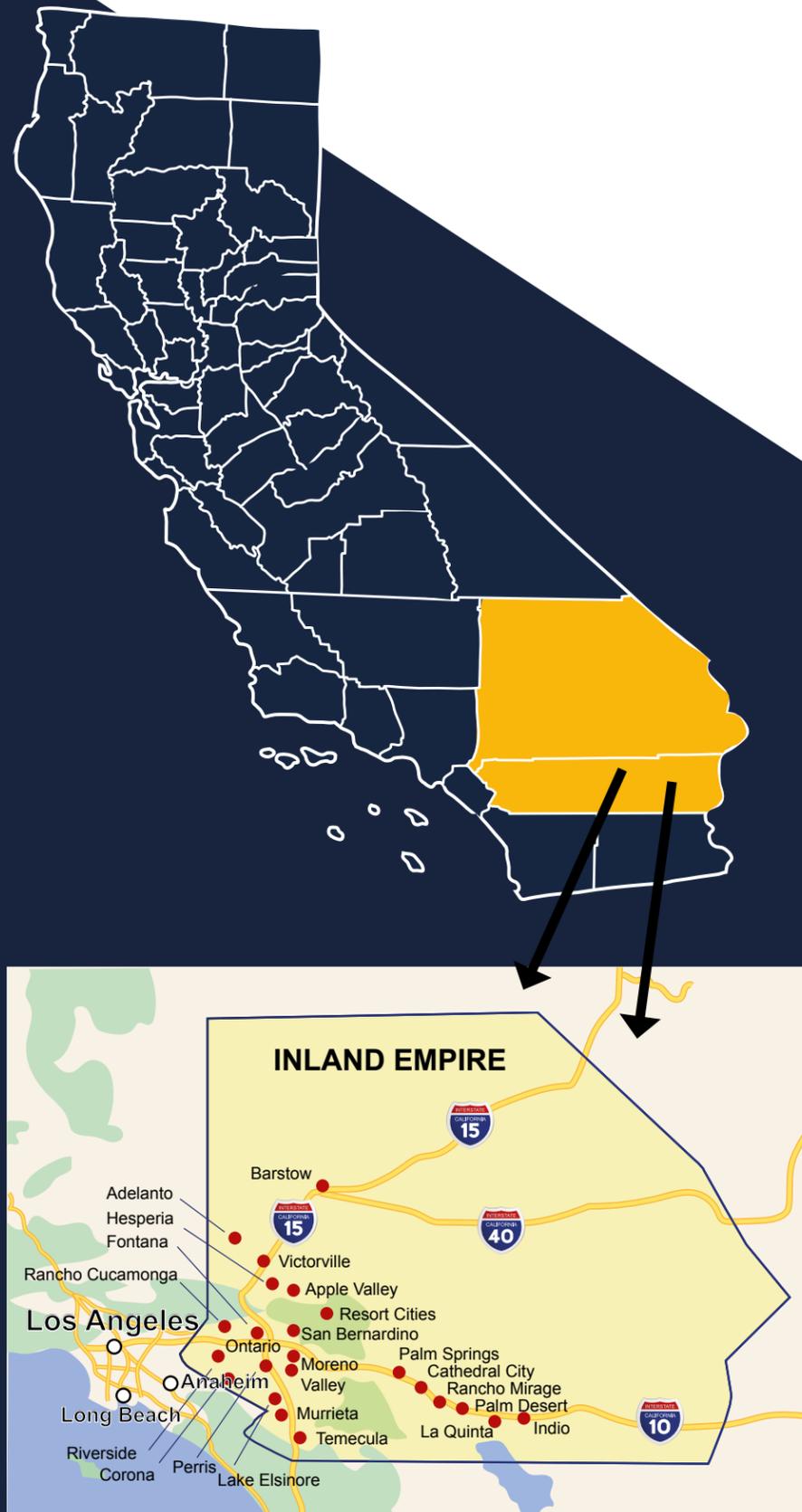
Each Summer Learning Lab provides high school students with approximately 40 hours of hands-on, career-connected learning. Students work in teams using STEP’s applied engineering framework, We Are All Designers, to identify a challenge, develop a solution, and present their projects to industry professionals. At the conclusion of each program, top teams are awarded scholarship prizes in recognition of innovation, collaboration, and technical execution.

With the successful completion of STEPCon25 and the full slate of 2025 STEM Summer Learning Labs, STEP continues to expand experiential learning opportunities that allow students to “test drive” STEM careers while developing critical professional skills in teamwork, problem-solving, communication, and design thinking.

Together, these initiatives reflect STEP’s sustained commitment to preparing Inland Empire students for high-demand, high-impact STEM careers and strengthening the region’s future workforce.



Student Research Showcase, Student STEPCon25, Bourns Technology Center, Riverside, CA



OUR TARGET COMMUNITY & BEYOND

The Inland Empire (IE) is a dynamic and expansive region of Southern California, anchored by the cities of Riverside and San Bernardino and situated immediately east of Los Angeles County. Federally defined as the Riverside–San Bernardino–Ontario Metropolitan Statistical Area, the region spans more than 27,000 square miles and forms a vital component of the Greater Los Angeles economic corridor.

Today, the Inland Empire is home to more than 4.6 million residents, making it the 12th largest metropolitan area in the United States and the third largest in California. Once a national center for citrus production, dairy farming, and viticulture in the late 19th and early 20th centuries, the region has undergone significant economic transformation. Since the 1970s, rapid population growth—driven largely by families seeking more affordable housing—has accelerated residential development and expanded the logistics, warehousing, healthcare, manufacturing, and service sectors. The IE now serves as one of the nation’s most important goods movement hubs, yet workforce preparation has not kept pace with the demands of a technology-driven economy.

Educational attainment, while gradually improving, continues to lag behind neighboring coastal counties. Recent Census data indicate that approximately 30–33% of adults in Riverside and San Bernardino Counties hold an associate degree or higher, compared with roughly 40% or more in Los Angeles and Orange Counties. High school graduation rates reflect both progress and persistent gaps. Riverside County’s graduation rate remains above the state average at approximately 90%, while San Bernardino County’s rate is closer to the mid-80% range, slightly below the statewide average. Early childhood education participation remains an area of concern. Enrollment in preschool programs for 3- and 4-year-olds in the Inland Empire continues to trail state targets, hovering near one-third of eligible children. Because early academic exposure is strongly correlated with long-term STEM readiness, this gap has long-term implications for workforce competitiveness.

Economically, the Inland Empire continues to grow, with logistics, renewable energy, healthcare, advanced manufacturing, and public utilities representing expanding employment sectors. However, median household incomes and average annual wages remain below those of neighboring metropolitan regions, underscoring the importance of career pathways that provide upward mobility. As employers increasingly require postsecondary credentials, technical certifications, and STEM competencies, the need for accessible, high-quality STEM education programs becomes even more urgent.

Despite these challenges, the region is rich in higher education assets. In Riverside, students have access to the University of California, Riverside; California Baptist University; La Sierra University; and Riverside City College. In the San Bernardino area, institutions include California State University, San Bernardino; San Bernardino Valley College; Crafton Hills College; Loma Linda University; and the University of Redlands. STEP is honored to collaborate regularly with many of these colleges and universities. For many students, a STEP event represents their first experience on a college campus. Walking through lecture halls, engaging with faculty, and sharing a meal in a university dining commons transforms higher education from an abstract idea into a tangible goal. These experiences play a critical role in helping students visualize and plan their academic and career trajectories.

The Inland Empire is also strengthened by forward-thinking municipal leadership. STEP’s STEM in Law Enforcement and Public Safety Summer Learning Labs were launched with the support of the Riverside Police and Fire Departments, including the leadership of Gina Perez of the Riverside Fire Department and Jennie Pauli of the Riverside Police Department. Building on that success, Riverside Public Utilities partnered with STEP to establish the STEM in Public Utilities Learning Labs (STEM PULL), with Sharon Gutierrez and Damaris Velez providing key expertise in program development and digital learning innovation.

STEP continues to convene leaders from education, industry, and government to design responsive, career-connected STEM programming aligned with regional workforce needs. We are grateful for the leadership of Yamileth Shimojyo, Administrator for STEM Education in Riverside County and STEP Vice President, and Kim Terry, STEM Coordinator for San Bernardino County and STEP Board Member. Their expertise, alongside the guidance of our Board of Directors and Program Planning Committees, ensures that STEP initiatives remain strategic, impactful, and aligned with both educational standards and labor market demand.

The data are clear: while the Inland Empire demonstrates resilience and growth, sustained investment in STEM education is essential to expand degree attainment, strengthen workforce readiness, and ensure that students are prepared for high-demand, high-wage careers.

The STEP Board and Program Planning Committees are proud to share highlights of their 2025 accomplishments and look forward to building on this momentum with your continued partnership and support in 2026.



Gordon Bourns
Bourns Inc., CEO

Gordon Bourns serves as the Chairman and CEO of Bourns, Inc., a family-owned electronic components manufacturing company headquartered in Riverside, which promotes STEM education. Bourns was co-founded in 1947 by Gordon's parents, Marlan and Rosemary Bourns, in their Pasadena, California garage. Marlan was the inventor and builder while Rosemary was the administrator and bookkeeper.

STEP Board CHAIRMAN

Gordon enjoys taking students on tours of the exact replica of his parents' garage located in the courtyard of the company's Worldwide Headquarters in Riverside. It houses the drafting table Marlan made and used to design the aerospace sensors used by many of the aircraft companies. Beside it is the desk Marlan and Rosemary made from a shipping crate, where Rosemary kept the books, and typed the product information and invoices on a manual Underwood typewriter.

Across from Rosemary's desk is the kitchen's oven they used together with their refrigerator to do the hot and cold temperature testing of their early aircraft instruments. On a workbench to the left of the oven are several of the original linear motion potentiometers they designed and manufactured, which indicated to the pilot the position of the rudder and elevators. Next to them are two accelerometers which indicated the aircraft's acceleration, and a vane potentiometer transducer, which measured the aircraft's position in relation to the air it is flying through.

After seeing and touching the history of the company, Gordon concludes the tour by telling students, "My parents were delighted when, in July of 1969 the Apollo 11 astronauts landed on the moon using a landing control made by Bourns. As they walked on the moon, regulators made in Riverside by Bourns controlled the oxygen they breathed and that pressurized their space suits. This is an example of how, with good ideas, hard work, and an excellent team, you can go from a garage to the moon in 22 years." Garage tour link: <https://seekbeak.com/v/KNj9907YjxB>

In addition to serving as the President of the STEP Board, Gordon serves on the UCR Foundation Board, the Cal Baptist University Board of Visitors, the Riverside STEM Academy Foundation Board, and the Woodcrest Christian School System Board. Gordon and his wife, Jill, have been married for 47 years and are blessed by their four children, a daughter-in-law, three sons-in-law, and nine grandchildren. Gordon says he is really a kid at heart when it comes to STEM.

STEP is very fortunate to have an excellent team of volunteers who are passionate about providing students with excellent educations and opportunities to see first-hand rewarding careers in STEM.

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A VISUAL JOURNEY THROUGH STEP 2025



SUMMER LEARNING LABS 2025



For the past decade, STEP has delivered its STEM Summer Learning Labs (SSLL) to students in grades 9–12, providing immersive, career-connected experiences grounded in applied problem-solving. Modeled after the Kaizen Week continuous improvement process (Kaizen meaning “good change” in Japanese utilized by Bourns, Inc.), the 2025 SSLL consisted of four one-week programs conducted between Monday, June 16, 2025 and Friday, July 25, 2025. More than half of participating students committed to all four weeks of programming, with female and male participation remaining consistently balanced at approximately 50/50 each week.

Each week began with students organized into collaborative teams of four to six participants. On the first day, teams were introduced to structured methods for research, data analysis, and solution development, forming the foundation of a project proposal they would refine throughout the week. On the second and third days, students engaged directly with industry professionals in their workplace settings, observing how STEM knowledge and technical competencies are applied across diverse career pathways. These field-based learning experiences informed the teams’ challenge statements, as students were tasked with designing solutions to improve the safety, efficiency, or effectiveness of professional practices through enhanced STEM application. Throughout the process, teams were encouraged to reconnect with their industry partners to gather additional insight and refine their proposals.

Each week culminated in the “STEM Design Challenge Competition,” where teams formally presented their solutions to a panel of professional judges. Projects were evaluated on innovation, feasibility, collaboration, and technical execution. Scholarship awards recognized outstanding achievement, with first-place team members receiving \$200 each, second-place team members receiving \$150 each, and third-place team members receiving \$100 each. This structured, high-expectation framework reinforces STEP’s commitment to experiential learning, professional skill development, and tangible academic recognition.

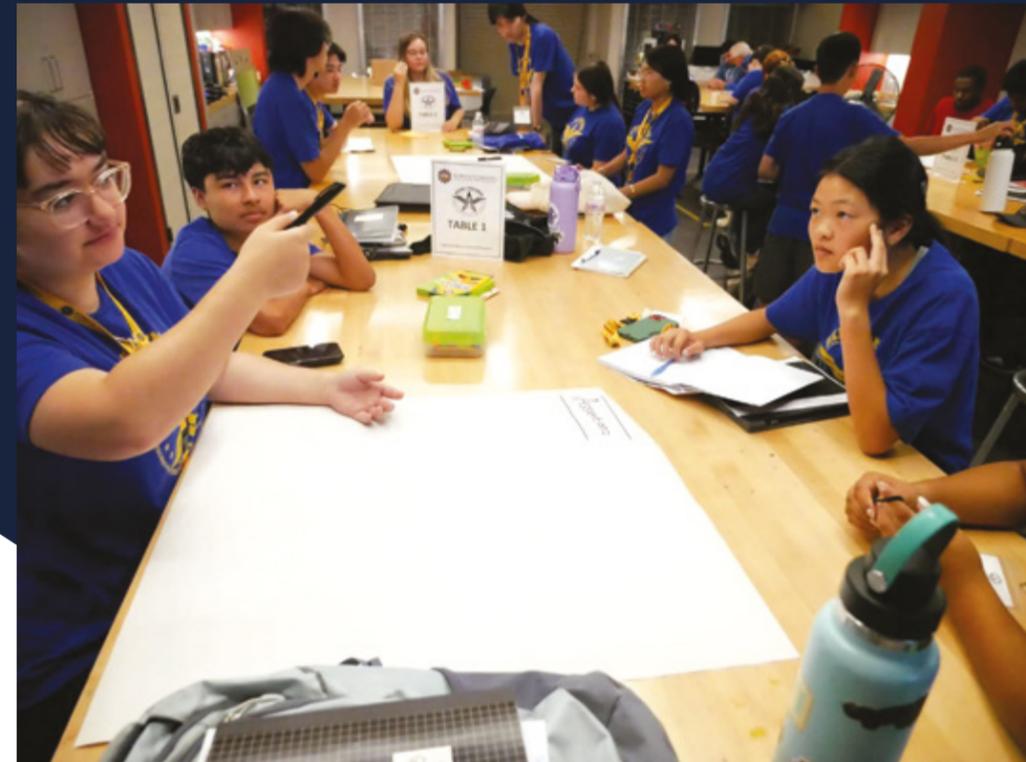
STEM ID

Students using a flight simulator at STEM ID, 2025.



Beginning Monday, June 16, 2025, STEM IN DEFENSE (STEM ID) provided 25 high school students a hands-on learning experience focused on exciting and high-paying career opportunities in cyber security, data science and defense. The students were “embedded” for one week in the innovative new TechBridge facility, the Naval Surface Warfare Center (NAVSEA) Naval base in Norco, the Norco College STEM Center, and the Data Visualization Laboratory at the University of California, Riverside.

Activities included interactive meetings with civilian and military resources about the role STEM plays in the defense of the infrastructure of our communities and our nation from cyber threats and inferior data science capabilities. At NAVSEA, the students learned how military research is key to the development and commercialization of new technologies and systems that benefit educational institutions and industry while providing excellent military and civilian careers. The new UC Riverside Data Visualization Laboratory immersed the students in sessions on the Power of Python Learning, Astrophotography, Visualization Wall about the use of drones in data collection prior to going outside to each practice flying high performance drones.



Students are seen at TechBridge near NAVSEA where they work with their teams on their Design Challenge pitch.



STEM-In-Defense (STEM ID) engage in a hands-on activity with partners at the UCR XCITE labs where they engage in the Virtual Reality Lab.



Above left, STEM In Defense teams compete to see which team can assemble the most prototypes of “Laser Modulators” in 5 minutes using colored plastic building blocks. Above right, STEM ID. On the right, the STEM ID students learn to fly small aircraft in flight simulators at the California Baptist University’s School of Aviation at the Riverside Airport.

STEM PULL



Beginning Monday, July 7, 2025 through July 11, STEM Public Utilities Learning Labs (STEM PULL) was conducted for 50 students by STEP in partnership with Riverside Public Utilities. Representatives from the Riverside Public Utilities Education Team (RPU), Sharon Gutierrez and Damaris Velez, welcomed participants of the 2025 STEM PULL cohort to the College of Engineering at California Baptist University. The opening session included the introduction of College Student Mentors, each assigned to a designated student team for the duration of the week to provide academic guidance, project support, and near-peer mentorship.

Representatives from the Riverside Public Utilities Education Team (RPU), Sharon Gutierrez and Damaris Velez, welcomed participants of the 2025 STEM PULL cohort to the College of Engineering at California Baptist University. The opening session included the introduction of College Student Mentors, each assigned to a designated student team for the duration of the week to provide academic guidance, project support, and near-peer mentorship.

The STEM PULL experience centered on the essential work of public service professionals and the STEM technologies used to ensure the safety, reliability, and sustainability of regional water and power systems. Throughout the week, students engaged in structured site visits and technical tours, including the Riverside Energy Resource Center (Peaker Plant) and water supply and treatment facilities operated by Riverside Public Utilities. These immersive experiences provided students with firsthand insight into infrastructure systems, resource management, and the engineering solutions that support critical public utilities across the Inland Empire.



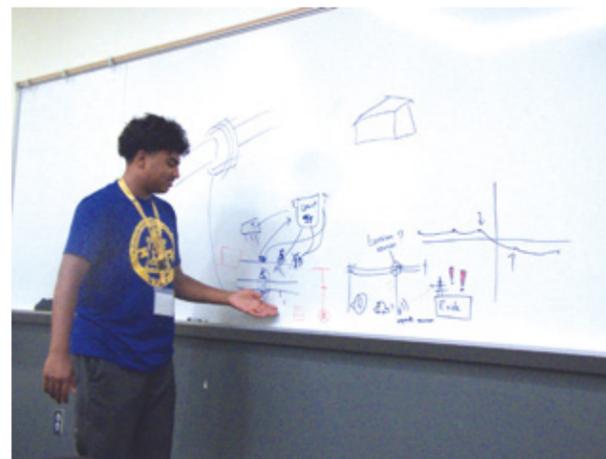
STEM PULL - students engaged in a team Design challenge, visiting with City Council members at Riverside City hall with City Council members. Here the students learned about the importance of citizens participating in the governance of our community by expressing their opinions to their local City Council Members and attending City Council Meetings.



STEM PULL Students, Using KidWind models to convert wind energy to electrical energy at the College of Engineering, CBU.



Participants were privileged to tour the Riverside Public Utilities Training Center to learn more about the tools and training our RPU crews are given when they work on repairing damage to our power lines, for example, after a Santa Ana wind storm.



On the left, STEM PULL participants are working on building water valves as efficiently as possible using multicolored pop beads. On the right, a student is with his team on their Design Challenge Project at the California Baptist University, College of Engineering.

STEM LEAPS



Above left, students learn about drone technologies used by the Riverside City Fire Department. Above right they learn about unmanned vehicles used by the Riverside County Sheriff's Department against potential bomb threats or other high-risk situations.



During the STEM LEAPS, City of Riverside program, students are engaged in a demonstration of how Self-contained-breathing-apparatus (SCBA) are utilized by the Riverside City Fire Department.

During the week of July 14–18, 2025, STEP conducted STEM Law Enforcement and Public Safety (STEM LEAPS), operating two concurrent programs to expand access and increase student participation across the region. Now in its seventh year, STEM LEAPS – Riverside served 55 students from the City of Riverside through a collaborative partnership with the Riverside City College School of Nursing, the Riverside Police Department, and the Riverside Fire Department.

In partnership with the Riverside County Sheriff's Department, CAL FIRE and Riverside Community College District, a pilot program for 45 Riverside County students from as far away as the Coachella Valley at Moreno Valley College's Ben Clark Training Center. In both programs, students worked in teams to learn about how STEM is used by law enforcement officers, firefighters and emergency medical technicians to improve their safety and effectiveness as they perform their lifesaving duties in service to their communities.



On the left, students are shown how to use fire extinguishers on real fires at the EOC (Emergency Operations Center) at the Riverside City Fire Department's Training Center, On the right, students are participating in a Forensic lab where they learned to "lift" fingerprints. Riverside Police Department. Riverside.



On the left, student participants are shown the Riverside County Sheriff's helicopter by the Force Options Unit at the Ben Clark Training Facility in Moreno Valley. On the right, the students tour a correctional guard training facility at the Ben Clark Training Center.



Working in teams, students developed a Design Challenge Solution and presented their projects on Friday, July 18, to a panel of Riverside County Sheriff Department, CAL FIRE, and Moreno Valley College, School of Public Safety judges at the Ben Clark Training Center. In the audience were the other team participants and their family members. The Design Challenge Competitions showcase and put to the test both their technical understanding and professional communication skills.

STEM SOLUTIONS

The final week of the 2025 STEM Summer Learning Labs, held July 21–25, featured STEM Solutions, serving 55 students with a focused exploration of biomedical engineering careers. The program was led by Carlos Gonzalez and the faculty and staff of the Marlan and Rosemary Bourns College of Engineering in collaboration with the UC Riverside School of Medicine at University of California, Riverside.

Students participated in curated tours and demonstrations across campus research facilities, including the Center for Advanced Neuroimaging (UCR CAN), the Genomics Building, the School of Medicine Research Building, the Visualization Lab, Psychology laboratories featuring EEG technology, and sessions focused on health policy and advocacy. These experiences provided direct exposure to interdisciplinary biomedical research and the diverse STEM pathways supporting innovation in healthcare and medicine.



STEM Solutions: Students captivated in a presentation on the Science around Analyzing Public Policy, Bourns College of Engineering, UCR, 2025.



All of the STEM Solutions students pose for a photo near the UCR School of Medicine.



A STEM Solutions team poses for their photo during the Award ceremony at the Bourns Technology Center, Friday, July 25, 2025 along with their College Student Mentors, Madison Eason, on the left, and Jasmine Shields, second from the left. On the right is STEP Vice President, Yami Shimoyjo. Students who graduate from our STEM Summer Learning Labs can be proud of their accomplishments. The STEP program leaders are often asked by their participating students for letters of recommendation for college applications.



STEM Solutions: Students experiencing a brain scan by being fitted with a brain lead cap for a computer challenge at the Bioengineering Lab, UCR, 2025.

STEM I AM



During the week of July 21 to 25, in parallel with STEM Solutions, Rialto Unified School District conducted STEM In Advanced Manufacturing (STEM I AM) at Eisenhower High School in Rialto Unified School District. In STEM I AM, 30 students learned core principles of effective manufacturing through hands-on experience. On Monday, after learning about key business principles, the three teams of students played a business simulation game. The teams made decisions over eight quarters of play including product pricing, how much to invest in engineering and quality improvement, whether to build more production capacity and hire additional salesmen and the amount of dividends to pay to their investors.

On Tuesday and Wednesday, the students went on tours of manufacturing companies including Niagara Water, Phenix Technology: the leading manufacturer of fire helmets, Martinez and Turek: a tool and die manufacturer of heavy equipment, and the Bedding Industry of America, where they saw how manufacturing principles were being applied. On Friday the students competed in the Design Challenge Competition for cash prizes in presenting their project proposals for making a product or improving a process they saw on the plant tours.



STEM I AM tour of Niagara Bottling in Rialto, where robots move pallets with millions of bottles of water each week followed by a tour of Phenix Technologies in Riverside, where fire helmets are made by hand, one at a time.



During STEM I AM, the students learn about manufacturing systems and technologies from the high volume manufacturing of bottles of water at Niagara Water on the left, to the much lower volume manufacturing of mattresses at Bedding Industries of America West from Michel Moore, Director of Sales & New Business Development on the right.



STEM ACADEMIES

This past summer, we broadened the reach of our STEM Summer Academies following the strong outcomes of our 2023–2024 pilot initiatives. These programs include Patterns, Puzzles, and Problems for 5th and 6th grade students and STEM FUNdamentals for 7th and 8th grade students. The academies are intentionally designed to introduce students—beginning as early as 5th grade—to foundational STEM concepts while exposing them to the wide range of career opportunities available within STEM fields. Equally important, we guide students in understanding the academic pathways available to them as they transition through the critical middle school years.

A central theme of these pathway discussions is mathematics—the foundational “language of STEM.” Students are encouraged to recognize that early and strategic math course selection can significantly expand future opportunities. For those interested in STEM careers, enrolling in advanced mathematics in 7th grade and completing Algebra by 8th grade positions them to reach Calculus by 12th grade. Highly motivated students pursuing an accelerated track may aim to complete Calculus by 11th grade and Statistics in 12th grade, strengthening both college readiness and competitiveness.

Throughout the academies, students engage daily with STEM professionals who share career insights and answer thoughtful questions, helping participants begin to map their own individualized STEM pathways. As these students enter high school, they are well positioned to participate in STEP’s STEM Summer Learning Labs beginning in 9th grade, where they continue refining their academic plans and career aspirations toward the STEM fields that most inspire them.

Patterns, Puzzles, and Problems (P-3) Academy is an innovative STEP initiative designed to introduce students to algebraic thinking through meaningful, hands-on application. Rather than learning variables in isolation, students explore how changing quantities relate to one another (X and Y) by analyzing and designing board games. Through a structured progression, participants develop original game prototypes that intentionally embed the fundamental principles of variables, equations, and mathematical relationships—building a strong conceptual foundation for algebra within authentic, real-world contexts.

Hosted at the Bourns Technology Center in Riverside and supported by valued partners including UCR-MESA, SBCSS Alliance for Education, I-REN, and Bourns Inc., P-3 has generated an overwhelmingly positive response from the community, with continuous enrollment requests throughout the year. Serving 25 students from across the Inland Empire, the program culminated in team presentations, Certificates of Completion for all participants, and recognition awards for First, Second, and Third Place teams—demonstrating excellence and the transformative impact of applied STEM learning.



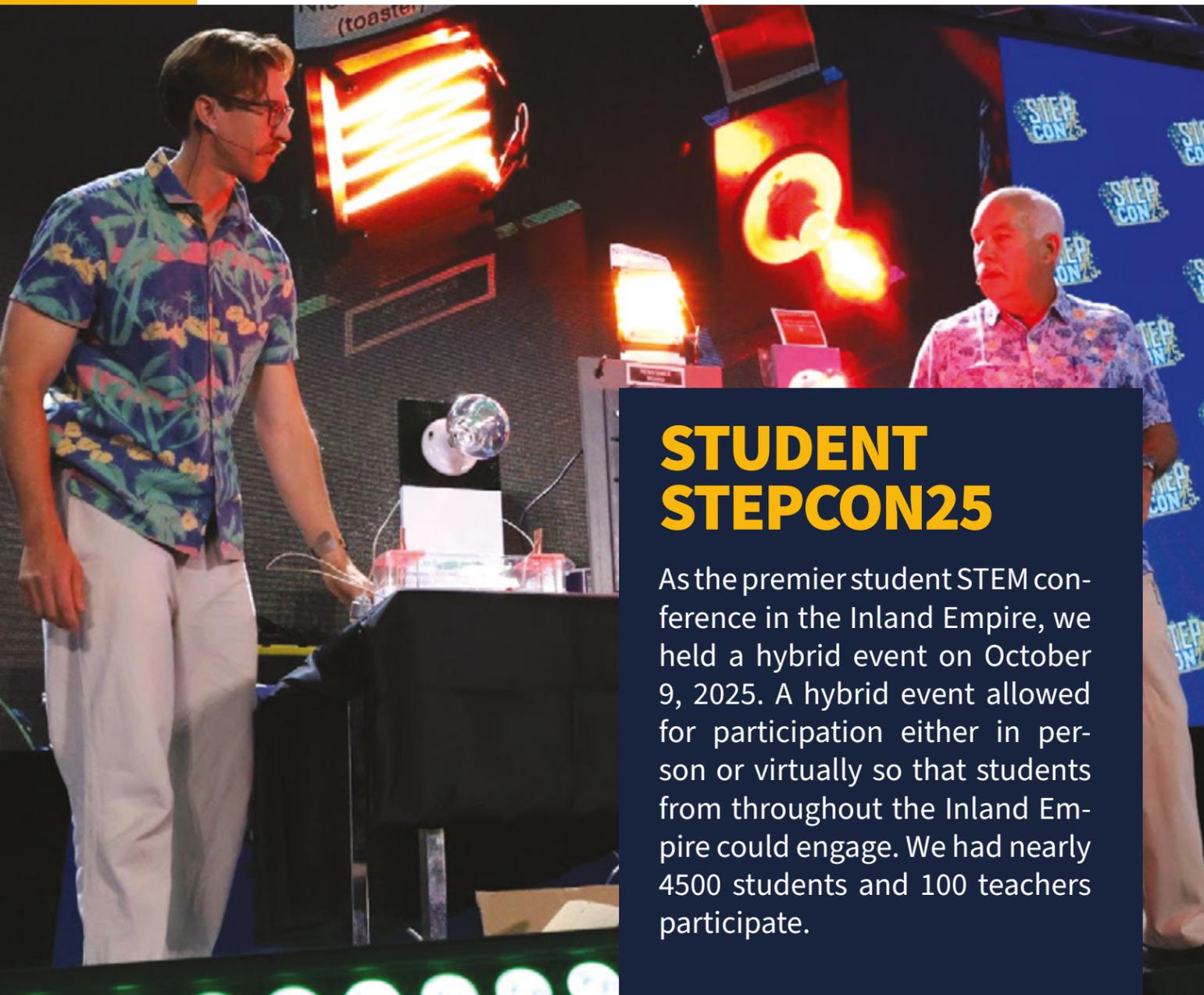
P-3 Session Understanding Catapults and Variables



P-3 Top Projects Award Ceremony



STEM FUNdamentals: Participating Middle School students with their High School Mentor engaged in a hands-on project, Riverside, 2025.



STUDENT STEP CON 25

As the premier student STEM conference in the Inland Empire, we held a hybrid event on October 9, 2025. A hybrid event allowed for participation either in person or virtually so that students from throughout the Inland Empire could engage. We had nearly 4500 students and 100 teachers participate.

STEPCon25 Science-On-Stage | Theme: “Totally Electric”

During its twenty-six years of inspiring tens of thousands of students, the STEPCon Science Show has evolved into **Science-On-Stage (SOS)**—a high-impact live STEM production serving approximately 500 students per show, while simultaneously broadcasting interactively online with 30-day on-demand access for classrooms across the Inland Empire.

This year marked a major and celebratory character transition. **Dr. Boom** officially retired, and **Mr. Clayton Gray** debuted as the new on-stage character as **Mr. Megahertz**, joining **Rick Lee (Professor Matters)** in delivering this year’s dynamic theme, “**Totally Electric.**” The show was further strengthened with the addition of a young female college engineer serving as MC support alongside Carlos Gonzalez, modeling authentic STEM pathways and representation for students.

Science-On-Stage featured dynamic lighting and stage effects, anchored by a massive 12’ x 40’ LED display wall and an eight-camera production system—including a ceiling-mounted camera for close-up experimental visuals.

The LED display wall and full video production were supported by Val Verde Unified School District STEM Director Dog Henderson, with highly technical production leadership provided by Video Production TOSA Johnny Nunez and Sal Quijada. This professional-level production significantly enhanced engagement for both in-person audiences and the thousands of students participating virtually.

Students also received highly popular trading cards featuring this year’s science characters: **Voltage, Charge, Resistance, and Circuit.** For the first time, cartoon trading cards of **Professor Matters** and **Mr. Megahertz** were introduced, creating an exciting collectible experience while reinforcing key concepts aligned to **NGSS Physical Science Standards.**

STEPCon25 demonstrated once again how immersive, theatrical STEM experiences—powered by strong district partnerships and technical excellence—ignite curiosity, deepen scientific understanding aligned to NGSS, and inspire the next generation of innovators.

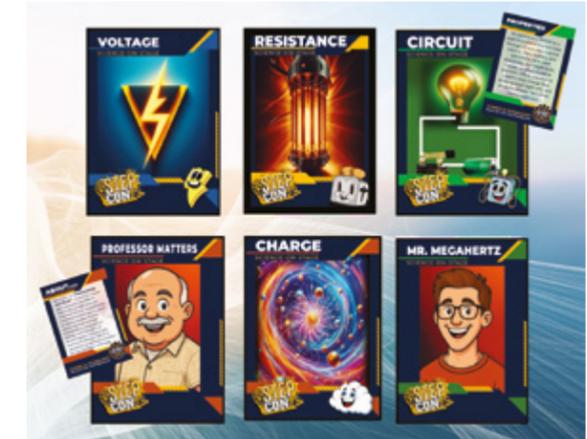


Students continue, through their comments, to express the following beliefs:

- “Attending college is important.”
- “Science, technology, engineering, and mathematics are more interesting than before.”
- “A STEM Career would be rewarding.”



Student STEPCon25: Science-on-Stage, Bourns Technology Center, Riverside, California.



Student STEPCon25: Trading cards for the Science on Stage show: Voltage, Resistance, Circuit, Charge, Professor Matters, and Mr. Megahertz, Riverside, 2025.

Exhibitor Highlights

Nearly 50 exhibitors participated in the Exhibitor Zone held under the solar panels in the Bourns parking lot. They represented various STEM careers including Engineering and Manufacturing, Environment, Education, Medical, and Technology. Students had the opportunity to engage directly with STEM professionals at the in-person event while virtual attendees interacted through engaging videos and interactive presentations. The E-Sports Hall, Eco-Hero show, battling robots, and pinball experience were student favorites for our in-person event.



Student STEPCon25: Student looking at specimens under a microscope at the Microscope Exhibit, Riverside, 2025.



Student STEPCon25: Audience interacting with a science demonstration, Bourns Technology Center, Riverside, 2025.



EDUCATOR STEPCon25

This marked our eighth year hosting a full-day conference for educators in the Inland Empire. Educator STEPCon25 took place on Wednesday, October 22, 2025, at the Bourns Technology Center, bringing together over 160 attendees for a day of professional learning and collaboration.

The conference provided educators, administrators, and education staff with opportunities to explore innovative teaching strategies and gain practical tools to inspire students and prepare them for future STEM careers. Attendees engaged in insightful panel sessions, dynamic workshops, and valuable networking opportunities.

Featuring speakers from a diverse range of STEM disciplines, Educator STEPCon25 reinforced the critical connection between education and industry, equipping educators with knowledge and resources to better support their students in an evolving STEM landscape.

The Artificial Intelligence Industry Panel at Educator STEPCon brought together industry experts to discuss the evolving role of AI in the workforce and the essential skills students need to succeed in STEM careers. Moderated by Dr. Sonal Patel, Program Manager of Digital Learning and Computer Science Education at San Bernardino County Superintendent of Schools, the panel featured Ahmed Alem and Deepak Jose from Niagara Bottling, Inc; Dr. Vincent Nestler from the Center for Cyber and AI at CSUSB; and Raul Razo, a UCR graduate student from HRL Laboratories.

Panelists shared insights into how AI is shaping industries, the technical and problem-solving skills they seek in future employees, and the educational pathways that best prepare students for careers that use AI, like in automation, manufacturing, and engineering. They also provided valuable guidance for educators on how to align classroom instruction with industry needs. Through this panel, attendees gained an appreciation and awareness of the rapidly growing demand for professionals with AI skills in our region.

“...this year was impressive. Every year, Educator STEPCon is getting better and better. I like how Educator STEPCon is on top of the hot topics and know that STEM will lead us to the next generation” ”



2025 STEP Scholarship Recipient, Cassandra Caluag



2025 STEP Scholarship Recipient, Jeannine Jauregui

EDUCATOR STEPCon25



A highlight of Educator STEPCon is the recognition and awarding of scholarships to outstanding high school students from San Bernardino and Riverside Counties. The STEP Student STEM Impact Scholarship honors students who have demonstrated the profound influence of STEM education in their lives. Applicants submit a three-minute video showcasing their STEM journey, including how STEM will shape the future, challenges they have overcome, and the role of an educator in their success.

This year, STEP awarded \$1,000 scholarships to two exceptional students:

Cassandra Caluag

Temescal Canyon High School
(Riverside County)

Jeannine Jauregui

University Preparatory School
(San Bernardino County)

These students' stories stood out among a competitive pool of applicants, resonating with our scholarship committee and inspiring educators across the region. As part of their recognition, they had the opportunity to share their experiences with conference attendees, reinforcing the vital role of STEM education and educators in shaping future innovators.

The STEP Scholarship Review Committee evaluated applications using a structured rubric that assessed the impact of STEM in the student's life, the clarity and quality of their video submission, and the strength of their storytelling. This process ensured that the most compelling and inspiring voices were recognized and celebrated.

Through this scholarship, STEP continues its commitment to encouraging students to pursue STEM careers and empowering educators to make a lasting impact in the lives of future STEM leaders.

LINK TO SCHOLARSHIP WINNERS VIDEO:

<https://www.youtube.com/watch?v=JjYY2j5GLQc>



COUNSELOR STEPCon25

Counselors play a pivotal role in cultivating a strong and sustainable STEM workforce “tree.” Yet many have had limited exposure to the full spectrum of academic pathways required to support students as they navigate the diverse branches of STEM careers. To address this need, STEP convened the third annual STEPCon25 – COUNSELOR on Thursday, October 23, 2025, at the Bourns Technology Center in Riverside.

The conference opened with a timely and thought-provoking presentation on the evolving impact of Artificial Intelligence (AI), delivered by Doug Henderson of Val Verde Unified School District. His remarks highlighted the disproportionate disruption AI is creating across computer science and arts-related professions, underscoring how rapidly shifting entry-level roles are redefining traditional boundaries between programmers and artists. As automation and generative technologies continue to reshape workforce demands, creativity and adaptability have emerged as essential competencies. For counselors, understanding these labor market shifts is critical to engaging students in informed, forward-looking academic and career planning conversations.

A highlight of the day was the keynote address delivered by Eric E. Schmidt, CEO of Exquadrum and Vice President of the Inland Empire Manufacturing Council. Based in California’s High Desert region, Exquadrum is recognized for engineering novel solutions to complex challenges, with demonstrated success in rocket propulsion, advanced product design, and renewable energy systems. In his remarks, Eric shared his personal journey as a young immigrant to the United States and reflected on how the encouragement of a single teacher helped him recognize his aptitude for engineering and ultimately shaped the trajectory of his career. His story reinforced the profound influence counselors and educators have in identifying potential and guiding students toward high-impact STEM pathways.



Eric E. Schmidt, CEO Exquadrum, and
STEPCon25 - Counselor Keynote Speaker



A featured component of STEPCon25 – COUNSELOR was the College Student Panel, moderated by Nicole Johnson-Green, middle school counselor from Riverside Unified School District. Representing regional postsecondary institutions were Taylor Navarro of California Baptist University, Jacob Fletcher of University of California, Riverside, and Ornella Foyet, also of University of California, Riverside. Through candid reflection, panelists shared their academic journeys, transition experiences, and insights into navigating STEM majors at the collegiate level. Their perspectives provided counselors with a contemporary understanding of student challenges, institutional expectations, and the supports that contribute to persistence and success in STEM degree programs.

Breakout sessions throughout the day concentrated on high-demand STEM careers across the Inland Empire and the aligned educational pathways required to access those opportunities. Facilitated by representatives from community colleges, universities, military branches, and regional trade unions, the sessions presented multiple, clearly defined roadmaps leading to STEM professions. Career focus areas included engineering, allied health, cybersecurity, computer science, construction, medical fields, and advanced manufacturing. Each session provided counselors with detailed guidance regarding prerequisite coursework, certification requirements, degree options, and alternative entry points, equipping them with actionable tools to better advise students as they progress along their individualized STEM career pathways.

COUNSELOR STEPCon25



Above left, Donna Woods spoke about the job growth in computer science jobs in the region and helps counselors where to send students who want more information. On the right, the audience listened intently to the keynote. STEPCon - Counselor is a key program in supporting K-12 school counselors as they guide their students effectively along education paths toward their chosen STEM careers.



The conference concluded with an interactive learning experience centered on practical Artificial Intelligence application. Counselors were organized into three cohorts based on their self-identified level of familiarity and comfort with AI technologies. This tiered structure ensured that participants engaged at an appropriate depth while building both confidence and competency.

Each group worked collaboratively to develop counseling-related solutions using AI platforms, exploring real-world use cases such as academic planning support, career pathway research, and student communication tools. Participants in the advanced cohort received targeted instruction in designing and deploying customized AI “Gems” to streamline advising practices and enhance student support systems. This culminating activity reinforced the conference’s central objective: equipping counselors with forward-looking tools and strategies that align with the rapidly evolving landscape of STEM education and workforce.

STUDENT REACH AND ENGAGEMENT

In 2025, STEP programs served a total of **5,103 students** across multiple program models.

- **STEPCon 2025** engaged **4,873 students**, including 1,600 in-person participants and 3,273 virtual attendees
- **The STEM Summer Learning Labs (SLL)** served an additional **230 students** across eight specialized lab sessions

These programs provided students in grades 4–12 with direct exposure to STEM demonstrations, hands-on activities, industry-aligned learning experiences, and real-world career pathways.

Survey data from STEPCon indicates that:

- **69%** of students reported that science, technology, engineering, and mathematics became more interesting after attending.
- **83%** affirmed that going to college is important.
- **68%** indicated that a STEM career would be rewarding.
- **59%** reported they would recommend STEPCon to peers.

Similarly, STEM Summer Learning Lab outcomes demonstrate high levels of student growth in confidence, STEM career awareness, and understanding of post-secondary pathways.

EDUCATOR CAPACITY BUILDING

STEPCon 2025 included a dedicated Educator and Counselor Conference that served **272 education professionals**, including school counselors, administrators, and teacher leaders.

Survey results indicate:

- **100%** would recommend the conference to colleagues.
- **100%** reported increased comfort advising students about STEM careers.
- **100%** indicated they gained additional resources to support students interested in STEM pathways.

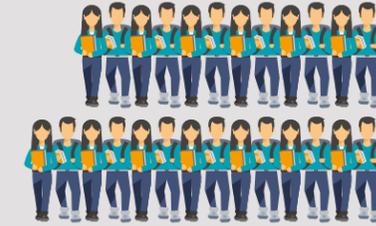
This professional learning component strengthens district-level advising capacity and ensures that students receive accurate, industry-aligned guidance toward college and career readiness.

- Served 5,103 students
- Built capacity among 322 educators and counselors
- Delivered 10 structured STEM program experiences
- Engaged 350+ Partners/Exhibitors/Volunteers
- Increased student interest in STEM fields
- Strengthened college-going culture
- Expanded career pathway awareness
- Enhanced educator confidence in STEM advising



SCIENCE & TECHNOLOGY EDUCATION PARTNERSHIP™

5,103
Students participated
in our STEP programs



322
EDUCATORS
Engaged in
STEP Experiences

10
STEM
Opportunities



350+
Sponsors - Partners
Exhibitors - Volunteers



Inspiring students to pursue careers in STEM

Through strategic partnerships, experiential learning design, and data-informed programming, STEP continues to function as a regional catalyst for STEM equity, workforce alignment, and postsecondary access.



THANK YOU

PLANNING COMMITTEE MEMBERS

A SPECIAL THANK YOU TO ALL OF OUR PLANNING TEAM MEMBERS WHO SUPPORT THE BUILDING OF A STEM CULTURE IN THE INLAND EMPIRE BY BRINGING OUR STEM PROGRAMS TO LIFE FOR OUR COMMUNITIES.

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Kim Terry
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STEM SUMMER LEARNING LABS

STEM IN DEFENSE

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STEM SUMMER LEARNING LABS

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STEMCon25

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Caroline Rasmussen
Autumn Wassink
Dolumnar Bergen
Doug Henderson
Eboni Wells
Gordon Bourns
Heather McDonald
Henri Shimojyo
Jimmy Johnson
Juanita Chan
Julia Smith
Kelley Ambriz
Josh Combs
Kim Terry
Leonesa Sanchez

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Mike Leffin
Sammy Perez
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Steve Hickman
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Caroline Cabal
Debra Johson
Heidi Baynes
Hilda Castanon
Nicole Johnson-Green
Rhonda Clement
Ruth Arriaga
Dawn Mann
Alison Presser



RECOGNIZING 26 YEARS OF COMMITMENT TO STEM EDUCATION!

Pictures taken at the Annual STEP Breakfast where together we reflect on the work, the mission and our impact. Kaizen (continuous improvement) drives us to continually change, modify and attend to best practices. Below are various committee leads, teams and Board members. Bourns Technology Center, November 2025.





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