Strategy spotlight:

StriveTogether®

What's working across the Cradle to Career Network

Outcome: Middle Grade Math

Essential Question: Do students have access to quality school environments, including quality curricula and instruction, experienced teachers, effective leaders, and adequate funding?

Indicator: Math and reading proficiency in grade 8, 8th grade on track, Teacher credentials, Student perceptions of teaching, Teachers' contributions to student learning growth, School-family engagement

Impact

Middle grade math is a critical predictor of high school graduation, postsecondary success and long-term economic mobility. Yet across the country, math achievement has declined, with particularly steep drops for students from low-income households and communities of color.

In Pima County, Arizona, just 22% of 8th-grade students passed the state math assessment in 2021. By 2024, that number had risen to 26%. In 2023, low-income students made up 47% of the 8th-grade class, yet fewer than 0.2% reached proficiency. By 2024, low-income students accounted for 57% of 8th graders and 16% (830 out of 5,535 students) reached proficiency.

Cradle to Career Partnership (C2C), a member of the StriveTogether Cradle to Career Network, is addressing these disparities through a place-based strategy anchored by the Math Collaborative Action Network (CAN), a collaborative infrastructure driving a multi-pronged approach to strengthen teacher support and improve student outcomes. By investing in teachers' capacity, aligning curriculum and centering student voice, the partnership is working to increase math proficiency and confidence for middle school students across the region. Since 2021, the effort has reached 20 schools and sites, supported more than 175 teachers and impacted over 16,800 students.

Strategies

Cradle to Career Partnership is supporting systems change by improving instruction through targeted, educator-focused initiatives that aim to strengthen access to quality curriculum and experienced educators. Central to this approach is IMPACTS-MS (Improving Mathematical Problem Solving, Agency, and Student-Centered Instruction for Middle School Teachers and Students), a professional learning program that provides job-embedded coaching for math educators.

In 2023–2024, the IMPACTS-MS program supported 12 middle grade math teachers across Pima County,

reaching more than 1,100 students. Teachers reported a 21% increase in content knowledge, along with improved instructional practice, confidence and student relationships.

In Marana Unified School District, a parallel professional development initiative aligned math instruction to Arizona's state standards. A 6th-grade cohort of educators worked with a K–8 math specialist to strength vertical alignment and improve the quality of instructional materials, refine assessment strategies and design lessons that build conceptual understanding. This cohort reached 150 students and laid the groundwork for a districtwide community of practice now serving 6th through 8th-grade teachers.

Youth and family engagement is also central to the strategy. In partnership with the Boys & Girls Club and Mansfeld Magnet Middle School, C2C co-developed the Up and Atom STEM program, a 10–20 week initiative designed with input from students and families, with a focus on supporting girls of color. Pre- and post-program surveys showed a 15% increase in students' math interest and confidence. Additional listening sessions informed instructional adjustments and engagement strategies, helping to create more inclusive and responsive classroom environments.

Building on Early Results

Early indicators point to meaningful progress. Teachers in the IMPACTS-MS program reported higher self-efficacy, stronger student relationships and more inclusive instructional practices. In Marana, educators described improved alignment between teaching and assessment, and students demonstrated early gains in problem-solving confidence. These outcomes align with national research. The National Council on Teacher Quality (**NCTQ, 2025**) finds that math-specific professional development improves instructional quality and student achievement, particularly for historically underserved students.

C2C's long-term goal is to increase the 8th grade math proficiency rate in Pima County to 69% by 2030. This mirrors Arizona's statewide benchmark and reflects the partnership's commitment to systems-level alignment. Progress is tracked through multiple indicators, including student assessment results, on-track rates and teacher retention and certification.

Scaling What Works

To accelerate progress, Cradle to Career Partnership is strengthening the infrastructure that connects classroom practice to regional goals. Since 2021, the Math Collaborative Action Network has improved transitions between elementary and middle grades through educator collaboration. In 2024, this work expanded to support alignment from fifth grade through postsecondary pathways through the launch of the Empowering STEM Innovators Collaborative Action Network.

A cornerstone of this work is IMPACTS-MS, led by the University of Arizona's Center for Recruitment and Retention of Mathematics Teachers (CRR). The initiative is grounded in a five-stage mentoring model that promotes teacher leadership and retention. The approach includes workshops, site-based PLCs and classroom coaching, as well as engagement with local and national math professional organizations. In 2023–2024, two coaches supported 12 middle school teachers—six new and six returning—who served 1,140 students.

C2C is also expanding hands-on STEM learning through the Up and Atom initiative. With plans to bring its Underwater Robotics Project to all Boys & Girls Club sites in Tucson, the partnership is increasing access to engaging STEM experiences and career exposure. Supported by partners like Stellantis, which funded expanded math and STEM programming, C2C is building a model for measurable, scalable and sustainable improvement in math outcomes