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## NEWS &gt; EDUCATION

## After years of progress, students' math gender gap is back. Here's what the data shows for San Diego County schools.

Local districts departed from some national trends. But girls' scores still slid more than boys', with a few exceptions.



L. Carter Jach, from Robogenesis, shows Violet McGovern a robotic paper airplane launcher during the second annual Southeast San Diego Science & Art Expo at Elementary Institute of Science on Saturday, Aug. 30, 2025. The expo was an inclusive Science fair that highlighted science, art, and culture in the world around us. (Sandy Huffaker / For The San Diego Union-Tribune)



By **JEMMA STEPHENSON** | [jemma.stephenson@sduniontribune.com](mailto:jemma.stephenson@sduniontribune.com) | The San Diego Union-Tribune and **APRESS**  
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At Del Rio STEM Academy, a magnet school in Oceanside Unified School District, first-grade teacher Katherine Sebastian uses her hands as she talks through math problems. Her hands come together in a clasp over her head as she says “sum,” enunciating each consonant.

Her first-graders, seated in rows on a color-coded carpet, are learning to count.

First they identify the number of dots on a sheet of paper projected on the wall, and explain how they did it. Some get to six by identifying two groups of three. Then they take turns saying the next number in a sequence — all the way to 20 — as they pass along a stuffed cow, some hugging it tightly with enthusiasm.

The school has had the highest increase in science scores in the district, said Mercedes Lovie, the district's associate superintendent of educational support services. Those scores have not been released yet.

Efforts to close the gap between boys and girls in STEM classes are picking up after losing steam nationwide during the chaos of the COVID-19 pandemic. But schools have extensive work ahead to make up for the ground girls lost, in both interest and performance.

In the years leading up to the pandemic, the gender gap nearly closed. But within a few

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years, girls lost all the ground they had gained in math test scores over the previous decade, according to an Associated Press analysis. While boys' scores also suffered during the pandemic, they have recovered faster than girls, widening the gender gap.

As learning went online, special programs to engage girls lapsed — and schools were slow to restart them. Remote learning also often emphasized rote learning, a technique based on repetition that some experts believe may favor boys.

And old practices likely reemerged during the pandemic, said Michelle Stie, a vice president at the National Math and Science Initiative.

"Let's just call it what it is," Stie said. "When society is disrupted, you fall back into bad patterns."

## Progress upended

In most school districts in the 2008-09 school year, boys had higher average math scores on standardized tests than girls, the AP found in analyzing scores across 15 years in more than 5,000 school districts.

That analysis was based on average test scores for third- through eighth-grade students in 33 states, compiled by the Educational Opportunity Project at Stanford University.

A decade later, girls had not only caught up, they were ahead: Slightly more than half of districts had higher math averages for girls.

But a few years into the COVID-19 pandemic, that parity had vanished. In 2023-24, boys on average outscored girls in math in nearly nine out of 10 districts.

A separate study by NWEA, an education research company, found gaps between boys and girls in science and math on national assessments went from being practically non-existent in 2019 to favoring boys around 2022.

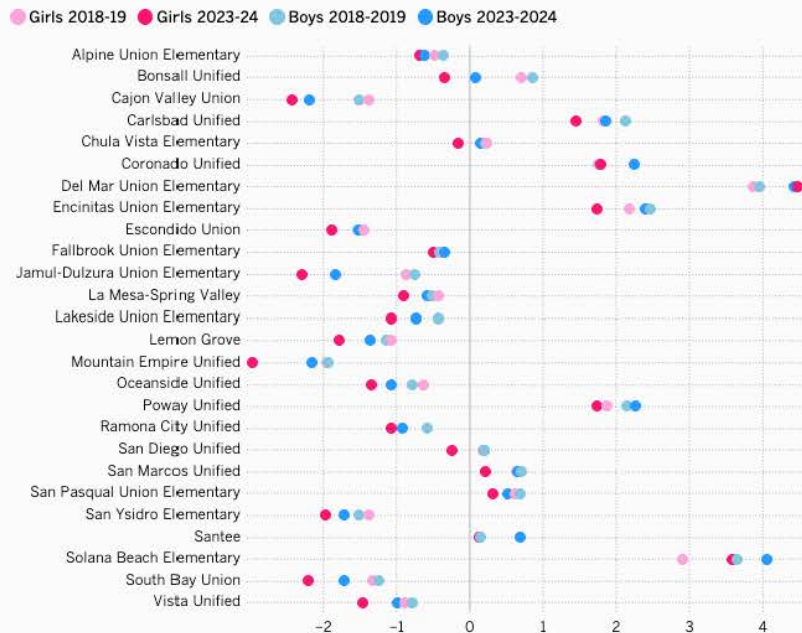
Locally, that story is a little more complicated.

In the larger districts in San Diego County, girls tended to lose more ground in math — but for the most part, they were also lagging boys already in the 2018-19 school year. That was the case in both San Diego Unified and Carlsbad Unified, for instance.

Oceanside Unified was one of the few local districts where girls were outperforming boys before the pandemic and lagging them five years later, the AP analysis found. Boys' scores slid there, too — just not as steeply.

## How San Diego County math scores compare nationally

This chart shows how third- through eighth-graders' average scores on standardized math tests compare and have changed. The closer to zero a district's scores, the closer they are to nationwide grade-level average. A score of -1 means students there scored one grade-level equivalent below the national average; a 2 means they scored two grade levels higher.



Average test scores were reported in approximate grade levels, based on each district's standardized test scores and scaled relative to the 2019 National Assessment of Educational Progress.

Sources: Stanford Education Data Archive and the National Center for Education Statistics; analysis by Sharon Lurye and Todd Feathers, Associated Press



Lovie pointed out the district's drops were small, and said that at the high school level, math and science Advanced Placement courses remain roughly evenly split by gender. She said her district had seen a continuing gender gap in computer science and was working to overcome it.

"We're seeing in math and in science, we have 50/50 — and we do specific outreach to make sure that girls are included and that they have those opportunities," she said.

Oceanside Unified is also working to improve students' self-image and confidence in math so one of the first things it did, leading up to 2018-19, was offer representation so all kids could see themselves in STEM.

They're trying to make the field appeal to everyone. But they're also getting granular to have teachers encourage girls with a natural aptitude or interest — and those who don't — to explore it.

"Having more women in the field, inviting women who are scientists and mathematicians to come to our career days, to mentor our students — these are all important efforts," she said.



The Del Mar Union School District's STEAM+ program teaches its students arts, science, physical education and interdisciplinary learning, including coding, robotics and the design thinking process. (Nancy Ingersoll / Del Mar Union School District)

The most notable local outlier resisting the gender-gap trend is Del Mar Union, which is one of the county's most affluent school districts. There, girls have begun outpacing boys where they hadn't before.

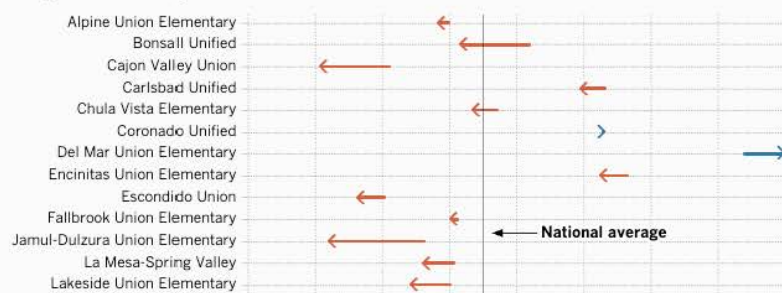
Del Mar Union, which has far fewer socioeconomically disadvantaged students than most other local districts, said its funding helps it keep learning equitable and ensures it can offer plenty of STEAM+-dedicated instruction. Del Mar Union is a community-funded, or basic aid, district — which means it gets more funding from local property tax revenue than it would through the more widely used state-funded system.

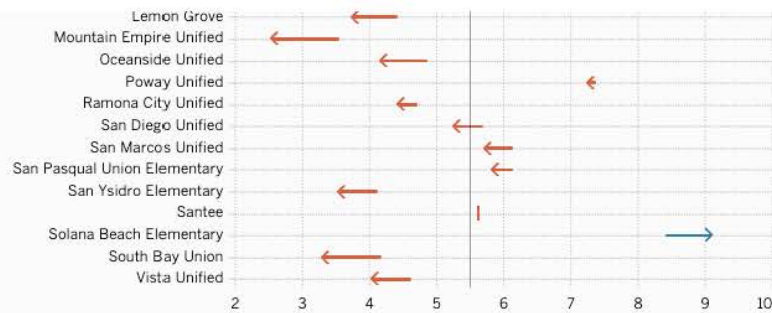
Indeed, San Diego County's wealthier school districts generally saw smaller drops in scores — for both boys and girls — than districts where more students are socioeconomically disadvantaged. And some of the county's more rural districts tended to have especially steep drops in performance, the AP analysis found.

### How San Diego County math scores changed in 5 years

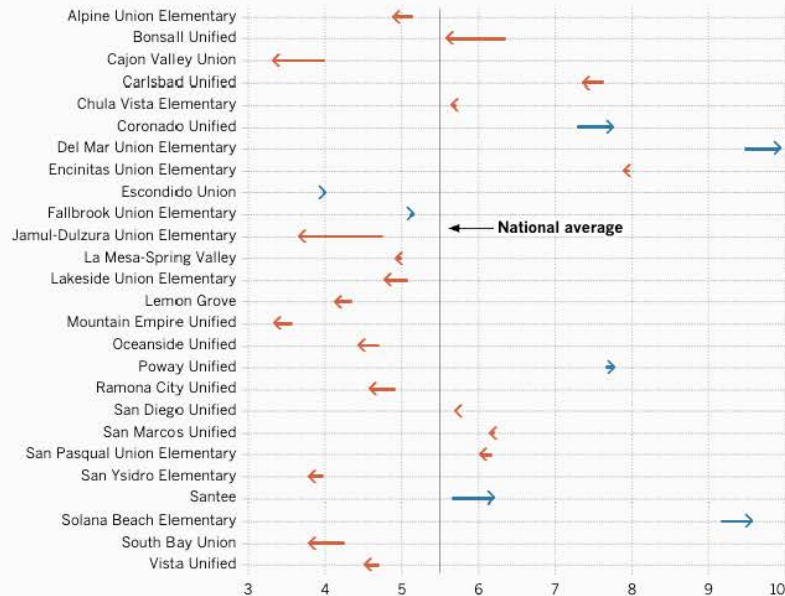
Many of the gains that girls made to close the gender gap in STEM performance have been lost since the COVID-19 pandemic began, a new data analysis shows. Here's how San Diego County third- through eighth-graders' average scores changed from 2018-19 to 2023-24.

How girls' scores changed:





#### How boys' scores changed:



Average test scores are reported in approximate grade levels, based on each district's third to eighth grade standardized test scores and scaled relative to the 2019 National Assessment of Educational Progress.

Sources: Stanford Education Data Archive; National Center for Education Statistics; Sharon Lurye and Todd Feathers, Associated Press

Sam Schulz / The San Diego Union-Tribune

## Bucking the trend

Studies have previously indicated that girls reported higher levels of anxiety and depression during the pandemic, plus more caretaking burdens — but the dip in academic performance the AP found did not extend beyond STEM. Girls outperformed boys in reading in nearly every school district nationwide before the pandemic, and they still do.

“It wasn’t something like COVID happened and girls just fell apart,” said Megan Kuhfeld, one of the authors of the NWEA study.

In the years leading up to the pandemic, teaching practices shifted to deemphasize speed, competition and rote memorization. Through new curriculum standards, schools moved toward research-backed methods that emphasized how to think flexibly to solve problems and how to tackle numeric problems conceptually.

Educators also promoted participation in STEM subjects and programs that boosted girls’ confidence, including extracurriculars that emphasized hands-on learning and connected abstract concepts to real-life applications.

That’s still the emphasis in Del Mar.





The Del Mar Union School District's STEAM+ program teaches its students arts, science, physical education and interdisciplinary learning, including coding, robotics and the design thinking process. (Nancy Ingersoll / Del Mar Union School District)

To Alison Fieberg, the assistant superintendent of instructional services at Del Mar Union, hands-on and exploratory learning is especially important — and especially starting at a young age.

At one school board meeting last year, a group of sixth-graders gave a presentation on coding and robotics that also included the design-thinking process. For the design-thinking aspect, the students interviewed architects on building homes that could withstand different weather conditions.

The students learned about earthquake- and fire-proofing, as well as building for drought conditions. The architects had helped them understand human-proofing in design.

"They taught me that kids can really be effective at problem-solving — that they are big thinkers, and that they have a desire to make an impact on the world around them," she said.

She credits much of Del Mar Union's success to its STEAM+ program, which spans arts, science, physical education and interdisciplinary learning, and includes coding, robotics and the design-thinking process.

That program exposes students to hands-on, creative STEM learning early on, and helps them develop interest and self-confidence at a young age.

Early in the pandemic, the district continued to look at math education lab experiences, and design thinking was a big component when students came back to school in person, she added.

Fieberg said the district works to foster excitement among its youngest students by integrating art and design thinking into technical subjects. That makes STEM less intimidating, and creativity fuels scientific innovation, she said. And parents are enthusiastic supporters.

"When students are able to access that hands-on learning with credentialed teachers, it really helps to build their familiarity, confidence and comfort with STEM subjects from a young age," she said.

After they graduate out of the district, Fieberg added, many girls remain excited about STEM fields. Former students will visit and share what they're doing with the STEM and coding clubs they're starting in their middle schools and high schools, she added — many of them girls.

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*Annie Ma and Sharon Lurye reported for The Associated Press, and Todd Feathers contributed reporting.*

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