

THE JERSEY VINDICATOR

New Jersey's innovation economy depends on today's STEM students

Declining math performance and growing workforce demands make sustained STEM investment essential to New Jersey's economic future.



By Kim Case, J.D. • June 4, 2026

Thomas Edison built the world's first industrial research laboratory in New Jersey. The transistor was invented here. Today, the state is home to more than 3,200 life sciences and

biopharma companies, including 14 of the top 20 pharmaceutical companies in the world, and has the highest concentration of scientists and engineers per square mile anywhere in the country. Across life sciences, defense, clean energy, and advanced manufacturing, New Jersey's economy runs on technical talent.

The industries that power New Jersey's economy all depend on a strong STEM workforce.

But a legacy does not reproduce itself. Those jobs depend on a pipeline of technically prepared workers that starts in our classrooms. Right now, the data suggests we are not moving fast enough.

A recent report from the Education Recovery Scorecard, a collaboration between Harvard University's Center for Education Policy Research and Stanford University's Educational Opportunity Project, tracked reading and math test scores across nearly 6,000 school districts nationwide from 2019 through 2025. The findings for New Jersey are sobering. Students in grades 3 through 8 remain nearly 0.6 grade equivalents below their 2019 math performance levels.

These are not abstract statistics. They are students who will enter New Jersey's colleges and workforce within the decade. They will enter a workforce that increasingly demands technical fluency, where seven in 10 U.S. employers report struggling to find workers

with the skills they need. As AI, automation, and advanced manufacturing reshape the economy, the gap is only expected to widen.

The challenge is not correcting itself, and schools are facing growing obstacles in addressing it. New Jersey school districts are facing health care premium increases of nearly 30% for the 2026-27 school year, increases that are forcing districts to plan program cuts and staff reductions. That is precisely the role statewide public investment is designed to play: filling gaps that individual institutions cannot, and ensuring that workforce development does not stop at the district line.



Thomas Solitro, Bryan Oko, and Muzen Mohamedsaeed present their biomedical pill monitoring device at the Governor's STEM Scholars Commencement Conference. The prototype tracks medication use and alerts users, caregivers, and providers when doses are missed.

What New Jersey needs is statewide STEM infrastructure that is coordinated, consistent, and accessible regardless of ZIP code.

States across the country are treating STEM talent as a competitive advantage. States including Iowa and Massachusetts have sustained state investments in statewide STEM networks for more than a decade; Iowa at more than \$5 million annually, Massachusetts through a dedicated STEM Pipeline Fund and regional network dating to 2003. These states understand that the competition for STEM talent is not local; it is national and increasingly global. New Jersey has the infrastructure. What it has lacked is the sustained public commitment those states have made.



Reindy Sanon of Carteret explores chemistry through an interactive demonstration led by Princeton Women in Chemistry during the Governor's STEM Scholars STEM in Academia Conference at Princeton University.

New Jersey ranks among the nation's innovation leaders, placing 10th among the most innovative states and fourth in the country for STEM graduates. These standings were hard-earned. Sustaining them requires continued investment in the pipeline that made them possible.

New Jersey already has strong infrastructure to build on. The Research & Development Council of New Jersey operates several of the state's most effective STEM initiatives. The New Jersey STEM Pathways Network manages eight regionally embedded STEM learning ecosystems that bring together more than 800 representatives from K-12 education, higher education, business, and government to strengthen pathways from classroom to career. The Governor's STEM Scholars program connects students directly with the researchers, companies, and innovators shaping New Jersey's economy, with the explicit goal of keeping talent in-state. Since 2018, these initiatives have reached more than 400,000 learners across New Jersey, supported by the council's more than \$1 million in direct investment in STEM programming statewide. Since 2023, participation among first-generation college students has nearly tripled,



Middle school students from Passaic explored STEM careers, college pathways, and hands-on learning during the Hispanics Inspiring Students' Performance and Achievement (HISPA) Youth Conference at Montclair State University, connecting with industry professionals and discovering new possibilities for their futures.

participation among low-income students has more than doubled, and participation among groups historically underrepresented in STEM has increased by more than 50%.

The model works. The need is documented. What remains is the will to treat STEM education as the economic strategy it is: the foundation on which New Jersey's innovation economy depends.



Delran Township School District educators explored the science of sound and its effects on relaxation, focus, and well-being during an engaging professional development session that included a live sound bath experience.

Other states have decided that STEM infrastructure is a public responsibility. New Jersey faces the same decision. The students who will build the next chapter of the state's economy are sitting in classrooms right now. Whether they have access to the opportunities, networks, and experiences that prepare them for that future depends on choices being made today.

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