

St. Louis Public School District grows science learning through 2-year pilot



November 2022
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School districts throughout the St. Louis region choose mySci to bring joyful, engaging and high-quality science learning experiences to their K-8 classrooms.

With generous support from the Bayer Fund, the Institute for School Partnership at Washington University in St. Louis (ISP), St. Louis Public Schools (SLPS) and The Little Bit Foundation launched a two-year pilot to explore how to best support STEM learning in SLPS schools. The pilot's primary goals included:

1. Providing students more equitable hands-on STEM experiences
2. Providing teachers and students with a strong foundation in inquiry-based instruction
3. Inspiring students to see themselves as innovators and problem-solvers

PROJECT SCOPE ACROSS TWO YEARS

This unique collaboration leveraged the expertise of district administrators, as well as third, fourth and fifth grade teachers from 18 schools who co-developed activities to meet the complex and ever-evolving needs of their specific learning communities during the COVID-19 pandemic.

Teachers were provided access to the online mySci curriculum and accompanying hands-on science activity kits, makerspace science fair materials kits, and 12 customized professional learning sessions led by a team of SLPS science coordinators, mySci instructional specialists, and The Little Bit Foundation program staff. The two-year pilot reached:

- **194 SLPS educators** in total (**61** participated both years)
- **141 classrooms** received mySci kits & curriculum
- **49 classrooms** received makerspace science fair materials kits
- **2,000 + students** received mySci instructional materials

PROJECT OUTCOMES

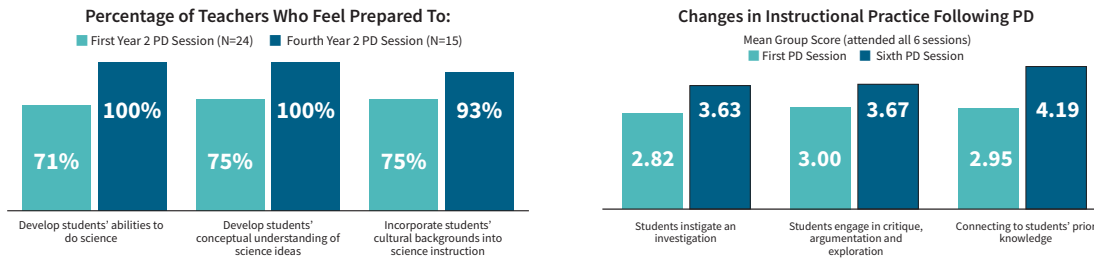
This partnership deepened connections to amplify engaging and equitable STEM teaching and learning. Evaluation methods were developed to capture not only student test scores, but also qualitative information that cannot be measured with traditional tools. Educators provided regular feedback, completed

“There’s something special about hands-on not just for students but also for me – I get it now! If it’s making sense to me I know that children who wouldn’t otherwise – are also going to get it.”

– 4rd Grade Teacher, SLPS

surveys using validated instruments, and were invited to share observations to support continuous quality improvement and identify some of the project’s most significant impacts:

- **Teachers indicated that they felt better prepared to provide high-quality instruction and empowered to step out of their comfort zones.** The **benefits of the pilot increased over time** as teachers had the opportunity to learn and grow.
- **Teachers changed their instructional practice**, providing more opportunities for hands-on, inquiry-based learning for students.



Overall, the impact of the pilot on students was higher in schools with the greatest needs, the fewest resources and the lowest scores. Students had access to hands-on science instruction and learned at a higher level:

- Students of teachers who participated in the pilot had an average growth **two times higher** than their classmates in the same schools and **outpaced the district average.**
- **Students in the pilot achieved higher scores than their peers** on science exams, with the largest increases seen for those students in the most impoverished schools.
- Students in classrooms supported by the pilot made up **90% of third, fourth, and fifth grade entries** in the second annual SLPS Virtual Science Fair.

“I was extremely excited to learn more about how to use Novel Engineering for the science fair. As much as I LOVE science, the science fair has always scared me.” – 4th Grade Teacher SLPS

- **Students demonstrated increased interest and confident engagement with science and engineering practices.**

“The biggest change I’ve seen in my students is that when something goes wrong, they don’t complain about problems to me, they just think like problem-solvers and try something else. It’s changed the way their brains operate in my opinion. They’ve been practicing this for so long that they just jump right to it, solving problems left and right without me even telling them that they have a problem.” – Elementary STEM Teacher SLPS

- **Students continued to engage in science through remote learning, despite the ongoing impacts of the pandemic.**

“They say necessity is the mother of invention and this partnership helped us leverage the crisis to teach more science than ever before and better science than ever before.” – K-12 Social Studies Curriculum Specialist SLPS

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