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MySci program boosts science learning, standardized test scores

Pattonville School District elementary students – at every grade level and of every ability – have made statistically significant gains in science after completing the innovative MySci curriculum developed by the Institute for School Partnership (ISP) at Washington University in St. Louis.

The data confirm what ISP Executive Director Victoria May has observed for years in MySci classrooms across the region — hands-on inquiry paired with teacher development and smart assessment tools boost student success.

“The results show MySci delivers a significant and persistent pattern of growth for all students,” May said. “You don’t see that in a lot of programs. Some programs are good at getting students who are behind up to grade level but leave higher achieving students bored. Others do the opposite. Here, everyone achieves.”

Melissa Yount-Ott, principal at Parkwood Elementary in Pattonville, credits MySci's inquiry-based approach. Parkwood saw a double-digit jump in its Missouri Assessment Program (MAP) science score from 38 percent proficient in 2015 to 65 percent proficient in 2016. The Pattonville district piloted the program in some classrooms in 2014 and implemented it in all elementary classrooms in 2015.

"Teachers saw academic progress but what really motivated them was the excitement they saw in the kids," said Yount-Ott, whose students are ethnically and economically diverse. "We knew if we engaged our kids in more scientific thinking and broadened their content knowledge, as opposed to just teaching them a checklist of standards, then they would have more overall knowledge and perform better."

MySci serves 36,000 K-8 students in public school districts, charter schools and private schools around the region. The program provides three components: teacher development, curriculum and assessment.

Teachers learn key scientific concepts and how to activate small-group learning. Classrooms receive MySci kits — big, red boxes neatly packed with everything a teacher needs for a given lesson from books to batteries to light bulbs. Pre-test and post-tests also help schools better understand students needs and predict performance on standardized testing.

"Actually doing science — not just talking about it or reading about it — is key to student success," May said. "There is a misconception that struggling students will do better on standardized testing if you focus on vocabulary. But we have found doing what scientists do in the field and then thinking and writing about that data, helps lower achieving students grasp these concepts and pushes higher achieving students to take their work to the next level."

Veteran teacher Kelley Chestnut says MySci has encouraged her to rethink her role in the classroom. She no longer stands before class and delivers a lesson; now she carefully organizes students of varying abilities to work together. Every student is engaged; not just the ones who raise their hands.

"Honestly, it was uncomfortable at first," Chestnut said. "There was a lot of, 'What's the right answer? Am I doing this right?' But the real learning comes from exploring the material on their own and making sense of it. They are learning to think like scientists."

The MySci program is one way Washington University faculty, students and staff are working to improve K-12 education in St. Louis. To learn more, visit The Pipeline. (<https://pipeline.wustl.edu/>)

February 2017 | by, Diane Toroian Keaggy

Original story published in the Source (<https://source.wustl.edu/2017/02/mysci-program-boosts-science-learning-standardized-test-scores/>).

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The MySci program engages students in hands-on learning. Here a student in the Jennings School District makes a simple series circuit during a MySci lesson plan about energy. (Photo: James Byard/Washington University)



MySci helps teachers become comfortable teaching scientific concepts. (Photo: Joe Angeles/Washington University)

UPCOMING EVENTS

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MAR

Science in St. Louis: Finding What Fits - The Biochemistry of Drug Design
(<https://schoolpartnership.wustl.edu/events/science-st-louis-finding-fits-biochemistry-drug-design/>)

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MAR **Lecture: Human Impacts on Insect Affairs: Turnabout is Not Fair Play**
(<https://schoolpartnership.wustl.edu/events/lecture-human-impacts-insect-affairs-turnabout-not-fair-play/>)

7:30 pm - 8:30 pm | Missouri Botanical Garden, The Schoenberg Theatre, Ridgway Center

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MAR **Hot Topics: Total Solar Eclipse 2017** (<https://schoolpartnership.wustl.edu/events/hot-topics-total-solar-eclipse-2017-3/>)

8:30 am - 12:00 pm | MySci Resource Center

[all events \(https://schoolpartnership.wustl.edu/events/\)](https://schoolpartnership.wustl.edu/events/)

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