

SCIENCE MATERIALS THAT CHANGED **THE WAY** SCIENCE IS TAUGHT



About Sayreville Public Schools



K-12 community public school district in suburban New Jersey



9 Schools



7,160 students

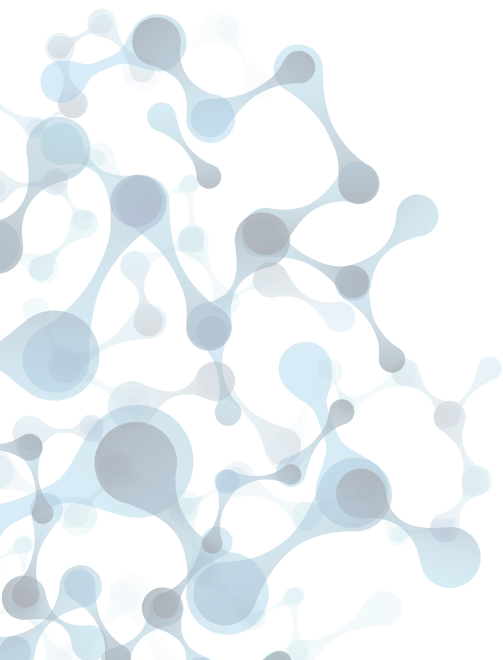


528 full-time teachers



Mission:

Educate today's learners to be tomorrow's leaders by providing all students with a high quality, challenging education that instills character and enables our students to compete successfully in the 21st century.



The Challenge

New Jersey's Sayreville School District serves more than 7,000 PreK-12 students across 9 schools. Sayreville Middle School is the only middle school in the district, marking the first time that students from its five feeder elementary schools come together to learn. As a result, science teachers face a new group of students every year who've experienced different approaches to science instruction and have varying levels of scientific understanding. In this environment, teachers are tasked with building coherence and community, as well as advancing the district's mission to prepare their students to be successful in and out of school.

In 2018, the science team at Sayreville shared that their science curriculum lacked the spirit and rigor their students needed to be excited about and engaged in science, primarily because it relied on textbooks, worksheets, and stationary resources that often kept students heads-down at their desks. For Carolyn O'Connor, supervisor of science instruction, this presented an opportunity to rethink how science was done at the district.

"I knew this wasn't how students learned best, and I was determined to find a solution—one where the materials were aligned to the NGSS and presented our students with exciting opportunities to engage with and be excited about science."

Carolyn O'Connor

Any change is hard, so O'Connor was deliberate in her search for a more engaging set of science materials: "I only wanted to present my science team with resources I knew they would connect with and that their students would love. I also wanted to be sure that the learning curve for adopting new materials wasn't prohibitively steep."

After evaluating and piloting several types of science materials, it was clear that Mosa Mack Science best fit the needs of Sayreville's teachers and students.

The Solution

Mosa Mack Science was started by and for science teachers to provide joyful, exciting curricular materials that put learning in the hands of students. The inquiry-based, NGSS-aligned curricular materials celebrate the mystery and complexity of science by using real-world, relevant phenomena to connect what students learn in the classroom to their everyday lives.

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Science teachers shared that after trying the materials in their classrooms, they found that the lessons promoted “authentic, active engagement because the learning experiences were fun and exciting.” Teachers also shared that the lessons invited students to see themselves as scientists, putting them in the driver’s seat by asking them to solve scientific mysteries that required the development and application of critical thinking skills.

Mosa Mack bakes teacher development into the content itself, empowering teachers to be facilitators of learning rather than lecturers. This approach made it easier for teachers to work with a class of students who’d all learned science differently because it allowed for more flexibility and differentiation.

The Outcome

In the 5 years since Sayreville Middle School adopted Mosa Mack Science, the culture and quality of its science education program has improved greatly:



Classroom culture has evolved to be more active, rigorous, and hands-on.



Teachers and students share a sense of discovery, thrill, and enthusiasm about teaching and learning science.



Students exhibit greater mastery of NGSS standards and a deeper understanding of both scientific concepts and the language of science.

For O’Connor, these changes have transformed science classrooms for the better. “Teachers feel empowered using Mosa Mack materials,” she says. “Now our science classrooms are full of discovery, investigation, and meaning-making, while meaningfully addressing the standards.”

Looking Forward

Mosa Mack Science materials have changed the way science is being taught in Sayreville classrooms.

With more students embracing their inner scientist and more teachers equipped to guide thoughtful and exciting learning experiences, the middle school serves as a great example of how the district is living out their mission to graduate students who are prepared to take on the challenges of the 21st century.