

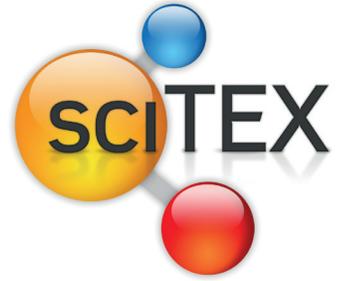


Fifth grade student declares new active learning STEM program “pretty helpful and awesome”

It's always a good thing when students are excited about learning, and in a recent trip to Escandon Elementary, a school that has been working diligently with the LJ Create program to increase their standardized test scores in science, we could hardly stop one of the students from excitedly telling us about everything she had learned using **Living with STEM**. “Science is the subject with everything,” Abby proclaims. “You get to do math, and reading, and you have to write down everything. It's pretty helpful and awesome.”

Abby's face lights up with a smile as she describes the stream table kit, one of her favorite activities: “I love doing the experiments because you learn better when it's hands-on.... We got to use little models, and the rain would fall, and the water would start streaming, and we could see how the water makes the carving and makes the Grand Canyon.

I never knew how the Grand Canyon appeared. I never knew that a river could carve a mountain or a canyon. I didn't know that, and I was like, ‘Oh, that explains a lot!’”



“I love the program. All the kids love the hands-on. It's exciting to see them come in and progress from not really knowing anything to being able to work independently.”

Ms. Josie Garcia,
Wilson Elementary



“I love doing the experiments because you learn better when it’s hands-on.”

Abby,
5th Grade Student

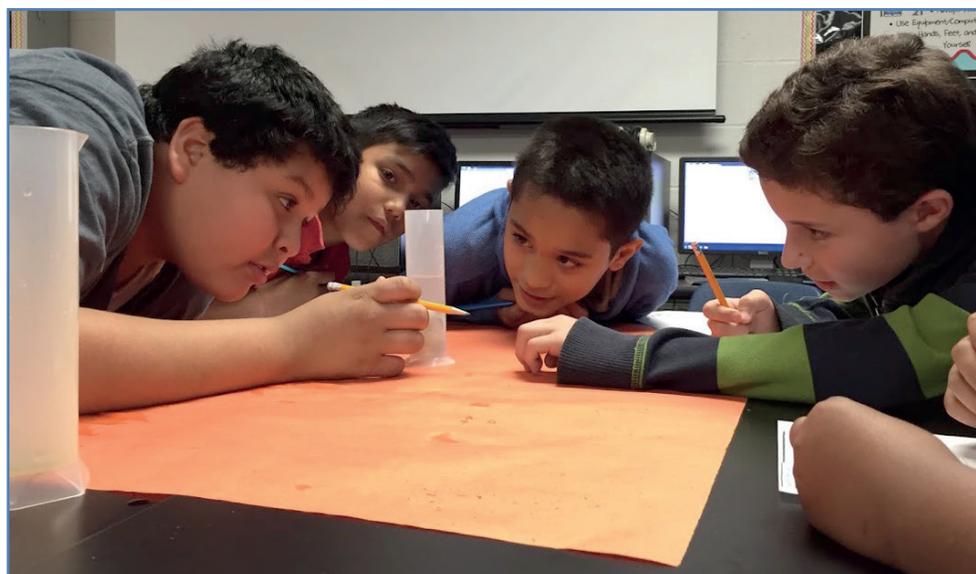
“We get to do experiments and then we get to test on them. I like doing the tests because I can learn and get good grades.”

Linda,
5th Grade Student

Students learn best when learning is active

According to the Teaching Center at Columbia University, Abby is correct about learning better in a hands-on environment. The Center finds that students learn best with they are involved in an active learning process that includes inquiry, discovery, investigation, and interpretation.⁽¹⁾ The **Living with STEM** program follows this methodology, using a combination of digital presentations, virtual simulations and investigations, hands-on practical experiments, and computer-based assessments to engage the students while meeting the standards that must be taught in today’s 21st Century classrooms.

“The investigations encourage them to interact with one another,” Mr. Luis Lerma of Bonham Elementary tells us. “If this program were taken away, the students would suffer because they otherwise wouldn’t have hands-on. There would be a burden on the teachers.” Ms. Nelda Bulthuis, a 3rd Grade Teacher agrees. She enjoys seeing the students work with the program, and interact with each other. “You can hear the excitement,” she tells us. “The pictures in the presentations are beautiful, and you can hear them talking about it.”



Every teacher we talk to says the same thing – they love the hands-on learning, and they like that the students are responsible for their own learning outcomes. At Alvarez Elementary, the Science Coordinator and Lab Instructor fully recognize the benefits of independent learning where the students take ownership of their learning. “The students commonly say ‘the teacher didn’t teach me that,’” as an excuse for not knowing something, says Ms. Grohler. “But in the **Living with STEM** lab they can’t, it’s up to them.”

The Teaching Center at Columbia also points out that “real learning involves more than memorization. Students need to reflect on their learning.” This is why the instant feedback students receive from their computer-graded assessments following both the theory-based presentations and hands-on activities in **Living with STEM** is so important. And interestingly, the students actually seem to be on board with that. Linda, another 5th grade student, described her experience by saying, “We get to do experiments and then we get to test on them. I like doing the tests because I can learn and get good grades.” And Abby, our friend from earlier agrees, saying “I like using the computer because it tests you and makes you know your knowledge.”

Standards-based theory, application, and assessment

LJ Create's Living with STEM program is being used in elementary schools across the U.S. to teach standards-based science, technology, math, engineering, and English language skills. The accompanying Learning Management System is ready to go with preset courses in a variety of instructional areas, such as Scientific Investigation and Reasoning; Force, Matter, and Energy; and Organisms and Environments.

Whether you're looking for the science standards, cross-cutting concepts, or English and math standards, all you have to do is click on the desired standard to find lessons that work towards meeting that standard. The filter works in reverse too, so that clicking on a lesson automatically provides a filtered view for the teacher to easily see what standards are addressed in that content. A simple search tool also makes it easy to find lessons based on topics, hands-on kits, grade level, and more.

Rogelio Pena who runs the SciTEX lab at Thigpen Zavala Elementary sums it up by saying "The awesome part is that I can just select the parts of the program that I need for what each class will be working on. It literally takes me about 30 seconds." And that's good for students who may need some extra support, or extension, such as Justin. Justin, a second grade student, told us, "I need to study life science because my uncle does heart transplants at the hospital, so I want to grow up to be a brain surgeon. He talks to me about what he does, but sometimes it's a little bit complicated."



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Rogelio Pena,
SciTEX lab Coordinator