



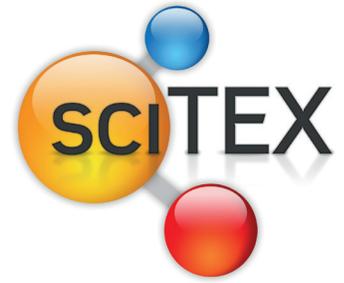
## Bilingual Science Instruction Prepares Students for STAAR Testing

In McAllen, Texas, a district whose student population is 95% Hispanic<sup>(1)</sup>, a true dual language curriculum is an absolute necessity. McAllen Independent School District has made **Living with STEM** the standard for delivering science education in their SciTEX science labs, equipping 19 elementary schools with the LJ Create hands-on kits for active learning and computer-based curriculum. This decision was based on the unique benefits of the dual English/Spanish language capabilities within the state-adopted K-5 **Living with STEM** curriculum, which also offers 100% coverage of the TEKS for science.

### Bilingual science instruction makes it possible

Wendy Grohler, Elementary Science Coordinator for McAllen ISD, is very clear about what it would be like without the Spanish support for the English language learners in the **Living with STEM** program, saying simply, "It would be impossible."

LJ Create went along with Wendy to some of her schools to see how the bilingual aspects of the program were used, and found a variety of methods. These ranged from the K and 1st grade students starting their school years using the Spanish program and transitioning to English for 4th and 5th grades, while others used a completely individualized approach, based on ability, or based on which language the student would use to take the Grade 5 science STAAR test.



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Juan Hinojosa,  
Paraprofessional  
Educator - Alvarez  
Elementary



“Sometimes you see something in pictures, and don’t believe it, but when you do experiments, you get to experience it, and find out what’s really true. It’s awesome because I can call myself a scientist.”

5th Grade Student,  
Escandon Elementary

“If this program were taken away, the students would suffer.”

Luis Lerma,  
Paraprofessional Educator  
Bonham Elementary

“The students love the Living with STEM program. They love the hands on. They make the connection.”

Josie Garcia,  
Wilson Elementary

“A lot of the kids here, this is their first year learning English, even in fifth grade,” says Juan Hinojosa, SciTEX Para at Alvarez Elementary. “When they are able to read and listen to Lenia, the little green alien speaking Spanish, they feel engaged. They think ‘this is my language; now I understand.’”

As the students become more proficient at English, many teachers and even the students themselves tell us that they prefer to do their science work in English, as the vocabulary terms are ones that they haven’t come across at home, and are easier to learn in English. This is particularly important as the students transition from taking their STAAR tests in Spanish, to testing in English.

“We encourage them not to be afraid of trying the English, and they learn it little by little,” says Juan. “It really helps that they can switch back and forth. They try it, and they understand it, and then they are able to test in English. They actually perform as well as or better than the native English speakers. I have one student that has only been here a year and a half, and she now does all of her science work completely in English.”

One particularly insightful student named Abigail shared her own thoughts with us, saying “I’m surprised myself because it increases Spanish and English.”



## Hands-on science engages students

In addition to the presentations and assessments being bilingual, **Living with STEM** also offers all of their K-5 virtual investigations and hands-on experiments in both English and Spanish.

A 5th grader at Escandon Elementary was all smiles when she told us, “Sometimes you see something in pictures, and don’t believe it, but when you do experiments, you get to experience it, and find out what’s really true. It’s awesome because I can call myself a scientist.”

Every school we visited agreed: the hands-on component was absolutely vital to engaging the students and encouraging them to be responsible for their own learning outcomes. Luis Lerma, SciTEX Para at Bonham Elementary particularly agreed, saying, “If this program were taking away, the students would suffer because they otherwise wouldn’t have hands-on. There would be a burden on the teachers without this program; they don’t have time to take the students outside and find a caterpillar.”

Says Josie Garcia, SciTEX Para at Wilson Elementary, “The students love the **Living with STEM** program. They love the hands-on. They make the connection. We’re using the **Living with STEM** program to get the students where they need to be.”

<sup>1</sup>SchoolDigger.com. School Year: 2014-2015, Filter: District: McAllen Independent School District (McAllen, TX) <http://www.schooldigger.com/go/TX/schoolrank.aspx>