



Magnolia ISD Raises Passing Rate on STAAR Grade 5 Science Assessment by 4 Percentage Points

SUMMARY

From 2016 to 2017, the average statewide passing rate on the STAAR® Grade 5 Science Assessment declined by 2 percentage points, dropping from 75 to 73 percent. Magnolia Independent School District (ISD) bucked this trend, raising its passing rate by 4 percentage points, with gains for students who are economically disadvantaged and English language learners (ELLs) as well. According to Magnolia's Director of Science Sheri Gallemore, students' growth was due to the diligent work of their teachers and the consistent use of the STEMscopes™ comprehensive science curriculum.

CHALLENGE

"Computers and technology are a part of kids' everyday lives," said Gallemore. "We wanted to move forward with online learning in our elementary classrooms to engage students and better prepare them for their futures."

SOLUTION

- Implementation of the STEMscopes PK-12 Digital STEM Curriculum

Magnolia ISD began implementing the STEMscopes Texas digital science curriculum in 2014-15. The following year, it added the STEMscopes hands-on exploration kits to expand inquiry-based learning opportunities and continue to build student engagement and excitement for learning. All eight elementary schools now use STEMscopes as their core science curriculum in kindergarten through fifth grade, as well as a Spanish version available for grades K-5.

Supporting state standards

STEMscopes Texas is 100 percent aligned to the Texas Essential Knowledge and Skills (TEKS), and it can be used as a core science curriculum or supplementary resource in traditional, blended, and 1:1 classroom environments.

“STEMscopes covers all of our state standards, so teachers don’t have to worry if they’re teaching the right content. They can pick and choose from a variety of learning activities for whatever their students need, which saves them time,” said Gallemore.

Promoting inquiry-based learning for diverse learners

“Students are naturally curious, especially at the elementary level,” said Gallemore. “Students love exploring with STEMscopes. They especially like the interactive activities and simulations, which is great because they keep them interested and wanting to learn more.”

Each STEMscopes unit is developed around the 5E model of instruction, with additional modules for Intervention and Acceleration to meet the needs of diverse learners. As students dive into the investigations in each scope, they develop their own contexts and meanings for the scientific concepts they are learning, retain more knowledge, and develop deeper understandings of the world around them.

“Science isn’t just something children see in a textbook. It’s real life. It’s about asking questions, investigating, and finding answers — not being given the answers,” said Gallemore. “With STEMscopes, students can think critically, problem solve, and collaborate with other students. It’s helping them develop the skills they’ll need to be successful in the workforce and in careers that aren’t even available yet.”

STEMscopes also helps teachers provide high-quality, engaging science content to students who are native Spanish speakers. “Having the Spanish version of STEMscopes available for our students has taken a lot of pressure off of our teachers. They know that students who are English language learners are learning the same content and working at the same level as their English-speaking students,” she said.

Supporting teachers

STEMscopes also includes embedded support for teachers, such as professional development videos and how-to guides, to help them continuously improve their teaching. In addition, up-to-the-minute analytics provide feedback on each student, so teachers can accelerate learning with differentiated activities.

“Our teachers love STEMscopes,” said Gallemore. “While some still like to bring in other resources too, like from their favorite websites, they know they don’t have to in order to meet our state standards. In fact, one teacher told me she made the decision to only use STEMscopes in her science class last year, and 100 percent of her students passed the STAAR science assessment. That’s because STEMscopes provides everything teachers need to help their students to succeed when they use it with fidelity.”

According to Gallemore, STEMscopes makes it easy for her to help teachers as well. “At the district level, I can see which teachers are using STEMscopes and which scopes they use the most. I can do district-wide data reporting or drill down to the school, class, or student level. It’s a very user friendly program,” she said.

RESULTS

Studies show that students who use STEMscopes have higher passing rates on science assessments such as the STAAR. In 2017, Magnolia ISD’s passing rate on the STAAR Grade 5 Science Assessment was 10 percentage points higher than the state average. Eighty-three percent of Magnolia’s fifth graders passed the assessment, up from 79 percent in 2016. In addition, the passing rates increased for economically disadvantaged, limited English proficient (LEP), and English as a second language (ESL) students. In contrast, the average passing rate in Texas was 73 percent in 2017, down from 75 percent in 2016.

Percentage of students passing the STAAR Grade 5 Science Assessment

All Students			
5th Grade	2016	2017	Change
Magnolia ISD	79%	83%	+4%
Texas	75%	73%	-2%
Economically Disadvantaged Students			
Magnolia ISD	69%	74%	+5%
Texas	67%	65%	-2%
LEP Students			
Magnolia ISD	54%	60%	+6%
Texas	61%	57%	-4%
ESL Students			
Magnolia ISD	54%	58%	+4%
Texas	58%	52%	-6%

“We have amazing teachers in our district. They work very hard to give their students what they need to improve their skills. During the 2016-17 school year, we were able to increase the number of Chromebooks in our fifth grade classrooms, so students had more opportunities for one-on-one instruction with STEMscopes. We also purchased the STEMscopes hands-on exploration kits, so teachers had all of the materials for their students right there at their fingertips. With our teachers’ instruction and STEMscopes, we saw wonderful gains,” said Gallemore.

Looking ahead

In 2017-18, Magnolia ISD plans to add STEMscopes Early Explorer to its prekindergarten classrooms.

“We’re adding Early Explorer so we can provide our youngest students with more exposure to science,” said Gallemore. “Because students are naturally curious, we want to help them develop an understanding of the world around them before they make up their own misconceptions, which are more difficult to break later on. Our goal is to help as many students as possible understand the fundamentals of science so we can keep moving them forward in their learning.”

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