



## Ben Sheppard Elementary's Proficiency Rate Jumps 11 Percentage Points in One Year on the Florida Grade 5 Statewide Science Assessment

### SUMMARY

At [Ben Sheppard Elementary STEM Magnet School](#), the proficiency rate on the Florida Grade 5 Statewide Science Assessment climbed from 38 percent in 2016 to 49 percent in 2017. How did the Title I school raise its proficiency rate 11 percentage points while the average statewide proficiency rate remained flat at 51 percent? In 2016, the Title I school removed science textbooks from the classroom and implemented the [STEMscopes™](#) digital STEM curriculum and hands-on exploration kits in kindergarten through fifth grade.

### CHALLENGE

At Ben Sheppard Elementary, 93 percent of students are economically disadvantaged and more than 50 percent of students are English language learners. The Title I school is the only elementary school in Miami-Dade County Public Schools with a math, science, and technology magnet program, which is offered to K-5 students who apply and meet the program criteria. While all students school-wide participate in STEM courses, students enrolled in the magnet [program](#) complete more extensive study in these subjects.

“In 2015, our school’s biggest challenge in STEM was that our science textbook series was out of date,” said Pura Ruiz, magnet lead teacher for Ben Sheppard Elementary. “It should have been brought up for adoption 10 years ago. It still included Pluto as a planet.”

“We first saw the STEMscopes curriculum at a district STEM School Designation meeting,” said Lourdes Hernandez-Roan, STEM Designation liaison for Ben Sheppard Elementary. “We liked that the curriculum is digital, so it’s completely up to date, and that it has so many hands-on activities.”

### SOLUTION

- Implementation of the STEMscopes PK-12 Digital STEM Curriculum

Ben Sheppard Elementary began using the [STEMscopes Florida](#) digital science curriculum in 2016. STEMscopes provides teacher and student digital resources, supplemental print materials, and hands-on exploration kits that

build student engagement and excitement for learning science. It also includes embedded support for teachers, such as professional development videos and how-to guides, to help them continuously improve their teaching.

“The immediate buy-in from teachers was a nice surprise. Once they saw how easy it was to incorporate STEMscopes in the classroom and how well it worked, they were all on board,” said Dr. Eduardo Tagle, principal of Ben Sheppard Elementary. “They like that STEMscopes gives them new and engaging ways to introduce concepts and that it provides students with a variety of hands-on learning opportunities.”

### **Supporting state standards**

STEMscopes Florida is 100 percent aligned to the Florida Next Generation Sunshine State Standards (NGSSS) for Science. It can be used as a core science curriculum or supplementary resource in traditional, blended, and 1:1 classroom environments.

“We use STEMscopes as our core science curriculum,” said Hernandez-Roan.

“With STEMscopes, we can provide students with the academic rigor required to meet our state standards, while allowing them to explore topics in depth to build their understanding,” said Tagle.

### **Promoting inquiry-based learning for diverse learners**

STEMscopes promotes student inquiry and a real-world understanding of science, engineering, technology, and mathematics through hands-on and digital experiences. Each STEMscopes unit is developed around the 5E (Engage, Explore, Explain, Elaborate, Evaluate) model of instruction, with additional phases 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.

“Students love STEMscopes,” said Hernandez-Roan. “We’ve found that by giving students the opportunity to do hands-on activities first, we’re able to capture their interest much more quickly and effectively than by going to vocabulary first. They also really love the videos and the songs in STEMscopes, especially the raps.”

## **RESULTS**

From 2016 to 2017, the proficiency rate for Ben Sheppard Elementary on the Grade 5 Statewide Science Assessment rose from 38 percent to 49 percent — a gain of 11 percentage points. In contrast, the average proficiency rate for the state of Florida remained flat at 51 percent.

### **Florida Statewide Science Assessment Grade 5 Proficiency Rates**

<b>5th Grade</b>	<b>2016</b>	<b>2017</b>	<b>Change</b>
Ben Sheppard Elementary	38%	49%	+11%
State of Florida	51%	51%	0%

“The only thing that was different from last year to this year was the addition of STEMscopes,” said Ruiz.

“We’re very happy with our results,” said Tagle. “We look forward to seeing our results for this school year.”

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