



CASE STUDY

Columbia County School District
Evans, Georgia

Columbia County Raises Fifth Grade Proficiency Rates

SUMMARY

In the first year that Columbia County School District (CCSD) used the STEMscopes Georgia curriculum, the percentage of fifth graders scoring at the proficient level and above on the Georgia Milestones Science End-of-Grade (EOG) assessment increased from 52 percent in 2017 to 56 percent in 2018. By moving from textbooks to the on-line, comprehensive science curriculum, CCSD achieved its vision for hands-on STEM learning — and posted its best results in science since the Georgia Milestones Assessment System began in 2014-15.

Columbia County Raises Fifth Grade Proficiency Rates on the Georgia Milestones Assessment in Science 4 Percentage Points in One Year

CHALLENGES

When the State Board of Education approved the new K-12 Georgia Standards of Excellence (GSE) for Science in June 2016, CCSD began looking for a new solution to replace its science textbooks in grades 1-5.

“We looked at science curricula from several different companies. No one had anything to match the new state standards — until we saw STEMscopes,” said Scott Weinand, director of student learning (PK-5) for CCSD. “STEMscopes Georgia not only aligns with the GSE for Science, but it aligns with our vision for STEM. Before, when we were using textbooks, one big issue we had was that our teachers were not doing a lot of hands-on activities with their students. With STEMscopes, our teachers now have a bridge to the new standards and to hands-on STEM.”

SOLUTION

Implementation of the STEMscopes Georgia digital STEM curriculum

CCSD began using STEMscopes Georgia as its core science curriculum in all 18 elementary schools in fall 2017. Built from the GSE for Science, STEMscopes Georgia provides digital resources, supplemental print materials, and hands-on exploration kits that build student engagement and excitement for learning science. It also includes embedded support such as professional development videos and how-to guides to help teachers continuously improve their teaching.

“Many elementary school teachers don’t have a lot of experience in science, and several were also worried about using a digital curriculum instead of textbooks. But as soon as they saw how easy it was to use STEMscopes, they were sold,” said Weinand. “STEMscopes provides teachers with a solid background in science, which is a huge help, and it provides the cross-curricular connections and resources they need to promote student inquiry and a real-world understanding of STEM.”

Providing inquiry-based learning for diverse learners

STEMscopes Georgia helps teachers create a student-centric, blended STEM learning environment through hands-on and digital experiences. Each STEMscopes unit or “scope” 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.

Providing inquiry-based learning for diverse learners (cont.)

“With STEMscopes, students learn by doing and experiencing, rather than just observing. While this helps students at all levels, it’s especially helpful for those who struggle with reading. With hands-on activities, they can explore and experience things before diving into the vocabulary, which helps them better grasp the content and what it really means,” said Weinand. “Our struggling learners have really taken off with STEMscopes, and our gifted and high-achieving students have taken off as well.”

Saving teachers time

In addition to the digital curriculum, the district purchased STEMscopes hands-on explorations kits for every school.

“One of the most time-consuming parts of science is pulling together equipment and materials and making sure students have everything they need for their investigations,” said Weinand. “The STEMscopes hands-on kits are an integral part of our STEM program, and they’re a tremendous help to teachers because everything is included and ready to go.”

RESULTS

In CCSD’s first year with STEMscopes, the percentage of fifth graders scoring at the Proficient Learner and Distinguished Learner levels increased from 52 to 56 percent on the Georgia Milestones Assessment System EOG assessment in science.

“These are the best results we’ve had in our district since the Georgia Milestones Assessment System began. In just one year, we saw a gain of 4 percentage points district-wide. Not bad for a first-year implementation! Some schools even saw improvements of 10 points or more,” said Weinand. “Looking at our results and usage of STEMscopes, our schools are doing a phenomenal job — and those with better usage got better scores on the state assessment.”

Georgia Milestones End-of-Grade Assessment in Science - Grade 5

	2017	2018	Change
Columbia County	51.9%	56.2%	4.3 percentage points
State of Georgia	39.4%	39.5%	0.1 percentage points

*Percentages reflect students considered proficient and distinguished.

“STEMscopes is a big part of the increase in our science scores. It has changed the way our classrooms are set up. Science instruction used to be stand-and-deliver. The teacher would do the experiment and students would watch. Now students are engaged in hands-on STEM learning,” said Weinand. “One piece of advice I’d offer to other districts is to just dive in. STEMscopes is easy to use and it aligns with the standards, so teachers love it and students are now excited to show up to science class.”