CASE STUDY

Hands-On Science for All

A successful Science Coordinator reveals his secret to ensuring cost-effective resources to support teachers and student learning objectives.

Charleston County SCHOOL DISTRICT
excellence is our standard

FAST FACTS

Name: Rodney Moore

Role: Science Coordinator

District: Charleston County School District, Charleston, SC

Challenge: To ensure cost-effective measures are in place to make instructional materials available to all schools in a uniform way while meeting standards.

Solution: Carolina's Inquiries in Science Series and Inquiries in Science Biology Kits.

Results: More than 85% of students passing end-of-year biology exams; increased conceptual understanding and love of science.

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Science advocate. *Rodney Moore plays a key role in STEM expansion in his district, collaborating between local organizations, businesses, colleges and the community. An award-winning former principal, Rodney is a big fan of Inquiries in Science Kits due to their hands-on learning approach.*

Rodney Moore is the Science Coordinator for the Charleston Country School District, the second largest school district in South Carolina. He supervises the district's Science Resource Center and provides a variety of services that support the district's teachers and learning objectives. "A large part of my role here," Moore comments, "is to make sure that we have cost-effective measures in place to ensure the availability of instructional materials to all our schools in a uniform way that meets our standards. Inquiries in Science Kits from Carolina Biological Supply are an important tool that our district has used successfully for more than 20 years."

Moore notes that his district has been purchasing quantities of Carolina Inquiry Kits for Biology over the last three years in order to improve students' end-of-year biology state exam scores. "We now have 85 percent or more of our students passing these exams," he says. "That is higher than the state average."

Success by Design

Success with the Inquiry Kits derives in large part from the design philosophy behind them. "Students learn science best when they learn by doing," Moore explains. "The Inquiry Kits promote this hands-on learning experience, making science more engaging and fun – and at a price that is budget friendly. Cost is important to our district because we have a number of schools that fall into low-income areas; they need accessibility to materials every bit as much as the more affluent schools."

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"Our classroom teachers are very happy with the kits, and that applies to our professional developers and master teachers as well."

—Rodney Moore, Science Coordinator, Charleston County School District, Charleston, SC

Team Science. *Rodney Moore (second from right) with members of the Charleston STEM Festival team, a dedicated group of volunteers passionate about engaging the community in Science.*

Moore also appreciates the fact that the Biology Kits comply with state and national standards, while promoting the best STEM practices. Students are engaged in educational projects that cover key areas of biological study – cell, genetics, ecology, evolution, and physiology. "I also like the fact that kits include instructional materials for teachers. That is definitely a plus, because it means teachers can conduct more hands-on experiments with their students."

The 5-E Learning Cycle

"We embrace the 5E learning cycle here," Moore says. "The Inquiry Kits are built on that model of Engagement, Exploration, Explanation, Elaboration – with Evaluation built in at every level. *Engagement* begins with an experience that fires a student's desire to know – we also call these anchor experiences and they may occur outside the classroom where students see real-world examples of science at work. We use inquiry kits to further *explore* what the students have seen and the question they have about why certain scientific phenomena happen.

"The kits lead naturally into units of study that are the 'how and why' of these phenomena. And finally the students *elaborate* on what they have – generalizing from principles and applying them to other situations. The Kits provide a framework based in observable things; and each step of increased understanding is rooted in hands-on learning. As a result, students are not left to wonder why they have to study this 'stuff,' because the learning is fun and relevant. The students want to learn!"

CONCEPTUAL UNDERSTANDING

Inquries in Science Kits:

- ☑ Use a guided-inquiry approach
- ☑ Address essential science concepts
- ☑ Present real-world scenarios
- ☑ Include extensions for additional investigations
- ☑ Provide suggestions for differentiated instruction.

Empowering Teachers

Moore further praises the Inquiry Kits because they include materials that empower teachers. "The Kits are actually a form of professional development," Moore observes. "They connect the teachers to the 5E learning cycle and enable them to make classroom teaching come alive. So professional development in our district is an on-going process – not a one-shot deal. Our classroom teachers are very happy with the Kits, and that applies to our professional developers and master teachers as well."

Moore enthusiastically recommends the Inquiries in Science Kits to other schools. "When anyone asks me what the kids are using here, Inquiries in Science from Carolina Biological Supply is definitely the one I promote. The kids love it, our teachers love it, and it is helping our district meet and exceed state and national standards." ■

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