





Hands-On Learning that Truly Works

A teacher trainer discovers a robust, workable solution to help teachers statewide establish science know-how in their students early on.

FAST FACTS

Name: Maria Young

Role: Research Scientist, State Department of Education, Alabama Math Science and Technology Initiative (AMSTI).

District: Alabama Department of Education

Challenge: Training classroom teachers statewide to establish a foundation for their students in science while meeting standards.

Solution: Carolina Curriculum Building Blocks of Science.

Results: Teachers meeting Next Generation Science, Common Core Literacy and Math Standards with an integrated cross-curricular approach that works.

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Hands-on Advocate. Maria Young trains teachers statewide with the workable and very successful Building Blocks of Science.

Maria Young is a Research Scientist working for the State Department of Education for Alabama. Her home base is the University of Alabama at Huntsville and she is associated with the Alabama Math, Science, and Technology Initiative (AMSTI). "Basically, my job is to train teachers," she says. "I was a classroom teacher for many years, and now I teach teachers to do what I did for so long." "We have been using Carolina Bio products for more than 15 years," she notes. "The company is best known for products that help teachers and students establish a foundation in science.

Now, they're bringing out Building Blocks of Science, which takes off from the science kits that teachers know and love. The appeal of Building Blocks is that they present science in a hands-on way — and they serve as a visual activity for the students. This is of growing importance to all schools, especially with the new standards coming out. Building Blocks offer four-week units, which is an advantage because it is a shorter amount of time, which works well with the content area needs to be covered over the school year."

Starting Early

Building Blocks is being introduced into pre-K classes and Kindergarten. The product includes lab sheets that the students work from, and they act as each student's science notebook. "Students conduct an investigation and then write about it in their science notebooks," Young explains. "With pre-K, it's more drawings of what they



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—Maria Young, Research Scientist and Teacher Trainer, AMSTI, Alabama Department of Education



Teacher
training.
During
summer
months,
teachers dig in
and do their
homework on
standards to
prepare for the
coming year.

observed in their investigation. So it works very well with the kids at that younger level. The students are very engaged, the presentation is very hands-on, and the lessons are about 20 minutes long. That's perfect for young students."

"The hands-on aspect is very important," she continues. "They are not just talking about science, they are actually *doing* it. For example, we have been working with a kit called Push, Pull, Go. It's a physical science kit. The children build ramps and swings, knock things over, and watch how things move. Then they talk about a system and how everything works together when it's built. It looks like play, but it is really learning. So the kids are engaged with an immersive type of science."

A Logical Progression

Building Blocks is a progression, according to Young. "If a kindergarten teacher does her job, then the next teacher, in first grade, can build on it. It really is like building blocks," she says. "The kits provide a science framework, which helps everyone get the big picture at the end — from kindergarten all the way to graduating seniors.

STANDARDS MADE EASY

Building Blocks of Science tackles multiple standards with a logical, cross-curricular approach.

"The kits are great for kids, because children love science," she observes. "It's in their nature to investigate, to explore. And Building Blocks gives them what they need to explore and learn at the same time. The teachers love it too but they need to get used to how it works. Some teachers aren't ready to give up the lecturing. But they quickly discover for themselves that children actually learn by doing."

Improved Scores, Everyone Wins

"What we have seen with Carolina is that it improves not only science scores, but reading and writing skills as well," she says. "Building Blocks help develop math skills and language arts skill — so you really get the whole package, and it segues into all the other content areas. The kids are having a great time! But they are also learning and writing, building math, science, and English language skills all together.

"My advice to other educational leaders would be discover for yourself the benefits of Carolina and the Building Blocks of Science," she concludes. "It works — and the tests show it! It benefits everyone — from low performing students, even special needs kids, to your medium to high achievers. They all can perform better when they get to use these kits. Look at the research that proves it. Try it for yourself. Everyone wins big with Carolina Building Blocks."



