smartlab

WITH ACHIEVEMENT TAKING A DEEP DIVE, THIS MIDDLE SCHOOL TURNED THINGS AROUND

The middle school years represent a critical time for young teens as they experience incredible physical change, cognitive development, and identity formation. In middle school, engagement is particularly important because adolescents may struggle socially and emotionally during this transitional time and can fall behind academically.

To meet this challenge, the District Improvement Team for Blount County Schools in Oneonta, AL turned to its data for direction.

"We know that kids have a difficult time in those middle years," said Dr. Stoney Beavers, Assistant Superintendent of Blount County Schools. "When the team looked at our district data and saw that achievement was taking a deep dive in reading and math at 7th- and 8th-grade levels, we knew we needed to do something to excite, engage, and pull these kids back in to get them through those very difficult middle grade years," he said.

The vision for Blount County Schools is to build partnerships, create opportunities, and prepare students to succeed in life. Dr. Beavers started to explore STEM curriculum and supplies to turn this vision into a reality.

"We had one teacher who started doing some STEM activities with her elementary students, and that was really about all we had in place at the time," said Dr. Beavers. "And then we started to do more research on our workforce development and looking at future jobs and needs. We realized the growth in STEAM or STEM careers and felt that we were behind in that area," he said.

WE KNEW WE NEEDED TO EXCITE, ENGAGE, AND PULL KIDS BACK IN

To explore options, Dr. Beavers, along with Rodney Green, Superintendent of Blount County Schools, went to Phenix City, AL to take a tour of the district's SmartLab HQ STEAM Center. "After speaking with the Phenix City Superintendent, the STEM coordinator, and observing the students, we really felt that the SmartLab Learning program was something that we wanted to bring to Blount County," said Dr. Beavers.

The team knew that they'd found the right partner in SmartLab Learning to provide guidance on how to integrate a STEM program for their middle school students.

"They have it all in one package: the professional development, the learning kits, the training, and the support. We felt confident that they really knew how to do it and could make it all possible without us having to put together all the pieces ourselves," said Dr. Beavers.

FINDING FUNDING TO GROW THE PROGRAM

The SmartLab HQ program had such a positive response that Blount County Schools wants to fund a SmartLab HQ for every middle school throughout its seven communities, which are different configurations of schools throughout the county. "The second SmartLab HQ was partially funded through a corporate sponsorship with Schneider Electric, which was already doing a big energy efficiency project in our system," said Dr. Beavers. The district relies heavily on local partners and businesses to get involved and be part of the program. "We named parts of the classroom or a certain station after the sponsor," he said.

Blount County Schools also has an active education foundation in its system that will help raise funds for future SmartLab HQ programs in each community.

STUDENTS TAKE OWNERSHIP IN A SMARTLAB

During the SmartLab HQ's first month, it was filled with excitement and curiosity. "We're a medium-sized rural system in central Alabama. To see these kids walk into the SmartLab HQ filled with all this great technology—it was great. We really wanted the students to understand that learning is different here," he said.

After three months, the district held an open house for the Chamber of Commerce. "It was incredible to see the growth of the kids. They presented their projects, and the adults were amazed at how advanced the topics were," he said. "These are kids who have never been exposed to topics like that—especially a lot of our students in special education and our students who are Hispanic. It's amazing how well they do in a SmartLab HQ environment," he said.

Dr. Beavers credits choice as a big reason why students become so engaged in their learning when working with SmartLab curriculum. "They have more say in their own learning. They get to, sometimes for the very first time, actually drive their own learning. Collaboration has increased. It's more of a social learning environment. They have pride in what they're doing," said Dr. Beavers.

He also sees an increase in students developing next-generation skills, like problem-solving and oral communication.

"One of our groups kept working on a flight simulator project. It was supposed to fly to the ceiling while not hitting it. But the project kept hitting the ceiling and breaking the propellers; eventually they ran out of them. The teacher was about to order more, but the students decided to use the 3D printer to create more," he said.

This is just one of several examples of students coming up with possible solutions, taking action, and getting results. And that's what they really wanted to accomplish in this program.

TURNING TEACHERS INTO FACILITATORS

Dr. Beavers believes having the right Facilitator is key to a successful SmartLab Learning program. "The Facilitators we selected were rock stars in the district already, so that really helped the students' confidence in the first three months," he said.

Dr. Beavers believes because of the foundational training and professional development they received from the SmartLab Learning team, the Facilitators can now look beyond the curriculum

to incorporate new technologies and topics into the learning environment. "Interestingly, one of our Facilitators is the first district coach for E–Sports." (A new program recently sanctioned by their high school athletic association.) "And he started an E–Sports team that he coaches in his STEAM lab," he said.

The team now competes with kids all across the state and recently had its first winning season. This is another example of kids who would not ordinarily be involved in this type of competition, but they're thriving.

"They're doing awesome. So I think that the training in the SmartLab HQ laid that groundwork for them to seek out additional training and grow even more through other means," said Dr. Beavers.

In a middle school SmartLab HQ, the emphasis is on discovery and exploration. Teams of learners apply a wide range of technologies to project work as they rotate through a carefully crafted sequence of learning engagements. Middle school students are encouraged to choose an appropriate level of challenge, apply their own interests and learning styles, and explore questions of personal relevance.

THE FUTURE FOR BLOUNT COUNTY SCHOOLS

Blount County Schools is actually ahead of its plan to install a SmartLab HQ for each of its seven communities. They've secured more grant funds and two more SmartLab HQ programs were installed in summer 2019.

"The ultimate goal is to expand our offerings in the Career Tech Center to address STEM careers. We really want to morph our career training opportunities, such as cosmetology, welding, health sciences, computer science, with additional STEM options so students not only have career tech opportunities, but also STEM career training opportunities," said Dr. Beavers.

As of now, the opportunity to learn in a SmartLab HQ ends for students at the eighth grade.

"The goal is, by the time the middle school students get into 9th or 10th grade, that Blount County Schools will have something 'next level' for them to go to that will really prepare them for careers in engineering, architecture, design, science, technology, graphic design, and mathematics," said Dr. Beavers.

COMING TOGETHER TO HONOR A SCIENCE TEACHER

The cost of a SmartLab HQ wasn't in the school's original budget, so the team had to search for funds. Although progress was slow at first, the entire community came together over a tragic loss.

"The year after our initial visit to see a SmartLab HQ, one of our science teachers passed away from cancer. She was always looking for grants and was very innovative," said Dr. Beavers.

This tragedy sparked the entire community to come together to raise the funds to build a SmartLab HQ in her honor and memory. "We also searched and received federal and state grants. There are all these different avenues and fund sources that you can pull together if you want to make it happen," said Dr. Beavers.

The team began working in the summer and finished renovating a classroom to use as the new STEM center. During the first semester, they finished installation, selected the Facilitator, and completed professional development. "We opened in January of that second semester," said Dr. Beavers.

"The SmartLab HQ was named in the teacher's honor, and we had a celebration. Her parents came and it was a very nice event for the entire community."