

New STEM labs at CES engage young learners

A new, innovative approach to engage the earliest learners with the fundamentals of engineering and math has been implemented at Carrollton Elementary School.

Using a Charter Innovation Grant, CES is expanding upon its reputation as the Georgia Department of Education's only STEM certified K-3 institution by creating laboratories uniquely designed for STEM education. These leading edge labs allow youngsters to design, implement and test their own creations using technology.

Children will also be able to build scaled replicas of their creations using three-dimensional printers, which are part of the labs.

STEM, an acronym for Science, Technology, Engineering and Math, has moved to the educational fore as universities and businesses are requiring more collaborative problem-solving thought processes from the workforce.

"Carrollton City Schools remains com-



mitted to providing access to an endless world of possibilities to every student," said Dr. Kent Edwards, superintendent of Carrollton City Schools. "These STEM labs provide dynamic learning experiences, teach teamwork at a young age and will propel our CES STEM curriculum to even greater heights.

"This 'moon-shot thinking' approach will produce great results for our children and our community," he continued. "This is another example of

why we sought state approval to be a charter system."

There are 16 collaborative work stations spread among two laboratories. Each station provides access to web-based platforms, such as Tinkercad, WeDo from Lego and various physics simulations. Utilizing Chromebases, students can video conference with field experts. Each station includes digital microscopes, Go-Pro cameras to provide digital record of observations inside and



In the top photo, CES third graders use Tinkercad to design a keychain model that can be produced on a 3-D printer. Above, this group shows off the design and the 3-D printout results.

outside of the classroom and littleBit kits that teach students the

intricacies of electrical circuitry. There is also a 3-D printer in each

lab to support the students' activities.

"We are excited to expand upon the opportunities to help our children become thinkers and problem solvers," said Karen Wild, principal of Carrollton Elementary School. "These classrooms are unique and fun. We even had our students assist in building the laboratories with our system technology team. This type of hands-on work allows students to participate in directing their own learning."