

# STEM School Offers Strong Foundation for Students

By Christine Crouch, MS Ed, PHR



**ABOVE - John C. Dunham STEM Partnership School is on the campus of Aurora University. It serves elementary and middle school students from the Aurora East, Aurora West and Indian Prairie School Districts currently, with Batavia joining the partnership during the 2015-2016 school year.**

What do third grade students know about businesses in their community? Quite a bit if you ask third graders enrolled at the John C. Dunham STEM Partnership School on the campus of Aurora University located in Aurora. When writing to prospective students about the school, a current third grader wrote, "This school has a lot of partners and they will teach you about their jobs."

The John C. Dunham STEM Partnership School began as a collaborative effort in response to a challenge from the Dunham Fund, a local philanthropic group, which asked organizations to identify a community need and suggest an innovative program to address that need. The Institute for Collaboration of Aurora University and 12 community partners offered a possible solution to the complex issue of strengthening mathematics

and science achievement. Their solution was a new model for educating students through a collaborative partnership.

The STEM Partnership School serves elementary and middle school students from the Aurora East, Aurora West and Indian Prairie school districts. Batavia will be joining the partnership beginning with the 2015-16 school year. The school prepares the community's young learners in ways that ignite their interest in STEM during their elementary and middle school years when many might otherwise lose interest in science and mathematics, no longer considering career options dependent on STEM knowledge and skills.

The school includes workshops, or classrooms, a STEM Forum where students can work in collaborative groups, and multi-generational laboratories. The environment enables students to engage in hands-on projects using problem-based learning and inquiry strategies.

The school is staffed via a unique professional development model. Teachers are drawn from the four partner districts to teach and take graduate coursework in STEM content and curriculum during their residency at the school. They then return to their home districts on a rotating basis to serve as teacher leaders as new professionals from the school districts take their places.

Several area corporations and businesses contributed fiscally and also identified



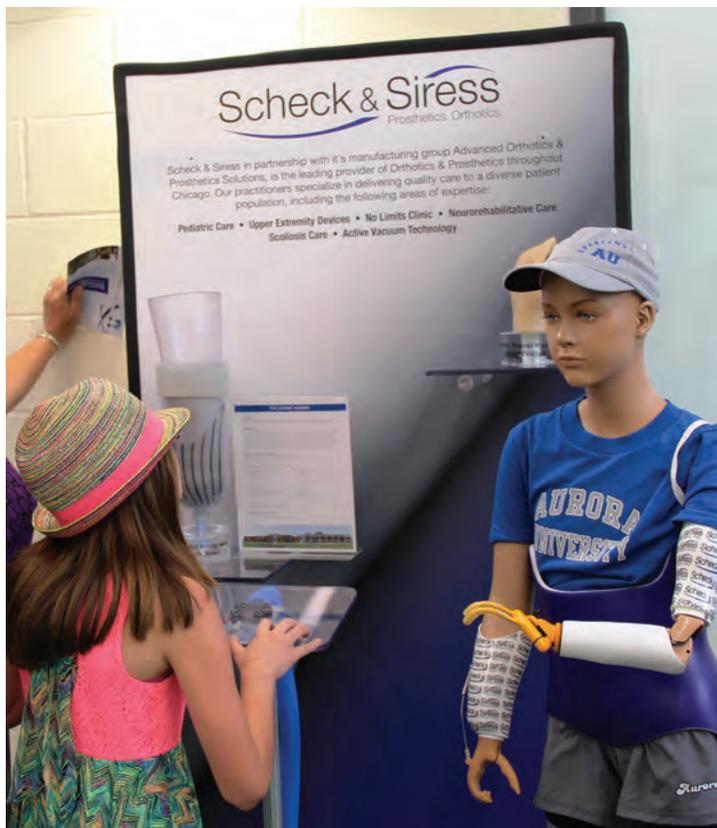
**ABOVE - Why teach "STEM"? Exposing children to STEM topics at an early age helps students excel as they develop the STEM-related knowledge and competencies.**

professionals who could provide their expertise to teachers and students on an on-going basis. The partners include Cabot Microelectronics, Caterpillar Foundation, Exelon Foundation, Nicor Gas, Scheck & Siress, Tellabs Foundation and Waste Management. Michael Oros, president and CEO of Scheck & Siress commented, "For our small company, this partnership presents an opportunity to tell the story about a niche healthcare profession to a young and impressionable audience. This story includes understanding and accepting those with physical disabilities, and how STEM curriculum can lead to solutions that have a meaningful impact on the lives of those individuals."

Curriculum development was a collaborative process among business, public school educators, university faculty, non-profit partners and national laboratories. Working together, these partners developed a corporate framework consisting of areas identified as critical for future success in STEM careers: design process understanding, industry experiences, career awareness and interpersonal skills. The framework served as the foundation for the curriculum.

The partners are continuing their active involvement as the curriculum is implemented. Each STEM Partnership School teacher has a corporate/business partner, non-profit or national laboratory partner and university faculty member "assigned" to their classroom, interacting with students at least once per month. University faculty, many with backgrounds in industry, provide content expertise. Corporate and business partners provide students with connections to the content they are learning, allowing students to apply the knowledge and understand why the content is important.

The John C. Dunham STEM Partnership School is a new, innovative model of education that can be replicated in communities across Illinois. If you would like to learn more, visit their website at [stem.aurora.edu](http://stem.aurora.edu).



**ABOVE - Partner corporations and businesses contributed interactive exhibits, highlighting their work and its connection to STEM. During the school open house, a student views the display from Scheck & Siress, a company that manufactures orthotics and prosthetics.**

## STEM is Essential for A Strong Future Business Foundation

*By Wintrust Outreach*

*STEM isn't just another acronym; it's a foundation for our country's future. The fields of science, technology, engineering and mathematics are the basis of so much of what we do, and keep us competitive in an international market. The national push to make these fields a priority, and to provide assistance and encouragement to expand the capacity and diversity in the STEM workforce, is critical to a healthy economy.*

*Much of the STEM push surrounds providing the right educational support to students—and in particular, young women—in order to set them up for success in these fields. That effort provides a great foundation, but there are other ways to support the STEM initiative, like helping those currently in, or trying to get in to, STEM areas.*

*Businesses across the country, and across Illinois, are in these fields already. So many more are trying to be. Chicago's innovation community, which consists heavily of start-ups, is at work on this endeavor, particularly when it comes to technology.*

*A significant number of these companies desperately need support, from resources to financial assistance, to continue to push the envelope and to use technology in different and exciting ways.*

*This is a group that contributes to the STEM push—and will help provide jobs and services we can't even begin to imagine yet—if given the proper resources and guidance. It's also a group that has a different set of needs than other kinds of businesses.*

*As a banker working closely in this community, I think it's going to take a different way of thinking about how to provide support. But, one thing is clear: across industries, there is a role for each of us to play in the STEM initiative. Even in a field as traditional as banking, we can make an impact.*

