

Transforming the Face of Science Education

by Fatima Khan

The NC Community College System is working with industry partners, government and education to reach students in K-12 schools with details on career pathways in Science, Technology, Engineering and Mathematics (STEM). Through initiatives such as the Mobile Launch Pad and outreach, NC Community Colleges are transforming the face of education.

“In the US, demographic data shows that impending retirement for baby boomers will deplete many key technology and manufacturing positions in the next 10 years,” stated Matthew Meyer, associate vice president of innovation and biotechnology for NC Community Colleges. “There are just not enough qualified people to replace baby boomers in those high-tech jobs. At the same time, giants such as India and China continue to churn out highly skilled graduates in technical fields.”

MOBILE LAUNCH PAD

One of North Carolina’s answers is the Mobile Launch Pad for Critical Careers. Formerly BioNetwork’s Biotechnology Mobile Laboratory, the Mobile Launch Pad, funded through grants from Duke Energy, targets middle, high school and community college students.

“When students enter the Launch Pad, they see real-life equipment, videos and gaming stations to teach them about different careers. We also have industry experts on the Launch Pad to teach students about STEM careers,” said Lisa Richman, Mobile Launch Pad Instructor. “The idea is to let them know what is available.”

The Launch Pad visits career fairs in the Duke Energy service area. “The demand for this kind of information is huge. During our 11 days at the North Carolina State Fair in the fall of 2009, we had 4,000 people board the bus. We have many requests from teachers who want their students to be able to access the Launch Pad,” Richman said.

“The Launch Pad provides experiential learning, which is vital for kids,” said Jenna Miller, who works in the Charlotte office of Duke Energy’s department of Diversity, Inclusion and Workforce Planning. “Field trips are the first to go with state budget cuts. With the Mobile Launch Pad, we bring the field trip to the kids.”

Duke Energy is serious about STEM. Hundreds of Duke employees volunteer at career fairs, provide in-class presentations, judge science fairs and talk to students about energy industry careers. Duke actively supports



State leaders board the Mobile Launch Pad for Critical Careers, formerly BioNetwork’s Biotechnology Mobile Laboratory. The new Mobile Launch Pad is funded in partnership with Duke Energy and targets middle, high school and community college students.

the Electrical Line Technician program at Forsyth Tech in Winston-Salem.

OUTREACH

NC Community Colleges’ BioNetwork centers promote STEM awareness in K-12. BioNetwork’s Bioprocessing Center has coordinated education forums in Eastern North Carolina where local leaders, K-12 educators, economic development agencies and industry representatives discuss STEM education and workforce needs.

“Parents are unaware of how important STEM is for careers in the 21st century,” said Bill Cooper, manager of BioNetwork’s Bioprocessing Center. “This is why BioNetwork’s outreach includes not just schools, but also civic groups where parents can be accessed.”

Teachers are the other focus. In Orange County, the Bioprocessing Center worked with a Gravelly Hill Middle School biotechnology teacher regarding curricula development. In Craven County, it supported an alternative fuels initiative, and also partnered with the Bertie Early College for Biotechnology and Agriculture concerning career pathways.

“Training for faculty to keep up-to-date with latest biotechnology trends in the workplace is essential. Through our BioForums, we keep teachers abreast of the latest trends. BioForums are held once a month, online or in a classroom, are free, and act much like a train-the-trainer module,” explained Cooper.

BioNetwork is also partnered with East Carolina University and the NC Department of Public Instruction to produce free, high-quality videos for students on career and training pathways in biotechnology that will be online and used in classrooms. **i**

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