

Students Solve Real-World Problems Using STEM Skills

3M and PIE Team Up to Change STEM Education

Scientists and engineers get to do some pretty cool things. They challenge their brains to solve problems. They develop hands-on projects to make new discoveries. They can change the world within the four walls of their labs. So why not give students the chance to do so too?

That's what Partnership for Innovation in Education (PIE) asked Ohio educators. The non-profit group encourages case-based learning to give students a better understanding of how science relates to everyday tasks and future job opportunities. PIE teamed up with 3M to give Ohio middle school students a pragmatic obstacle to solve. And the result was amazing.

"The students were able to see how this case-based study approach related to real life and related to careers too, such as product development, engineering, and technological careers," said Heather Wahlert, sixth grade math and science teacher at Seipelt Elementary School. "Working with 3M Milford engineers enlightened students to so many career paths they never thought about before."

3M Milford plant engineers captured the attention of more than 600 sixth graders by creating a technical dilemma to determine what type of material should be used for a bandage, wrap, or brace. Students had to test different variables such as the absorption rate and moisture dispersion of the sample fabrics.

"Case-based learning is about experiences, defining, analyzing, researching, and giving a solution," explained Mary Welsh Schlueter, chief executive officer of PIE. "But until now, there hasn't been any content out there that allows K-12 students a chance to solve real problems. We want to change that."

"The chance to work with these students gives us a better opportunity to expose them to STEM fields at an early age," said Don Barnes, 3M Milford human resources manager. "It's a core mission of ours to give back to the local community and schools, and this a great way to do a lot of good for kids."

Teachers and education officials have taken notice of the program. Northern Kentucky University stepped in to help the students apply their new-found STEM knowledge toward two new mobile game applications, teaching them about coding and making it fun. The two game apps, *Fabric Bounce* and *Flappy Fabric*, are now available to download for Apple and Android devices. The results of the program in Milford have been made into another case-study to show other schools how to encourage the next generation of scientists and engineers.

About 3M

3M captures the spark of new ideas and transforms them into thousands of ingenious products. Our culture of creative collaboration inspires a never-ending stream of powerful technologies that make life better. 3M is the innovation company that never stops inventing. With \$32 billion in sales, 3M employs 90,000 people worldwide and has operations in more than 70 countries. For more information, visit www.3M.com or follow @3MNewsroom on Twitter.

3M Media Contact Fanna Haile-Selassie, 651-736-0876 Fhaile-selassie@mmm.com