

The Oklahoman

GE Summer Science Academy takes creative approach to academic, engineering challenges

BY JIM STAFFORD

For The Oklahoman

Inside a science laboratory on the campus of the Oklahoma School of Science and Mathematics, teams of students last week attempted to connect syringes to plastic tubing and canisters filled with vegetable oil and coffee grounds.

They were participating in an oil and gas extraction competition as part of the GE Summer Science Academy, which brought 62 students from 35 communities across Oklahoma to the campus in the heart of Oklahoma City.

The oil extraction challenge emulates real-life challenges of the oil and gas industry as campers try to successfully engineer ways to lift the oil from a canister on the ground to a reservoir on a table using tools like syringes, tubing and balloons.

"You have to try in multiple different ways," said Sophie Fosmire, a junior-to-be at Kremlin-Hillsdale High School

north of Enid. "Sometimes it works and sometimes it doesn't, and sometimes it doesn't always work the second time even if it worked the first time. It's frustrating and challenging — and I like that."

The GE Summer Science Academy was sponsored by the GE Foundation as part of a \$400,000 STEM initiative established in partnership with the Oklahoma Center for the Advancement of Science and Technology (OCAST). The academy provides a residential experience for students who pursue a week of academic classes, field trips and challenging competitions. Camp activities are focused on creating interest in science, technology, engineering and mathematics

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To watch a video of students working on engineering problems based on issues in the oil and gas industry, go online to Oklahoman.com.

(STEM), said Nick Drenzek, a senior scientist at the energy innovation center operated by Baker Hughes, a GE company, and located across the street from the Oklahoma School of Science and Mathematics campus.

"It's very important for us to do this because these kids are the future workforce for Oklahoma, and STEM is critically important to us to seed our next-generation workforce so we can develop the new technology that oil and gas needs," Drenzek said. "I want the campers to take away a passion for the challenges we face every single day in oil and gas."

Isabella Cosby, a rising junior from Bethel High School near Shawnee, said she will remember the positive campus

atmosphere and diversity of fellow students attending the camp.

"The teachers are so empowering," she said. "And they make it seem easier to understand than previous classes I've taken. I finally got something today in my math class, like 'oh, that makes sense now.'"

The camp serves both as a recruiting tool for the school of science and math and a weeklong exposure to challenging academic concepts for campers, said Brent Richards, a professor of biology at OSSM and camp director.

"It's a way for kids who come from school districts all over the state to get some exposure to advanced science and math — just a taste of it — they might not get otherwise," Richards said. "It's a program we are really proud of."

Jim Stafford writes about Oklahoma innovation and research and development topics on behalf of the Oklahoma Center for the Advancement of Science & Technology (OCAST).