HARRISBURG

Hands-on is the way Meghan Foard teaches science at Harrisburg Middle School.

A doctoral student in environmental studies at Arkansas State University, Foard teaches Teresa Sanders' fifth- and Emaly Stonesyphor's seventh- and eighth-grade students science. She is a GK-12 fellow, part of the National Science Foundation program. The program puts graduate student scientists in the classroom to teach science lessons to kindergartners through high school seniors.

“I want to show students not all scientists are like Albert Einstein, with crazy hair, glasses, lab coats and beakers. They can relate to me. I'm fun and I make science real and obtainable,” Foard said. “It's something they can see for themselves after they've seen me doing it.”

Foard's lesson on Monday was about light waves and how light interacts with matter. Vocabulary words of the day included: absorption, refraction, reflection, transparent, translucent and opaque.

Before the lesson, though, she said she had to “engage” students, meaning she wanted to get their minds working. One way to engage them was to show a short film about Bill Nye, the Science Guy.

“The biggest part of the lesson is engaging them,” she said. “You can show them a video or a picture of something crazy and wacky. Engaging is huge. It keeps them active and involved. I've learned everyone is a big kid. I need to engage them the way I would kids.”

For example, to convey symbiosis, she used a “stinky flower covered in maggots” to get them interested, she said. Throughout the semester, Foard will present 34 lessons, including 10 she wrote from scratch. Some lessons come from kits, such as Newton's toy box or a roller coaster with kinetic energy project. Sanders said students built a food chain. Students went outside and placed ants, butterflies...