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YIMS science classes utilizing different curriculum

*Project Lead the Way
incorporated*

By PAUL PATERRA

Brian Grindle admits he's always looking for different methods for teaching his science classes at Yough Intermediate Middle School.

That led him to look into Project Lead the Way, a nonprofit organization that develops STEM (Science, Technology, Engineering and Math) curriculum for K-12 students and teachers across the U.S.

Through this curriculum, students not only learn technical skills, but also learn to solve problems, think critically

and creatively, communicate, and collaborate. Teachers are provided with the training, resources, and support needed to engage students in real-world learning.

"We're a small rural school, we're always looking for some different way to (instruct)," Grindle said. "Over the years, I've taken a look at Project Lead the Way curriculum and I really like it. It's a prepared curriculum and, depending on what level you're at, there are certain curriculum components designed specifically for (that)."

Grindle, who said he's seen the success of Project Lead the Way in school districts such as Chartiers Valley and Montour, said the program is being incorporated into the school through a two-

year grant from Chevron. The grant, for which Grindle and Crystal Donaldson wrote the proposal, is \$30,000 for sixth-grade students and \$20,000 for those in fifth grade.

The school is utilizing Project Lead the Way's Gateway component this school year, which is geared toward middle school students. It stresses empowering students to lead their own discovery. The hands-on program boosts classroom engagement, collaboration, and deep comprehension.

Students are instructed in each portion of the curriculum for nine weeks

First up this school year is design and

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modeling, with Donaldson as the instructor. Students use and apply what they've learned throughout the unit to design a therapeutic toy for a child who has cerebral palsy in this component.

"They'll be designing and creating prototypes," Donaldson explained.

Another portion of the curriculum will be dedicated to energy and the environment, in which Grindle will handle the instruction. That will begin in the 2018-19 school year.

In the energy and the environment component, students explore sustainable solutions and use what they've learned to design and model alternative energy sources, as well as evaluate options for reducing energy consumption.

There will be two other components of the science curriculum, earth science and

life science, which are not part of Project Lead the Way.

"The four teachers will be teaching those four different blocks," Grindle explained. "The kids will rotate through those four blocks. They'll all have all four teachers throughout the course."

Project Lead the Way supplies all of the tools used in the instruction for the curriculum for that program.

"Through the grant funding, we're able to buy all of the components to have a more project-based style of learning, as compared to just a classroom setting," Grindle said

Computers and software were able to be purchased for the design and modeling component, while for energy and the environment, there will be features such as kits to build windmills.

"My morning classes will involve more, stand up and get your project ready and go

to your desk, and that's how we'll evaluate it," Grindle said.

Grindle added the curriculum for the fifth-grade students, which will begin this school year, is more computer and software-based.

"There's is going to be done more as an outreach," Grindle said. "We're not going to be doing it all in a classroom setting, but during those times like between Thanksgiving and Christmas."

So far in the early part of the school year, the program seems to be a hit with the students.

"They're excited. They really are," Donaldson said. "It's just giving them so many different experiences. It's fun for them and it's fun for us. There's a lot of teamwork."

Paul Paterra is the editor of The Independent-Observer. He can be reached at 724-887-7400 or ppaterra@independent-observer.com.