

PLTW

Students haven't lost their marbles...

Some various sized and colored marbles, a few Dixie cups, and what looks to be Erector set pieces can become an intricate machine capable of reading the weight, size and opacity of marbles and categorize them into separate containers.

The course is *Principles of Engineering* and it is a piece of a four-year national "Project Lead the Way" curriculum, in which Blackford offers its students four courses.

"Students have a series of curricular pieces where in the first semester they focus on learning the basic level programming, including the language and commands," teacher Frank Jackson said. "Then second semester is the fun side where the kids

are actually making prototypes. The students get a taste of a lot of things," Jackson said.

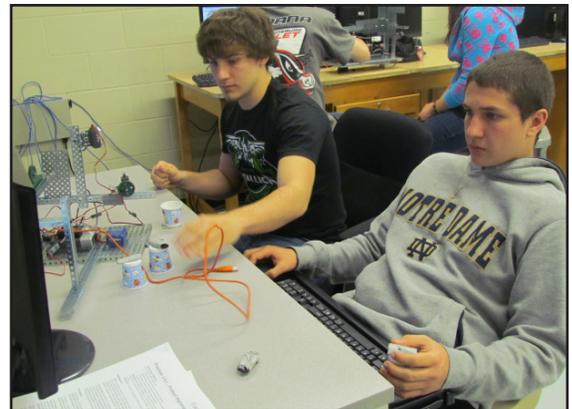
Sophomore Alex Huff, who would like to go into auto engineering some day says, "Simply put, it (engineering class) shows how much we have to rely on thinking everything through."

"We get to build it from scratch. We get to program it. We do everything ourselves," Huff said.

Junior Cody Oswald took on the challenge of designing a house for a client along Habitat for Humanity guidelines, while junior Blake Buchanan remodeled a basement and conducted a complete walk through. "I could see myself doing this one day," Buchanan said.



Junior Kyle Holsten likes that "you can build things at a relaxed pace," in Project Lead The Way engineering classes. "I'm thinking about going into Design Engineering. I like making things, but don't want to physically build them." Using the software Auto Desk, Kyle and classmates have created machines that will sort marbles according to opacity in the second-level, "Principles of Engineering" class.



Creating 3-D prototypes can be achieved on the Replicator in Introduction to Engineering Design as demonstrated by Kyle Holsten, accompanied by Dane Smith, Damon Vallad and Zach Morgan. The Replicator heats up to 230 degrees so it can use the filament strands to reproduce an engineering design, Holsten explained.



SHANNON WALKER

"It (engineering) really teaches you how to be creative. There are project guidelines but you can put your own personal touch on it."

— SHANNON WALKER, SOPHOMORE

PLTW COURSES
at Blackford High School
Intro to Engineering Design
Principles of Engineering
Civil Engineering
Architecture

Above Left: Engineering teacher Frank Jackson assists sophomore Ethan Shelton in making adjustments to his project. "The light sensor wouldn't register the constant value that we needed," Shelton said. "Problem solving - that's the whole 'thing' of it."

Above Right: Teammates Adam Jennerjahn and Tarrin Best coordinate the computer program with their equipment to demonstrate how their project successfully sorts the marbles. "Working with the higher end computer programs also helps me in physics class," Jennerjahn said.