

NEWS

Leading the Way to the future

Pre-engineering course helping students

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WATERLOO

A cluster of doohickeys assembled from what looks like the world's fanciest Erector Set, designed to sort colored marbles, may be a humble beginning.

But some gifted Waterloo High School students may take what they're learning in the district's newest class to great heights.

Local business leaders last week got a chance to see the future they are helping make possible at a special Waterloo Chamber of Commerce meeting at the high school library.

Center stage was Principles of Engineering, a course now

taught by ag and industrial arts teacher Tim McDermott. It is the first class offered locally through Project Lead the Way, a nationally renowned program started more than 20 years ago in New York to improve math and science education.

"We gave them a base plate and 13 kits with little parts that look like souped-up Lego's. What you don't see right away is a little box that is an interface that connects with a computer and will set this in motion," McDermott explained.

"I'm hoping to use this experience to apply toward an architectural degree at (Southern Illinois University) Carbondale," said Louis Bourgeois, one of the students who demonstrated his

work for the Chamber.

"Working on the (Computer Aided) D(rafting) system is like an extra step up for a major in architecture and a career," Andrew Biffar, another student who participated, said.

McDermott explained the district is attempting to turn the Lead the Way classes into college-credit courses, but that hasn't been accomplished yet.

"The next project will be with simple machines—levers, pulleys, incline planes, wedges. They'll get a one-by-one sheet of plywood on which they will build five simple mechanisms that transfer energy from the starting point on through 10 different work stations," McDermott said.

The cutting-edge curriculum

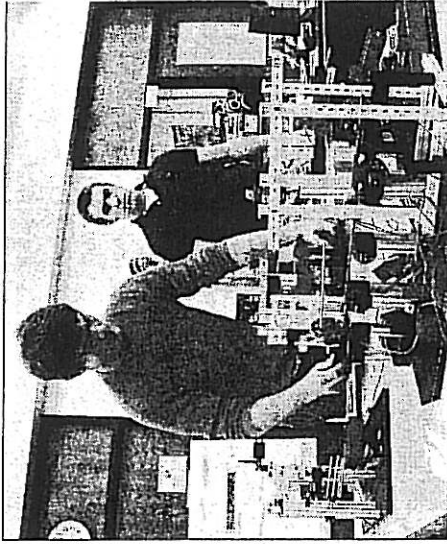
had its genesis at a meeting of school district officials and a group of local engineering professionals that included Kim Walster, Craig Hearn, Doug Kinzinger, Rodney Linker, Larry Rhutasel and Ryan Hunsaker.

"They were there from the beginning," District Curriculum Director Dottie Barbeau said.

"The next step was to secure a community partner so we could apply for the \$60,000 grant to start the program. Most school districts partner with their local chambers of commerce and when we approached (Director) Debbie Ruggieri and (President) Julie Whelan, they were very supportive," Barbeau said.

Barbeau explained the grant requires a community partnership to ensure ongoing technical support and encouragement.

"We are considered a



JOE LEICHT P
Waterloo High School students Louis Bourgeois and Andrew Biffar demonstrate the pre-engineering project they have been working on during Principles of Engineering, a course now taught by ag and industrial arts teacher Tim McDermott.

Governor's School. Only six in the state have received this grant to start a pre-engineering curriculum. Next year, we will add digital electronics third year we will add bio-neering and the fourth, architectural engineering," she :