

# James Buchanan High School students learn manufacturing first hand

By BRIAN HALL Staff writer

MERCERSBURG -- James Buchanan High School students took a simple idea and expanded it from computer design to finished product.

Then they found a practical approach to put their work into large-scale production -- develop a manufacturing assembly line.

Erin Martin's fundamentals of manufacturing and CADD course used computer-aided drafting and design software to design a small crate made out of unfinished pine.

It ties directly to the curriculum.

"They were drafting on the computer their composite project," Martin said. "From there, they each produced a single crate using single item manufacturing. After each produced a crate from single-item manufacturing, we looked at the best way to mass produce it -- looking at fixtures and templates to see if we were able to do a production run."

Once a design was established, students created a crate. They've built more crates -- which measure 16 x 12 x 13 inches - - as orders have rolled in.

Students also had to develop a marketing plan, which included posters in the high school, descriptions of the product and placing fliers in businesses owned by parents in the community. They also sent a mass e-mail throughout the district.

"One of the most interesting things is after releasing the e-mail, within the first 14 minutes we sold 31 crates via e-mail," Martin said.

Now 58 have sold.

Martin said the project also incorporated math skills, problem solving and logical thinking.

The project, titled Just In Time Manufacturing, uses lean manufacturing methods.

"We didn't have any expectations (for how many would be sold)," Martin said. "We called it Just In Time Manufacturing. Until your order is placed, no material is cut. Nobody's order is cut until you tell me you want one. There's no waste in the end and no inventory for students to track."

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