



Photos by Larry Winget

Max Rivera, woodshop teacher at Sierra Grande High School shows off the workings of a computer numerically controlled (CNC) wood cutting table. Computer designs produced on a computer assisted design program are transferred to the CNC table, which is then capable of making several cuts on each piece of wood for any project.

## Students make money making cabinets

### Kids build and sell hand-made oak cabinets

By LARRY WINGET

BLANCA — "I just love what these vocational programs can do for kids," said Sierra Grande High School woodshop teacher Max Rivera, while talking about the latest development for his school's woodshop class. Sierra Grande serves Blanca, Fort Garland, and northern Costilla County.

The Sierra Grande first year woodshop students designed, built, finished and marketed 40 bookcase cabinets, with proceeds going toward more equipment for their school and a supply of stock wood "to keep these kids busy" next year. Rivera said 22 students



Sierra Grande High School wood shop teacher Max Rivera shows off a medallion designed and manufactured in his classroom. The high-grade plywood piece shows a chisel, wooden mallet, and compass, inside the school's name.



Freshman Michael Espinosa, left, and junior Sergio Fierro display one of 40 red oak cabinets designed and built by SGHS first year woodshop students. The cabinets were made and sold as a fund-raising project for the school's woodshop program.

were involved in making the cabinets. The cabinets are made of red oak. They stand some 30 inches tall, are 24 inches wide, and feature two adjustable shelves.

Rivera and his volunteer shop teacher's aide son, Philip Rivera, use some of their own equipment to give Sierra Grande students a look at modern woodshop methods. The two operate a woodworking shop in San Luis.

The bookcases were designed on a computer; using CNC-computer numerically controlled-design programs and the initial cuts of material for the cabinets were then done by machine, using a CAM-computer-aided manufacturing-cutting table. After the machine cuts were made the students did the rest of the woodworking, assembly, and finishing. The students then went to Valley business

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Max Rivera, right, Sierra Grande High School's woodshop instructor and advanced shop students Dariana Roybal, Sergio Fierro, and Michael Espinosa stand in front of a number of red oak bookcase cabinets designed, constructed and sold by Sierra Grande woodshop students. Forty of the pieces were built and sold for \$65 each to benefit the SGHS woodshop program.

## Wood

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people and pitched their work for sale. "Some of them were a little shy in making a presentation, but they made the effort," Rivera said. According to Rivera, after the work progressed and the prospective customers began seeing the finished product, several of them ordered additional pieces.

"We're heading to an arrangement where the kids have their own non-profit business. I'm trying to teach them about costs accounting, taxes, computer use in the

woodworking business," said Rivera. He said he is trying to show the shop students how mathematics, art, and sound business practices work combine in the working world.

For years, Rivera has been able to receive donated wood stock for his students, who have not had to buy wood for seven years. "We use the money we save for more equipment," said the shop teacher. And the project to make and market the bookcase cabinets is meant to raise money to keep the program going. "I want them to have a good program in place after I retire," Rivera said. He began teaching at SGHS part-time, after the school lost a teacher.

"Then they asked me to stay" and he has been there for the last 10 years.

Rivera said he believes his school shop is already the best one in the Valley and he is willing to share with other schools. He said if any school wants to come and see what he's doing in woodshop, they are welcome see what he is doing and he is willing to teach them, too.

Rivera said some students don't do well with academics, but they learn and progress through vocational programs. He mentioned one young man who was in trouble at school, used bad language, and treated the teachers badly. "This program was a total turnaround for him," said Rivera. "He came in here, saw what he could do with his hands and now he has graduated from high school and has his own little shop."

The project to build and sell the cabinets was meant to address a lack of funds in the SGHS woodshop and teach the students how math, art, design, construction, and business practices all fit together to make successful enterprise.