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## Functional learning : ASC students exhibit creations

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ALFRED — From an automated barbecue sauce maker to an ancient steam engine designed by the Greeks, Alfred State College seniors put their lessons to use during the school's Demo Day Friday.

### HIGHEReducation

The students, all part of one of three programs offered by ASC's Electrical Engineering Technology Department, were responsible for all phases of their project from coming up with ideas to ordering parts and meeting self-imposed deadlines. The aim was to teach students about project management.

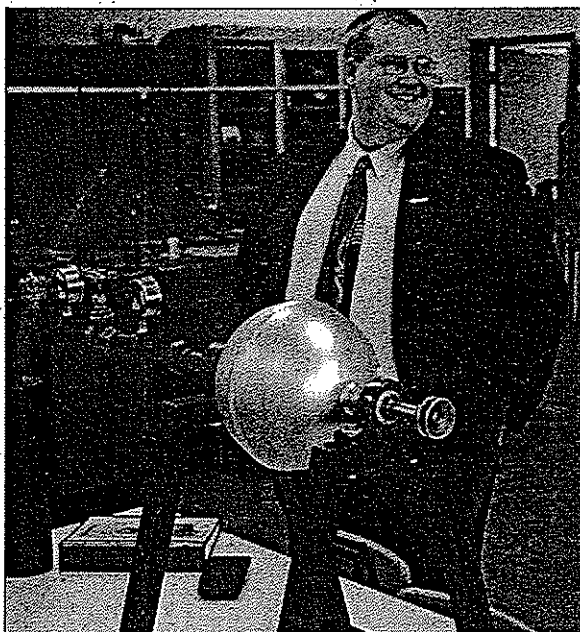
"I love it because it's all about applied technology," said ASC President Uma Gupta while touring the exhibits Friday afternoon. "They take what they learn in the classroom, and they come up with some new and interesting things."

Gupta hopes some of the students will patent their ideas. While many students exhibited new ideas and technology, 21-year-old Dave Snyder of Coudersport, Pa., looked to the past for his project. He built a modern version of an ancient Greek steam engine called an Aeolipile.

"It's not really much of a practical device," Snyder said. "It's a novelty. It's not a very efficient type of engine."

Snyder, however, wasn't looking at efficiency. Instead, he wanted to imagine what the ancient Greeks could have done with the rudimentary engine if they knew what they had. It could have easily been used to move water or the gears of a mill, he said.

Heated water produced steam that entered the device



LYNN BRENNAN

Dave Snyder of Coudersport, Pa. shows off his modern version of an ancient Greek steam engine, the Aeolipile, at the Alfred State College Demo Day Friday.

— a ball with two pipes sticking out of it — and spun it around. Unfortunately it was seen only as a toy.

Snyder points out the steam engine revolutionized industry about 300 years ago. By comparison, the Aeolipile — which derives its name from the ancient Greek god of wind Aeolus and their word for ball, "pila" — first appeared more than 2,000 years ago.

Snyder used compressed air to power his machine Friday, but also is developing a boiler to power it.

Fellow ASC students Joseph Dagastino, Todd Morris and Andrew Milbrandt had a more modern creation on display. They developed a solar concentrator with a two axis tracking system. The device uses solar energy to heat a home's hot water tank. It's like a common flat solar panel, but 10 times as strong.

The device also can track

the sun across the sky, turn itself off and over to protect it during the night or stormy weather. It can be manually adjusted to match seasonal changes as well.

"On a larger scale I know in California they have fields of concentrators that can heat a whole prison," Dagastino said. "Solar rays come in and reflect off the aluminum. It heats copper tubing, which has water running through it."

"We finally just completed it this morning," added Morris, who noted they began work on the project in October 2005. "I really had no idea about solar energy before doing this project. I really learned a lot."

ASC professor Milton Brown was pleased with his students' work.

"It's great timing because of the energy crisis," he said, "and they did an excellent job."