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EPCOT Drafting and Design instructor Tammie Clark operates the 3-D printer that is printing face shields for Jackson County Schools employees.

County Schools 3-D printing face shields for employees

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Jackson County Schools are using an innovative way to ensure the protection of its employees and students. The Earnest Pruett Center of Technology (EPCOT) is 3-D printing face shields for employees of the Jackson County School System.

This project is part of a collaboration with the University of Alabama Huntsville's Systems Management and Production (SMAP) Center. Jackson County Schools has partnered with SMAP for several years. It started as a test bed for school safety. SMAP Center Director Dr. Gary Maddux said schools are facing a whole new enemy with COVID-19, and they are still going to be focused on school safety.

SMAP began making face shields and supplies for medical personnel all across North Alabama.

"When you're facing a crisis like this, people feel helpless," said Maddux. "We want to help people feel safe in their work environment."

Maddux said 3-D printing these face shields would get EPCOT jumpstarted where it could soon become self-sufficient. He said EPCOT was one of the first tech schools in the state to have this project.

Maddux called the project a "win", and he said the model could be used throughout the state. He wants to spread the technology to the hot spots in Alabama.

Maddux sent two of his SMAP employees to EPCOT to set up the printers and get the project started. Luke Forkum and Jarvee Liles helped EPCOT get the project on its feet for Jackson County Schools.

The former Jackson County students came up with a stacking technique to help mass produce the face shields.

"It was really nice to be helping Jackson County," said Forkum. "The pandemic is giving students the opportunity to innovate and use new things to help people. There is some bad stuff going on in the world, but through trials comes innovation."

"It's a neat project," said Liles. "I like being able to help the community, and it is nice knowing they care about teachers and students."

Forkum graduated from Skyline High School, and Liles graduated from Pisgah High School. Both are seniors at UAH.

EPCOT Drafting and Design Instructor Tammie Clark has been making the face shields. She said they are making them mainly for workers who come more in contact with students in a one-on-one setting like aides

and pre-k through third grade teachers.

"The printer will be running nonstop all year long, and we'll make them for the rest of the employees throughout the year," said Clark.

Each high school in the county has a 3-D printer, and they will be making their own once the school year starts.

EPCOT prints the piece that holds the face shield. When Clark comes in in the morning, she starts a stack of three masks on the printer. By the end of her shift, those pieces will be finished printing. She said it takes about eight hours to print the three pieces. Before she goes home, she starts a stack of 7, and she said those are finished when she gets to work the next morning.

The shield is a transparency film for an overhead projector.

Clark said they have made approximately 200 face shields to get the schools started.

EPCOT Principal Jason Davidson said the partnership between UAH and Jackson County Schools has always been rewarding.

"The UAH SMAP team has worked on this Med Net project for several months, and we are fortunate to be part of the process," said Davidson. "The project has developed a way to merge nursing and engineering technologies."