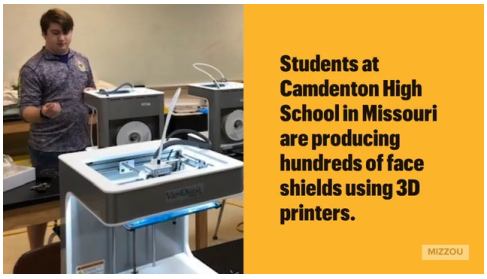
Science APRIL 9, 2020 11:37 PM AEST

Printing 3D equipment to fight COVID-19

COLUMBIA, Mo. – With health care workers at the front lines of the coronavirus pandemic, the demand for personal protective equipment is at an all-time high.



To address this challenge, students at Camdenton High School are using 3D printers to help produce hu of face shields for health care workers at Lake Regional Hospital in Osage Beach, Missouri. The printers provided by nearby Camdenton Middle School, which received them as part of a $16 million grant from *College of Education's* eMINTS National Center.

"To see the face shields being used by medical professionals is encouraging and the reaction has been s positive," said Zane Foulk, a senior at Camdenton High School and member of the Camdenton For Inspir and Recognition of Science and Technology (FIRST) Robotics team. "We have been making roughly 40 fac a day and will keep going until we run out of material or the hospitals get what they need."

As COVID-19 continues to spread, what started as a simple ask from Lake Regional Hospital for 150 face quickly snowballed into additional requests from first responders, dentist offices and even U.S. troops s overseas in Afghanistan.

Timeline

Life after flattening curve will not be business as usual
5:14 AM AEST

High jobless rates expected but improvement seen in 2nd half of 2020
5:14 AM AEST

Dana-Farber Cancer Institute and Jimmy Fund Establish Emergency Response Fund
5:12 AM AEST

Researchers design ventilation hoods for hospital beds to help contain COVID-19 spread
5:10 AM AEST

'Freeze frame' chemistry to unlock drugs of future
5:07 AM AEST

A glimpse into future of tropical forests

5:06 AM AEST

World's most complex microparticle: A synthetic that outdoes nature's intricacy

5:02 AM AEST

U.S. President Trump Announces Intent to Nominate and Appoint Following Individuals to

4:54 AM AEST

Cross to bear

4:52 AM AEST

Youths arrested after pizza shop burglary

4:48 AM AEST

Statement from Downing Street 9 April 2020

4:41 AM AEST

Canada lynx disappearing from Washington state

4:41 AM AEST

CRTC update on its proceedings further to COVID-19 pandemic

4:40 AM AEST

False-negative COVID-19 test results may lead to false sense of security

4:36 AM AEST

Tom Meuser featured in Healthline article about caring for loved ones with Alzheimer's during

4:28 AM AEST

"Our small, good intention turned into something much larger," said Sherry Comer, who coaches the *Ca LASER 3284 FIRST* Robotics team and serves as the school district's after-school director. "It's been a colla effort, and the students were eager to jump at an opportunity to help the community."

The grant project, which started in 2018, trains middle school teachers to incorporate technology, such a printing, into their classrooms. Michelle Kendrick, program coordinator for eMINTS, Enhancing Missouri' Instructional Networked Teaching Strategies, collaborated with Johannes Strobel, a professor in the Coll Education, to partner with 27 middle schools throughout rural Missouri and Kansas.

"We are teaching students that they are not just consumers of new technologies, but they can use it to p something that is helpful and can save lives," Strobel said. "This is a time to organize and mobilize our re to support the health care workers in our communities."

Strobel has been working with 16 3D printers in the College of Education to prototype new designs and face shields locally for MU Health Care, Boone Hospital and nursing homes. He and Kendrick are workin the Department of Education to share the 3D printing experiences in Camdenton with other eMINTS par middle schools throughout rural Missouri and Kansas so that they can use their own 3D printers, which been provided by Kansas City Audio-Visual through the grant project, to join the effort and amplify face production rapidly.

In addition, Kendrick and Strobel are developing curriculum for middle school teachers that highlight the coronavirus pandemic response in relation to its impact on science, technology, engineering and math (well as skills like problem-solving, teamwork and empathy.

"By tying this health crisis into the students' curriculum, they are able to see that the work they are doing printers is having an immediate and direct impact on a real-world situation," Kendrick said. "In addition t sparking interest in science and making schoolwork more engaging, we hope this experience teaches yo students about empathy by asking them to consider the needs of health care workers and the sacrifices have made to protect us all."

Funding for this project was provided by the eMINTS National Center and Kansas City Audio-Visual. The is solely the responsibility of the authors and does not necessarily represent the official views of the fun agencies.

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/Public Release. View in full *here*.

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