

Local high schoolers turn pandemic printers to aid PWC medical workers

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April 13, 2020. Manassas. Va - Two Prince William County High schoolers are 3D printing protective face shields and face mask extenders in their Manassas homes to support county health workers battling the CoronaVirus.

Max Lawson and Ethan Carr, friends and 16-year-old sophomores at Colgan High School, have turned their high-tech hobby into a pandemic printing effort to help ease local shortages of medical equipment.

“It’s about service,” said Lawson, an aspiring engineer.

Since April 9, Lawson and Carr and their friends have printed, assembled and delivered forty two (42) 3D-printed face shields to Sentara Northern Virginia Medical Center, according to Michele R. Eckhardt, Sentra’s Director of Physician & Community Relations.

On April 8, Lawson was contacted by local physician and PWC School Board Chairman Babur B. Lateef, M.D., about using his 3D printers to help provide face shields for fellow medical professionals hindered by nationwide shortages of protective equipment.

“It’s not just the hospitals, but also care providers in local practices,” Lateef said.

“Equipment like this is in very short supply and there are urgent, immediate needs. I knew Max was a 3D printer and called to see if he might be able to help. By that night, he had a working prototype in production!”

Max’s friend, Ethan, quickly joined forces with Max and they also enlisted the help of fellow printers and classmates Solomon Ralston and Aiden Patterson to help boost production. Over the next several days, the boys printed and delivered 42 protective shields and more than 20 N95 face mask extenders.

Using open source designs available on the internet, the boys printed simple but sturdy plastic frames. With help of their parents, they acquired “field expedient” parts including plastic binder sheets, Glue, clips and elastic which they then used to assemble the shields.

The boys have received more than \$900 in community donations to pay for printer filament and other supplies. They are also receiving requests for face shields from friends and neighbors who work in nursing homes, the airline industry and medical facilities around the country. They are filling orders as quickly as they can.

Max has posted a video on YouTube advising other like-minded students how to print and build the face shields so that they can make them in their own communities.

Both boys have been avid 3D printers since 2017 when they founded EMP (Ethan/Max printing) to start a “Fidget Spinner” business. They are both enrolled in Project Lead the Way (PLTW) High School Engineering Program - a nationally recognized program that offers an enriched sequence of courses to prepare students for college level engineering courses.

“I’m in awe of how our country is singularly focused on beating this pandemic,” Lateef said.
“Each of us can make a difference, and these boys are leading the way.”

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