

## SDOC Design & Technology Team Makes Thousands of Pieces of PPE Using 3D Printers

By: Ananya Holland

The Chatham Education Foundation applauds the Design and Technology teachers in the School District of the Chathams for their outstanding ingenuity and compassion during the COVID-19 pandemic. Led by D&T curriculum supervisor Danielle Dagounis, teachers Jessica Liatys, Kyle Kermick, Amanda Turton, Jason Mariano, and Julianna Ryan, along with SDOC students, have come together to produce and supply over 2,500 local hospital workers and health care professionals with PPE such as masks and face shields that they made using 3D printers.

Just days after schools were closed as of March 16th, a group of Chatham teachers realized that their 3D printers were lying unused in their empty classrooms. It occurred to them that if they could bring these printers home and create their own remote makerspaces, they could assist the frontline efforts in their own communities right from their own homes while social distancing. It became their mission to protect those who so tirelessly and selflessly have protected thousands of people in our own community. If companies like GM, Dodge, Tesla, and Lamborghini were able to turn around their manufacturing missives, why not engage the world of makers. And who better than our own Chatham Design & Technology teachers!

Using 3D printers, some of which have been granted by the Chatham Education Foundation, Ms. Dagounis led her team in innovating and following instructions set by thousands of makers before them to create thousands of face masks and shields which they have distributed to hospitals in Morris, Bergen and Essex counties. Based on feedback they are continually receiving from healthcare providers, they have been able to optimize and improve upon the design, ensuring comfort and a firm seal.

The masks are equipped with removable filtration pads. In addition, the items are reusable.

When the Design & Technology teachers began running low on supplies such as filament, replicator grip surface, extruders, transparency film and tape, Chatham Education Foundation stepped up to grant the money to purchase more prototyping supplies. Appreciative of the grant, Ms. Dagounis says, “We are so very proud of the wonderful work that our district Design & Technology teachers have been doing to help our community in this time of need. The thoughtfulness and generosity of this Chatham Education Foundation grant will enable us to continue to leverage our 3D printing technology to help our frontline healthcare workers during this pandemic.”

Chatham Education Foundation is filled with gratitude for its teachers and for the opportunity to award a grant that will help sustain the PPE production efforts and protect our healthcare workers.

The teachers have already been sharing the design thinking and engineering processes with students, who have begun to assist them. Students at every grade level will be impacted by this grant as they learn about the engineering and design methodologies at work in this powerful project that has helped innovators rally around their communities in a real life setting. Chatham Education Foundation commends everyone involved with this initiative and all makers everywhere. The Chatham Education Foundation looks forward to continuing to fund the needs of our front liners.

*The generous support of our donors allows the Chatham Education Foundation to fund innovative grants for the SDOC's six public schools. Grants are designed to cover programs not covered by the school district's budget. In addition, donations to Chatham Education Foundation help fund supplies for the school district's 3D printers and equipment to be used to provide PPE to Frontline Healthcare Workers during the COVID-19 pandemic, and will help fund resources needed to help students and educators return safely to school. The Chatham Education Foundation is a 501(c)(3) organization, and all donations are tax deductible.*