

D211 POST: CONANT H.S. TEACHERS MAKE PPE FOR MEDICAL PROFESSIONALS



James B. Conant High School Science Teacher Dave Torpe and Applied Technology Department Chair Eric LeBlanc have been occupying their time recently doing what they can to support medical professionals combating the current COVID-19 pandemic. Due to social distancing, Torpe and LeBlanc have been working on different personal protective equipment (PPE) designs from their homes.

LeBlanc said he was inspired to begin work on this after seeing Conant High School Principal Julie Nowak and others packing meals for students across the District.

“You could tell from the photos I saw that she was putting her heart and soul into D211 families and it really made me want to do more,” he said. “I learned about a movement through another staff member at Conant, Brigit Cain, about an open source design from a group of doctors in Montana that made and shared online a design for a surgical mask.”



Conant Applied Tech. Chair Eric LeBlanc displays a 3-D printed mask.

LeBlanc reached out to engineers in the discussion group on the website

www.makethemasks.com. After getting permission from school administration, LeBlanc retrieved a couple of the school's 3-D printers and used the pattern from the engineers to begin making masks.

He added that while the masks have not yet been approved by the FDA, there is strong evidence about the effectiveness of this design.

While LeBlanc has been working on masks, Torpe has been working on creating face shields. He said he was able to find a pattern at <http://3dverkstan.se> and current information on the clinical review can be found at <http://3dprint.nih.gov/discover/3dpx-013306>. Torpe said he came up with the idea to make the masks after reading about the need in the online 3-D community.

"There were some posts in the 3-D community that had some people designing solutions for medical professionals," he said. "While I was following this, I was also hearing about shortages of PPE, and how our applied tech department donated some of our unused PPE."



Conant Science Teacher David Torpe demonstrates a face shield he built.

Following a discussion with Conant High School Science Department Chair Sharon McCoy, Torpe began printing PPE equipment that was in demand. He then retrieved some 3-D printers from the school and began using them to print the

components needed to assemble the face shields.

Torpe added that each shield takes approximately one hour to print and five minutes to assemble. He added that after looking into the design he decided to use, he found it was one of the more popular designs.

Torpe and LeBlanc said they are engaging students in concept designs and instruction of assembly as part of the students' e-learning experience. The two teachers also are making arrangements to donate the completed projects to local hospitals.