## This group of students in NJ are working every day to create PPE for hospitals, classmates

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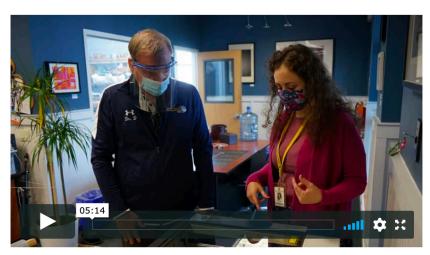
ENGLEWOOD — Throughout the pandemic, access to personal protective equipment has been a struggle for many health professionals and first responders.

Students at Dwight-Englewood are hoping to lighten the load.

A group of students from Dwight-Englewood, a private pre-K-12 school in Englewood, are working 24/7 to provide personal protective equipment, including thousands of ear savers and face shields, to local hospitals and their fellow students.

Colleen Larionoff, robotics coach at the school, said that since April, the students have donated more than 4,000 ear savers and 1,000 face shields. Ear savers are plastic strips that attach to the shields and go behind the head to relieve pressure on the ears.

In addition to local hospitals, private doctors' offices and the Dwight-Englewood community, the personal protective equipment has been sent to other areas of the country, such as the Navajo Nation in Arizona and Gouverneur Health in New York City, Larionoff said.



"Some of them have put in hundreds of hours doing this and assembling everything," she said. "I've been impressed with how passionate these students are."

The project began when rising sophomore Sujan Munver requested access to a 3D printer on campus to start printing face shields and ear savers. School officials did not want students to come to campus, so staff members dropped off a 3D printer at Munver's house.

"My father is a front-line worker, so it really made me feel connected to all the work that he's been doing and I really wanted to do my part," said Munver, an Englewood Cliffs resident.

He sent his first set of masks to Hackensack University Medical Center, where his father worked, to get some feedback. The designs Munver had grabbed from the internet created face shields that were "a little too heavy and weren't comfortable."

Munver decided he would need to figure out his own designs. He spent about 30 hours creating a design that would provide a more comfortable fit. His younger sister, Radha, also helped with a new design for ear savers.



Ben Tauser, a junior at Dwight Englewood, is one of the student who has 3D printed face shields and ear savers for local hospitals and his own classmates. Photo Courtesy Of Elizabeth Tausner

As of September, Munver had printed more than 4,000 face shields and ear savers, which he sent to other local hospitals, including Englewood Health and The Valley Hospital in Ridgewood; first responders in Englewood Cliffs; and private dentists and physicians in the area.

"I was reading the news, and it was a little bit disturbing how people have been suffering through this pandemic and haven't been able to get the PPE that they needed," Munver said. "This is something I could personally do to help."

It takes about an hour and a half to print a face shield, and Munver leaves the 3D printer running 24/7, even when he's sleeping.

A couple of weeks after he began printing PPE, other students at Dwight Englewood offered to help. The school provided 3D printers to five other students, who worked together as the Dynamic Equanimity 3D Printers Initiative, or DE3D, Munver said.

"The name reflects the good deeds that we are doing," he said. "The school has been very supportive of this project and donated a lot of materials and supplies. It's been really great."

Getting the face shield ready for use is a collaborative effort. After Munver and other members of DE3D print the visor part of the face shields, Larionoff laser-cuts the plastic front on the school campus, while members of the middle school robotics team assemble all the pieces from their homes.

Dwight-Englewood began the school year Tuesday with a hybrid model that has different cohorts of students attending school in person and virtually. Face shields and ear savers were available for all students and staff who requested them, Munver said. He's even modified his design for the preschool students to have shields that fit more comfortably on their faces.

Ben Tausner, a junior who helped with the printing, said he was "more than eager" to assist and put his skills from the school's robotics team to good use.

AJ Campbell, a senior at Dwight-Englewood, had his own personal 3D printer, allowing him to double his output when the school let him borrow one of its printers. He printed nine ear savers every two hours and was able to donate the

equipment to local hospitals, his grandmother's nursing home and family members who had to wear masks at work.

"I thought this was a great way to make an impact," Campbell said. "Doing something active to help our community and our state and help keeping doctors safe really spoke to me."

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