

# NEBRASKA

## Columbus Public Schools Join Community in Personal Protective Equipment (PPE) Production

### Submitted by Nebraska Department of Education

The idea came from a family member halfway across the country, but its impact, and those who are helping create it, will be felt in Columbus.

Just days ago, Behlen Custom Fabrication's general manager Heather Macholan had been discussing with her family how her cousin, engineer John Eberly of Seattle, WA, and other engineers were working with emergency room doctors to design masks that provided the necessary protection for healthcare workers. Macholan was given designs and instructions on Sunday and immediately reached out for help.

And she received plenty from Columbus.

"Everyone always seems to come through. It was just last year with the floods, and 'Nebraska Strong,'" Macholan said. "It's in our nature to help, to ask 'how can I help,' and 'what do I have?'"

Macholan was quick to acknowledge the response from schools, the East Central Health District (ECHD), and Columbus Community Hospital.

"We reached out earlier this week and the response has been awesome," she said. "Work started with the community. On Tuesday, we reached out to the local high schools and colleges and put a plan in place."

At Columbus Public Schools (CPS), middle school assistant principal Jordon Anderson, high school science, technology, engineering, and math (STEM) teachers Adam Whitmore and Joe Krysl, and superintendent Dr. Troy Loeffelholz made the arrangements for printers to be used.

"This is why we started our STEM program, to offer students and staff real-life experiences," Dr. Loeffelholz said. "In this case, we're helping those in need by making these masks."

Macholan also acknowledged the support of Betsie Rall from Scotus Central Catholic, Ben Wilshusen from Central Community College, and the team at Behlen: Jacob Forbes, Dan Broekemeier, and Juli Thelen.

CPS is operating its printers at both the high school and middle school with each location estimating upwards of 20 masks a day. Scotus Central Catholic and Central Community College, as well as Behlen themselves, are helping with production.

"Joe Krysl and I are running the 3D printer lab at the high school to produce part of PPE being worn by medical professionals," Whitmore said. "This project is definitely unique. Most of the time I am dealing with mechanical and electrical situations and solutions not necessarily medical. Hopefully, this can make an impact for someone."

In total, Macholan believes 30 to 60 finished products can be produced daily.

"We got these plans out Tuesday morning and by (Wednesday) we should be rolling," she said. Behlen is providing the headpieces at cost, between \$3 and \$3.50 each.



The headpiece is printed from one of several possible plastics to prevent material shortages. The design is a universal size and is fitted with a plastic sheet cover that has been punched for a three-ringed binder. This allows for different thickness of plastics to be used for different hospital workers, Macholan said. Masks are secured by rubber bands, elastic, or velcro, giving flexibility to those on the front line.

“That’s the beauty. The framework can be used with any three-hole punched dividers or sheet covers,” she said. “This way we’re not telling them what (thickness) they need, or trying to guess.”

Currently, the masks are being produced for Columbus Community Hospital and the ECHD. Saint Francis Memorial Hospital in West Point has also expressed need.

“My guess is as you see the word get out that more high schools and colleges have this capability, you’ll have hands go up and more will be requested,” Macholan said.

While schools sit empty, it’s important to show students across the community that careers and knowledge in STEM can have an impact.

“What a message to tell STEM students about how science can help,” Macholan said. “They may not even think of it. I took a mask home and showed my kids, ‘Look at what we made today. Look at what help it can be,’ I said. It closes that loop.”