Duncan Students Design and Manufacture Face Shields for Medical Workers

Students Seeking Donations to Keep Producing the Shields

What: Duncan Polytechnical High School manufacturing students have designed and produced more than 500 face shields to protect local medical workers

Availability: Duncan teacher Douglas Urabe available virtually for interviews

Duncan Polytechnical's junior Computer Integrated Manufacturing class has been working hard to design and produce face shields needed by the local medical community. They have donated 529 shields to facilities with the greatest need, as well as to district food services employees who are preparing and distributing meals to students and families.

The project began when instructor Douglas Urabe learned from industry partners that 3D printed headbands were needed for face shields. He knew immediately his students would want to help. After identifying that 3D printing the headbands was time consuming, the class decided to take on the challenge of creating a new headband design that could be manufactured and distributed more quickly. Each student designed their own prototype using 3D modeling software on their computers and identified which equipment in the manufacturing shop could be used to produce their design -- all from home. After a series of virtual meetings to discuss and refine designs, the class selected the top designs and Mr. Urabe created the prototypes. Using the new design and process, Mr. Urabe could create 56 headbands in the same amount of time it took to 3D print just one using the original process.

The prototypes were then tested by Duncan staff and a nurse at St. Agnes Medical Center. After feedback, the students revised the design and production began. Mr. Urabe fabricated and gathered materials and distributed them to students, who assembled the face shields.
Duncan is seeking donations to purchase more materials and produce more shields. Donations can be made at paypal.me/duncanpoly using a credit or debit card or send a check payable to Duncan Polytechnical High School to Duncan at 4330 E. Garland Ave., Fresno, CA 93726. Please make sure to include “Face Shield Project” on the note or memo-line of the PayPal donation or check.

Medical facilities in need of face shields can submit a request to Duncan at https://forms.gle/LU9cZsCxEEuwcq6

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