



PROTECTING OUR STUDENTS AND STAFF

The opening of schools for 2020-21 has not been business as usual.

Schools are having to balance the need for educating students with the added challenges associated with COVID-19 precautions.

For schools opening their buildings to students for in-school learning, the fundamentals of wearing masks, social distancing, plexiglass guarding and cleaning protocols are the foundation of risk mitigation strategies.

What more can be done? The **Greenwood Lab School PTA** asked this question and came to the conclusion that implementing mobile air cleaners in school spaces would be a great investment to mitigate risks associated with airborne viruses.

The decision was made to purchase 30 Cook **Mobile Air Cleaners** (MAC fans).

OVERCOMING OBSTACLES

Greenwood Assistant Director, Dr. Ron Snodgrass related the struggles they experienced at the end of the previous school year. 'We were forced to close our school facility in March for the remainder of the school year. While we continued with our remote education plan, it was hard on the teachers and the students.' He went on to say, 'All children need a routine. Students need to be with their teachers and their friends. We are social creatures. Our goal this year is to do everything we can to remain open for in-school learning.'

'OUR GOAL THIS YEAR IS TO DO EVERYTHING WE CAN TO REMAIN OPEN FOR IN-SCHOOL LEARNING.'

DR. RON SNODGRASS - ASSISTANT DIRECTOR

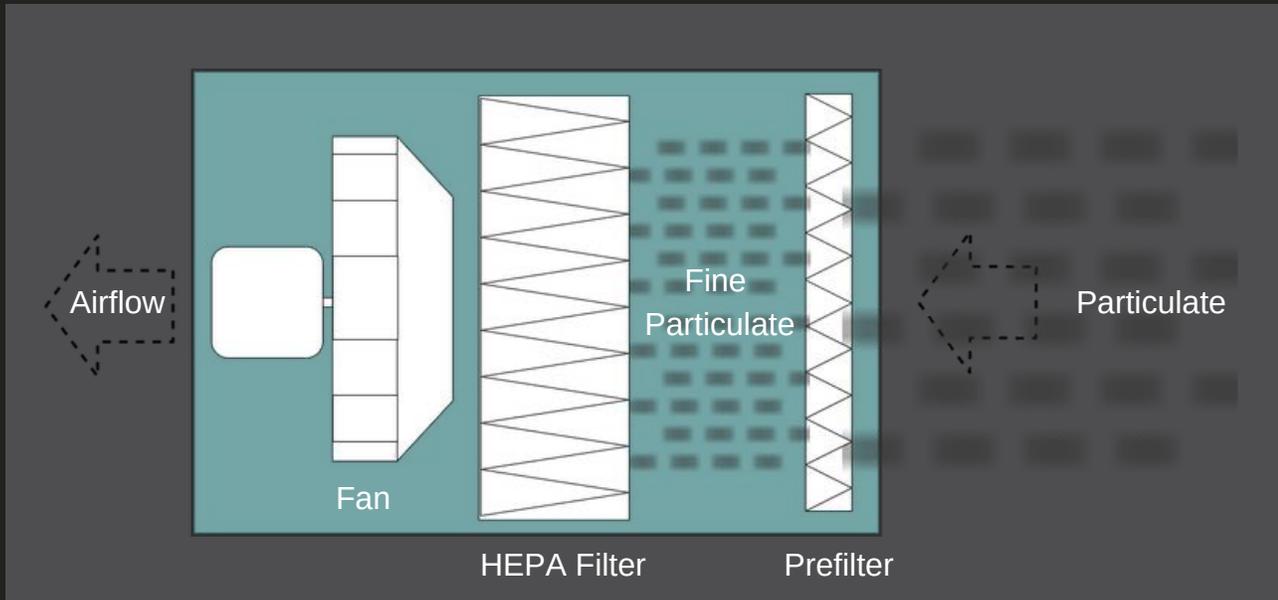
'We are implementing all the tools we have at our disposal', Snodgrass said. 'We are wearing masks, social distancing, following cleaning protocols, taking temperatures and other precautions. We see the Cook MAC fans as another tool to keep everyone safe and in school. We have been open for several weeks and have not had one child test positive for COVID 19. Our goal is for that to continue.'

MAC FANS - WHAT THEY DO



COOK MAC Fan

COOK MAC fans are portable fan/filter units that are mounted on casters to make them easy to move from space-to-space or within a space. The key components are a fan, pre-filter, and a final HEPA filter. Additionally, they include a service switch and a plug-and-cord.



MAC FAN CROSS SECTION SCHEMATIC

The pre-filter captures larger particles such as dirt and dust and the final filter captures small particles such as viruses, bacteria, mold spores and other allergens. These particles are captured in the filter where they become inactive and disintegrate. HEPA filters can capture particles as little as 1/10th the size of a COVID 19 particle.

SELECTION AND IMPLEMENTATION

The decision to implement mobile air cleaners is supported by the Harvard School for Public Safety in their recent publication 'Schools For Health - Risk Reduction Strategies for Reopening Schools - COVID 19' (June 2020) and by the ASHRAE Epidemic Task Force. Both recommend mobile air cleaners as part of an overall airborne virus risk reduction strategy. In the Greenwood case, MAC fans were selected to exceed 100 CFM per 250 square feet of classroom and also to operate quietly enough so as not to disturb classroom instruction. Ultimately, the MAC 2000 VF was selected as it could meet the classroom needs, but also be sped to be used in larger spaces such as commons areas, gymnasium, library and so on. These units have electronically commutated (EC) motors for energy efficiency and ease of control. The fans have casters, a plug-and-cord, a run-time indicator, service switch and on-board speed control

When asked how difficult it was to implement the MAC fans, Snodgrass responded, 'There has been almost no disruption due to implementing the MAC fans. You simply roll them into place, plug them in and turn them on. The teachers leave them on all day and they have simply become a part of our routine. There have been no complaints as they are extremely quiet.' Greenwood Director, Dr. Janice Duncan added, 'We love the Cook MAC fans. The teachers have had nothing but good things to say about them!'

OPERATION AND ADJUSTMENT

The maintenance of the MAC fans is simple and straightforward. Pre-filters need to be changed periodically and the fan speed is adjusted to move the appropriate amount of air for the space. 'The fans are so simple, I feel comfortable I can do what little is needed myself!', Dr. Snodgrass stated.



Dr. Snodgrass adjusts MAC Fan speed

'THE FANS ARE SIMPLE. I FEEL COMFORTABLE I CAN DO WHAT LITTLE IS NEEDED MYSELF.'

DR. RON SNODGRASS - ASSISTANT DIRECTOR

SUMMARY

Implementation of the COOK MAC Fans at Greenwood has gone very smoothly, with minimal disruption and has been readily adopted by staff, teachers and students alike. For the younger students, one of the MAC Fans has been dressed up as a bumblebee and affectionately nicknamed, 'Buzz'. The units are unobtrusive and have quickly faded into the background. All the while, these units are working constantly to filter viruses and other particles out of the air in the occupied classrooms and common spaces. The units require almost no maintenance. Pre-filter replacements and speed changes are so simple that any person on staff could do them.



'BUZZ' the Mobile Air Cleaner

MORE INFO

Cook offers 3 sizes of MAC fans, 500, 1000 and 2000 CFM. Features and options are similar for all. For more detailed information including brochure, flyers, submittals, white paper and more can be found at:

<https://lorencook.com/product/mobile-air-cleaner/>

LINKS TO REFERENCES

'Schools For Health - Risk Reduction Strategies for Reopening Schools - COVID 19' (June 2020)

<https://schools.forhealth.org/wp-content/uploads/sites/19/2020/06/Harvard-Healthy-Buildings-Program-Schools-For-Health-Reopening-Covid19-June2020.pdf>

'Filtration and Disinfection' - (August 7, 2020)
ASHRAE Epidemic Task Force

https://www.ashrae.org/file%20library/technical%20resources/covid-19/ashrae-filtration_disinfection-c19-guidance.pdf

