ASU's DIY Corsi-Rosenthal Box (C-R Box) Project Information Fact Sheet

Updated 3/4/2022

ASU's Clean Air C-R Box Project is a public health initiative to bring cleaner air into Arizona classrooms. The project aims to Increase awareness about the importance of indoor air quality and help every classroom have access to a portable air cleaner to remove airborne viruses, wildfire smoke, allergens, and air pollution.

Bringing cleaner air into Arizona classrooms!

Background: *Indoor air quality has a profound impact on infectious disease transmission. If we don't want to breathe it in then we need to remove it from the air.*

- SARS-CoV-2 transmits more easily in crowded indoor environments with poor ventilation. Airborne infection is 15-20x more likely indoors.
- Installing portable air filtration systems can significantly improve air quality in classrooms by lowering aerosol levels, which in turn lowers COVID-19 transmission risk.
- CDC, EPA leading schools of public health all recommend classroom air cleaners, but many schools can not afford to purchase expensive HEPA filters.
- Investments in air filtration and ventilation can reduce student absences due to illness – both during a pandemic and in more normal times. See, Lancet COVID-19 Commission Table 1. Additional benefits of higher ventilation and improved air quality in schools beyond airborne infectious disease transmission and full paper here.

How do the Corsi-Rosenthal Boxes (C-R Boxes) work**:** *C-R boxes have been shown to work as efficiently as portable HEPA filters at a fraction of the cost (@ approximately $70-80 per unit)*

- These DIY units use hospital-grade air filters, a box fan, and duct tape. It was designed by a renowned air quality expert, Richard Corsi. When the fan is turned on, they pull air through the filters and blow clean air through the top. As the air is pulled through the filters, the vast majority of virus-laden particles are removed.
- They have been tested extensively for safety and effectiveness and have been shown to work better than many of the expensive HEPA filters. The lower the concentration of particles in the air, the less likely they are to be inhaled through the lungs.
- Air filters should be used as part of a multi-layered mitigation approach. Masks, vaccination, distancing and upgraded ventilation/filtration will determine how well students are protected from COVID-19.

ASU's Role & the ASU Clean Air C-R Box Project: *This hands-on public health initiative helps reduce virus transmission and they are fun and easy to make!*

- Community members and ASU students are volunteering their time to build DIY air filtration units for schools across the state. We also work with teachers on STEM lesson plans and do community outreach to help schools and community groups organize their own box-building events. See recent media coverage here.
- ASU has access to world-class faculty experts, material resources, and lots of students. This project aligns with our charter to take responsibility for the health of the communities that we serve.
- Students benefit because they are applying their knowledge, gaining hands-on experience, all while having an immediate impact on the health of our communities.

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- Supplies have been generously donated by community members/organizations and by Home Depot stores throughout the state. We are also raising funds through ASU Foundation's Public Health Air Filters Campaign.
- Each unit helps to improve indoor air quality and reduce exposure to virus-laden particles.

Student Outbreak Response Team: *The C-R Box initiative is part of larger COVID-19 Community Response Team including ASU's Student Outbreak Response Team.*

- This Team works with state, local and tribal health partners to implement evidence-based public health interventions in communities across the state.
- The Team is led by Dr. Megan Jehn, an epidemiologist and associate professor of global health at ASU.

Building, studying, and deploying units to communities in need.

The Impact & End Goal: *We would like to increase awareness about the importance of indoor air quality and help every classroom have access to a portable air cleaner to remove viruses, allergens, wildfire smoke and air pollution*.

- The ASU Team has built more than **130 air units and counting.** These units are going to K-12 classrooms from **Tucson to Prescott Valley**. Over the last few months the team has hosted **four** "Boxathon" events at the Tempe campus. We are gearing up for another build event on April 2, 2022!
- Check out our Clean Air C-R Unit Tracker to see where our C-R boxes have been deployed!
- Community clubs, teachers, principals, and school support staff submit requests for units to the team and after the units are assembled the team hosts Drive Thru events for pick up and organizes delivery when possible.
- The Team is launching its new ***ASU DIY C-R Box Student Ambassador Program:*** ASU student ambassadors will provide support to help communities take control of their own environment by building their own units. This program is open to community members, parent groups, teachers/staff, principals, and student groups and clubs! To have a Team member contact you about this program please fill out this form.
- Watch 5th Graders Make DIY Air Purifiers for Entire School.

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How can others be a part of this important public health initiative?
Spread the word, donate, volunteer or learn more about the project by emailing asupublichealth@gmail.com or by going to https://bit.ly/ASUCRBOX

The ASU COVID-19 Community Response Team works with state, local and tribal public health partners to support communities that are disproportionately impacted by COVID-19.
website: https://shesc.asu.edu/research/projects/asu-covid-19-case-investigation-team
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