A Pathway to Healthy Schools:

Safety in the Age of COVID-19 and Beyond

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Build with Robots

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AT A GLANCE - Schools and Disinfecting

THE AUTONOMOUS DISINFECTING ROBOT

The most reliable, consistent, and economical method for routine disinfection.

Attendance increases by

2 days

per student with daily disinfection

(Journal of School Nursing, 2009)

What are the reasons why your child is currently doing school remotely?

Don't trust schools to keep children safe. **28%**

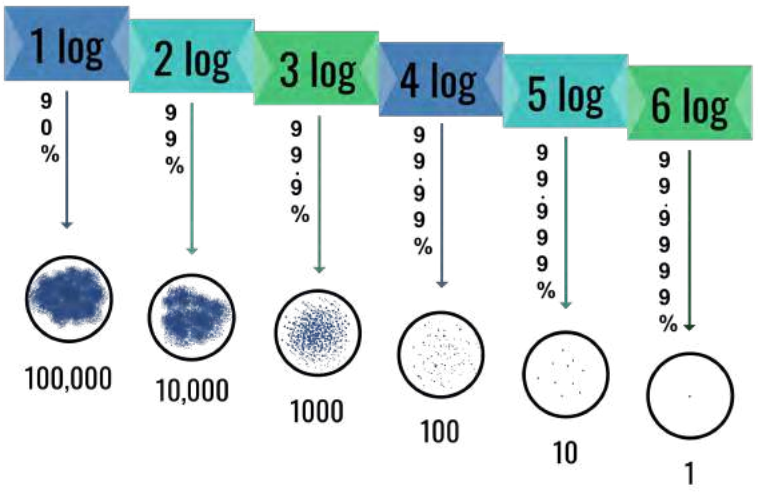
The Brookings Institute, 2021

Improved attendance → **Better student outcomes & increased school revenue**

(US Dept. of Education, 2016)

"Our janitors were more efficient…and our families were comforted knowing we were taking steps with Breezy to keep our kids safe."

– Rebecca Maestas-Sanchez, Principal at St. Mary's Catholic School (Albuquerque, NM).



Safety First

Safety is a priority at every school across the nation. The COVID-19 pandemic has amplified this and painted a clear picture for us moving forward - our schools ***must*** be safe because our children ***need*** to be in the classroom.

> ***"That's our number one priority: safety."***
> - Dr. Jared Cleveland, Superintendent, Springdale Public Schools (Springdale, AR)

But for that to happen, parents need to trust that schools are in fact safe. A recent Brookings Institute study found that 45% of parents are not sending their child to in-person learning because they think it is safer to keep them home; 28% didn't trust schools to keep their children safe.

While COVID-19 is the newest virus stressing our school systems, disease spread is not new. Influenza and Strep, for example, circulate through schools year-round. In a study following three flu seasons, researchers found that influenza accounted for 47% of school days missed.

Safety also means our teachers, administration, and staff are protected. **A healthier community leads to fewer needs for substitute teachers due to staff illness.** This is equally important as studies are finding teachers' effect on students goes well beyond impacting grades – teachers make big impacts on student absences, suspension rates, noncognitive skills, and college attendance.

Clearly, safety is the key that will get children back into the classroom where they are able to reap the full benefits of our American education system - education, after-school programs, meal support, health care, and social-emotional support.

While schools couldn't have predicted COVID-19, they are now presented with an opportunity. School systems are uniquely positioned to reopen with reliable and consistent safety measures that provide protection for years to come. This was not the case years ago. **Here is why safety is possible now:**

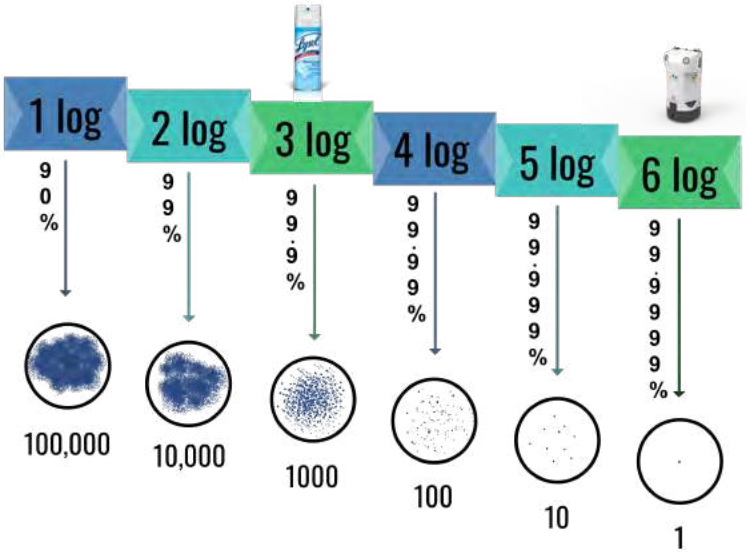
- A rising focus on safety from parents
- School systems have an existing disinfecting foundation, as disinfecting, in general, is not new to school procedures
- American Rescue Funding is still being allocated
- New innovations making disinfecting scalable (i.e., autonomous robots)

How do we ensure safety?

Understanding the separate functions of cleaning and disinfecting is the first step towards ensuring a safe facility. **Disinfecting is different than cleaning:** disinfecting kills germs, whereas cleaning only removes them. Both help lower diseases spread, but there is an important distinction because to clean means only some of the germs and bacteria are removed, ***not killed***.

The bacterial cells that are left over, grow back at exponential rates – this growth is known as generation time (how long it takes for cells to double in population).

EPA guidelines require a 6-Log Kill (99.9999%) in order to qualify a chemical as a disinfectant. The difference between a 6-Log Kill and a 3-Log Kill is big; within 3 hours of cleaning with a 3-Log Kill, a colony of pathogens could be back to its original size. In comparison, after the application of a 6-Log Kill disinfectant, there will only be a few pathogens remaining.



Cleaning has its benefits, but the reality is that a pathogen's generation time can negate cleaning efforts within hours.

It's also important to recognize that while COVID-19 rarely transmits through surfaces, other common virus', like the flu, still do. "Most studies have shown that the flu virus can live and potentially infect a person for up to 48 hours after being deposited on a surface". Similarly, a 7-week study from the Journal of School Nursing found a **46% reduction in days absent** when classroom surfaces were disinfected daily. Irrespective of COVID-19, schools are capable of investing in strategies that reduce absenteeism and disease spread.

Attendance increases by

per student with daily disinfection

(Journal of School Nursing, 2009)

The Opportunity

Noticeably, it is a daunting task to ask our janitors to disinfect every surface in a building. Nonetheless, current measures are falling short of what parents need to send their children back to school.

How do we ensure that every chair handle, chair back, door handle, knob, paper towel dispenser, soap dispenser, sink, marker, ruler, and table, is disinfected every single day?

It is not for lack of trying, **disinfecting a school has numerous challenges:**

- researching which way of disinfecting is most reliable and scalable
- figuring out how to disinfect when students are on campus the majority of the day
- finding enough staff to disinfect the entire facility

Still, truly disinfecting is the difference between students being sick and students being healthy and in school. School administrators understand that health and education go hand in hand. But when schools do not innovate, they risk the health and safety of students, staff, and their families; some schools even risk losing funding to already tight budgets.

$35/day

reimbursement for one student

X

4.5 days a year

average number of absences

X

1000 students

estimated school population

=

$157,500 lost

every year -
Breezy One™ can fix that.

(American Journal of Infection Control, 2014)

The Solution - Breezy One™

If schools want to ensure safety, disinfecting needs to be done routinely, the same way, every single time.

Breezy One™ is the autonomous disinfecting robot working alongside janitors to improve school safety and reduce absences and disease spread. Breezy also has a presence on campus; janitors watch their facility get disinfected prior to cleaning, and students see Breezy in the hallways during the day. When schools communicate to families how Breezy is impacting their school, schools can prove students are safe.

"Our janitors were more efficient…and our families were comforted knowing we were taking steps with Breezy to keep our kids safe."

– Rebecca Maestas-Sanchez, Principal at St. Mary's Catholic School (Albuquerque, NM).

St. Mary's Catholic School, a K-8th grade school from Albuquerque, New Mexico, deployed one of the first Breezy One's™ this past year. In February, March, and April, some of the most contagious months of flu season, they saw 238 fewer nurse office visits in 2021 (during COVID-19) compared to 2019 (pre-COVID-19). Even with an increase in enrollment, St. Mary's saw their student's health and attendance improve.

St. Mary's after using Breezy One™

Each Breezy is quick and efficient, disinfecting 100,000 square feet in less than an hour. Prior to janitors going into clean surfaces, **Breezy One™ will use fogging to disinfect the air and all surfaces, ensuring the janitor's safety first.**

Breezy One™ uses fogging because the chemicals released during fogging stay suspended in the air long enough to pull out the airborne pathogens. This is critical, as fogging **decontaminates both the air and surfaces.**

The disinfectant used by Breezy was designed by the Sandia National Laboratories for the fast and efficient decontamination of large areas, as you can **reenter a facility safely in as little as 30 minutes.**

The disinfectant was specifically chosen because it:

- has over 6-Log Kill, killing 99.9999% of bacteria and viruses
- neutralizes Volatile Organic Compounds, chemical toxins, and allergens
- is Green Clean Certified, meaning it is non-toxic, biodegradable, and fragrant free
- is EPA N-List approved, thus able to kill COVID-19.

Breezy One's™ technical abilities make it the most reliable, consistent, and economical method for routine disinfection.

Conclusion

COVID-19 brought to our attention the importance of infectious disease safety, but parents and students alike are still looking for safety measures they can trust. For school districts looking to bring students back, more will have to be done to demonstrate the steps they are taking.

St. Mary's Catholic School is just one example of administrators taking the necessary steps to keep their schools safe. Breezy One™ is also in Har-Ber High School in Springdale, Arkansas and other facilities around the country.

This disinfecting robot is one step on the pathway to healthy schools, and more will follow. It is the responsibility of the schools, the state and local governments, and all of us to look past COVID-19 and think about how to prepare for Fall 2021, the next flu season, or the next pandemic.

Breezy One™ at St. Mary's, dressed in their uniform.

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