

Green Cleaning Programs in Schools Get High Scores

The studies are convincingly positive: green cleaning programs in schools benefit students and the administration. With the implementation of successful indoor air quality programs, schools can see an increase in productivity and higher test scores overall.

Defined as “cleaning to protect health without harming the environment,” green cleaning programs employ processes that promote health, safety and social consciousness, and include the use of environmentally friendly janitorial products and equipment. From pre-schools to colleges, green cleaning and indoor air quality programs have gained popularity and produced outstanding results. According to expert Dr. Michael A. Berry, PhD, “there is a direct connection between healthy school environments; behaviors and attitudes of students, parents, and educators; and academic achievement.”¹

Greening, Writing and 'Rithmetic

Green cleaning programs play a vital role in creating a healthier environment. And the healthier environments created by indoor air quality programs result in improved student attendance and attitude, improved teacher attitude and retention and – perhaps most important—improved math and reading scores.

Charles Young Elementary School in Washington, DC, for example, implemented green cleaning and indoor air quality programs that addressed total environmental quality. Here are some of the remarkable results of their green cleaning and indoor air quality programs (*Source: Healthy School Environment and Enhanced Educational Performance – The Case of Charles Young Elementary School, Washington, DC, Carpet & Rug Institute, January 2002.*)*

- School attendance increased from 89% to 93%
- Math scores at basic or above increased from 51% to 76%
- Reading scores at basic or above increased from 59% to 75%

Green cleaning programs addressed general sanitation, air quality, noise control, lighting, and general comfort (temperature and climate), kept in a steady state with a thoughtfully organized cleaning and maintenance program.

Research for the Young School's green cleaning programs showed that high performance schools manifest many common traits, including:

- The appearance of the school is inviting. Students, teachers, and the local community want it to be there.
- The school strives for student-friendly conditions throughout the building.
- The school is inviting to good teachers and supports their retention.

- The school is designed to reduce stress. It is comfortable, has a consistent temperature, and manages noise.
- The school is clean and sanitary.
- The risk of an adverse health effect is very small.

The report goes on to conclude:

The cleanliness of schools is also an important aspect of school environments. Clean schools not only lower the threat of the spread of illness, but also convey a caring message to the students and teachers. Cleaning and maintenance of schools is vitally important and is often underemphasized and underperformed. Students feel better going to clean classes and sitting in clean desks and surroundings. Sanitation in [elementary] schools is important because young children face unique health hazards, especially respiratory infections, asthma attacks, skin disease, and diarrhea outbreaks.

Indoor Air Quality Programs = Cleaner Air = Better Health + Comfort

Indoor air quality programs can impact several of the traits listed above for high performance schools. Green cleaning programs focus on improving air quality because contaminants are typically at least two to five times worse indoors than outdoors.² In another school study, implementation of new indoor air quality programs, equipment and supplies had the following positive results:³

- Airborne dust inside the building decreased by 52%
- Volatile organic chemical (VOC) concentrations decreased by 49%
- Bacteria decreased by 40%
- Fungi colony-forming units decreased by 61%

Yet another study examined the health benefits of improved green cleaning programs at a school. Results attributed to cleaning practices and indoor air quality programs indicated that total illnesses were reduced by 24%, doctor visits by 34%, courses of antibiotics by 24%, and days absent by 46%.⁴

The ABCs of Green Cleaning Programs

Thorough green cleaning programs will take a holistic view of the school facility. Each aspect of “green” building operations and maintenance will be viewed in the context of goals and benefits the school expects to derive from green cleaning and indoor air quality programs they wish to implement.

Some basic principles of green cleaning programs include:

- **Focus on entryways inside and out.** Most pollutants enter the building on people’s feet, so it’s important to implement indoor air quality

programs, which will help to trap and remove dirt before it enters the building and to frequently clean the entrances and entryway mats.

- **Minimize particles and chemicals in the air.** Mechanically capturing dust and dirt, using course spray for chemicals, and applying the cleaner to the cloth rather than spraying the surface to be cleaned are all important aspects of indoor air quality programs.
- **Use environmentally preferable cleaning chemicals** along with chemical management systems for accurate product dilution.
- **Ensure proper vacuuming, extraction, rinsing and drying.** Carpets can be a host for moisture problems and mold growth. When implementing green cleaning programs, use Carpet & Rug Institute's Green Label approved vacuums. Empty vacuum bags frequently for more efficient operating.
- **Focus on preventative measures** and quick clean up of accidents. Therefore, fewer and milder chemicals can be used.
- **Mechanically capture dirt and remove it** rather than moving it around. Green cleaning programs should use products like microfiber dusting cloths and flat mops, for example, which can eliminate the need for chemicals.
- **Focus on touch-points.** These are door handles, bright work and other areas where people come in contact with the facility or its fixtures.
- **Apply disinfectant in restrooms properly.** Typical procedures for green cleaning programs will include ensuring the chemical has proper dwell time so that soil is thoroughly removed using less product.
- **Promote safety and prevent cross-contamination.** Safer products and proper use and storage of chemicals help green cleaning and indoor air quality programs create a safer environment. Color-coded tools ensure that pollutants don't get carried from one area (such as a restroom) to another.
- **Use "green" paper products,** such as recycled tissues and towels bleached without the use of chlorine.
- **Implement an effective recycling program.**
- **Create a communication program** so that building occupants understand they are part of the process. Proper spill notification, food clean-up and clutter reduction will help to ensure a healthy facility.

The Learning Curve with Green Cleaning and Indoor Air Quality Programs

At Harvard, their University Operations' Services has successfully implemented green cleaning programs – proof that schools can do it themselves. However, many schools will find it more effective and more cost efficient to hire a janitorial

company that specializes in green cleaning and indoor air quality programs. These experts can conduct an assessment of the school and suggest a plan for implementing indoor air quality programs that meet specific goals and budget. If the school needs to start small, the cleaning company can suggest some basic changes that can drastically improve the quality of the indoor environment.

A company proficient in green cleaning programs will know the latest practices and products, and their cleaning staff will have the proper training. Plus some companies that provide indoor air quality programs will offer posters and other communication materials to help occupants understand the responsibilities and benefits of the new program. By relying on an expert for green cleaning and indoor air quality programs, school administrators can focus on what they do best: running a successful school.

The Dollars and Sense of Green Cleaning Programs

Many schools now understand the benefits of green cleaning programs when it comes to attracting and retaining teachers and students. They have also reaped the benefits of being known as environmental stewards and achieving higher averages on standardized testing. These recruiting and marketing advantages to implementing green cleaning and indoor air quality programs—plus the possible savings on teacher sick leave and insurance premiums—can equate to a healthier bottom line. A school may spend more upfront on launching green cleaning programs, but the benefits are great. What school doesn't desire happier, healthier, higher-achieving students?

References

- 1) Healthy School Environment and Enhanced Educational Performance – The Case of Charles Young Elementary School, Washington, DC, Carpet & Rug Institute, January 2002.
- 2) U.S. Environmental Protection Agency
- 3) Indoor Environment Characterization of a Non-Problem Building: Assessment of Cleaning Effectiveness, US
- 4) Environmental Protection Agency, March 1994. (Conducted at the Frank Porter Graham Child Development Center, Chapel Hill, NC)
- 5) Leonard R. Krilov, MD, Impact of An Infection Control Program in a Specialized Preschool, American Journal of Infection Control, 1996: 24:167-173