

Learning to Think Green: Healthy Cleaning in Educational Institutions



Paul Goldin – Avmor
Director of Marketing and
Technical Services

« ...asthma accounts for over 14 million missed school days per year.

Green cleaning can play a vital role in creating a healthier environment »

School rankings, along with your programs, curriculum, and reputation, play a crucial role in attracting new students to your educational institution. How does your institution rank? What proactive steps can you take to improve your institution's ranking?

The cleanliness of an educational institution and its maintenance program are not likely factors that you would consider as affecting its reputation. However, studies are showing that cleaning is not merely a necessary expense: **'Green' cleaning** plays a role that can contribute to an educational institution's success. Green cleaning products no longer deserve the reputation of being expensive and not as effective as traditional cleaning products. Green cleaning is now a viable option for any institution seeking to implement a safer and healthier maintenance program.

1. The Impact of Indoor Air Quality (IAQ)

According to the Environmental Protection Agency (EPA), the average person spends about 90% of his time indoors. Given this fact, it is no wonder that childhood diseases, including asthma and particular types of cancers, are on the rise, as are certain types of common learning disabilities. Researchers have linked these and other problems such as dizziness, skin irritation, allergies and reproductive disorders to exposure to chemicals found in many traditional cleaners. Failure to deal adequately with the underlying causes of these issues takes its toll on the health, comfort, and performance of teachers, students, and school employees. **Indeed, asthma accounts for over 14 million missed school days per year.**

Green cleaning can play a vital role in creating a healthier environment, and as a consequence, improve the quality of education at your school. As evidenced by the case study below, better indoor air quality can result in improved student attendance and attitude, teacher attitude and retention, and even math and reading scores.

1.1 Case Study: The Charles Young Elementary School

Charles Young Elementary School in Washington D.C. implemented green cleaning and indoor air quality programs that addressed total environmental quality¹. Below are some of their remarkable results²:

- ✓ **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%

¹ The Green cleaning program 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.

² Source: Healthy School Environment and Enhanced Educational Performance – The Case of Charles Young Elementary School, Washington, DC, Carpet & Rug Institute, January 2002.

Note: All other factors in this study generally remained the same; therefore, the results can be attributable to the newly implemented green cleaning and indoor air quality programs.



Research for the Young School's green cleaning programs showed that high performance institutions manifest the following common traits:

- ✓ The appearance of the school is inviting to students, teachers, and the local community.
- ✓ 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.

In another case study of the health benefits of green cleaning programs at a school, total illnesses were reduced by 24%, doctor visits by 34%, courses of antibiotics by 24%, and days absent by 46%³ because of cleaning practices and indoor air quality programs.

Clean schools not only lower the threat of spreading illnesses, but also convey a caring message to the students, teachers, employees, and the community at large.

« ...the health benefits of green cleaning programs at a school, total illnesses were reduced by 24%, doctor visits by 34%, courses of antibiotics by 24%, and days absent by 46% because of cleaning practices and indoor air quality programs. Clean schools not only lower the threat of spreading illnesses, but also convey a caring message to the students, teachers, employees and the community at large. »

2. Green Cleaning Improves Your Bottom Line

The following statistics speak for themselves:

- The average custodian uses five gallons of hazardous chemicals each year.

Over \$75 million is being spent each year on medical expenses and lost time wages for custodians due to injuries relating to exposure to chemicals.

- Using safer cleaning products and an improved ventilation system has been shown to increase worker productivity by up to 5% and to save institutions nationwide \$30 to \$150 billion annually.

Consider a Green Building Audit to improve your bottom line. This person conducting the audit is trained to examine the processes it takes to clean a facility, the products used and their efficiency. He will provide recommendations to simplify the maintenance process and incorporate greener practices and products. For example, as a result of a green building audit, one university reduced its inventory of cleaning chemicals by approximately 75% - thereby incurring extensive savings.

3. Green Cleaning 101

When choosing green cleaning products, it is important to be aware of the different options on the market, as well as the advantages and disadvantages of each method. Below is a quick review of biological and chemical green cleaning technologies.

³ Leonard R. Krilov, MD, Impact of An Infection Control Program in a Specialized Preschool, American Journal of Infection Control, 1996: 24:167-173



3.1 Biological Cleaning

A biological cleaning solution uses biological decomposition to clean and deodorize. These solutions harness nature's own processes to recycle waste into simple and essential substances. They meet today's demands for cleaning, odour control, and waste elimination without the use of potentially harmful chemicals.

There are four main advantages to using biological cleaners and odour control products:

- ✓ They are better for the environment and safer for the users and occupants when compared to traditional products;
- ✓ They use highly specialized enzyme producing microbials to clean and control odours by eliminating the soils that traditional chemical products alone cannot treat;
- ✓ They provide residual cleaning up to 80 hours after application and therefore reduce overall labour costs by continuing to work long after application;
- ✓ They help to displace unknown, potentially disease causing bacteria with known, healthy microbials and in this way contribute to our better health.

3.2 Chemical Cleaning

Chemical based products can offer another environmentally responsible method for effective cleaning. For example, hydrogen peroxide is particularly attractive because it can break up organic matter and then prevent grease from sticking onto the surface. Other benefits of Hydrogen peroxide include that it:

- ✓ Creates no toxic or hazardous byproducts — it breaks down into water and oxygen
- ✓ Is safe for hard surfaces and textile finishes
- ✓ Has excellent stain removal properties
- ✓ Eliminates odours
- ✓ Improves wastewater quality in sewer systems
- ✓ Helps reduce biochemical oxygen demand (BOD) and chemical oxygen demand (COD) — key parameters in measuring water quality
- ✓ Can detoxify cyanide, nitrogen compounds, chlorine, bisulfate, phenol and a host of other toxic based waste

Although biological and chemical technologies differ from one another, they can safely complement one another. An ideal sustainable cleaning program will take advantage of the strengths of each technology in order to help obtain an effective and more complete clean.

4. Choosing the right Green products

Not all green cleaning products are created equal. Therefore, it is important to educate yourself and ensure that you have chosen the best products for your institution's needs.

All products should meet your organization's criteria for:

- ✓ **Performance** – Saves time while cleaning effectively and ensures the pristine appearance of your educational institution
- ✓ **People** – Safeguards the health and safety of students, teachers and staff



- ✓ **Planet** – Raw materials should be biodegradable and meet the highest environmental standards for safe storage, transportation and disposal. More specifically, materials used should be safe on our water systems and aquatic life.
- ✓ **Price** – Priced competitively when compared to conventional cleaning products in the same categories

In addition, look for products with dilution control. By providing accurate dilutions, the products will perform at their optimal level, thereby maximizing effectiveness, making cleaning easier on your employees, and preventing wastage.

Good customer service, support, and training can be as important as the right cleaning solution. Look for a company who can offer added value and support in the form of hands-on training, sanitation programs, wall charts, proper labels and MSDS sheets. These tools are an integral part of the process of going green because it is crucial that the products you choose are being used properly for optimal performance.

5. Green Building certifications

The movement towards going Green has led to the development of certifications for buildings and institutions that meet certain standards and guidelines. These certifications provide a tangible and formal recognition of your institution's environmental efforts and thereby award you with a clear competitive advantage.

5.1 LEED Program

At the forefront of the green building movement in North America is the LEED green building rating system. The system provides a common understanding of what is a green building in the Canadian context. Buildings are given points or credits based on the ability to meet certain specified criteria. For example, the Richard Renaud Science Complex at Concordia University in Montreal has received LEED certification and the John Molson School of Business is in the process of being LEED certified as well. The university continues to distinguish itself through its continued commitment to sustainable practices.

5.2 BOMA Go Green

BOMA Go Green is a national environmental recognition and certification program for existing commercial buildings. The program is more than a certification: the application process will help assess how well your building is performing and includes suggestions for tangible ways to improve environmental practices. McGill University's Montreal University Health Center (MUHC) was granted a Go Green certification last year and is implementing similar initiatives across its various buildings.

6. Educating your students and staff about Green cleaning

Educational institutions play an important role in educating students, teachers, staff and the community about ways to take care of the environment. Below are some specific ways to set an example of putting sustainability first:

- ✓ Use innovative cleaning tools, such as microfibre which is environmentally friendly and cost efficient because of its high quality and durability
- ✓ Use energy efficient cleaning equipment

« ...Educational institutions play an important role in educating students, teachers, staff and the community about ways to take care of the environment. »



- ✓ Use more accurate dilution of cleaning chemicals for cost savings and waste reduction
- ✓ Use non-chlorine bleached paper towels and tissue
- ✓ Design and use “best practices” to maximize the use of all materials used in the cleaning process
- ✓ Eliminate duplication and dispose of outdated or unusable products
- ✓ Recycling is important, but refilling and reusing is better
- ✓ Use cold water instead of hot water
- ✓ Turn out lights in rooms or areas when not occupied

Ultimately, your commitment to the safety of your students, teachers, staff and community demonstrates your commitment to the success of your institution and your surrounding environment.

For more information, contact Avmor at info@avmor.com or call 1 800 387.8074 or visit the website at www.ecopure.ca or www.avmor.com . Avmor Ltd. is Canada's leading manufacturer of professional cleaning solutions for the Jan/San and Foodservice markets. Its Biomor and Ecopure products have received one or more of the following certifications: *Environmental Choice Program, Green Seal, Design for the Environment U.S. EPA, Avmor Green Approved Standard, Drug Identification Number, and Canadian Food Inspection Agency.*

