

Improving Student Health Begins with Better Air

Proper Flooring and Smart Ventilation Play Key Roles

By Don Brown

According to Harvard Schools for Health, 13.8 million school days are missed by students each year due to asthma. Unfortunately, we often have a false sense of security when we walk into a building that the air we breathe is safe and healthy to consume. Indoor air quality, commonly referred to as IAQ, is a key component of protecting the health of young students and keeping them in classrooms.

Research has shown the importance of protecting kids from the impacts of poor IAQ. According to a statement in the EPA's Healthy Buildings, Healthy People report, "Children often experience higher exposures to environmental pollutants than adults because, per pound of body weight, they breathe more air and ingest more materials than adults. Children really do absorb more contaminants."

Because students spend hundreds of days each year within their walls, schools need to consider the proactive actions they can take to help protect student health. There are simple steps that can be taken to keep kids in the school building without the burden of breathing issues. By installing healthier solutions, adhering to proper maintenance and utilizing good ventilation practices, schools can protect the health of students, faculty and staff.

Create Solutions at the Source

Solutions for maintaining proper IAQ start at the source: the building materials used in school construction. Far too often building products used in schools feature high concentrations of volatile organic compounds, or VOCs. In fact, a study conducted by Washington's East Campus Plus Program found that up to 96 percent of VOCs found in large office buildings following construction were a result of the materials used to construct and furnish the space.

Consider flooring within schools. Students, teachers, staff and parents all walk through the building, bringing with them dirt, dust, allergens and more. Some flooring products can trap these contaminants and emit them into the air that's then breathed in by students. However, by thoughtfully selecting the flooring used, schools can help prevent these pollutants from making their way into the air.

Synthetic floors, like polyurethane solutions, are seamless and non-porous, which means dirt and other messes aren't absorbed the same way they would be on carpeted flooring. Not only does this make these systems easier to maintain, but it also prevents the growth of mold and bacteria. Additionally, pad and pour floor systems can be manufactured as low VOC, further supporting good indoor air quality.

Similarly, maple hardwood floors, which are ideal for academic athletic facilities, can also be manufactured with IAQ in mind. Maple flooring is a natural material and can be third-party certified as a low-VOC building material, which helps make it even easier for schools to select healthier products. Look for FloorScore®-certified flooring, which offers school architects and administrators confidence that flooring consistently meets the rigorous indoor air quality emissions requirements.

Proper Maintenance is a Must

Maintenance is important not only for schools to



Thoughtful flooring selection can actually play a role in better indoor air quality.

protect their investment in flooring products but also for preserving IAQ for students and staff. This means that floors need to be cleaned both regularly and with the proper products.

Dirt, dust and germs that commonly accumulate on or within flooring can have lasting impacts on air quality if the flooring traps contaminants. This becomes especially important to address when you consider multipurpose spaces that may be used for both physical activity and as an eating space. Regular cleaning and maintenance ensures the air students breathe is sanitary and free of these harmful contaminants and allergens. Look for commercial flooring solutions that are easy to clean and support a hygienic environment.

Administrators must also remember, however, that while cleaning is necessary, cleaning products can also have an impact on air quality. According to research by the EPA, some ingredients and VOCs commonly found in commercial products can present hazards as the cleaning agents evaporate. Schools should evaluate what products they are currently using and select products that feature low toxicity and VOC content and minimal to no amount of potentially harmful chemicals.

Similarly, while reapplying some finish coats is often required for maintaining the integrity of a floor, it can also emit VOCs. These types of annual maintenance should be strategically scheduled when children will be out of the building for extended periods, such as summer or winter break.

Ventilation

While typically associated with maintaining a comfortable environment, ventilation and air exchange plays a key role in maintaining proper IAQ within school facilities. Beyond controlling temperature and humidity, HVAC systems also recirculate and filter air, helping remove contaminants and allergens. When air is not properly circulated and filtered, VOCs and other air pollutants are allowed to linger within spaces such as classrooms. This means students continue to breathe in contaminated air throughout the day.

This becomes especially important when students have an existing breathing or allergy condition. While you clean the surface areas that came in contact with the



Brown

allergen in the cafeteria, those allergens may have also entered the air and, when breathed in, can cause irritation. HVAC systems play a pivotal role as they circulate and filter air, removing potentially harmful pollen and allergens.

That's why schools must maintain effective air exchange systems and regularly replace filters to ensure air is properly recirculated.

A Healthier Future

A recent study conducted by researchers from Harvard's Center for Health and the Global Environment found that, on average, cognitive scores were 61% higher in green building conditions. These results highlight the importance and necessity of providing superior IAQ and safeguarding the health and wellbeing of students within classrooms.

By taking simple steps, such as selecting and maintaining healthy products and implementing proper ventilation, schools can proactively protect their students' health. This not only supports the success of the schools but also the future leaders these buildings house.

Don Brown heads technical sales at Action Floor Systems, LLC, a company that specializes in high performance sports floor systems to accommodate any application. Action's headquarters and manufacturing plant are in Mercer, Wis.