



Questions and Answers

Webinar: Creating Exceptional Learning Environments through Comprehensive Indoor Air Quality Management

Answers provided by Dave Hill, Blue Valley School District, Overland Park, Kansas

General Indoor Air Quality (IAQ) Questions

Q: Have you found that there are common IAQ problems or issues with portable classrooms? Are there any resources available pertaining specifically to portable classrooms?

A: The most common IAQ problems that I am aware of with portable classrooms are poor initial construction quality and lack of regularly scheduled maintenance. These issues can lead to water leaks that become larger problems, including mold infestations. It is important to recognize that these buildings are often not constructed to the same standards of regular school buildings – and are more typically constructed to a residential standard. This requires that those in charge of maintaining these facilities pay *even closer* attention to properly maintaining them. Unfortunately, they are sometimes neglected because they are not a part of the main facility.

For more information, check out EPA's online guidance about portable school classrooms: [EPA's Online Portable School Classrooms Webpage Link](#).

Q: What Engineering Management System (EMS) did you use in your building floor plan diagram that tracks IAQ indicators? It looks very impressive!

A: Our Energy Management System (EMS) is an important tool that we use to manage our IAQ. The system allows us to track, trend and monitor in real time important IAQ indicators including temperature, humidity, airflow or ventilation rates, carbon dioxide (CO₂) levels, run times, energy usage, etc. The heat ventilation and air conditioning (HVAC) systems software we use is Niagara by Tridium. Niagara is software that enables facility managers, building owners, and systems integrators to integrate proprietary and otherwise incompatible products into a unified enterprise solution. This allows personnel using a standard Web browser to measure, manage and control a wide variety of facilities, security and energy applications, from anywhere.

Q: How often do you assess your school facilities, as recommended by the Key Drivers in EPA's Framework for Effective School IAQ Management?

A: Blue Valley School District's IAQ team is constantly assessing air temperature, humidity levels, CO₂ levels, and ventilation rates with our Engineering Management System (EMS). We assess every day; 24 hours a day; seven days a week.

Occasionally, we have other issues, including moldy smells or water infiltration problems that could lead to a bigger problem later on. We try to respond to those issues within 24 hours, but usually respond on the same day.

In addition, we have developed baseline IAQ information for each of our schools, which includes metrics such as CO₂ levels and temperatures. These baseline levels help us determine what the normal IAQ conditions are for each school. We have guidelines for temperature, humidity, particulate matter and CO₂ levels, but each school also has its own kind of tendencies and signatures. We want to make sure we are operating from a known baseline of data.

Q: What air contaminants are measured with the AirCuity System?

A: Our AirCuity devices measure the air for mold spores, particulate matter, volatile organic compounds (VOCs), temperature, humidity, carbon monoxide (CO), and CO₂. We are able to sample for any period of time and then download that information digitally to an industrial hygiene laboratory for professional analysis and interpretation. It is a very quick, efficient and cost effective way to objectively measure and analyze IAQ concerns.

Q: What tools would you recommend that an IAQ coordinator use when completing a school facility walkthrough?

A: For specific instructions on how to conduct a school IAQ walkthrough access resources from EPA's Virtual School Walkthrough webinar ([EPA Virtual School Walkthrough Webinar webpage link](#)), with IAQ expert speakers David Blake at the Northwest Clean Air Agency and Richard Prill at Washington State University. You can also watch a video of a school walkthrough ([Northwest Clean Air Agency's school walkthrough video webpage link](#)) on Northwest Clean Air Agency's website. Additionally, the walkthrough inspection checklist ([EPA's IAQ Tools for Schools walkthrough inspection checklist webpage link](#)) in EPA's *IAQ Tools for Schools* Action Kit includes information on what to look for as well as useful tips on how to get everyone in your school involved in conducting a school facility walkthrough.