

Indoor air quality walkthrough

Learn how to inspect your school or worksite

A walkthrough to look at indoor air quality (IAQ) issues is an eye-opening experience for any local association. Walkthrough evaluations systematically monitor IAQ conditions. They also provide an opportunity to talk to members and show that the local association is active in responding to problems.

There has never been a better time to learn to evaluate IAQ in your school district's buildings. Videos and checklists, including several from the Environmental Protection Agency (EPA), can get you started. An excellent new DVD

from the state of Washington is also available (see sidebar).

What to look for on the IAQ walkthrough

The walkthrough should include both an exterior and interior inspection. During the walkthrough, look for the five essential criteria of good IAQ: dryness, cleanliness, comfortable temperature, pollutant control, and adequate ventilation. These are explained in more detail below and in the checklists and videos listed in the resources section.



Order *The Virtual School Walkthrough*

Decades of experience helping schools prevent and solve indoor air quality problems have been distilled into a 62-minute DVD. *The Virtual School Walkthrough: Identifying and Solving Common Indoor Air Quality Problems* is a professionally videotaped and edited presentation by Rich Prill, Washington State University Extension Energy Program Building Scientist, and Dave Blake, Northwest Clean Air Agency's indoor air quality (IAQ) specialist.

This show features 200 photos and has been presented the past two years at the Environmental Protection Agency's (EPA) IAQ Tools for Schools National Symposium in Washington, D.C. The DVD has received unanimous praise from a broad diversity of symposium attendees including nurses, facility managers, teachers, administrators, architects, health professionals, loss control specialists, and IAQ consultants.

Eileen Senn, industrial hygiene consultant for the New Jersey Work Environment Council, a frequent NJEA partner, said, "The DVD is technically excellent. I appreciate how key concepts are condensed into memorable slogans, such as 'What's outside, gets inside,' 'Look high, look low' and 'What's under the school gets into the school.'"

The DVD emphasizes that what gets measured gets fixed and that only what can be interpreted should be measured. It suggests that an IAQ "tool kit" be put together for about \$1,000 that includes a moisture meter (\$300), a temperature meter (\$100), a carbon dioxide meter (\$500), an air flow meter (\$50), and tracer smoke (\$25).

"The tool kit is a great idea. Local associations can purchase one themselves or ask district administration to do so," said Senn. "With these five tools, the basic parameters of good IAQ can be assessed. The cost is reasonable considering the great potential benefits."

"A nonthreatening, nonregulatory approach is promoted in the DVD. Such an approach is to be preferred when it works," said Thomas Hardy, NJEA Worksite Safety and Health Committee staff contact. "Thanks to public employee unions, there is a Public Employees Occupational Safety and Health (PEOSH) IAQ standard in New Jersey that can be enforced in schools when necessary. The PEOSH IAQ checklist is a great resource for local associations to use during walkthroughs."

Dryness

- Visible mold
- Damp, moldy, musty smell
- Wet ceilings, carpet, books, furniture
- Dripping pipes
- Condensation on cold pipes, ducts, surfaces
- Condition of roof; standing water
- Downspouts discharge away from building
- Landscaping slopes away from building
- Dampness in crawlspaces
- Exhaust ventilation in mold-prone areas such as swimming pools, showers, locker rooms, and kitchens
- Mold-friendly building materials like carpeting, acoustical ceiling tiles, or wallboard subject to water damage

Cleanliness

- Level of cleanliness
- Walk-off mats at all entryways
- High-efficiency vacuum cleaners; bags changed regularly
- Wet or static dusting and mopping instead of dry
- Signs of insect, animal, or bird infestation

Comfortable temperature

- Type, age, condition of heating systems

- Type, age, condition of air conditioning systems
- If present, can radiators be controlled
- Thermostats read 68 to 78 degrees Fahrenheit
- Staff temperature logs
- Window shades

Pollutant control

- Chemical smells
- Least toxic pest control
- Least toxic cleaning chemicals
- Excessive lab chemicals
- Disturbed asbestos, fiberglass, lead paint
- Toxic construction products (paints, coatings, adhesives, carpeting, roofing materials)
- Sewer gas traps filled with water
- Pollution sources near outdoor air intakes
- Vehicles on school grounds

Adequate ventilation

- Air flowing from supply vents
- Air flowing into return vents
- Blockage of vents
- Windows operable
- Air flow from clean areas to dirty areas (kitchen, cafeteria, gyms, locker rooms)

Check out these IAQ walkthrough resources

Videos

- The Virtual School Walkthrough: Identifying and Solving Common Indoor Air Quality Problems. Contact Dave Blake dave@nwcleanair.org or 360-428-1617 x212 for a free copy.
- EPA IAQ Tools for Schools: Taking Action and Ventilation Basics videos. Taking Action shows how one school successfully implemented the IAQ Tools for Schools Action Kit. Ventilation Basics explains how to operate and maintain school ventilation systems. EPA document number 402-V-98-001. Free.
- EPA IAQ Tools for Schools Walkthrough Video: Four Schools Making a Difference, EPA document number 402-V-01-004. The video illustrates some of the most common IAQ problems found in schools. Free.
- The EPA videos above can be ordered individually or as part of the complete IAQ Tools for Schools Action

Kit, EPA document number 402-K-05-001. Call 800-490-9198 or fax your request to 301-604-3408. You can also e-mail your request to nscep@bps-lmit.com.

Checklists

- PEOSH Indoor Air Quality Checklist www.state.nj.us/health/eoh/peoshweb/iaqchecklist.pdf Or call PEOSH at 609-984-1863
 - EPA IAQ Tools for Schools Walkthrough Checklist www.epa.gov/iaq/schools/pdfs/kit/checklists/walkthruchklist.pdf
 - Other EPA IAQ Tools for Schools Checklists
- The EPA has designed 10 additional checklists to engage teachers, nurses, and other school staff in the process of school inspections. Each checklist is accompanied by a "Checklist Backgrounder," which describes the purpose of the specific checklist. These can be downloaded from www.epa.gov/iaq/schools/toolkit.html.