

Healthy Air Quality in Schools

Achieving healthy air quality in schools takes administrators, custodians, and teachers working together. Ventilating well and controlling sources of pollutants are essential for healthy indoor air quality.

General Tips

- Teachers and staff need to know who to contact for indoor air quality concerns in the school.
- Have a written school or district indoor environmental quality plan that includes indoor air quality and integrated pest management.
- Notify the school or district indoor air quality contact if you detect odors or dust from locations such as shops, copy rooms, science labs, laminators, locker rooms, graphic arts, custodial supply rooms, storage areas, combustion equipment, kitchens, or bus exhaust. Document your concerns.
- Immediately report water leaks, water stains, damp materials, or unusual odors—such as musty or moldy smells—to maintenance staff.
- Maintenance staff should respond to water leaks and moisture problems within 24 hours.
- Keep relative humidity levels between 30 and 50 percent for better health. Low relative humidity leads to dry eyes and respiratory irritation. High relative humidity allows dust mites to grow and promotes condensation.
- Dispose of food waste promptly in covered containers.

Ventilation

- Operate the ventilation system continually when the school is in use and during custodial work.
 Supply at least 15 cubic feet per minute per person of fresh outside air. See <u>WSU Energy</u>
 <u>Program's Good Ventilation is Essential for a Healthy and Efficient Building (PDF)</u>.
- Monitor carbon dioxide (CO₂) levels with the goal of keeping levels below 800 ppm. If levels are frequently above 1000 ppm, consider increasing outdoor air ventilation. See <u>WSU Energy</u> <u>Program's Measuring Carbon Dioxide Inside Buildings (PDF)</u>.

- Maintain three feet of clearance around unit ventilators. Don't put items on top or block airflow.
 Note: Unit ventilators are single-room units that bring in outdoor air and sometimes heat or cool air. They are often found underneath windows on an external wall of a classroom.
- Keep unit ventilators turned on. Ask maintenance staff to repair noisy units, control temperatures, and control drafts.
- Change ventilation filters regularly. Use the highest rated, deepest pleat filters the system can accommodate. MERV 13 or higher are required in new facilities and recommended for all facilities.
- Check that supply air diffusers, return grilles, and exhaust systems are clean, dry, and not blocked.
- Monitor windows. They should not show condensation except on very cold days.
- Don't allow vehicles to idle on school property.
- Prepare school or district plans for ventilation during wildfire smoke or airborne illness events. See
 <u>Improving Ventilation and Indoor Air Quality during Wildfire Smoke Events (PDF)</u> and <u>Ventilation</u>
 and Air Quality for Reducing Transmission of Airborne Illnesses (PDF).

Control of Asthma Triggers

Reduce Animal Allergens, Including Dust Mites

- Keep animals out of classrooms. If you choose to allow animals, have a plan in place to control
 allergens and avoid spreading disease.
- Use integrated pest management practices to prevent cockroach and rodent infestations.
- Store food in tightly sealed containers.
- Seal all cracks and crevices in walls and around doors and windows.
- Install grates on all foundation and roof ventilation. Use barriers to discourage birds from roosting.
- Wash stuffed animals and blankets in hot water every two weeks or remove them.

Control Dust

- Use pre-mixed and pre-wetted clay, glazes, and other art supplies to reduce hazardous dusts.
- All outside doors should have large walk-off mats outside and just inside the door. Mats should provide at least four to seven footfalls.
- Maintain cleanable surfaces and avoid clutter. Remove as many unnecessary dust-collecting items as possible. Put loose items into plastic boxes with lids that can be damp wiped.
- Damp wipe surfaces weekly with a micro-fiber cloth.
- Don't hang items from ceiling T-bars without special clips to prevent fraying fiberglass. Limit items and remove or clean them when dusty.
- Replace fabric upholstered furniture with furniture that is easy to clean.

Reduce Chemicals

- Don't use permanent, solvent-based, or scented pens, markers, and board cleaners. Use water-based, unscented, crayon-based, or low-odor items.
- Don't use room deodorizing sprays, plug-ins, scented candles or candle warmers, scented reeds, incense, essential oils, or potpourris.
- Don't use urinal cakes in bathrooms.
- Avoid spray adhesives, contact cement, and volatile paints. If spray adhesives are necessary, use hexane- and toluene-free products. Wear solvent-resistant gloves. Spray in an area with local exhaust ventilation and away from children.
- Don't bring chemicals, cleaners, or disinfectants from home. Use only those provided by the school
 or district.
- Discourage perfumes, colognes, body sprays, and other strongly scented personal care products.
- Properly store and manage hazardous chemicals in laboratories, chemical storages, shops, art rooms, and other areas to prevent air contamination.
- Never use air-cleaning devices that generate ozone. Ozone is a respiratory irritant.
- Follow integrated pest management (IPM) strategies. Don't use pesticides in the building.

Carpet Care

- Avoid food or beverages in classrooms. If possible, vacuum daily and after children leave for the
 day, when children are not present. Use a vacuum with a high efficiency particulate air (HEPA) filter
 or HEPA vacuum bags, preferably both.
- Avoid area rugs. They can trap moisture and dirt. Clean carpets thoroughly with truck-mounted hot water and steam extraction once or twice per year.
 - Spot treat carpet as needed first.
 - Use the minimum amount necessary of low-odor and low-sudsing carpet shampoo.
 - All shampoo and cleaner needs to be thoroughly extracted until the water runs clean.
 - Carpet should dry thoroughly within 24 to 48 hours after cleaning.

Resources

- School Environmental Health & Safety Resources
- Art Hazards
- School Integrated Pest Management
- Healthy Air for Healthy Schools Flyer (PDF)
- Essential Oils Guide for Healthy Classrooms (PDF)
- Classroom Cleaning Tips for Teachers
- School Indoor Air Quality Best Management Practices Manual, 2003 (PDF)
- Creating Healthy Indoor Air Quality in School, U.S. EPA



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