

Sensible Steps to Healthier School Environments

Cost-effective, affordable measures to protect the health of students and school staff



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Introduction



Kids Learn Best in Healthy Environments

58M **8M**
CHILDREN **ADULTS**



127K
BUILDINGS

Approximately 58 million children and 8 million adults in the U.S. spend a significant portion of their days in more than 127,000 public and private school buildings.¹ Many of these buildings are old, in poor condition, and may contain environmental conditions that pose increased risks to the health of children and staff. Reducing exposures to environmental hazards in schools can help improve children's health while reducing absenteeism and lowering school employee turnover. Healthier school environments enable children to learn and perform better in the classroom, which can improve their achievements later in life.

This resource is designed to address some of the most common areas of environmental health concerns found in schools. It also provides one-stop access to facts about these hazards and the many existing low-cost or no-cost measures, programs and resources available to help prevent, reduce, and resolve each of them. By completing the voluntary Quick Assessment activity provided near the end of this resource, schools can determine which areas and programs will require more detailed attention. Additionally, by implementing the waste reduction and energy efficiency actions highlighted, schools can conserve valuable financial resources.

In addition, schools can take steps to improve health during school energy-efficiency upgrades. Some examples may include improved indoor air quality systems, moisture control, integrated pest management practices, and removal of PCB- containing lighting ballasts and building materials from school facilities.

Other valuable cost-saving steps for schools include reducing waste and reusing or recycling materials. These steps can save schools money and educate students about environmental topics. Simple tasks like composting food or yard waste and reusing school supplies can help conserve valuable resources.

Healthy School Environments

EPA's healthy school environments website is designed to be a gateway to the many programs and resources available to help prevent and resolve environmental hazards in schools.

To learn more about these programs and resources, go to www.epa.gov/schools.

1. National Center for Education Statistics (2023). *Digest of Education Statistics*. nces.ed.gov/programs/digest/2023menu_tables.asp

Topics



Air Quality Flag Program

AirNow's Air Quality Flag Program uses brightly colored flags, based on EPA's Air Quality Index (AQI), to inform people about outdoor air quality conditions. Organizations raise a flag each day that corresponds to their local air quality forecast.

The AQI is a guide for reporting daily air quality. It uses colors and numbers to show how clean or polluted the air is. EPA uses the AQI to report ground-level ozone, particle pollution, carbon monoxide, sulfur dioxide, and nitrogen dioxide. For each pollutant, EPA has established national standards to protect people's health.

Why is the Flag Program important?

The Flag Program creates public awareness of outdoor air quality conditions. People can continue to get plenty of physical activity, while still protecting their health from poor air quality. When air quality is unhealthy, people can modify their activities, such as recess or sports, or move them inside. To learn more about outdoor activity guidance, view the resource "Guide for Schools" on the following webpage: www.airnow.gov/activity-guides-publications/.

What do the flag colors mean?

The Flag Program uses green, yellow, orange, red and purple flags. These colors correspond to the AQI. To understand which flag to raise, visit the Flag Program website (www.airnow.gov/flag), click on the link titled "Which flag do I fly?" and enter the zip code. At www.airnow.gov, sign up to get AQI emails, download the AirNow app, or install an AQI widget.

Flag Program Resources for Schools

EPA offers a range of classroom lesson plans and activities to help students learn about their local air quality and how they can take action to protect themselves from poor air quality. Visit www.airnow.gov/air-quality-flag-program/schools/ to explore our school resources.

	Green means air quality is good.
	Yellow means air quality is moderate.
	Orange means air quality is unhealthy for sensitive groups - people with heart disease or lung disease such as asthma, children and teens, people who are active outdoors, and older adults.
	Red means air quality is unhealthy.
	Purple means air quality is very unhealthy.

Learn more at:

[AirNow | Air Quality Flag Program](http://AirNow.gov/AirQualityFlagProgram)

Asbestos

Asbestos is the name given to a number of naturally occurring mineral fibers with high tensile strength, the ability to be woven, and resistance to high heat and most chemicals. Because of these properties, asbestos was used in a variety of manufactured goods, including:



Insulation



Ceiling and
floor tiles



Paper and
cement products



Textiles

Intact and undisturbed asbestos-containing materials generally do not pose a health risk. Materials containing asbestos may become hazardous and pose increased risk if they are damaged, are disturbed in some manner, or deteriorate over time and release asbestos fibers into the air. Exposure to asbestos is known to cause asbestosis, lung cancer, mesothelioma, and other cancers, primarily of the digestive tract.

EPA's asbestos program for schools, mandated by the Asbestos Hazard Emergency Response Act (AHERA) along with its regulations for schools and other buildings, is founded on the principle of "in-place" management of asbestos-containing material (ACM). This approach is designed to prevent asbestos exposure by teaching people to recognize ACM and actively monitor and manage them without removal. Removal of ACM is not usually necessary unless the material is severely damaged or will be disturbed by a building demolition or renovation project.

AHERA requires public school districts and non-profit private schools (collectively called local education agencies) to inspect their schools for asbestos-containing building material and prepare management plans to prevent or reduce asbestos hazards. EPA's [model asbestos management plan](#) includes step-by-step instructions for local education agencies to develop and implement these management plans.

Steps a School Can Take

- ✓ Make school management plans publicly available so anyone interested can learn where identified ACM is located and how it is being monitored.
- ✓ Ensure all building operations and maintenance staff review the management plan to understand how to minimize potential disturbance to ACM.
- ✓ To prevent exposures to asbestos, do not cut, scrape, gouge, drill, or physically disturb ACM in any way, including sand grinding, sawing or abrading ACM.
- ✓ Report any concerns about damage or deterioration of ACM immediately to the building administrator.

Learn more at:

[EPA | Asbestos](#)

[EPA | Asbestos and School Buildings](#)

[EPA | Model AHERA Asbestos Management Plan for Local Education Agencies](#)

Asthma and Asthma Triggers

Asthma is a disease that affects the lungs and makes it hard for people to breathe. Asthma is a chronic condition and a leading cause of school absenteeism, accounting for more than 13.8 million missed school days per year in 2013.² On average, one out of every fourteen school-age children has asthma.

Asthma attacks in schools can be triggered by:



Animal allergens



Pest allergens



Mold and moisture



Chemical irritants



Outdoor air pollutants like ozone, particle pollution, or school bus diesel exhaust



Dust and dust mites, particularly on fabric covered objects

Steps a School Can Take

- ✓ Avoid having birds or furry animals such as mice, rabbits or guinea pigs as classroom pets.
- ✓ Switch to using environmentally friendly cleaning chemicals as much as possible. These products are less likely to have harsh chemical odors that can exacerbate asthma symptoms. Further, always use “wet” dusting techniques wherever possible when cleaning.
- ✓ Keep classrooms adequately ventilated, free of clutter, dust regularly and frequently wash items that attract dust.
- ✓ Ensure that the school has an Integrated Pest Management program that will reduce exposures to pesticides while reducing asthma triggers.
- ✓ Have a policy against scented products (e.g., aerosol or plug-in air fresheners) in classrooms.

Learn more at:

[EPA | Asthma](#)

[EPA | Asthma Triggers: Gain Control](#)

[EPA | Integrated Pest Management](#)

2. Zahran HS, Bailey CM, Damon SA, Garbe PL, Breyse PN. (2018) “Vital Signs: Asthma in Children - United States, 2001-2016.” Accessible at: pubmed.ncbi.nlm.nih.gov/29420459/

Buses and Vehicle Idling

School buses in the United States travel more than 4 billion miles each year, providing daily transportation to and from schools for more than 25 million American children.

Buses

Air pollution from older diesel buses, many of which pre-date recent emission standards promulgated by EPA, has health implications for everyone, especially children. In addition to producing a number of pollutants, diesel exhaust contains significant levels of particulate matter (PM) that can deposit into the lungs and can cause lung damage and aggravate respiratory conditions such as asthma.

Vehicle Idling

Idling vehicles contribute to air pollution and emit air toxins, which are pollutants known or suspected of causing cancer or other serious health effects. When drivers idle their vehicles during student drop-off and pick-up, the resulting exhaust can affect children's health at school. Exhaust produced by idling vehicles can be pulled into a school through the air intakes of the building's heating, ventilating and air conditioning (HVAC) system where it can accumulate and cause serious health issues for staff and students.

In addition to other environmental benefits, reducing vehicle idling has a number of financial benefits, including reductions in: fuel costs, energy costs, and unnecessary engine wear.

Clean School Bus Program

In 2021, Congress established the Clean School Bus (CSB) Program dedicated to replacing existing older diesel school buses with new, clean or zero- emission school buses. As of September 30, 2025, EPA's CSB Program has awarded almost \$3 billion to fund more than 8,800 school bus replacements in over 1,000 school districts. EPA's Diesel Emission Reduction Act (DERA) Program funded tens of thousands of school bus retrofits and replacements from 2008 to 2020.

Steps a School Can Take

- ✓ Encourage policies to eliminate unnecessary school bus idling.
- ✓ Upgrade or "retrofit" buses and replace older vehicles with newer, more efficient models.
- ✓ Establish anti-idling zones for all vehicles on school campuses (school buses, delivery trucks, and parents).
- ✓ Locate passenger pickup and drop off areas away from a school's air intake supply and classroom windows.

Learn more at:

[EPA | Reducing Diesel Emissions from School Buses](#)

[EPA | Idle-Free Schools Toolkit](#)

[EPA | Clean School Bus Program](#)

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless, and toxic gas that can kill without warning. CO is produced when carbon in fuel is not burned completely.

Common sources of CO in schools include:



Improperly vented furnaces, malfunctioning gas ranges, and exhaust fumes that have been drawn back into the building



Worn or poorly maintained combustion devices (e.g., boilers, furnaces) or a flue that is improperly sized, blocked, disconnected, or leaking



Fuel-powered generators and cleaning equipment



Auto, truck, or bus exhaust from attached garages, nearby roads, or idling vehicles in parking areas



Exhaust vents blocked by snow or debris

Breathing high levels of CO can result in loss of consciousness and death. At lower levels, exposure to CO can cause permanent neurological and cardiovascular impairment. Symptoms of low-level CO exposure may include a variety of flu-like symptoms, such as dizziness, fatigue, headaches, disorientation and nausea. Because of their higher metabolic rates, infants and children have increased susceptibility of CO toxicity and may become symptomatic earlier than adults. Children with existing health conditions may be more vulnerable.

Combustion equipment must be maintained to ensure that there are no blockages, and air and fuel mixtures must be properly adjusted to ensure more complete combustion. Ensure CO detectors and smoke alarms are installed and working properly. Carefully manage vehicular use adjacent to buildings and in vocational programs. Additional ventilation can be used as a temporary measure when high levels of CO are expected for short periods of time.

Carbon Monoxide (cont'd)

Steps a School Can Take

- ✓ Understand state, territory, or local laws that govern where CO detectors are required.
- ✓ Install CO detectors in the school near appliances that burn natural gas, oil, wood, diesel or gasoline. Identify places children spend time and where CO poisoning is a risk, but CO detectors may not be present.
- ✓ Test alarms once a month to ensure CO detectors are functioning.
- ✓ Annually inventory and inspect all gas burning appliances (e.g., stoves, furnaces, and water heaters) to ensure they are properly operating and vented to the outside.
- ✓ Routinely inspect outdoor air intake and exhaust vents to ensure they are not obstructed (e.g., by snow or debris).
- ✓ Never let school buses or other vehicles idle directly outside of the school, particularly in places where air can get indoors (e.g., air handling intakes, windows or exit doors).
- ✓ Distribute information on preventing carbon monoxide poisoning.

Learn more at:

[EPA | Carbon Monoxide's Impact on Indoor Air Quality](#)

[Carbon Monoxide Alarms in Existing Schools: Overview of State Laws](#)

Chemical Management

A wide range of hazardous chemicals can be found in science classrooms, labs, art classrooms, and storage closets at schools. Chemicals can also be used for building maintenance (e.g., cleaning and pest control). When they are mismanaged, chemicals can put students and school personnel at risk from spills, fires, and other accidental exposures. Schools may inadvertently purchase chemicals in excessive amounts, store them incorrectly, and dispose of them improperly. Common hazardous chemicals include corrosive acids, bases, oxidizers, compressed gases and flammable solvents.

Chemical accidents can:



Impact children's and school personnel's safety



Cost thousands of dollars to clean up



Disrupt school schedules



Even temporarily close schools

A proper chemical management program ensures that all schools are free from hazards associated with mismanaged chemicals.

Chemicals may be considered mismanaged when they are:

- In poor condition or expired
- Overabundant
- Not needed or used
- Not properly labeled or unknown
- Unsecured
- Stored near food
- Stored in inappropriate, leaking, corroded or cracked containers
- Stored with incompatible chemicals
- Stored on unstable/incompatible shelves or cabinetry

Responsible chemical management programs start with development and implementation of a safe chemical management plan that reduces the risk of chemical exposures and accidents in schools. Proper chemical management includes: a strong inventory control process, assessment of chemicals for risk and benefit, prohibiting the use of unauthorized chemicals, proper hazardous chemicals clean out and disposal, appropriate safety measures, personal protective equipment, and eyewash/emergency shower stations. Every chemical used in a school must have an accompanying Safety Data Sheet (SDS) that describes chemical properties, potential hazards, storage, disposal, protective equipment and spill handling procedures.

Chemical Management (cont'd)

Steps a School Can Take

- ✓ Conduct annual chemical inventories and prohibit any unauthorized, toxic, or hazardous chemicals from being brought into the school.
- ✓ Store toxic or hazardous chemicals in appropriate containers, separated by hazard category in a ventilated, fire resistant, and locked area or cabinet.
- ✓ Label containers with the name of the material and date it entered the school. Ensure that Safety Data Sheets (SDSs) for each product are in a binder readily displayed near the chemical storage area.
- ✓ Conduct regular cleanouts of chemicals that are unnecessary, outdated, and pose a health, safety or environmental risk.
- ✓ Ensure proper training of staff involved with chemical management and training of students before using toxic or hazardous chemicals.

Learn more at:

[EPA | Toolkit for Safe Chemical Management in K-12 Schools](#)

Disinfectants



Disinfectants are an important tool for keeping everyone, including children, healthy at school.



These types of products are called antimicrobial pesticides because they are used to kill disease-causing pathogens, like viruses or bacteria.



Choosing disinfectant products with different application methods may reduce the potential for certain health effects. For example, using disinfectant wipes instead of sprays may reduce exposure to asthma triggers.

EPA's Role

Did you know that some of the products we use every day to clean our kitchens, bathrooms, and classrooms are actually EPA-registered pesticide products?

When registering these disinfectant products, EPA reviews a variety of health and safety information to ensure these products will not cause any unreasonable adverse effects to public health or the environment. EPA also reviews data on these products to ensure that they work against the intended bacteria or virus.

EPA maintains lists of the products registered for use against certain common disease-causing pathogens like hepatitis and norovirus at [Selected EPA-Registered Disinfectants](#).

Steps to Protect Children

- ✓ Decide on [cleaning, sanitizing, or disinfecting](#). Knowing the difference might change which label instructions to follow!
- ✓ Read the label and follow the directions as they are written before using any product.
- ✓ Wet times, defined as contact time on the label, are important to pay attention to in order for the product to kill the bacteria and viruses.
- ✓ Keep products out of children's reach.
- ✓ Never store disinfectants in containers that could be mistaken for food or drink.
- ✓ Children should not use any antimicrobial pesticide, including sanitizers or disinfectants.

Cleaning physically removes dirt and most germs from surfaces. Use soap and water to scrub, wash, and rinse. Cleaning should be regular and always comes before sanitizing and disinfecting.

Sanitizing reduces the number of germs on surfaces. Sanitize objects that come in contact with mouths and food (such as toys and countertops).

Disinfecting kills germs on surfaces to lower the risk of spreading disease. Disinfect surfaces when someone is sick using an EPA-registered disinfecting product.

Educational, Art, and Science Supplies

Common K-12 classroom supplies and those used in art, science labs, and vocational/technical education instruction are an important part of the educational process. These supplies could include glues, cleaners, glazes, paints, solvents, and other materials helpful to classroom instruction. Many of these materials are formulated with hazardous ingredients which can be harmful or toxic to children when used improperly or by an inappropriate age group.

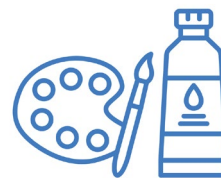
Dangerous metals such as lead, volatile organic compounds, dust, and fibers are commonly found in art materials and supplies in ordinary classrooms. Ingestion and skin absorption can occur when handling these materials as well as many other hazardous products. In fact, it is not uncommon for students to consciously “sniff” and smell the odors associated with contact cement, glues, paint thinners, correction fluids and solvents.

Simple preventive measures can greatly reduce harmful exposures to students. Careful purchase and selection of art materials, dedicated adult supervision, and the proper use of products with the appropriate age group are all simple actions that should be implemented. For added security, always lock up chemicals when they are not in use.

The U.S. Consumer Product Safety Commission recommends that when buying art materials, school supplies, and toys to only purchase those products that are labeled “Conforms to the American Society for Testing and Materials (ASTM) D4236 (CPSC Document #5016)” and that do not have any cautionary warnings on the label.

Steps a School Can Take

- ✓ Check whether supplies are listed as toxic or nontoxic (should be labeled accordingly by the Art and Creative Materials Institute (ACMI)).
- ✓ Read and follow directions on labels regarding fumes or ventilation.
- ✓ Read and have available the Safety Data Sheets (SDS) for all products being used in the classroom.
- ✓ Provide ample fresh air and ventilation.
- ✓ Do not allow eating or drinking around hazardous chemicals.
- ✓ Properly store and dispose of all products according to label instructions.
- ✓ Wash hands often when using toxic or hazardous chemicals.



Learn more at:

[Art and Craft Safety Guide](#)

[EPA | Appendix A: Model
Program for the State School
Environmental Health
Guidelines](#)

Energy Efficiency

According to ENERGY STAR, the nation's 17,450 K-12 school districts spend more than \$8 billion annually on energy — more than is spent on computers and textbooks combined.⁴ As much as 30 percent of a district's total energy is used inefficiently or unnecessarily.⁵

By being more energy efficient, schools can save money and reduce emissions. School districts can use the savings from improved energy performance to help pay for building improvements and other upgrades that enhance the learning environment.

Steps a School Can Take

No- and Low-Cost Measures

- ✓ Use ENERGY STAR's measurement and tracking tool, [Portfolio Manager](#), to assess energy performance.
- ✓ Turn off lights when not in use or when natural daylight can be used.
- ✓ Set back the thermostat in the evening and at other times when the building is unoccupied.
- ✓ Perform monthly maintenance of heating and cooling equipment to ensure efficient operation throughout the year.
- ✓ Educate students and staff about how their behaviors affect energy use. Some schools have created student energy patrols to monitor and inform others when energy is wasted.
- ✓ Use ENERGY STAR's Commercial Building Design Resource, [Target Finder](#), to set energy targets and integrate efficiency goals into the design of new properties.

Cost-Effective Investments

- ✓ Install energy-efficient lighting systems and controls to improve light quality and reduce heat gain. Installing new energy-efficient lighting systems will also serve to remove any potentially harmful PCB-containing light ballasts.
- ✓ Upgrade and maintain heating and cooling equipment.
- ✓ Use a performance-based contract to guarantee energy savings from upgrades.
- ✓ Work with an energy services provider to help manage and improve energy performance.
- ✓ Purchase energy-efficient products like ENERGY STAR certified office equipment.
- ✓ Install window films and add insulation or reflective roof coat.

Learn more at:

[ENERGY STAR | K-12 Schools](#)



4. U.S. Environmental Protection Agency (EPA) (2011) *Energy Efficiency Programs in K-12 Schools A Guide to Developing and Implementing*. www.epa.gov/sites/default/files/2015-08/documents/k-12_guide.pdf

5. Ibid.

Extreme Heat Events

Extreme heat events, or heat waves, are defined by weather that is substantially hotter and/or more humid than average for a location at that time of year. Extreme heat conditions stress the body's ability to maintain an ideal internal temperature, which can lead to a range of adverse health effects. Children need to take extra precautions on days of extreme heat because dehydration, heat stroke, and other heat illnesses may affect a child more severely than the average adult.



Children have a smaller body mass to surface area ratio than adults, making them more vulnerable to the heat.



Children play outside more than adults, and they may be at greater risk of heat stroke and exhaustion because they may lack the judgment to limit exertion during hot weather and to rehydrate themselves.



Children are more likely to become dehydrated than adults because they can lose fluid more quickly.



Most children with asthma are sensitive to heat because of hot weather's impacts on air quality.

Hot weather can affect ground-level ozone and other indicators of air quality. Useful tools such as the Air Quality Index (AQI), a guide for reporting daily air quality, and EPA's Air Quality Flag Program, which uses colored flags based on the AQI, can be used to teach coaches, recess monitors, students, and others about outdoor air quality conditions. To check for local air quality conditions, go to www.airnow.gov.

Steps a School can Take

- ✓ During days with high heat or unhealthy air conditions, limit physical exertion outdoors to morning hours.
- ✓ Encourage students to drink more fluids.
- ✓ Advise students to wear lightweight, light-colored, loose-fitting clothing.
- ✓ Train staff on how to recognize the signs of heat illness and in first aid.
- ✓ Ensure ventilation and air conditioning systems are functioning properly.
- ✓ Install window air conditioners and insulate around them, as needed, to ensure each child-occupied space is sufficiently cooled.
- ✓ Weather-strip doors and windows and insulate the building to keep heat out.
- ✓ Cover windows that receive morning or afternoon sun and use window reflectors designed to reflect heat back outside.
- ✓ Plant more trees and vegetation (low pollination varieties) on school grounds.
- ✓ Participate in EPA's Air Quality Flag Program to communicate the daily AQI.

Learn more at:

[EPA | Extreme Heat](#) | [EPA | Extreme Heat and Indoor Air Quality](#)
[NIHHS | Planning and Preparing](#)

Indoor Air Quality

Poor indoor air quality (IAQ) can impact the comfort and health of students and staff, which can affect concentration, attendance, and performance. Failing to prioritize IAQ could increase the risk of health impacts such as fatigue, nausea, coughing, eye irritation, headaches, asthma episodes, and allergic reactions.

The best way to improve IAQ is by developing and implementing comprehensive IAQ management programs that prioritize source control, ventilation, and air filtration.

Source Control

The most effective way to improve indoor air quality is to eliminate individual sources of pollution or to reduce their emissions. Some sources, like those that contain asbestos, can be sealed or enclosed; others, like cleaning chemicals, can be reduced through selecting low-toxicity and low-emitting alternatives.

Improved Ventilation

Lowering the concentrations of indoor air pollutants in schools by improving ventilation, i.e., increasing the amount of outdoor air coming indoors also improves IAQ. In consultation with a professional, ensure that minimum ventilation standards, such as ASHRAE 62.1 or local codes, are being met.

Filtration & Air Cleaning

Research shows that filtration can be an effective supplement to source control and ventilation. EPA recommends using air filters in HVAC systems with a Minimum Efficiency Reporting Value (MERV) 13 rating, if possible (per equipment specifications).

Air cleaners can also be used as a supplemental filtration strategy. It is recommended that any air cleaner uses proven technology and is appropriately sized for the spaces they will service. Do not use air cleaners that generate ozone and/or other air pollutants.

Steps a School Can Take

- ✓ Implement a comprehensive IAQ management program using the Framework for Effective School IAQ Management.
- ✓ Conduct regular building walkthrough inspections to proactively identify potential IAQ issues using the IAQ Tools for School Action Kit Checklists.
- ✓ Develop a plan to control sources of indoor air pollutants, including controlling mold/moisture; reducing the use of pesticides by using integrated pest management; and implementing an effective cleaning and maintenance program using the least toxic cleaners.
- ✓ Provide adequate ventilation by establishing an HVAC inspection and maintenance plan; cleaning air supply diffusers, return registers, and outside air intakes; and keeping unit ventilators clear of books, papers, and other items.

Learn more at:

[EPA | Indoor Air Quality Tools for Schools](#)

Lead in Drinking Water

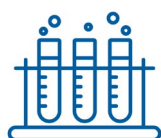
Clean and safe drinking water is necessary for good health. Lead can cause serious health effects in people of all ages, especially pregnant women, infants, and young children. Regular sampling of tap water in schools is critical to ensuring children aren't exposed to lead in drinking water at school.



Lead typically enters drinking water from building plumbing, fountains, and fixtures – especially in buildings with plumbing installed before 2014. Where present, lead service lines (i.e., lead pipes) can also contribute to lead at the tap.



It is important to test school water to know if lead is a concern. If lead is detected, then that information is necessary for taking action to reduce exposure, including identifying and removing lead materials, using a filter certified to reduce lead, using only cold water for drinking, cooking, and making baby formula, and letting the water run for several minutes before use.



Schools and child care facilities should establish routine practices to evaluate the risk of lead exposure and when necessary, reduce exposure to lead from plumbing fixtures. These activities should be integrated into the school's overall plans for maintaining healthy learning environments.

Funding

To support lead testing and reduction in drinking water at schools and child care facilities, EPA administers the [Voluntary School and Child Care Lead Testing and Reduction Grant](#) authorized under the Water Infrastructure Improvements (WIIN) Act. Subject to annual appropriations, funding is awarded to states, territories, and Tribes to assist local and Tribal educational agencies with voluntary lead testing and remediation. Schools and child care facilities may be eligible for these funds and should locate the state-specific program contact information here: [Program Contacts](#). School and child care facilities may also be eligible for the competitive [Reducing Lead in Drinking Water Grant](#) program.

EPA's 3Ts

EPA's 3Ts (Training, Testing and Taking Action) program provides recommendations, outreach materials, and tools to assist schools, childcare facilities, and states plan, sample, communicate results, and take corrective actions to reduce lead levels in drinking water.

Lead in Drinking Water (cont'd)

Steps a School Can Take

- ✓ Maintain drinking water outlets. Regularly clean and sanitize fountain mouthpieces and clean faucet screens/aerators regularly. Avoid cleaning or removing aerators immediately before lead sampling.
- ✓ If the school operates its own public water system, comply with state and federal drinking water requirements. Work with the state drinking water program to determine required monitoring and sampling and test accordingly.

Learn more at:

[EPA | Basic Information about Lead in Drinking Water](#)

[EPA | WIIN Grant: Voluntary School and Child Care Lead Testing and Reduction Grant Program](#)

[EPA | WIIN: Grant Reducing Lead in Drinking Water Grant](#)

[EPA | 3Ts for Reducing Lead in Drinking Water](#)

[EPA | Ensuring Drinking Water Quality in Schools During and After Extended Closures](#)

[EPA | 3Ts Lead Sample Collection Video](#)

Lead Paint

Lead is a toxic metal that is harmful if inhaled or swallowed and can pose serious health risk for both children and adults. One of the most common sources of lead exposure is dust from lead-based paint in buildings built before 1978. Lead dust may be created when painted surfaces are disturbed during renovations in older buildings, lead-based paint deteriorates and lead-contaminated soil gets tracked into a school.

Children under 6 years of age are especially vulnerable to harm because their growing bodies and brains are more sensitive to lead's damaging effects. Their tendency to put their hands and objects in their mouths and crawl on the floor makes it more like they will ingest lead. Some playground equipment and toys may contain lead or lead-based paint. Toys can also pick up lead from contaminated soil or dust. In children, lead exposure can cause damage to the brain and nervous system, lower IQ scores, slowed growth, hearing and speech problems, underperformance in school, learning and behavioral problems, and decreased ability to pay attention. If a school building was built before 1978, there is a good chance that it contains lead-based paint.

EPA's Renovation, Repair and Painting (RRP) Rule applies to child-occupied facilities (COF) built before 1978 that are regularly visited by children under 6 years of age. For pre-1978 COFs, you may either presume lead-based paint is present and follow lead-safe work practices, or determine that affected components are free of lead-based paint using an EPA-recognized test kit administered by a certified renovator, lead inspector or risk assessor to determine if the surfaces being renovated have lead-based paint. The RRP Rule applies when work disturbs painted surfaces in these settings unless the components have been determined to be free of lead-based paint.

RRP Rule Requirements:

- ✓ Renovators must provide building owners and occupants pre-renovation notification.
- ✓ Firms/contractors and school staff performing renovations that disturb paint must be certified in lead-safe work practices.
- ✓ Renovators must be trained and certified.
- ✓ Workers must receive on-the-job training from a certified renovator.
- ✓ Lead-safe work practices must be followed and documented.

Steps a School Can Take

- ✓ Interior painted areas—Examine walls and interior surfaces to see if the paint is cracking, chipping, or peeling, and check for areas on doors or windows where painted surfaces rub together.
- ✓ Exterior painted areas—Check exterior paint for flaking and ensure it is not contaminating nearby soil where children may play.
- ✓ Check large outdoor structures for peeling or flaking paint that could contaminate the soil around play areas.
- ✓ Have staff ensure that children wash their hands thoroughly after playing outside and before eating.

Learn more at: [EPA | Lead](#)

Low-Cost Air Pollution Monitors

A low-cost air pollution monitor is a device that uses one or more sensors and other components to detect, monitor and report on specific air pollutants like particulate matter (PM) or carbon dioxide and environmental factors such as temperature and humidity. Low-cost air pollution monitors can transmit near real-time results on one or more indoor air quality (IAQ) pollutants or environmental factors to computers, phones, or cloud databases. They may serve as a complement to IAQ best practices of source control, ventilation and air cleaning/filtration in helping building occupants improve a building's IAQ. The data from these types of devices can be tracked, analyzed, compiled, and shared and may be useful to decision makers when responding to IAQ issues or communicating with the school community. Quality assurance and quality control procedures for the equipment and data collection should be utilized to ensure the accuracy of results.

Installing low-cost air pollution monitors in schools might help building managers, school administrators or school personnel to:



Identify levels of specific substances that may be in the air.



Indicate the potential need to take actions to improve IAQ such as removing or reducing certain sources of a pollutant, increasing ventilation (e.g., adjusting building/unit ventilation systems, opening windows and doors) or using portable air cleaners.



Identify IAQ issues that may need attention and evaluate improvements after any changes have been implemented.

When considering where to place low-cost air pollution monitors in school buildings or classrooms, follow manufacturer's instructions. Avoid putting the monitors near windows, doors, air ducts, fans, or immediately next to sources of contaminants. In general, try to place the monitor in the breathing zone of the occupant(s) (e.g., 3-6 feet from the ground for a typical adult depending on if they are sitting or standing) and in a location that does not restrict air flow into the monitor. In some cases, it may be helpful to place one or more low-cost air pollution monitors outdoors in areas that can provide information about background conditions or outdoor contaminant sources that may impact the indoor air quality in the school. [Airnow.gov](https://airnow.gov) may also provide useful information regarding local ambient air quality.

Low-Cost Air Pollution Monitors (cont'd)

Questions for a School to Consider

- ✓ What prompted the school to consider air monitoring? What type of pollutants or environmental factors are you interested in monitoring? There are many makes, models and costs with various sensor types to consider.
- ✓ How many monitors are needed for the space of concern? Influencing factors include the size of the building, number and sizes of rooms, program priorities, contaminant sources, and activities.
- ✓ Who will maintain the monitor(s)? Low-cost air pollutant monitors may periodically need to be maintained and calibrated. The manufacturer's instructions should be followed for these activities.
- ✓ Who will be the recipients of the monitoring data? Is this information intended only for the building managers or the public? How will the resulting data from the monitors be both safeguarded and made available to the desired recipients?

Learn more at:

[EPA | Air Sensor Technology and Indoor Air Quality](#)

[EPA | Air Sensor Toolbox](#)

Mercury

Mercury is a neurotoxic substance that can produce a wide range of health effects in children. Elemental (metallic) mercury primarily causes health effects when it is inhaled as a vapor and absorbed into the lungs.

Elemental mercury can be found in:



Thermometers



Switches



Glass Vials



Barometers



Thermostats



Compact Fluorescent
Lamps (CFL)

Mercury is commonly found in school chemistry and science laboratories, including mercury salts in laboratory compounds. Exposure to mercury can occur when elemental mercury is spilled or when products that contain elemental mercury break and expose mercury to the air, particularly in warm or poorly-ventilated indoor spaces.

Cleaning up mercury spills in schools can be costly since it can easily be tracked through a building and to other buildings, vehicles, and personal property (e.g., clothes, backpacks, toys). To prevent this type of environmental contamination, items containing elemental mercury should be replaced in schools with alternatives whenever possible (e.g., employing digital thermometers). If a mercury spill or leak occurs, evacuate children from the classroom/area and contact the local health department immediately.

Steps a School Can Take

- ✓ Conduct an inventory of all chemicals and locate all mercury equipment and compounds, then contact a professional for proper disposal or removal.
- ✓ Create and distribute a mercury spill response plan.
- ✓ In the event of a large spill, have everyone leave the area, open windows, turn down the temperature, and contact a local or state health or environmental agency.
- ✓ Spills the size of a single thermometer or CFL can be cleaned by school personnel after ventilating the area. Students should leave the room until the spill is cleared.
- ✓ Never use a vacuum cleaner or broom to clean up mercury, they will increase exposure by spreading mercury droplets in the air and anywhere else they are used.
- ✓ Never wash clothing or other items that have come in direct contact with mercury in a washing machine, because mercury may contaminate the machine and/or pollute the sewage system. Clothing that has come into direct contact with mercury should be discarded as directed by your local officials.

Learn more at:

[EPA | Mercury](#) | [EPA | Cleaning Up a Broken CFL](#)
[EPA | Case Studies about Mercury Spills in Schools](#)

Mold and Moisture Control

Different molds have the potential to cause health effects of varying impact. These can be minor such as irritation of the eyes, skin, nose, and throat or more serious such as the production of potent toxins. Whether the mold is living or dead, it can act as an allergen and asthma trigger. Molds can be found almost anywhere, and they can grow on virtually any organic substance as long as moisture and oxygen are present. There are molds that can grow on wood, paper, carpet, insulation, and foods.

The key to mold control is moisture control. The presence of moisture within schools and other buildings can stimulate the growth of molds and provide a nurturing environment for mites, roaches, rodents and other biological contaminants associated with asthma and other diseases. Controlling moisture to prevent mold growth helps mitigate these potential health concerns.

Moisture problems can be caused by uncontrolled humidity, roof leaks, landscaping or gutters that direct water into or under the school building, unvented combustion appliances, or delayed or insufficient moisture-related maintenance.

By checking for moisture and mold on a regular basis, cleaning up any visible indoor mold growth immediately, and carrying out annual preventative maintenance procedures to control moisture and mold problems, school managers can avoid the need for costly mold and moisture-related repairs. These efforts can also reduce the potential of legal liability due to mold-related health risks for children and staff.

Steps a School Can Take

- ✓ Maintain ideal indoor humidity levels between 30% and 50% when possible.
- ✓ Clean and dry wet/damp areas or materials within 48 hours.
- ✓ Fix leaky plumbing and roof leaks as soon as possible.
- ✓ Check regularly for condensation and wet areas.
- ✓ Address sources of moisture problems as soon as possible.
- ✓ Scrub mold off hard surfaces with soap and water and dry completely.



Learn more at:

[EPA | Mold](#)
[EPA | Mold Remediation in
Schools and Commercial
Buildings](#)

Pesticides and Pesticide Management

Pesticides need to be used carefully and judiciously, especially when used in areas where children are present. Children may be more sensitive than adults to pesticides. In addition, young children can have greater exposure to pesticides from crawling, exploring, or other hand-to-mouth activities.

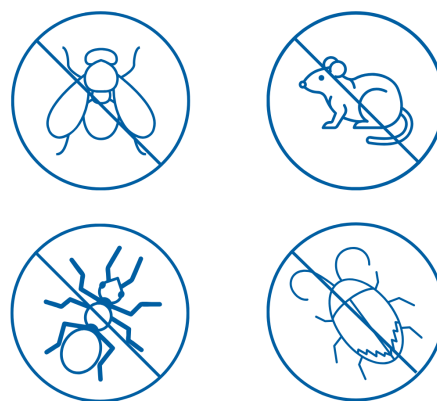
When registering pesticide products, EPA reviews a variety of health and safety information to ensure these products, when used according to the label, will not cause any unreasonable adverse effects to public health or the environment. Overexposure to pesticides may cause adverse health effects, ranging from mild symptoms of dizziness and nausea to serious, long-term neurological, developmental and reproductive disorders.

EPA recommends that schools use an Integrated Pest Management (IPM) approach to reduce pesticide risk and exposure to children and staff. Implementing IPM practices in schools can reduce or minimize economic and health related issues caused by pests and pesticides.

All school occupants and employees play a role in ensuring that a school's IPM program is successful. Ask school administrators if an established IPM program is being utilized in the school. By working together, everyone can have a role in creating an ongoing, safe, and healthy school environment.

Steps a School Can Take

- ✓ Install high-density door sweeps on all doors to keep mice, rats and roaches out.
- ✓ Block open spaces around utility pipes coming into the building with copper mesh wire. Open spaces as small as 1/4 inch, or less than half the diameter of a dime, will allow mice and other pests into a building.
- ✓ Install screens on all windows, particularly if they are open during warm months.
- ✓ Clean and mop floors in all food service areas daily, including classrooms.
- ✓ Use sealable containers or canisters to provide secure storage for edible food items and snacks.
- ✓ Bag and completely close all garbage and place in dumpsters outside of the school building daily.
- ✓ Always read the label and follow directions when applying pesticides.

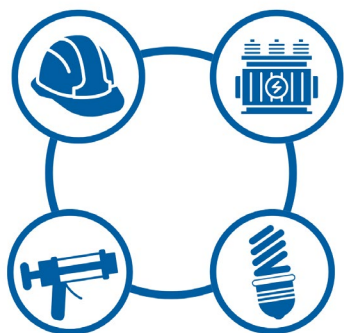


Learn more at:

[EPA | Integrated Pest Management](#)

[EPA | EPA's Approach to Integrated Pest Management in Schools](#)

Polychlorinated Biphenyls (PCBs) in Caulk and Fluorescent Light Ballasts



Polychlorinated biphenyls (PCBs) are a class of man-made organic chemicals that can be found in a variety of commercial products and building materials including caulking, paint, coatings, electrical equipment, electronics, fluorescent light ballasts, and other industrial and commercial applications from the 1950s to the late 1970s. In 1979, EPA banned the commercial production of PCBs, due to health and environmental concerns related to PCB exposure.

PCB-containing caulk and PCB-containing lighting ballasts can be significant primary sources of PCBs inside old school buildings.

Caulk

Caulk is a flexible material used to seal gaps and to make airtight or watertight windows, door frames, masonry, and joints in buildings and other structures. Old caulk in schools that were constructed or renovated between 1950 and 1979 may contain PCBs and can emit PCBs into the surrounding air. PCBs from caulk may also contaminate adjacent materials such as masonry or wood. Removal of PCB-containing caulk and adjacent materials during building renovations or demolition is the most effective method to reduce exposure risk. Each cleanup is dependent on site-specific conditions. It is important for schools to work with their regional PCB Coordinator to appropriately address PCBs found onsite.

Fluorescent Light Ballasts

PCBs are also contained within some fluorescent light ballast capacitors and the surrounding potting materials manufactured prior to 1979. PCB-containing fluorescent light ballasts that are currently in use have either approached or exceeded their designed life span, so they should be properly removed from buildings to prevent exposure. Sudden rupture of light ballasts may pose health risks to the occupants and is difficult and costly to remediate. Removal of PCB-containing light fixtures, as part of lighting upgrades or a stand-alone project, is an investment that pays off with long-term benefits to students, school staff, the community, and the environment.

PCBs in Caulk and Fluorescent Light Ballasts (cont'd)

Steps a School Can Take

- ✓ Remove all PCBs promptly and dispose of PCB waste appropriately.
- ✓ Ensure that ventilation systems are operating properly and are regularly inspected and maintained according to system manufacturer guidelines or ANSI/ASHRAE/ACCA Standard 180—Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems. If system cleaning is needed, follow ANSI/ACCA Standard 6 – Restoring the Cleanliness of HVAC Systems.
- ✓ Clean inside schools and other buildings frequently to reduce dust and residue.
- ✓ Use a damp cloth or mop to clean surfaces. Do not use dry brooms or cloths.
- ✓ Use vacuums with high efficiency particulate air (HEPA) filters.

Learn more at:

[EPA | Polychlorinated Biphenyls \(PCBs\)](#)

[EPA | Information about PCBs in Building Materials for School Administrators, Building Owners and Managers](#)

[EPA | Practical Actions for Reducing Exposure to PCBs in Schools and Other Buildings](#)

[EPA | Polychlorinated Biphenyl \(PCB\) – Containing Fluorescent Light Ballasts \(FLBs\) in School Buildings](#)

[EPA | Inadvertent PCBs](#)

[EPA | Regional PCB Programs](#)

Preventing the Spread of Infections

In the United States, respiratory illnesses (e.g., influenza, COVID-19, streptococcal pharyngitis) and gastrointestinal infections (caused by norovirus, rotavirus, etc.) are common among children and adults. These infections are frequent causes of absenteeism for students and missed work for school staff.

Schools can follow and encourage everyday actions that provide health benefits for all students and maximizes school attendance, while also preventing the spread of infections caused by common childhood respiratory or stomach viruses. If illnesses are spreading in the community, schools can take additional actions to prevent infections from spreading.

Schools can prepare for outbreaks or a pandemic with an [emergency operations plan that includes an infectious disease section](#), outlining the actions necessary to reduce the impact of the outbreak.

Clear and consistent communication between school administrators, parents and caregivers, and staff is essential for the success of many strategies to prevent the spread of infections.

Steps a School Can Take

- ✓ Teach and reinforce proper handwashing and respiratory etiquette (e.g., cover coughs and sneezes, dispose of tissues immediately).
- ✓ Take steps to promote cleaner indoor air by improving ventilation in schools. Schools should consider ventilation enhancements and design when undergoing remodeling or when undertaking new building construction to optimize clean air.
- ✓ Clean, sanitize, and disinfect when appropriate. Always read and follow label instructions.
- ✓ Have staff and students stay home when they are sick.
- ✓ When applicable, use personal protective equipment (PPE) for school staff who are caring for sick children.



Learn more at:

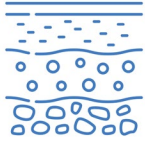
[CDC | Preventing Spread of Infections in K-12 Schools](#)

[CDC | Preventing Respiratory Illness](#)

[EPA | Ventilation and Respiratory Viruses](#)

[EPA | Healthy Indoor Environments in Schools During the COVID-19 Pandemic and Beyond](#)

Radon



Radon is a radioactive, colorless, and odorless gas that comes from the natural breakdown of uranium in soil, rock and water.



Radon gas can enter a building through cracks and holes in the floor and become trapped in indoor air.



Radon can be found in both old and new buildings and is colorless and odorless. Prolonged exposure to radon can result in lung cancer. EPA estimates that radon is responsible for 21,000 lung cancer deaths every year, making radon the second leading cause of lung cancer in the U.S., after smoking.

Steps a School Can Take

- ✓ Have qualified measurement professionals test all frequently used rooms on and below the ground level for radon, following state requirements and national standards of practice ([MA-MFLB: Protocol for Conducting Measurements of Radon and Radon Decay Products in Multifamily, School, Commercial and Mixed-Use Buildings](#)). To learn more about your state's requirements, contact the state's radon program.
- ✓ If test results show radon concentrations of 4pCi/L or higher, have qualified mitigation professionals install radon mitigation systems, which are designed to reduce and remove radon from indoor air, following state requirements and national standards of practice ([SGM-MFLB: Soil Gas Mitigation Standards for Existing Multifamily, School, Commercial and Mixed-Use Buildings](#)).

Learn more at:

[EPA | Radon](#)

[EPA | Radon in Schools](#)

[Kansas State University | National Radon Program Services](#)

UV Radiation

While short exposure to sunlight is enjoyable and beneficial as an important source of Vitamin D, overexposure to the sun and its ultraviolet (UV) radiation can be dangerous. Most people are not aware that skin cancer, while largely preventable, is the most common form of cancer in the United States. In fact, the Centers for Disease Control and Prevention (CDC) estimates that 6.1 million cases of basal and squamous cell skin cancer are diagnosed each year. There were 97,059 new cases of melanoma, the most deadly type of skin cancer, in 2022.

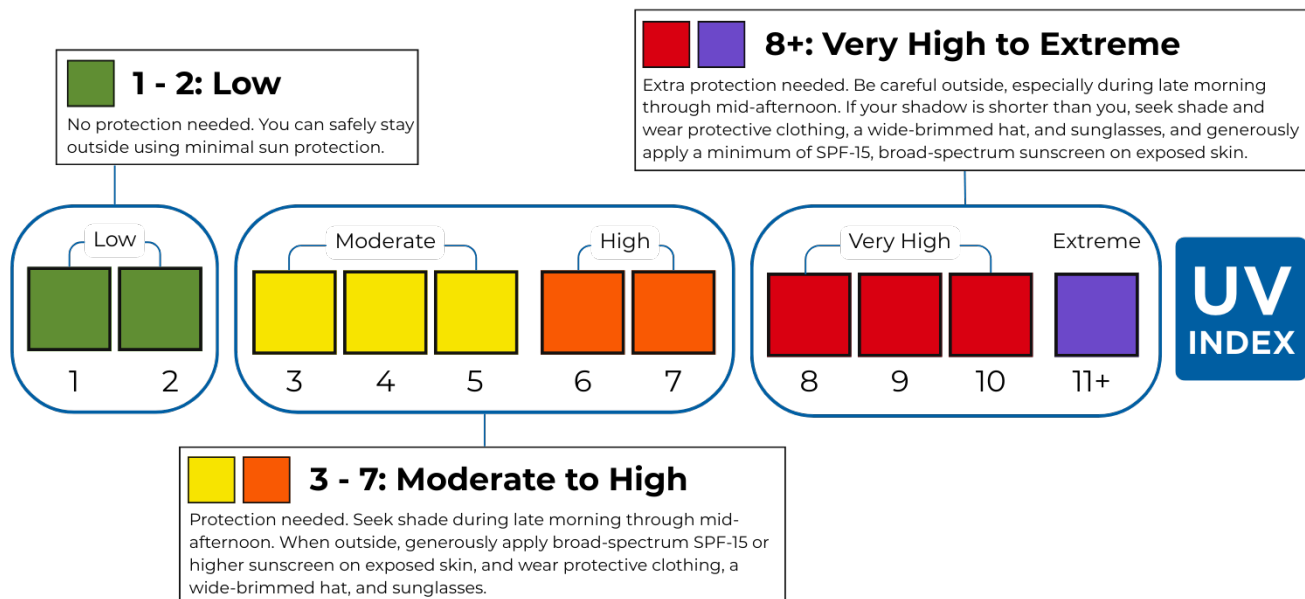


One in five Americans will develop skin cancer in their lifetime.



One American dies from skin cancer a little over every hour.

Overexposure to UV radiation from the sun can result in painful sunburns. It can also lead to more serious health problems in addition to skin cancer, including premature aging of the skin, cataracts and other eye damage, and immune system suppression. Because they tend to play outside more frequently for long periods of time and may not have the benefit of sunscreen or shade, children are particularly at risk. By following some simple steps, children and staff can still enjoy time in the sun and be protected from overexposure to UV radiation.



UV Radiation (cont'd)

Steps a School Can Take

- ✓ Take steps to prevent sunburns (e.g., protective clothing, sunscreen, hat). Sunburns significantly increase a person's lifetime risk of developing skin cancer, especially for children.
- ✓ Wear protective clothing. A long-sleeved shirt, a wide brimmed hat, and sunglasses are strongly recommended.
- ✓ Generously apply broad-spectrum sunscreen with a minimum Sun Protection Factor (SPF) of 15+ approximately 15 minutes prior to going outside. Sunscreen should provide protection from both ultraviolet A (UVA) and ultraviolet B (UVB) rays. Reapply every two hours, even on cloudy days, and after swimming or sweating.
- ✓ Designated school personnel should check the UV index which is issued daily by EPA and the National Weather Service. This index provides important information to help plan for outdoor activities in ways that prevent sun overexposure.
- ✓ Provide access to shade on school grounds and remember that the sun's UV rays are strongest between 10 a.m. and 4 p.m. Encourage sun-safe gear, sunscreen use and more frequent breaks and hydration during high UV days.

Learn more at:

[EPA | Sun Safety](#)

Waste Reduction

Every day, the average individual living in the United States produces approximately 4.9 pounds of trash. While many people already recycle products at home, schools can also control their waste by reducing, reusing and recycling it.



Waste reduction opportunities exist everywhere. Products that can be reused and recycled are countless and include everything from food scraps, yard and grounds wastes, paper, clothing, school supplies, sports equipment, and electronics. Items commonly recycled and found in virtually any school are paper, aluminum, glass, steel, cardboard, and yard waste. Food scraps or yard waste can be composted and then used to improve the soil and support school landscaping or gardens instead of being thrown out.

Many waste reduction efforts save money, energy, and natural resources while teaching children and young adults how solid waste affects their lives and their environment. Schools have a tremendous opportunity to implement waste reduction programs that can include pre- and post-waste reduction audits, incorporate waste tracking activities into the science curriculum, and promote programs that reduce waste. It is important to engage school-related groups including science classes, environmental clubs, and parent-teacher organizations. These groups can often educate the whole community about the benefits of waste reduction and encourage everyone to make it a part of their everyday life. Increasing the flow of reusable and recyclable materials can even generate extra funds for school departments and groups.

Connect with local or state waste authorities or private waste haulers for more information on what recycling options are available in the area. In the United States, state and local governments are responsible for determining what waste management approaches to take within their communities.

Steps a School Can Take

- ✓ Reduce waste through recycling, reusing or buying products made with recycled content.
- ✓ Purchase more environmentally friendly electronic and paper products.
- ✓ Manage obsolete electronics in an environmentally safe way.
- ✓ Carefully plan meals and establish share tables so that excess food does not go to waste.
- ✓ Track waste and recycled materials using ENERGY STAR Portfolio Manager.
- ✓ Establish recycling and composting programs and include relevant curriculum.

Learn more at:

[EPA | Educating Youth about Wasted Food](#)

[EPA | Reduce, Reuse, Recycle Resources for Students and Educators](#)

Wildfire Smoke

Wildfire smoke is a significant public health problem, especially as wildfires increase in size and severity and prescribed fires are increasingly common. Breathing in smoke is harmful to public health, and fine particulate matter (PM_{2.5}) is the greatest health concern. Exposure to fine particles in smoke can cause respiratory and cardiovascular health effects, especially for people in at-risk groups including children and people with heart and lung diseases, including asthma.

When smoke from fires becomes a health hazard, state and local health departments may advise people to stay indoors and avoid outside activity when possible. Smoke events can start with little warning and last for days and weeks. Schools affected by wildfire smoke are encouraged to develop a smoke readiness plan detailing how they will reduce occupants' exposure to smoke both indoors and outdoors.

Children are at greater risk of smoke-related health effects because their lungs are still growing. They are more likely to be exposed to smoke because they spend more time outdoors, engage in more vigorous activity, and inhale more air per pound of body weight compared to adults. Children may experience coughing, wheezing, trouble breathing, chest tightness, and decreased lung function when exposed to smoke. Children with asthma may have worsened symptoms or asthma attacks. In addition, children may experience stress and mental health effects as a result of living through a disaster like a wildfire.

After a wildfire, children should not be at a cleanup site, nor should they do cleanup work. Before children return to a wildfire-affected area, make sure there is safe drinking water, running electricity, safe road conditions, structurally sound buildings, and sewage, ash, and debris have been removed.

Steps a School Can Take

- ✓ Limit outdoor activity and organized athletic events when air quality is poor or forecasted to get worse.
- ✓ Reduce smoke intrusion: close doors and windows, weatherize buildings and limit allowable entrances. Adjust HVAC equipment to keep smoke out of buildings.
- ✓ Use high-efficiency (MERV 13+) filters and portable air cleaners to filter particles in smoke out of indoor air.
- ✓ Check air filters and change them when dirty.
- ✓ Reduce indoor sources of air pollution (see [Indoor Air Quality](#) for more information).
- ✓ Monitor indoor PM_{2.5} to verify that actions are reducing smoke indoors.
- ✓ Air out buildings when air quality improves, even temporarily.
- ✓ Consider NIOSH Approved® N95® respirators for children ages 2 and up.

Learn more at:

[EPA | Wildfire](#)

Facility Assessment



Quick Assessment

Use this voluntary assessment to help reduce and prevent exposures to common environmental health hazards at school. Each topic area covered below has low or no-cost steps which can be taken to improve students' environmental health. This tool also highlights waste reduction and energy efficiency strategies to help conserve valuable financial resources.

Air Quality Flag Program

Does the school train coaches, students, and staff about outdoor air quality conditions based on EPA's Air Quality Index?

☐Yes ☐No

Would school coaches and staff be able to gauge the safety of outdoor activities by checking what color flag was displayed based on the local air quality forecast?

☐Yes ☐No

Are physical activities adjusted as needed based on daily air quality forecasts?

☐Yes ☐No

Asbestos

Does the school have a readily available asbestos management plan?

☐Yes ☐No ☐N/A

Have all building operations and maintenance staff reviewed the asbestos management plan to understand how to minimize potential disturbance to asbestos containing material?

☐Yes ☐No ☐N/A

Asthma and Asthma Triggers

Are there policies that discourage the use of birds or furry animals such as mice, guinea pigs, and rabbits as pets in the school's classrooms?

☐Yes ☐No

Is the school's cleaning staff encouraged to use environmentally friendly cleaning products and "wet" dusting techniques whenever possible?

☐Yes ☐No

Are classrooms free of clutter? Are they dusted regularly? Are stuffed animals and pillows washed frequently?

☐Yes ☐No

Does the school have a policy against scented products (e.g., aerosol or plug-in air fresheners) in classrooms?

☐Yes ☐No

Buses and Vehicle Idling

Have anti-idling policies been developed and implemented for buses that serve the school?

☐Yes ☐No ☐N/A

Have anti-idling zones been established for all vehicles at the schools (school buses, delivery trucks and parents' cars)?

☐Yes ☐No

Are all passenger pickup/drop off areas located away from school's air intake supply, classroom windows, and exit doors?

☐Yes ☐No ☐N/A

Carbon Monoxide (CO)

Does the school's maintenance staff inspect and document the condition and findings for all gas burning appliances, furnaces and water heaters yearly to ensure they are properly operating?

☐Yes ☐No ☐N/A

Have CO detectors been installed in the school near appliances that burn natural gas, oil, or wood? Are they routinely inspected?

☐Yes ☐No ☐N/A

Chemical Management

Does the school conduct a yearly inventory of all chemicals present?

☐Yes ☐No

Does the school have a policy that prohibits any unauthorized toxic or hazardous chemicals from being brought into the school?

☐Yes ☐No

Are all chemicals properly labeled, stored in original containers, dated as to when they entered the school, and have accompanying Safety Data Sheets on site?

☐Yes ☐No

Are all toxic or hazardous chemicals stored in a ventilated, fire resistant, and locked area or cabinet in appropriate containers, separated by hazard category?

☐Yes ☐No

Does the school conduct cleanouts of all chemicals that are unnecessary, outdated, or posing a health risk on a regular basis?

☐Yes ☐No

Does the school ensure proper training of staff involved with chemical management? Are students properly trained before handling toxic or hazardous chemicals?

☐Yes ☐No

Disinfectants

Are there policies/procedures restricting children's access to disinfectants/chemicals?

☐Yes ☐No

Is there a schedule for cleaning/disinfecting to prevent 'overuse of products'?

☐Yes ☐No

Educational, Art and Science Supplies

Does your school have a policy to ensure that art materials, school supplies, and toys purchased are labeled "Conforms to ASTM D4236"?

☐Yes ☐No

Do school policies encourage minimizing exposure to hazardous materials by substituting less- or nonhazardous materials where possible for classroom activities; prohibiting food consumption around hazardous chemicals; and, washing hands often?

☐Yes ☐No

Are the school staff reminded to follow the precautionary recommendations listed on the labels?

☐Yes ☐No

Does the school have updated Safety Data Sheets for all products being used?

☐Yes ☐No

Energy Efficiency

Are lights turned off when not in use or when natural daylight can be used instead?

☐Yes ☐No

Are thermostats set back in the evening and at other times when the building is unoccupied?

☐Yes ☐No

Does the school track energy performance, perform monthly maintenance of heating and cooling equipment, educate students and staff about how their behaviors affect energy use, and use systems and controls that improve light quality, heating and cooling as part of an energy efficiency program?*

☐Yes ☐No

Extreme Heat Events

Does the school advise the students to wear lightweight, light- colored and loose-fitting clothing during extreme heat events?

☐Yes ☐No

Does the school limit physical exertion outdoors during days with unhealthy air conditions or periods of extreme heat?

☐Yes ☐No

Are staff trained on how to recognize the signs of heat illness and in first aid to treat heat-related emergencies?

☐Yes ☐No

Are ventilation and air conditioning systems maintained and functioning properly?

☐Yes ☐No

Indoor Air Quality

Does the school currently implement a comprehensive IAQ management program using the Framework for Effective School IAQ Management?

☐Yes ☐No

Are regular building walkthrough inspections conducted to proactively identify potential IAQ issues using the IAQ Tools for School Action Kit Checklists?

☐Yes ☐No

Has a plan been developed to control sources of indoor air pollutants, including controlling mold/moisture; reducing the use of pesticides by using integrated pest management; and implementing an effective cleaning and maintenance program using the least toxic cleaners?

☐Yes ☐No

Has an HVAC inspection and maintenance plan been established; cleaning air supply diffusers, return registers, and outside air intakes; and keeping unit ventilators clear of books, papers, and other items.?

☐Yes ☐No

Lead in Drinking Water

Is the water at the school tested according to regulations and the results documented?

☐Yes ☐No

Are water faucets, fountain screens and aerators regularly cleaned and sanitized?

☐Yes ☐No

Does the school have policies and procedures in place to prevent the disposal of hazardous substances down the toilets and/or dumping into storm drains?

☐Yes ☐No

Does the school have an established lead testing program, with clear communications and strategies to respond to sample results?

☐Yes ☐No

Lead Paint (in pre-1978 buildings)

Are the walls and interior surfaces free of cracking, chipping, or peeling paint, especially around doors or windows where painted surfaces rub together?

☐Yes ☐No

Are exterior walls and other large structures in the school grounds free of cracking, chipping, or peeling paint?

☐Yes ☐No

Does the school or school district provide a pre-renovation notification to staff and parents prior to construction activity?

☐Yes ☐No ☐N/A

Are all demolition and renovation activities impacting lead-based paint or other building materials in the school undertaken by certified and properly trained staff or contractors?*

☐Yes ☐No ☐N/A

Do students wash hands before snacks, lunch and after recess?

☐Yes ☐No

Low-Cost Air Pollution Monitors

Does the school use low-cost air pollution monitors to track IAQ, humidity, and temperature to ward off problems before they become larger, more costly issues?

☐Yes ☐No

Are monitors placed in an unrestricted, breathing zone for the typical occupants of the space?

☐Yes ☐No ☐N/A

Have administrators and staff been properly trained on monitor maintenance and proper tracking and use of air pollution/environmental data?

☐Yes ☐No ☐N/A

Mercury

Has an inventory of all chemicals, materials and equipment containing mercury been completed?

☐Yes ☐No ☐N/A

Does the school have a mercury spill kit and spill response plan readily available on site?

☐Yes ☐No ☐N/A

Mold and Moisture Control

Is humidity in the school building maintained below 60%, and ideally between 30% and 50% where possible?*

☐Yes ☐No

Does the school maintenance staff repair all leaking plumbing and roof leaks in the building as soon as possible?*

☐Yes ☐No

Is the school building (walls/ceilings/floors) free of wetness or condensation?

☐Yes ☐No

Does the school maintenance staff clean and dry any wet or damp areas or materials consistently within 48 hours?

☐Yes ☐No

Pesticides and Pest Management

Do all floors in food service areas and classrooms where food is served get cleaned and mopped daily?

☐Yes ☐No

Are all food items stored securely in sealable containers or canisters?

☐Yes ☐No

Is all garbage bagged, completely closed, and placed in dumpsters outside the school building daily?

☐Yes ☐No

Are there high-density door sweeps installed on all doors to keep out mice, rats and roaches?*

☐Yes ☐No

Are all open spaces around utility pipes coming into the building blocked with copper mesh wire or other material to hinder entrance into the building by pests?*

☐Yes ☐No

Does the school have screens installed on all operable windows?*

☐Yes ☐No

Polychlorinated Biphenyls (PCBs) in Caulk and Fluorescent Light Ballasts

Has the school determined whether the fluorescent light ballasts contain PCBs? If so, have the lighting fixtures in the school been retrofitted to adequately remove potential PCB hazards using recommendations highlighted in www.epa.gov/pcbs/polychlorinated-biphenyls-pcbs-building-materials?

☐Yes ☐No ☐N/A

Has the school followed recommendations highlighted in www.epa.gov/pcbs/polychlorinated-biphenyls-pcbs-building-materials for potential PCB-containing caulk?

☐Yes ☐No ☐N/A

Preventing the Spread of Infections

Does the school teach and reinforce proper hand washing and respiratory etiquette?

☐Yes ☐No

Does the school have policies and procedures in place for when students and staff become ill?

☐Yes ☐No

Does the school have an emergency operations plan that includes an infectious disease section outlining necessary actions to reduce the impact of an outbreak?

☐Yes ☐No

Radon

Have all frequently used rooms on and below the ground level been tested for the presence of radon with results documented and available for public review?

☐Yes ☐No

If the classroom radon levels meet or exceed 4pCi/L, has the school or school district installed radon mitigation systems?*

☐Yes ☐No ☐N/A

UV Radiation

Does the school post the daily UV Index to help staff protect students' overexposure to the sun?

☐Yes ☐No

Are students encouraged to wear protective, light weight clothing and sunscreen for recess during times of peak sun intensity?

☐Yes ☐No

Does the school have ample areas of shade to minimize time spent in the sunlight?

☐Yes ☐No

Waste Reduction

Does the school have an active waste reduction/recycling policy in place that promotes resource conservation, the purchasing of more environmentally friendly products, pre-post waste reduction audits, student involvement, and a curriculum that supports waste reduction and recycling?*

☐Yes ☐No

Wildfire Smoke

Does the school monitor the daily AQI when planning outdoor activities, especially during wildfire season?

☐ Yes ☐ No

Does the school have a smoke readiness plan to help reduce student and staff exposure to smoke both indoors and outside?

☐ Yes ☐ No

Are there N95 respirators or surgical masks, high-efficiency HVAC filters, and portable air cleaners available for use during wildfire season?

☐ Yes ☐ No

**Assessment activities that may require additional, cost-effective resources and methods for resolution.*

Resources



Top Ways to Make Your School Healthier



Clear the air inside. EPA's Indoor Air Quality Tools for Schools program provides information and tips on how to help schools prevent and solve indoor air quality problems, including simple steps that can be taken to reduce risk for students and staff with asthma.

Clear the air outside. Schools can reduce children's exposure to engine exhaust by eliminating unnecessary vehicle idling, installing effective emission control systems on newer buses and replacing the oldest buses with new ones. Check the daily AQI when planning outdoor activities, especially during wildfire smoke and extreme heat events. On poor AQ days, consider moving recess and sports practices indoors.



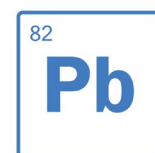
Test for radon and mitigate when necessary. If radon concentrations meet or exceed 4 pCi/L, take appropriate mitigation steps. Follow state requirements and national standards of practice when testing and mitigating for radon.

Use chemicals carefully. Possible health, safety, and environmental implications should be considered before chemicals are purchased for use in schools. Do not allow unauthorized chemicals to be brought into the school. Proper chemical use and management (e.g., storage, labeling, disposal) is critical for reducing chemical exposures and costly accidents.



Use disinfectants safely. Disinfectants help prevent the spread of illness, but they must be used correctly to protect health. Always read and follow label directions, including wet/contact times, and consider choosing products that reduce asthma triggers, such as wipes instead of sprays. Keep products out of children's reach, and never store disinfectants in food or drink containers.

Get the lead out. Renovations in schools built prior to 1978 must be tested for lead paint, or the presence of lead-based paint must be assumed. Renovations or repairs must be done by a renovator certified in lead-safe work practices so as to not create lead dust and debris. Children should be kept away from lead hazards inside and outside of school buildings. Have children wash hands after playing outdoors to protect them from lead in soil.





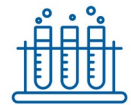
Eliminate mercury. School environments should be mercury-free. Schools should use digital thermometers and safer alternatives to mercury in science curriculum, nurses' offices and within facilities operations and maintenance.

Cover up. Schools should practice "sun-safe behavior" and encourage children to cover up, use SPF 15 or higher broad-spectrum sunscreen, and stay out of midday sun to avoid damaging UV rays. Consider adding shade structures to playgrounds and outdoor spaces.



Assess older building conditions regularly. Remove sources of lead, mercury, asbestos and PCBs from the school environment where possible. Materials containing toxics (e.g., lead paint, asbestos in floor tiles, PCBs in caulk) should be inspected regularly to ensure there is no chipping or cracking.

Test the water. School districts should test the drinking water in their school buildings regularly. Use EPA's 3Ts as guidance.



Proactive, regular building maintenance and cleaning. Regular cleaning and maintenance can ward off problems before they become severe. Routine inspections can discover leaks that can lead to mold and damaged materials that can lead to toxic exposures. Regular cleaning can keep pests away, lessening the need for pesticides and chemicals. Regular HVAC service and filter replacements support healthy IAQ.

Educate yourself. Know which environmental health issues affect your school and how to address them. Use EPA's Model School Environmental Health Program to create and implement your own plan. regularly. Use EPA's 3Ts as guidance.



Additional Online Resources

EPA Funding Opportunities

www.epa.gov/children/childrens-health-grants-and-funding-opportunities

EPA Children's Environmental Health Website

Protecting children's health from environmental risks is fundamental to EPA's mission. Get the facts about children's environmental health at www.epa.gov/children

EPA Regional School Contacts

Locate your regional EPA School Coordinator or Children's Health Coordinator by visiting www.epa.gov/children/learn-about-childrens-health-protection-where-you-live

EPA's Model Program for the State School Environmental Health Guidelines

www.epa.gov/schools/appendix-model-program-state-school-environmental-health-guidelines

EPA's Voluntary School Siting Guidelines

EPA's voluntary school siting guidelines can help local school districts and community members evaluate environmental factors to make the best possible school siting decisions. This website includes an overview for the guidelines, as well as links to resources and additional information. www.epa.gov/schools/school-siting-guidelines

EPA's Voluntary State School Environmental Health Guidelines

EPA has developed State School Environmental Health Guidelines, a voluntary guidance document which helps states, Tribes, and territories create and implement environmental health programs for K-12 schools. The goal of the guidelines is to provide a framework for improving the health and well-being of students by creating and sustaining healthy, safe, and productive school environments. To learn more visit www.epa.gov/schools/read-state-school-environmental-health-guidelines

Pediatric Environmental Health Specialty Unit (PEHSU)

PEHSU is a respected network of experts in children's environmental health. The PEHSU were created to ensure that children and communities have access to, at no cost, special medical knowledge and resources for children faced with a health risk due to a natural or human-made environmental hazard. To learn more visit www.pehsu.net/

National Center for School Infrastructure (NCSI)

As the national clearinghouse for school facilities, NCSI includes high-quality, practical resources relevant to planning, building, operating, and improving school buildings and grounds. Information is organized by topic and U.S. state to ensure local and state decision-makers can access the information most relevant to them. school-infrastructure.org