

INDOOR AIR QUALITY IN SCHOOLS

Designed and produced by the Green Flag Program with information from the Green Squad website, a project of the Natural Resources Defense Council and the Healthy Schools Network.

Some areas of your school may be off-limits without permission from your teacher or principal, and some projects should be done with at least one partner. Check with your teacher before beginning any activities or projects related to this fact sheet.

WHY IT MATTERS

The air inside a building can be more polluted than the air outside. Bad indoor air quality often plagues schools, especially when ventilation is poor and crowds are big.

When you think about air pollution, you probably picture smokestacks or the tailpipes on cars or trucks. But do you ever think of carpet? How about paint? Or mold? Air pollution happens inside too, and these are just a few of the things that can cause it.

Have you ever thought about how crowded your school is compared with other places? A classroom holds a lot more people than a space the same size in an office (about four times as many) or a house. The more crowded a space is, the worse its air quality is likely to be. Why? Because people breathe out carbon dioxide, and even germs, which can accumulate to unhealthy levels when too many people are crowded into too small a space. That's one reason schools often have indoor air problems.

Another is the ventilation. In many schools, the air doesn't circulate well, and that lets contamination build up. Many schools have leaks, which allow dampness to seep in. Moisture creates perfect conditions for the growth of mold, another big air quality problem for schools.

Many other substances can contaminate the air in school buildings. Dust and fibers can be a big problem. So can fumes from pesticides, paints or cleaning products. And new carpets, tiles, furniture or drapes often release fumes.

When the air quality is bad in your school, you might get headaches or nosebleeds, or feel dizzy or sick to your stomach. Sometimes bad air quality can cause learning or memory problems. And kids with asthma can suffer attacks triggered by dust or chemicals in the air.

WHAT YOU CAN DO

Many factors affect the air you breathe indoors, but two of the most important are poor ventilation and mold. Follow the steps below to help reduce the effects of bad ventilation and mold in your school. Then read the next section to learn about actions that school officials should take. And for information on other sources of indoor air pollution, see the fact sheets on renovation, painting, pesticides and cleaning supplies.

Ventilation

- **Use windows to help circulate air:** If the weather is nice and the outside air is good, open the windows if you can. This simple step can make a big difference. Just make sure neither the air conditioner nor the heater is running — or you'll waste energy.
- **Don't block vents:** To keep air flowing freely,



make sure nothing blocks vents. That includes books, papers, plants, shelves and furniture. Don't block the openings of air conditioners either.

Mold

Molds are a type of fungus. They grow everywhere, and they grow fast, by releasing spores that spread very easily. When molds are indoors, they can cause problems, because they release spores or chemicals that can build up in the air and make people sick.

To grow, mold needs moisture. When mold appears inside schools, it's usually because of dampness caused by leaks, flooding and other sources of standing water. Climate is an important factor, too: Schools in humid regions are more likely to develop mold. Mold doesn't need light, so it can even grow behind walls and in other places where you can't see it.

- **Report leaks immediately:** Since mold needs moisture, the best way to prevent it from growing in your school is to keep out standing water and dampness. If you see signs of a leak in ceiling tiles, walls, wood or anywhere in your school, report it right away to a custodian or your teacher.
- **Report musty or earthy smells:** Tell a custodian or your teacher about these odors, which can mean that mold is growing.

WHAT YOUR SCHOOL CAN DO

Ventilation

- **Make sure the air going into the school is as clean as possible:** Ventilation involves bringing in

air from the outside. Some of that air comes through windows and doors, but a lot comes through intake vents that draw in air. It's important to keep pollution away from these vents. Otherwise, dirty air will be pulled into your school. What kind of pollution might be near intake vents? If an exhaust fan — which pushes dirty air out of your school — is too close, the dirty air might get sucked right back in. And if trucks or buses park nearby, diesel smoke could get inside your school.

- **Maintain the HVAC (heating, ventilation and air conditioning) system properly:** It's important to keep vents clear, but they're just one part of the entire HVAC system. School staff should change filters regularly, keep dust out and take other steps to keep the system working right.

Mold

- **Don't give mold a chance to grow:** Humidity and standing water encourage mold to grow, so everyone at your school should work hard to keep surfaces dry. Leaks should be repaired immediately. Good ventilation is also important, so vents should be clear — school staff should monitor them to be sure. In humid climates, running an air conditioner also helps. If the air conditioning is not running, windows should be opened whenever possible.
- **Throw out wet materials if they take more than 24 hours to dry:** Anything that stays wet more than a day provides a good environment for mold. (Carpeting or upholstered furniture are examples of things that often stay wet for a long time.) If something isn't dry after a day, it should be thrown away.

For more facts, tips and project ideas, visit the Green Squad website at www.nrdc.org/greensquad. The Green Squad is a project of the Natural Resources Defense Council and the Healthy Schools Network.



To learn about the Green Flag School Program's three-step approach to making your school a healthier place to work and learn, go to www.greenflagschools.org