

Spring 2003

Serving Educators in
Butler, Clermont, Hamilton
and Warren Counties

REDUCE

School Bus
Idling



By Lynn White, Public Affairs Specialist

While school buses are one of the safest, and most effective ways to transport children to and from school, diesel exhaust from idling school busses can accumulate on and around the bus. When buses idle in the schoolyard, the exhaust not only pollutes the air outside and on the bus, but can pollute the air inside the school building and pose a risk to the children and faculty throughout the day.

Numerous scientific studies indicate that exposure to diesel exhaust can cause lung damage, respiratory problems, premature death, and lung cancer. Generally, children are more vulnerable than adults to air pollutants due to their higher inhalation rates, narrower airways, and less mature immune systems. However, there are some simple steps that your school can take to reduce idling time and air pollution.

Determine if there is an idling problem at your school by observing the arrival and departure times of the school buses, and whether or not the engines are left running while waiting for students to disembark and embark. Bus numbers, arrival times, departure times, and whether or not they are idling should be tabulated over several days and varying weather conditions.

What Your School Can Do

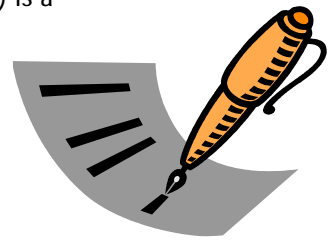
No Idling Policy: Require that buses (and parents) turn off their engines when waiting for students, unless temperatures are below 32°F.

Work with Bus Companies and Drivers: Inform them of not only the health, but the economic impact

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The Regional Ozone Coalition

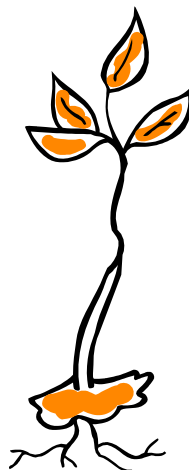
The Regional Ozone Coalition (ROC) is a voluntary association of local governments, organizations and businesses committed to reducing smog. The ROC aims to improve local air quality by educating the public, businesses and the media about smog. More recently, the ROC has become involved with assisting teachers and students in the region.



We have many free supplies such as activity sheets, tip sheets, coloring books and an air jeopardy computer game. In addition, the ROC is sponsoring its 3rd annual "Do Your Share for Cleaner Air Calendar Contest" for grades K-12. For more information on the contest or the ROC, please contact Summer Jones at (513) 621-6300 ext. 104, or visit www.doyourshare.org.

Free Tree Seedlings for Cleaner Air

Your school is eligible to receive 25 free tree seedlings to plant on school grounds or as part of a neighborhood planting project.



To receive your free trees, or find out more information, please visit www.hcdoes.org to print out a registration form or call (513) 946-7736. Registration forms must be received by April 1, 2003. **ALL** seedlings must be picked up during business hours at Funke's Greenhouse, near Spring Grove Cemetery, Cincinnati, on April 8, 2003 during business hours. Please do NOT turn up for trees without first sending in a registration form and receiving a confirmation.

The Air Quality Management Division, Solid Waste Management District, and the Soil and Water Conservation District of Hamilton County are all partnering with Funke's Greenhouse, Inc. to provide up to 2,000 free tree seedlings for this project.

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air Lesson

The Cost of Cleaning Pollution

Grades 3 and Up

Purpose: To teach that it is often easier to avoid polluting the air than to clean it afterwards.

Materials: Shower curtain, or large blanket, 2 containers (e.g. cup, butter tub), 1 measuring cylinder/jug, and an assortment of small items such as: uncooked rice, sand, stones, paper clips, beads, et.

Procedure: Spread the shower curtain/blanket on the floor. Have students name sources of air pollution. With each suggestion sprinkle some of the pollution (rice, etc.) on the curtain. Ask "what are the consequences of air pollution?" Explain that cleaning up pollution can be expensive (equipment and labor).

Ask for two volunteers to be the Environmental Cleanup Crew. Give them each a container, and inform them that you will give them a minute to clean up as much pollution as possible. After a minute, pour the collected "pollution" into the cylinder to measure how much was collected.

Repeat this twice more. Ask the students what happens to the amount collected, and when they think that it is no longer economically feasible to clean up the pollution. Explain to students that it is a lot harder to clean up pollution than to avoid making it in the first place. Ask them to brainstorm ways to avoid making air pollution.

For more Air Quality lessons and information, visit www.hcdoes.org, click on Air Quality and follow the education links!

Reduce Idling (cont'd from front)

of idling. A typical diesel engine burns approximately one gallon of fuel per hour idling. Reducing idling time by 30 minutes per day could add up to a savings of about \$130 a year, per vehicle.

Establish a program to recognize drivers: Ask students to write a thank you letter, or provide stickers or buttons

to drivers who comply.

Redesign Parking: Redesign bus parking at a diagonal. Back-to-front line-up of buses increases the concentrations of harmful particulate pollution inside school buses. Particulate pollution in school buses is 5-15 times higher.

Provide Notice to Parents: Send an annual notice home to parents, alerting them of the health risk, including what the school is doing, and what the parents

air Websites

www.airinfo.org/html/activities.html

Interactive site about the effects of pollution and ozone on our lungs.

www.eren.doe.gov/kids/

The U.S. Department of Energy's children's site teaches about alternative energy and energy conservation.

www.arbodayfoundation.com/carly/

Carly's Kids Corner by the Arbor Day Foundation includes games, quizzes and stories.

Free Stuff

For Students

Friends for Clean Air Coloring Book (K-2)

New Edition! *Kids Cloud Express* activity sheets (3-6)

Air Quality Pencils made from recycled newspaper, & cardboard (K-12)

Paper Fans (K-12)

For Teachers

The Breeze business/community newsletter

Living with Allergies Brochure

Transportation and Air Quality booklets

Air Quality Data or Progress Report for Butler, Clermont, Hamilton, and Warren counties.

Professional Development

Greater Cincinnati Environmental Educators Symposium

Thursday, June 26, 2003,
8:30 a.m. – 4:00 p.m.

Location: TBA

The symposium for tri-state educators will consist of an Environmental Education Resource Fair featuring organizations that provide field trips, curriculum, supplies, and classroom presentations, all designed to meet teachers needs and objectives.

The fair will be followed by several hands-on, break-out sessions, and a variety of field trips in the afternoon. For more information contact Gwen Roth with Hamilton County Soil and Water Conservation District at (513) 772-7645.

Fun Facts

- A study in General Climatology showed 85% less air pollution within a forest than just 300 feet from the forest edge.
- ...a half-full bus is equal to a single lane of cars 6 city blocks long!

Need More Information?

If you would like to receive *The Breeze* by email, please email lynn.white@hamilton-co.org, with the subject box stating "add to The School Breeze list."

For Free Outreach or Resources, contact Lynn White at 513-946-7754 or lynn.white@hamilton-co.org. Visit our website: www.hcdoes.org.