



Why should schools care about air pollution?

Most schools and childcare centers in urban areas are near major roads and sometimes industrial pollution sources. Whilst not always visible, the air in and around schools contains pollutants that can be damaging to children. UNICEF and the WHO cite research that shows young lungs are particularly susceptible to air pollution; exposure in childhood can lead to permanent respiratory health issues such as asthma and lung cancer.^{1,2} As a result, the United States Environmental Protection Agency and the British Lung Foundation have issued guidance to schools to raise awareness of the risks and to recommend ways to manage the problem.

Why monitor air pollution at schools?

It is often said you can't manage what you don't measure. Schools may choose to get air quality information from government-operated monitoring stations. But these stations can be many miles away, unrepresentative of local pollution sources and micro-climate effects, and do not report minute by minute changes in air pollution. Forward-thinking schools see air pollution monitoring as an opportunity to educate and protect.

Educate

- Brings STEM and environmental issues into the curriculum
- Gets children hands on with scientific equipment (OK maybe not the little ones!)
- Encourages time in the outdoors gathering measurements
- Teaches the basics of working with and interpreting data

Protect

- Children spend up to 50% of their waking time at school or in childcare
- Parents are increasingly concerned about pollution exposure during school hours
- Monitoring can be a management tool e.g. adjusting outdoor exercise on high pollution days
- Assures parents that something is being done, reflecting well on school administrators

Air pollution tools, made by Aeroqual

To get started you need an air pollution monitor that can measure and report real-time changes in pollution levels. Other methods, such as diffusion tubes, do not give real-time information and therefore miss the opportunity to capture and mitigate high pollution events, such as during school drop-off. Real-time air pollution monitors can be fixed (permanent) or portable – Aeroqual makes both.

Our air pollution monitors are built on a solid scientific foundation; the monitors are used by experts in the field such as the United States Environmental Protection Agency. Yet they have also been designed for ease of use, and are equally popular with schools and community groups. Here are just some of the schools who use our equipment:

- ▶ St Gerald's School (Omaha)
- ▶ Laurel Hall School (Los Angeles)
- ▶ Cognita Schools (London)
- ▶ United Nations International School (Hanoi)
- ▶ English Schools Foundation (Hong Kong)
- ▶ Concordia International School (Hanoi)



Fixed monitors

Offer real-time monitoring of air pollution for health and safety, managing outdoor activities, measuring impact of school / local mitigation initiatives.

Aeroqual's fixed monitors:

- Are compact and easy to use
- Measure the most common urban pollutants
- Present data to users on PC, tablet or phone
- Come in a range of prices to suit every budget
- Are supported remotely by a cloud based management platform



Portable monitors

Can be used as an educational tool for students to learn about air pollution. They are also great for spot checking pollution indoors or outdoors (e.g. during school drop offs).

Aeroqual's portable monitors:

- Are designed to be handheld (small hands too!)
- Measure a wide range of indoor and outdoor pollutants
- Come with a carry case to keep everything safe and tidy
- Report big numbers on a LCD screen
- Optional datalogging and PC download software

¹ World Health Organization (WHO), Effects of Air Pollution on Children's Health and Development – E86575, Special Programme on Health and Environment, European Centre For Environment and Health, Bonn Office, 2005.

² United Nations Children's Fund (UNICEF), Clear the air for children – The impact of air pollution on children, 2016.