



MyTAG helps Whitestone Primary School measure Air Quality

Whitestone Primary School caters for pupils between 3 and 11 years of age and is located in the western suburbs of Swansea above Mumbles Bay. The school's immediate catchment area is composed of both private and council properties, mainly built in the 1960s.

The school has achieved the Platinum Eco-School Award and has a long history of providing exciting and innovative opportunities for the Education for Sustainable Development and Global Citizenship (ESDGC) within the curriculum.

Maintaining and being able to demonstrate excellent air quality is of utmost importance in the schools' sector. Children are particularly vulnerable to the effects of air pollution on health: they breathe twice as fast as adults taking in more air relative to body weight; children are also more vulnerable to respiratory infection and exposure to air pollution can negatively affect lung development and health later in life.

Measuring air quality across different parts of the school premises can indicate where improvements can be made. These can often be relatively straightforward such as encouraging walk to school, implementing 'no engine idling' schemes to reduce emissions from the school run, or adding green infrastructure like 'barrier bushes' along busy roads and in playgrounds to help filter fumes. Air quality is also an educational opportunity for pupils and they can become directly involved.

MyTAG Air Quality Monitoring

In the latest Eco-School Review, which Whitestone Primary School are required to undertake annually, the children identified air pollution as being an area of interest for future investigation.

The most important pollutants to measure in a school environment are PM2.5 and CO₂. PM2.5 (particulate matter measuring <2.5 micrometres in diameter) is widely regarded to pose the greatest hazard to human health, given that its tiny size can penetrate deep into the human lungs and beyond, into the bloodstream. Particulate pollution is primarily a product of diesel vehicles, tyre and brake dust, and solid fuel-burning, and can also come from boilers and kitchen equipment inside a building itself.



CO₂ (an indication of confinement) is a less hazardous, but an equally important indoor pollutant. When rooms are not properly ventilated, human respiration can build up quickly, having a negative impact on concentration and tiredness, whilst creating an environment that allows bacteria and viruses to spread more easily, which is not ideal for a classroom.

An Educational Opportunity

MyTAG Air Quality Monitor measures PM2.5, CO₂, temperature and humidity, offering comprehensive readings to optimise indoor conditions for a top learning environment, and the children were very excited to receive the system in the school. The simple to set-up and inexpensive solution was operational very quickly, allowing them to check measurements and monitor trends, resulting in active participation and questioning. This helps to develop the key skills of literacy, numeracy and digital competency, as well as igniting enquiries across a range of subjects including geography, science, history and maths.

Each Air Quality Monitor is equipped with a bright 12.5cm LED screen which clearly displays its readings with easy-to-understand colour coding and icons. Data is also displayed online, providing an understanding of the monitored environment's health at a glance. You can toggle through hours, days and months of historical data to quickly discover trends in air quality.

In addition, the MyTAG App allows you to see current air quality information at a glance, as well as setting up pollution alerts or accessing pollution warnings and forecasts. Members of staff regularly check the web dashboard or App, to monitor building wide readings and take action as required, even if this is as simple as opening the windows!

The App also allows access to the world's largest global database of outdoor air quality data.



The cloud based systems allows transparent communication of real-time indoor conditions. This allows parents to view the information at any time, and to engage with their children in this area of their studies.

Mrs B. Peterson, Head Teacher, commented: "We believe that this is the perfect tool to inspire the children to undertake monitoring of their air and the atmosphere around them. It provides them with a wealth of information that they can interrogate and analyse, using their cross curricular skills, as well as enabling us to keep a check on the indoor air quality throughout the school. The children were particularly interested in the global information available on the website and we are in the process of establishing links with a school in China who share our passion for Environmental Education."

To find out more, please call MyTAG on 01752 657077 or visit www.mytag.io