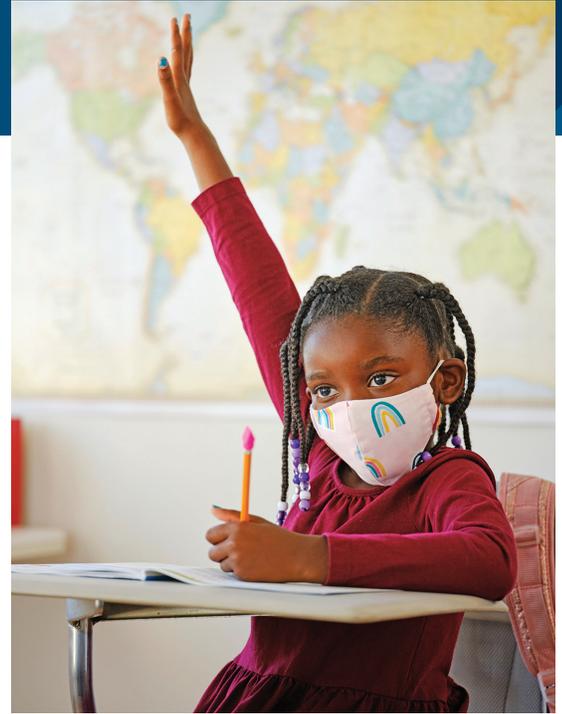# HOBO® by Onset®

Use Case:
Indoor Air Quality in Schools

Problem

As a facilities manager at a large county school district in Pennsylvania planned for the start of the upcoming term, he knew this year would be unlike any other. Anxious students, teachers, and administrators, concerned about the ongoing international pandemic, would soon be entering the district's buildings. Proper air circulation in buildings has always been a top priority, but the facilities manager recognized that this year air quality would play an even more important role in maintaining a healthy environment. He knew that he needed to be proactive and employ a solution that allowed him to repeatedly test and monitor all district HVAC systems to ensure maximum performance required for optimal fresh air circulation. He also knew that monitoring carbon dioxide (CO_2) levels indoors would help him to ensure proper circulation of fresh air, while reducing stagnant air that might retain virus particles. Initially, the main task at hand was to verify that all district buildings met the most current ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) standards. Knowing that testing and monitoring would be the starting point, the facilities manager contacted Onset for recommendations on CO_2 data logging and monitoring.

Solution

Onset recommended the HOBO MX1102A, a compact, battery-powered, Bluetooth Low Energy (BLE)-enabled data logger for convenient measuring and recording of CO_2, temperature, and relative humidity in buildings. The MX1102A features a long six-month battery life and a large LCD for visual inspection. And it works with Onset's free HOBOconnect app and a mobile phone or tablet so users can access data and configure audible alarm notifications when within 100 feet of the logger. Due to its compact size, battery-power operation, and BLE technology, the logger can be installed in safe, hard-to-reach locations, while allowing facilities workers to offload data without having to disturb classrooms or other workspaces where a logger is deployed.

With the addition of Onset's MX Gateway device, data can be collected from the HOBO MX1102A logger and automatically sent via Ethernet or WiFi communication to HOBOlink, Onset's cloud-based platform. With HOBOlink, data can be viewed anywhere at any time, simply by logging into an online user account, which can also be set up to send alarm notifications via text or email should conditions exceed user-set thresholds.

▶ *Read results on reverse*

Results

The facilities manager has installed numerous MX1102A loggers and MX Gateways throughout the school district's buildings for continuous monitoring of CO_2, temperature, and relative humidity. The data collected from the loggers enables performance optimization of the buildings' HVAC systems to ensure that indoor air quality is conducive to health and safety standards. The safer environment will ultimately contribute to the quality of the students' education by enabling them to continue learning in a live classroom. Using the data recorded by the MX1102A loggers, the district will also be able to strictly follow ASHRAE guidelines and guarantee that its demand-controlled ventilation (DCV) systems comply with local requirements. Remote alarm notifications set up with the MX1102A loggers and the MX Gateway will provide quick identification of any equipment malfunctions, so they can be fixed promptly. Getting the schools' HVAC systems operating at peak performance prior to the start of the school year was crucial. Having a system in place to continually check and verify brings peace of mind!

Products Used

Product	How it was used
HOBO MX1102A data logger	For the continuous monitoring of CO_2, temperature, and relative humidity
HOBO MX Gateway	To collect data from the HOBO MX1102A logger and automatically send it to HOBOlink, Onset's cloud-based platform
HOBOlink - Onset's cloud-based platform	To monitor CO_2, temperature, and relative humidity conditions, and send alarm notifications via text or email should conditions exceed user-set thresholds

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