

## AppliedSensor Study Finds High Level of VOCs in Classroom Air Industry Research Shows Indoor Air Quality Affects Student Performance and Attendance

Warren, New Jersey – June 28, 2010 – [AppliedSensor](#), a designer and manufacturer of chemical sensor components and intelligent indoor air quality (iAQ) modules, has [published research on indoor air quality in a classroom in Germany](#). The study focused on air quality fluctuation in a typical 700-square-foot classroom (60-70m<sup>2</sup>) with 20 to 30 occupants and an inadequate ventilation system. Measurements indicated that the amount of volatile organic compounds (VOCs) in the classroom air exceeded healthy threshold limits within minutes after students arrived at 8:00 a.m. and exceeded those limits for the majority of the school day.

“Poor air quality can put a damper on student academic performance and teacher productivity, as a high level of VOCs can make classroom occupants physically sick,” said AppliedSensor, Inc. CEO Tom Aiken. “Installing an AppliedSensor [iAQ Module](#) will signal the building’s ventilations systems within moments of detecting an unhealthy level of VOCs.”

In the study, measured values of VOCs in the classroom (correlated to parts-per-million of carbon dioxide (CO<sub>2</sub>)) continued to increase during the first hour of instruction, while slight improvements over the next few hours resulted from doors being opened for breaks or recess. Pollution increased and air quality continued to degrade as the day went on, reaching the unhealthiest levels just before students were dismissed for lunch.

According to the [Indoor Air Quality Scientific Findings Resource Bank](#) (developed by the Indoor Environment Department of the Lawrence Berkeley National Laboratory with funding support from the U.S. Environmental Protection Agency), in classrooms where ventilation rates are at or below minimum standards, student performance increases between five and ten percent when the ventilation rate is doubled. In addition, poor air quality may have financial implications. Students and teachers who spend the majority of their day inside inadequately ventilated classrooms are more likely to develop related health issues. In school districts where government resources are linked to student attendance, an increase in the number of student absences results in decreased funding, while more teacher absences result in higher expenses.

### **About AppliedSensor**

Relying on 25 years of research and development, AppliedSensor designs and manufacturers chemical sensor systems for a broad range of applications, including intelligent indoor air quality (iAQ) monitors, in-cabin air quality monitors for BMW Sport Utility Vehicles and Hydrogen Leak Sensors for fuel cell vehicles. The company operates three facilities worldwide: AppliedSensor, Inc. in Warren, New Jersey; AppliedSensor Sweden AB in Linköping, Sweden; and AppliedSensor GmbH in Reutlingen, Germany. Additional information is available at [www.appliedsensor.com](http://www.appliedsensor.com).

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