



Strategies to identify, prevent and curb student vaping

The School Leader's Guide to Addressing Vaping Epidemic

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Vaping on Campus: Who, Where and How Often

If you are a school principal, superintendent, teacher, IT professional or other school leader, you're probably familiar with the student vaping issue that persists on school campuses today.

Electronic cigarettes (e-cigarettes, for short), are small, hand-held nicotine delivery devices that heat a nicotine liquid into an inhalable vapor. E-cigarettes come in all shapes and sizes, but many are smaller than a USB drive.

These battery-powered vape pens produce an aerosol "vapor" that can contain nicotine, flavorings and other chemicals. The vapor looks similar to the smoke from a cigarette, but it doesn't have the same smell. Worse of all, unlike regular tobacco products, which have one distinct taste, e-cigarettes come in hundreds of fun flavors, like cotton candy, mango, or mint. This makes them more attractive to the [800,000 young people](#) who tried them for the first time in 2022 alone.

Because vapes don't smell like regular cigarettes, they are easy to hide. Students can take a quick puff between classes, in the bathroom, or even right in their seats.

In some cases, the vapor dissipates too quickly to be noticeable. In other cases, students can blow it into their clothing or hold it in their mouths before exhaling, reducing, or eliminating the vapor altogether.

A few of the most common places students vape include:

- **School Bathrooms:** Bathrooms are private and multiple students can use them throughout the day, making it easy to sneak a quick vape.
- **Classrooms:** Especially if a student sits in the back of the room, it can be difficult for a teacher to see them vaping.
- **Hallways:** During passing periods, students can easily blend in and vape without being noticed. During class time, they can use e-cigarettes while nobody is around.
- **Locker Rooms:** Like bathrooms, locker rooms are private places where students can vape without being detected.

And since these devices are so small, students can easily put them in their pockets or backpacks - making classroom vaping a big challenge. In fact, in 2019, the Truth Initiative hosted an [online discussion](#) with educators about how vaping impacts their classrooms. One of their primary concerns was how vaping can be a major distraction. When students use e-cigarettes, they are not paying attention to the lesson. This is a problem for all students in the class, not just those who use tobacco products and can have a ripple effect throughout the learning environment.

Student vaping can also lead to lower grades and academic performance. A [2021 study](#) found that students who began to use e-cigarettes missed assignments, skipped classes and reported lower GPAs than those who didn't use tobacco products. The Truth Initiative's 2019 data confirms this—teachers have personally noticed that e-cigarette use among their students has led to poor academic performance.

"A kid showing signs of (nicotine) addiction has mood swings (that they may or may not have had before), sudden drop in grades or loss or change of friend groups," one teacher said, describing how e-cigarette addiction has impacted her students.



Why Vaping is So Dangerous

As policies allow vape incidents to slip through the cracks and a lack of supplementary support systems makes it difficult to address the issue, more and more young adults are taking up vaping. This has many dramatic impacts on the health and safety of students and schools, namely:

1. Nicotine use can harm adolescent brain development.

In middle school and high school, students go through critical changes in their developing brains. Nicotine impairs the growth of neurons and directly harms the portions of the brain responsible for learning, memory and attention. Brain development continues until around age 25, so the more nicotine exposure young adults have now, the greater the risk for long-term problems.

2. E-cigarettes adversely impact lung health.

E-cigarettes contain potentially harmful ingredients, including metals like lead, volatile organic compounds and cancer-causing agents. According to the American Lung Association, the effects of these toxic chemicals [have amplified consequences for](#) young adults and their lung health. And this lung damage can have long-term effects (e.g., lung cancer, bronchitis and serious lung disease), particularly for teens who vape every day.

3. Teen vaping leads to early addiction.

In addition to the health risks associated with the harmful chemicals in vape juice, nicotine is highly addictive. Young adults who vape are at a greater risk of developing a nicotine addiction than those who don't. When users inhale nicotine, it quickly enters the bloodstream and travels to the brain.

This increases levels of the neurotransmitter dopamine, which is associated with feelings of pleasure. The body then begins to crave more nicotine to keep dopamine levels high, leading to nicotine addiction. This is even more alarming given that 39% of high school students who vape used e-cigarettes 20 or more days in the past month, [according to the most recent data](#). If nearly two in every five students are using e-cigarettes that frequently, it's likely that they will carry nicotine dependence into adulthood.

E-cigarette companies have been targeting young adults in their marketing for years. And as youth e-cigarette use grows, the social norm becomes more and more accepted and quitting vaping becomes less probable.

4. Widespread adoption results in younger users.

As more young people use e-cigarettes, the average age of first-time e-cigarette users continues to drop. Middle school students are now trying e-cigarettes at younger and younger ages. [The CDC reports](#) that 550,000 middle school students currently use e-cigarettes, which is only increasing.

For young teens, early adoption is the result of a domino effect. All it takes is one student with a brother or sister who vapes for the curiosity to set in. And since it's so addictive, the vaping epidemic can spread like wildfire.

5. Vaping e-cigarettes infringes on other students' health and safety.

When students vape at school, it's not just their own health and safety that's at risk. E-cigarette aerosol can have a secondhand impact on those around them, particularly for students with asthma or other respiratory problems.

Secondhand emissions from e-cigarette aerosols can actually be more harmful [among students who don't smoke or vape themselves](#), since they're not used to inhaling the chemicals. When teen vaping impacts the students and school personnel around them, it is no longer just an individual issue—it becomes a massive public health and safety concern.



8 Effective Strategies to Address Vaping

Across the country, how to stop vaping in schools is becoming a major conversation. To stand up against the teen vaping epidemic, there are a range of programs and strategies that schools can use to deter vaping.

"We have a health class that's required in and we actually added a section into that class that was based around vaping. We were hearing from students that [vapes] don't have any tobacco or nicotine. And so they didn't even really know what they were putting in their body and educating those students was key: we educated them on what those effects could look like."

Kurt Seiler,

Principal Independence HS, Kansas
Unified School District #446

To address the root of the vaping epidemic, teachers and administrators need to take a range of steps to curb vaping, drive better education around the topic, increase awareness, and more. Some of the strategies school leaders can deploy include:

- 1. Create an effective vaping policy:** A clear and concise vape-free policy is the first step to addressing the problem. The policy should include disciplinary actions for students who violate the rules, as well as education on the risks of vaping.
- 2. Increase monitoring and enforcement:** To ensure the policy is being followed, schools need to increase schoolwide monitoring for vape-related incidents. This might include more frequent check-ins during lunch or after school, as well as more random locker and backpack searches. It should also include building security cameras and vape detectors in bathrooms and other common areas.
- 3. Educate school staff:** When staff members are educated on the risks of vaping and how to identify vape-related incidents, they can play a crucial role in prevention. Each school administrator should be trained on the signs of vaping, so they can take action when necessary.
- 4. Engage parents:** Parents need to be involved in the conversation about teen vaping, both at home and at school. Schools can host parent workshops or send informational pamphlets to a family member to start the dialogue.
- 5. Educate students:** Many young adults are unaware of the harmful consequences of vaping nicotine. Students need to be educated on the risks of vaping, as well as the school's policy against it. This education should start early—in middle school—to prevent students from ever starting to vape.
- 6. Enforce consequences:** If students are caught violating the school's vaping policy, they should be subject to disciplinary action. This might include detention, suspension, or even expulsion, depending on the severity of the case. The consequences should be strict enough to deter students from vaping, but not so severe that they are unreasonable.
- 7. Provide support and resources for students:** Some young people vape because they struggle with other issues, like anxiety, depression, trouble at home, peer pressure, or a psychological issue. In other cases, they need the help from an addiction specialist. Schools should provide support and resources for these students, so they can get the help they need to stop vaping.
- 8. Capture student data:** Many schools collect data on student vaping, which can help administrators understand the scope of the problem and develop targeted prevention strategies. This data can be collected through surveys, focus groups, or student interviews. It can also be gathered through environmental monitoring systems placed on school grounds.



Taking the First Step - Identifying Student Vaping on Campus

Overview

In addition to longer-term programs to drive awareness, education and action around student vaping and the issues surrounding it, school leaders need to proactively take the first step to addressing the student vaping epidemic head-on: identify vaping incidents on campus.



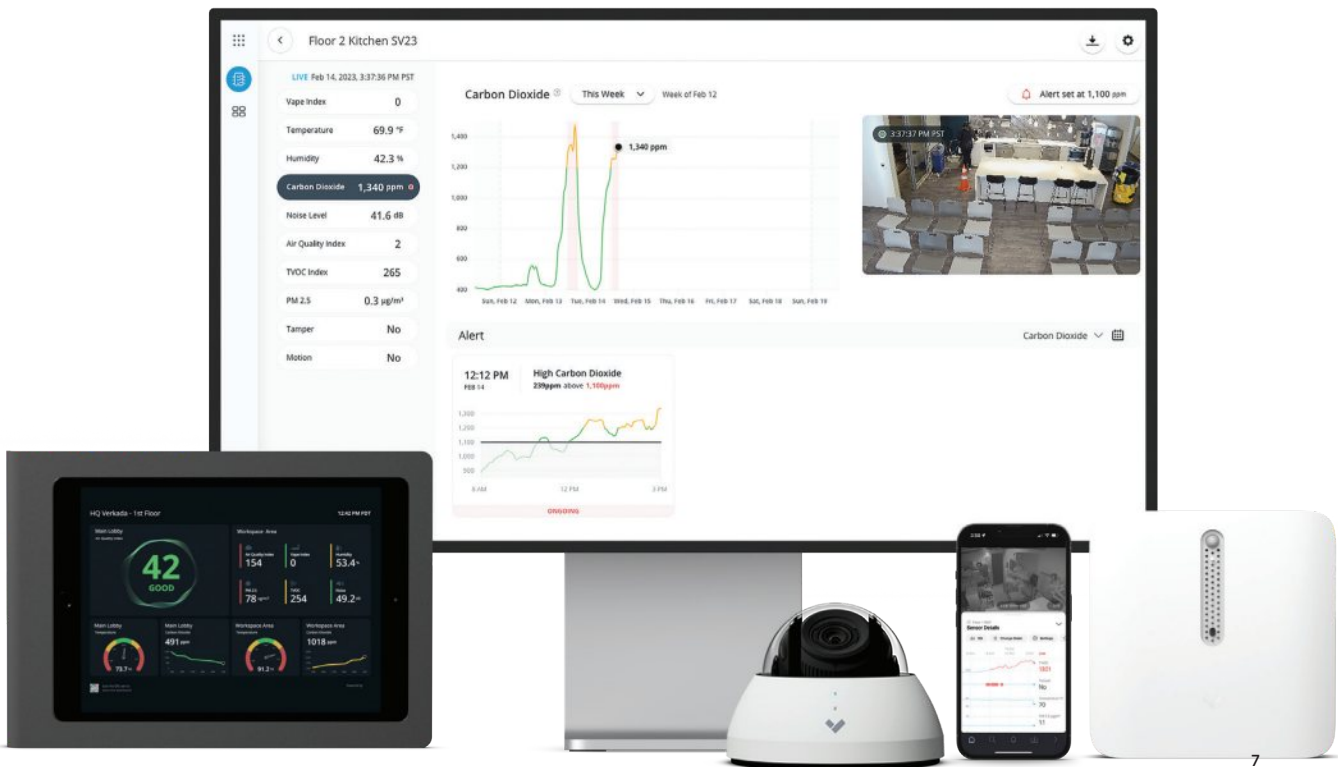


By better identifying vaping incidents on campus, school leaders can better build disciplinary action, school-wide awareness and proactive preventative measures around vaping. Verkada’s hybrid-cloud safety platform is an all-in-one security platform that allows school leaders to monitor video events, school access, and deploy all-in-one air quality sensors to monitor environmental changes in physical spaces.

With a collection of up to 15 embedded sensors, Verkada sensors simultaneously measure air quality, temperature, humidity, motion, noise and more. School leaders can configure the device to display which sensor data they wish to monitor, as well as set custom alerts for when certain thresholds are exceeded. Users receive alert notifications in real-time, allowing for fast and proactive responses.

"Whenever there's an event with someone vaping in the restroom, we get a text messages alert with a graph of the event and a live camera feed outside the bathroom. At this point we've honed the craft of investigations and it's really effective."


Kurt Seiler,
Principal Independence HS, Kansas
Unified School District #446





Verkada Sensor Vape Index:

Vape Index



0-10 10-50 50-80 > 80

Verkada’s Vape Index is a score derived from multiple sensors that is strongly correlated with vaping and/or smoking activity. Vape Index measurements outside of the green zone indicate suspected vaping/smoking activity, but could also reflect smoke or fumes from other sources. Smoke from cooking, burning fuel or wildfires may register highly on the Vape Index.

How it works

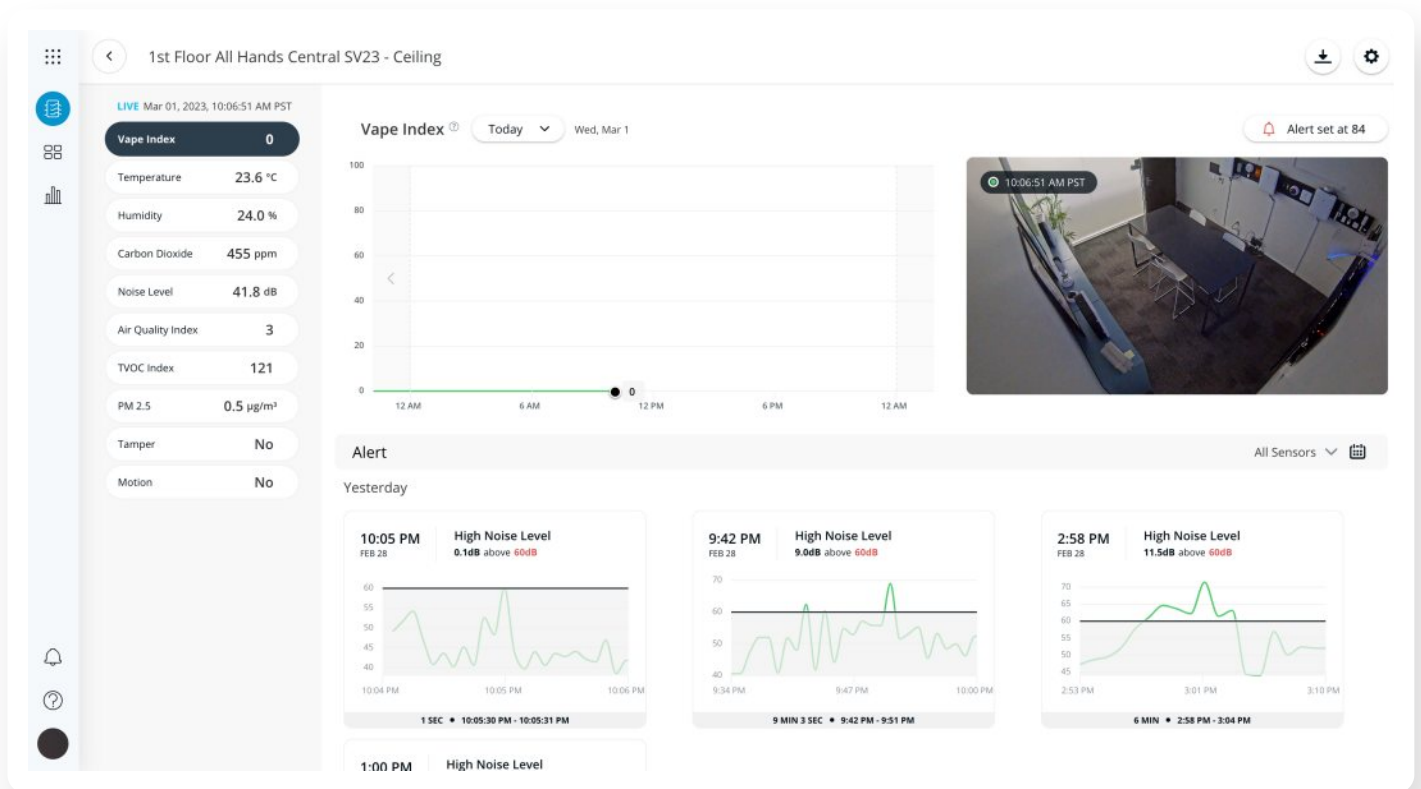
The Verkada Air Quality solution is extremely powerful in school settings as it allows school leaders to proactively monitor bathrooms, locker rooms and other indoor environments for vape events. The sensor uses multiple onboard sensors to detect and measure vaping events. Combined, these sensor readings output Verkada’s Vape Index, which determines the likeliness of vaping/smoking occurring on a scale of 1-100. The Vape Index takes several environmental changes into consideration, including increases in TVOC, PM2.5 and motion to determine if a person is present.

For best results, the Vape Index should only be enabled in areas more prone to vaping (restrooms, classrooms, hallways, hotel rooms) and not in spaces where common events could cause a false positive (kitchens, manufacturing floors). Additionally, users are encouraged to link a camera with each sensor, providing visibility and context into events taking place to investigate what triggered an increase in the Vape Index reading.



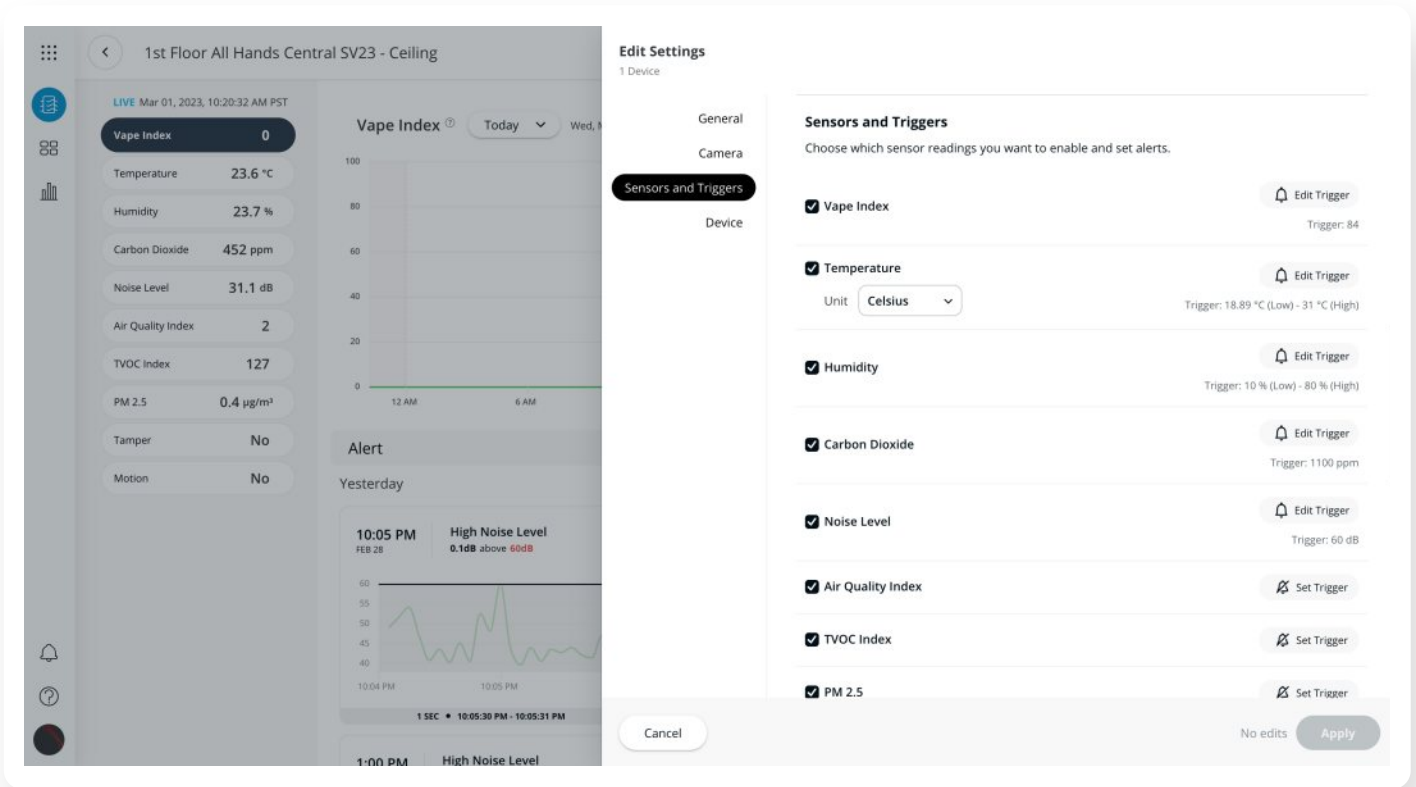
Platform Overview

Sensors are managed, configured and monitored through Verkada’s web-based Command platform. From Command, sensors can be paired with a Verkada camera to gain greater visibility of what occurred at a given event. This integration is made possible through Verkada’s all-in-one platform, enabling users to effortlessly add cameras without additional software or configurations.





Set Up: Alerts



Set custom thresholds

One of the most powerful capabilities within the Verkada system is the ability to get real-time alerts and notifications based on events that occur within your environment. To configure a Vape Alert, users can simply click into a site from the main Sensor page, select the Vape Index button across the top and the red rectangle that says “Alert set at” or “Set alert”. From there, users can customize the threshold at which they want to receive an alert. Users can choose any number from 1-100 on the Vape Index Scale.

Additionally, once a threshold is set, administrators can set which users should receive alerts. These users will need to have an account in Command. When a threshold is met, the predetermined users will receive an alert to take action.

Manage alert settings

For each user, set the days of the week and hours for when an alert can be set. Custom alerts are ideal for teams that work on different schedules, or to reduce unnecessary notifications on weekends or after work hours.



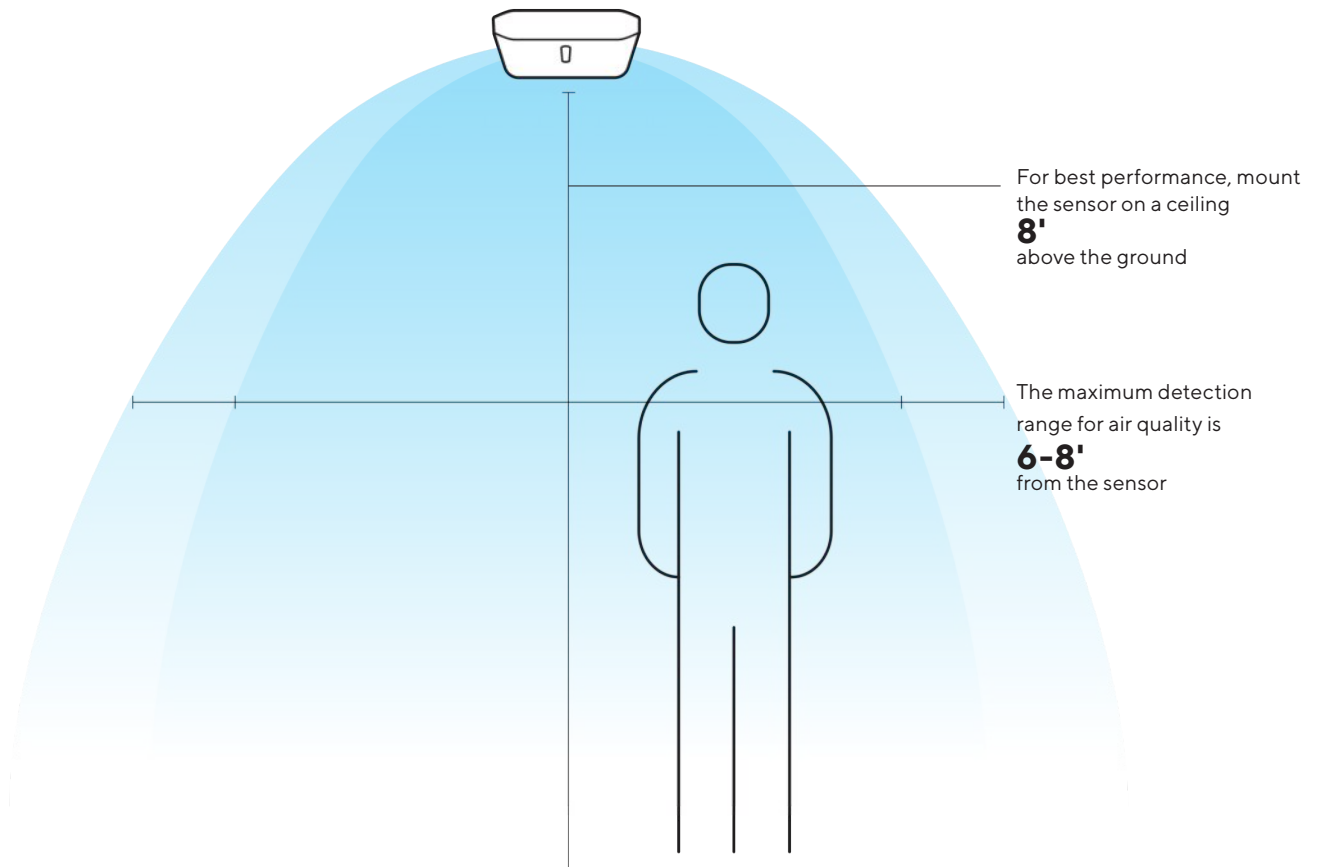
Setup: Mounting

Mounting location

For detecting vaping and smoking events, it is recommended to have the Verkada sensor mounted from the ceiling directly above the area where smoking is likely to occur. For best results, the sensor should be placed 8 feet from the ground.

What to avoid

Since particles and chemicals in the air must come into contact with the sensor to be detected, it is important to keep the device away from sources of accelerated air flow. Doing so will ensure the air diffuses normally into the device.

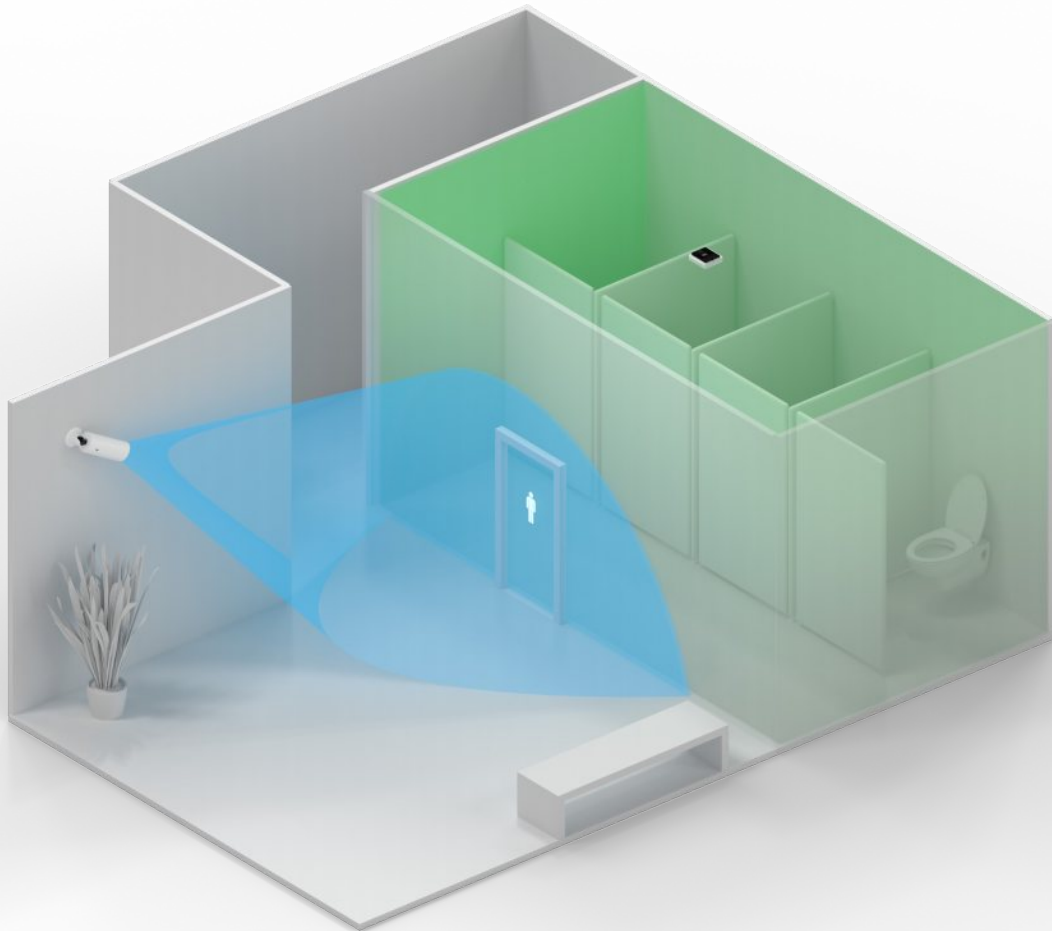


Testing your sensor

1. Light a match near a likely vape location and let the smoke blow up into the sensor.
2. Look at the Vape Index reading in the Verkada Command platform.
3. Set your sensor's Vape Index threshold below that number for best results.



Use Cases



Private areas

A key area where vaping and smoking often occurs is in spaces like restrooms and locker rooms. This is especially the case for schools, where students will vape discreetly in places like bathroom stalls.

To ensure privacy, cameras should be placed outside of these areas and positioned at a point of entry. When reviewing events, this will allow users to see who came and went during an incident.

Public areas

For non-private areas, such as classrooms, hallways or open spaces, users may place sensors and cameras in the same area at their discretion. For the best context and visibility, have cameras positioned towards areas of interest. This can include directly under where the sensor is and where vaping/smoking behavior is likely to occur.



Next Steps to Address the Vaping Epidemic

Whether you're a teacher who suspects that vaping is occurring on campus or a superintendent who is in active discussions with parents about the issue, vaping is a major issue on campus today. As with any on-campus issue, there are a range of stakeholders and systems involved and it is important to take a proactive, broad approach to addressing the vaping issue. There is no magic bullet to stopping vaping all together, but the right combination of awareness, increased education, preventative programs and disciplinary action can take major steps to addressing the issue head on. Here are some ways to start addressing on-campus vaping, today:

- Review the curriculum in mandatory health education classes to see how much vaping is, or is not, covered in that existing curriculum. If there is a need to add additional course material, there are excellent [resources from Stanford University](#) and others that offer an informative starting point.
- Create an effective vaping policy on campus that can clarify and publicize disciplinary actions for students who violate the rules, as well as education on the risks of vaping.
- Take steps to catch vaping on campus - these can include . This might include more frequent check-ins during lunch or after school, as well as more random locker and backpack searches. It should also include building security cameras and vape detectors in bathrooms and other common areas

From the perspective of any school leader, a modern, connected security platform like Verkada's hybrid-cloud offers powerful tools to elevate the awareness and tools administrators have available to catch, prevent and reduce vaping on campus. With the Verkada system, enforcement against potential vape events is augmented with sensors and camera devices. This preventative measure is critical to catching students in the act of vaping and preventing nicotine addiction. The Verkada vape solution allows you to:

- Deploy sensors for maximum coverage to monitor high-risk areas like bathrooms, locker rooms and hallways without infringing on privacy.
- Set up configurable alert thresholds and notify administrators via SMS or email to catch any vape events in real time.
- Review historical event footage and get the insights you need to take action including identifying frequent offenders or popular times to vape
- Lastly, Verkada's system tracks vaping events over time, so you can identify patterns and investigate as needed with data-based insights.



Disclaimer on investigations

The Verkada sensor Vape Index measures air quality events indicative of vaping and smoking, but cannot provide proof of a vaping incident. Administrators should use the sensor Vape Index and Verkada camera integration to help with investigations and monitor vaping activity and patterns, but use searches for physical evidence as the basis for further disciplinary/legal actions.

About Verkada

Verkada brings the ease of use that consumer security solutions provide, to the levels of scale and protection that businesses and organizations require. By building high-end hardware on an intuitive, cloud-based software platform, modern enterprises are able to run safer, smarter buildings across all of their locations.

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