



Kids Making Sense Newsletter

Winter 2026

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Where to use your AQ-go Sensors

AQ-go Sensors measure fine particulates (PM_{2.5}). So, where are good places to take measurements? Since particles are mainly comprised of dust, soot, and smoke, here are some ideas!

- **Around your school:** student drop-off areas, bus loading zones, near dumpsters, and near dirt playfields.
- **In your school:** Lunchroom/ kitchen, classrooms, gymnasiums.
- **In your neighborhood, you might pick up fine particle pollution from these common activities:** wood heating (smoky chimneys), outdoor recreational fires, transportation, and gasoline-powered yard equipment.

Please exercise caution when using your AQ-Go PM_{2.5} sensor and only measure particles when it is safe to do so. Wear bright clothing, do not measure after dark, and always stay in your group!

Temperature inversions and air quality

Many things contribute to our air pollution in Spokane, such as wood heating, vehicle exhaust, and more! Weather plays a role in our air quality.

Spokane frequently experiences temperature inversions, which can harm our air. During a temperature inversion, instead of air getting colder with altitude, it becomes warmer. This “lid” of lighter, warmer air aloft can trap heavier, cooler air beneath it near the Earth’s surface. This prevents pollutants from rising and dispersing as they normally would.

Temperature inversions are frequent in Spokane and can lead to poor air quality, especially during the winter months when temperature inversions can take longer to break down.

To see a visual example of how a temperature inversion works, watch [“Understanding Temperature Inversions with a Demonstration.”](#)



Keep your KMS kit ready-to-go!

Updating your kit:

The kit you were provided at the Kids Making Sense training does not require very much maintenance beyond replacing single-use materials. However, **the sensors and phones require regular updates to keep them functioning properly.** Your kit comes with a guide for updating the software and apps, but we developed more in-depth instructions for the update process to address questions that may come up. For the full rewritten instructions, click [here](#).

Viewing KMS data on the map:

When viewing the KMS map, there are a few things you need to know to see your sessions!

- Make sure you select the right pollutant. The sensors you were provided with only measure particulate matter.
- Confirm that the map is only pulling data from sensors labeled '**AQGo-PM2.5 ($\mu\text{g}/\text{m}^3$).**' There will be multiple sensor options to choose from that look similar, so make sure you select the right one!
- Pull collected data from the right time frame. If you know when you conducted the sessions, you can select a time frame on the map to narrow the search results.
- Make sure the map is only pulling data from Spokane County! Kids Making Sense is a nationwide program, which means that if you do not specify where to pull data from on the map, it will populate with results from all over the United States. While interesting, that can be confusing!

St Thomas More Catholic School educator Valerie Barnes shares her experience with KMS in her classroom

Did you find it manageable to implement lessons from the KMS kit?

In the first lesson, I covered the very basics of air quality and made connections to previous lessons on our environment. I shared what I had learned in the workshop, and I introduced the equipment and how to use it just enough to try our first exploration.

What was most useful about the program?

I was impressed with how well it was put together. As a teacher of 30 years, it is rare that I have had the opportunity to go to a local workshop where everything is provided. We had the opportunity to practice using the technology and learn pertinent information to help us understand what we would teach about air quality. I love to organize, and I am apt to use things that are efficiently set up and stored.

Did your students enjoy using the sensor technology?

Very much so! They were intrigued by the cell phone and sensor when they came to the science tables. They tested near puddles and anything in our path as we walked around the school. Each group came up with what to test on their own and had good ideas. It is impressive that the sensors are designed with clear cases and every part labeled. My adult sons immediately walked over to the kit and checked it out when they visited my lab.

What discoveries did students make with the sensors?

Each group had designated jobs for the students. We were respectful of the areas we walked through, so only the carriers of the sensors could go into the shop where lawnmowers and carts were parked. They enjoyed checking those, the dumpsters, and the playground shed where yard equipment is stored. They also tested the lunchroom. I think all of us were surprised by

which items and areas we assumed would have poor air quality readings and which actually did. I stole the idea of shaking my container of Mount St Helen's ash, and the little plume spiked the sensors so high. It gave the students an opportunity to see higher readings.

What's next for your class and the KMS kit?

When we return, classes will be engaging in the lessons provided in the kit and learning more about air quality. I will make this a unit and give them more exploration time than we had on the first day. This unit on air quality will go well with what we do in other units and labs, and how we are stewards of our environment. As a Catholic School, we reference the Pope's teaching of Laudato Si (caring for our Earth) in my STEM lab classes.

Have you had an opportunity to collaborate with other teachers? If so, how has that experience been?

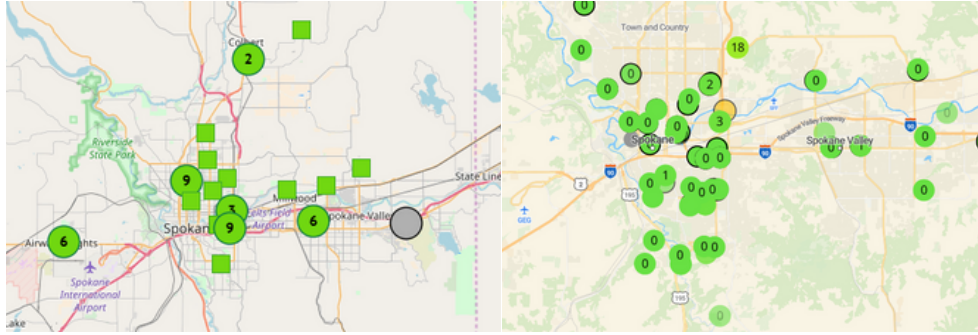
Not at this time. I am the only science teacher at our school. However, I did share my enthusiasm with adding this to the science program and how much I am enjoying the experience.



Students from St. Thomas More Catholic School using the handheld sensors for the first time.

A Picture Tells a 1,000 Stories: We want to hear from you! PLEASE share your photos of your students in action collecting data with the sensors!

Air Quality Monitors, Sensors, and Purple Airs



Your KMS classroom lab kits include handheld, mobile AQ-Go PM2.5 sensors. These sensors are valuable tools for collecting localized air quality data and comparing air quality across locations and over time. But what can you compare this data to? That's where we come in!

- [Spokane Clean Air webpage](#): Our air quality monitoring webpage features a map with locations and data from our regulatory monitors and sensors. Regulatory monitors require more extensive testing and performance standards than sensors. Sensors enhance the monitoring network with additional data. You can compare your AQ-Go sensor data with the monitoring location closest to you!
- [Purple Air webpage](#): You can use the Purple Air (PA) website to compare your handheld data to the data provided by the numerous local PA locations. There are many different local PA locations, including at schools, libraries, businesses, and at personal residences.
- [KMS webpage](#): You can view data from other schools participating in the KMS program locally and across the country. By comparing the data collected from your AQ-Go PM2.5 sensors with data from other sources, you and your students may better understand the data and the factors that can impact data, such as sensor limitations, sensor placement, seasonal and geographical variations, and more.



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About us

Our job at Spokane Clean Air is to ensure that everyone in Spokane County has clean air to breathe. We sample the air for key pollutants to know how clean the air is and where to focus our resources. We implement programs to improve air quality; we enforce federal, state, and local air quality laws; and we encourage individuals to make clean air choices.

Questions? Contact:

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