Tracking weather through a lens.

Neil Armstrong Academy expands its weather station with an Axis camera to add a visual tool for students.

Organization:
Neil Armstrong Academy

Location:
West Valley City, UT, USA

Industry segment:
Education

Application:
Environment and weather tracking, remote monitoring

Mission

Looking to further their efforts and enhance the current experience for its students, the Neil Armstrong Academy sought out a video solution to add to its thriving weather station. A project designed to give students a firsthand look at climate data throughout the region, the school wanted to implement a video solution to the station. As a STEM (Science/Technology/Engineering/Mathematics) school, the Armstrong Academy wanted to be progressive in its approach to its fundamental teaching style, "Launch, Explore, Discuss," by giving its student body a first-rate multimedia tool.

Solution

The faculty at the school realized a potentially strong link between data collecting and seeing live footage from the natural world. An Axis network camera on the school's rooftop connects students to the real world through video.

Along with access from inside of the weather station, the school added access on their website as well as social media channels to allow students, parents and other members of the community to view the images and live stream at any time.

Result

The footage from the Axis camera provided the school with a path to merge hard data with a visual learning tool and take their meteorology program to the next level. Additionally, over 1,300 direct followers over internet channels have increased interest across the school community in the project and opened up more possibilities for the weather station in the future. The camera has also been linked to other weather stations in the state of Utah, providing a new perspective of meteorology across the state.

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"The Axis camera has perfectly fit the bill. The image quality picks up on the smallest detail, and the live stream capabilities show the airplanes fly across the screen or the houses across the way being built. Students engage so easily with it because it's so dynamic."

Tyler Howe, Principal, Neil Armstrong Academy.

Scoping out Utah's climate

Nestled in West Valley City, Utah, a suburb of the Salt Lake City metropolitan area, the Neil Armstrong Academy continues to grow as a pre-K through sixth grade elementary school promoting the values of science, technology, engineering and math (STEM). Using those four demanding fields as a platform for its curriculum, the school enrolls nearly 750 students annually and gives students access to numerous lines of technology and mobile devices.

Named after the first man on the moon, the institution promotes elements of STEM to teach its students how to work toward ambitious goals. To reach the school's own goals of providing unique learning opportunities to its student body, the academy constructed a weather station that allows students to access a realm of meteorology in a way that can't be done through textbooks alone.

Inspired by Dr. John Horel at the University of Utah, the school's staff was now able to give students, especially those in the fourth grade with a heavy coursework focus on meteorology, an inside look at numerous climate factors. The setup gathers information on elements like wind speed, soil temperatures and air pressure, among many other variables. Setting up a video structure was the next step in assembling a top-of-the-line weather station.

Weather through a lens

Under the guidance of Dr. Horel, the academy installed an AXIS Q1602-E Network Camera on its rooftop that opened more doors for the program than Principal Tyler Howe could have ever imagined. "The video component of the weather station is the crown jewel," Howe noted. "For highly visual students who might not be interested in engaging with the data provided by a university-caliber weather station, the video feed grabs their attention and pulls them in."

Howe and his staff sought an IP-based solution to meet their need for a video component. The AXIS Q1602-E fit the bill perfectly, as it gave the station a versatile outlet to share images and a live stream in a simple manner. The academy was able to introduce a live broadcast on their website available to students, parents and community members around the clock. To promote it, the school has a system in place that posts a thumbnail from the camera to a box on their home page that updates every 10 seconds. Upon implementing the camera in June 2014, the school's website saw a monthly increase in hits from 6,049 in June of the previous year to 10,383 in that first month alone.

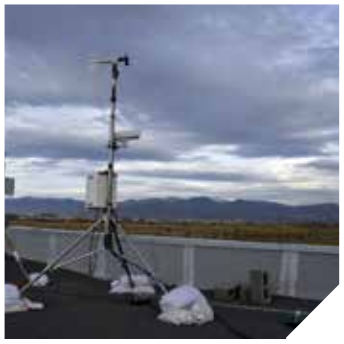
The joys of visual learning

Partnered with the mechanisms used in the weather station, the new camera has brought on more surprises and benefits than the school ever envisioned. Howe says the response to the video content and image quality has been phenomenal. "We have students beg to use their recess to come see the weather station and play with the time lapse video footage," Howe remarked.

A selection of the best moments captured by the camera sparked social media posts and comments in the town. Students and parents chimed in online to express their awe in some of the more astonishing happenings caught on the camera, including their view of a recent Supermoon and Fourth of July fireworks.

Further, the school saw an uptick in its overall SAGE testing scores, used in the state of Utah as a judgement of core science program performance. A 10 percent increase in scores from 2014 to 2015 can be partially attributed to the camera opening up new opportunities, Howe explained. They saw an increase in students' open attitudes toward inquiry and exploring patterns around them.

"Ultimately the camera has created great discussions among our students," Howe concluded. "Through careful guidance from our teachers, these discussions have resulted in increased learning among our students."



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