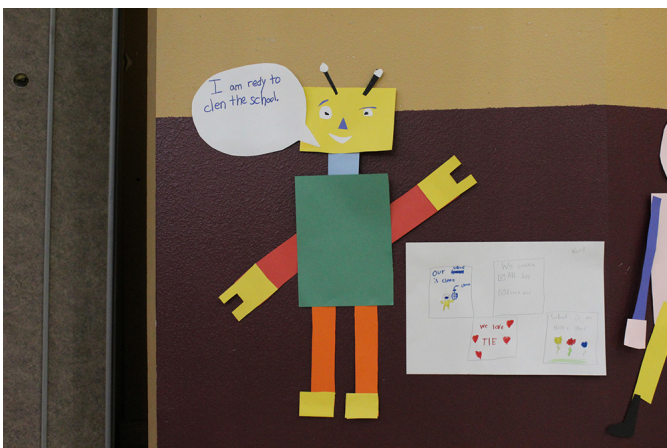


'MR. FOX' VS. COVID-19: MORTAL COMBAT

Written by By Molly Adamson Sun Correspondent
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Robot to fight virus at Twin Lakes Elementary

Robots will soon be joining students at Gallup-McKinley County schools in the district's battle against COVID-19, the common cold, and the flu in the classroom.

When COVID-19 was declared a pandemic in 2020, GMCS tried many strategies to keep its schools as healthy as possible. Cleaning vents and disinfecting surfaces were some of the methods used.

But in November, the district found a different solution: robots.

That's when GMCS reached out to UVD Robots, a company that builds infection protection robots that use UV-C light to deactivate bacteria and viruses. UVD Robots is a Danish company that has its U.S. headquarters in Boston, Mass. The company was founded in Denmark in 2016, according to its website. Its robots are used in hospitals, airports, and offices.

"It's really exciting technology; they're like mini-Teslas," District Superintendent Mike Hyatt said at the event.

GMCS will have 37 robots in the district: 34 in schools, two in administration buildings, and one in the district's shipping and receiving building. This will be the largest fleet of autonomous robots in a school district in the country.

Twin Lakes Elementary school will be home to one of the robots, "Mr. Fox," named by fourth grader Kylynn Cadman in Ms. Begay's class, as part of a contest. Cadman said the robot is "as smart as a fox to fight our diseases."

Twin Lakes Elementary Principal Ophelia Sanchez, GMCS Superintendent Hyatt and members of the school board introduced "Mr. Fox" to the community in a special event March 25.

That's when Andy Molnar explained how the robots work. Molnar is vice president of business development in the Americas for UVD Robots.

The robots use a specific wavelength of UV-C light, which is the maximum germicidal wavelength, according to the Centers for Disease Control. The light disrupts the DNA of bacteria and viruses, preventing them from multiplying. Molnar said this ultimately "deactivates" the bacteria and viruses. He explained that the company uses the term "deactivate" rather than "kill," because it is more scientifically accurate.

The robots will not be joining GMCS students in the hallways or classrooms during the school day. This cleaning method is so strong it can be harmful to human skin and eyes, so the robots will be doing their work at night. During school hours they will stand in classroom corners.

Custodians will be trained on the proper procedures for operating the robots. Each night, they will set the robots up to work. There is a safety checklist they will follow. Some of the questions on the checklist include: "Is the room clear of obstacles the robot would have to move around? Is the room free of people and animals?"

The robots will not run during school breaks or weekends unless people are in the buildings for things like clubs or summer school. Molnar explained that there is no risk of a virus spreading without people in the buildings, so the robots won't need to be operating.

There is a safety mechanism on the robots that will activate if someone comes into the room during a cleaning session. Sensors will immediately shut down the robot's lamps.

When it comes to classroom pets, Molnar said there's no need to worry. School pets like hamsters would just need their cages to be covered with a blanket, since the light does not penetrate fabric. It also does not transmit through glass, so fish will be safe, too.

Molnar wanted to reassure people that the robots are not replacing them. He said they would be

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freeing cleaning staff to focus on other things.

UVD Robots builds robots for humans, not for replacing humans, he said. It will eliminate repetitive tasks for the custodians.

"The thing about human cleaning is we can only really clean surfaces effectively [if] we're spraying chemicals," Molnar said. "We want to keep people away from chemicals, because if chemicals are doing something to deactivate bacteria, viruses, and fungi, it's not good in the atmosphere."

"It lingers for a long while," he said. "You have to keep rooms vacant for a long while before you can go back in. So we want to keep away from chemicals as much as we can."

He then went on to compare human accuracy to the robots' accuracy.

"The other thing is obviously human nature being what it is, not every cleaner will follow exactly the same protocol for cleaning surfaces, the thing they can actually clean," Molnar said. "They'll do it to the best of their ability, but they'll do it differently—slightly—every time."

Once the robot is programmed it will stop at various high-touch areas, and as it moves, it will also disinfect the air, Molnar explained. The robot will emit an even flow of UV-C light as it travels. Then it will produce a report verifying it successfully completed its task.

Molnar said each robot will cost the school about \$55 a day.

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