

Are You Being Watched?

Some schools, airports, and cities are using technology that can recognize people's faces.

Is it being used to keep an eye on you?

You're sitting in class listening to today's lesson when your mind starts to wander. At first, your teacher doesn't notice you've stopped paying attention—but the cameras watching you do. They scan the faces of you and your classmates every second to determine how engaged you are. The devices alert your teacher, who tells you to quit daydreaming.

This scenario may sound like science fiction, but *facial recognition technology* like this is actually being used in a school in China. It can detect when students are listening, answering questions, writing, interacting with one another, or asleep.

A similar system tested in another Chinese school even analyzes students' expressions to track their emotions: if they're angry, happy, disappointed, or sad. The data collected by both systems is used to evaluate students' class performance. Each person receives a score, which gets displayed on a screen at school and can be viewed on an app by parents, pupils, and teachers.

Right now, schools in the U.S. aren't using this kind of technology to monitor students' behavior. And it may never be used for that purpose here. But some American schools are considering using facial recognition for other things, like scanning school grounds to spot people who may pose a danger to students. In fact, facial recognition is currently used mainly for security purposes. It can help police identify suspects from video footage. Stores have tested the tech to catch repeat shoplifters. Some makers of electronic devices, like doorbells with built-in cameras that identify visitors, see facial recognition as an added safety feature.

Some people are embracing this high-tech trend. But it's raising red flags for others. They believe facial recognition, which is often used without individuals' knowledge, could violate people's privacy. The technology has also come under fire for being inaccurate, particularly when identifying people of color. Despite these objections, the use of facial recognition is becoming more widespread, showing up in places from schools and airports to concert venues.

In the wake of several deadly shootings at schools in the U.S., some educational institutions are interested in using facial recognition to better protect students. The software can also detect if someone is holding a gun. If a match is found for a face or a weapon, school officials are notified so they can decide whether taking action, like calling the police, is needed.

As a facial recognition program can do a comparison a million times a second with a database, some experts think the technology could be used to help search for missing persons as well.

(451 words)

(Adapted from: <https://scienceworld.scholastic.com/issues/2019-20/090219/are-you-being-watched.html#1120L>)

Billions of pieces of plastic spread disease in coral reefs

It's no secret. The world's coral reefs are in bad shape. Climate change has led to coral bleaching. It is widespread. Overfishing has disrupted the ecosystems. Those ecosystems keep reefs healthy.

Toxic runoffs from human industry are destroying reefs. They are sometimes called "rainforests of the sea." A new study has highlighted the distressing scope of yet another threat to coral reefs. That threat is plastic. The study was published in the journal *Science*. Researchers analyzed more than 124,000 corals. They were from 159 reefs. The reefs were in Myanmar, Thailand, Indonesia and Australia. They saw bits of plastics almost everywhere they looked. "We came across chairs. Chip wrappers. Q-tips. Garbage bags. Water bottles. Old nappies." That's according to a marine disease ecologist. She is also the lead author of the study. "Everything you see on the beach is probably lying on the reef."

The team estimates that at least 11 billion plastic items are stuck in coral reefs. The reefs are in the Asia-Pacific. And they believe that number will go up by 40 percent. This could happen by 2025. This could spell disaster for the world's reefs.

Further studies are needed to find exactly how and why plastics make coral open to different diseases. But scientists have a general idea. It seems that plastic debris slices open the skin of the corals. This exposes them to diseases. "Plastic debris can cause physical injury. It does so by exhausting resources for immune system function during wound-healing processes," the authors of the study write.

Drew Harvell is a professor who teaches marine ecology at Cornell. He is co-author of the study. He tells *Washington Post* that plastics also "shade the light coral needs and cut off water flow."

It is vital to preserve the health of coral reefs. This is for a number of reasons. For one, many marine creatures make their homes within the reefs. The reefs support “more species per unit area than any other marine environment.” Reefs also protect coastlines. They protect them from waves. And they protect them from tropical storms. Reefs also support both local and international fishing industries. Reefs also make billions of dollars for the worldwide tourism industry every year.

Scientists involved in the new study noticed something throughout the course of their research. The plastics problem was not evenly distributed. Reefs near Indonesia had the highest amount of plastic trash. But reefs near Australia had the lowest. This could be because Australia boasts the best waste removal system. It suggests that there is most likely an easy fix to the issue. “We can clean up the problem,” Harvell said. “It’s so much easier than climate change.”

(461 words)

(Adapted from: <https://www.tweentribune.com/article/junior/billions-pieces-plastic-spread-disease-coral-reefs/>)

The Most Unbelievable Friendship

On the edge of the city of Williamsburg, Virginia, resides Ryan Phillips and his very best friend, Jenna the cow, in just one of the many animal adoption stories that will warm your heart.

About two years ago, Ryan saw an ad for a newborn Holstein calf in North Carolina, just three hours from his home. After visiting a sanctuary in Maryland that rescues cows, Ryan's suspicion that cows are just "grass puppies" was confirmed. Playful and full of curiosity, cows have many similarities to pets you may find in your home. Since Ryan was able to see firsthand just how amazing these creatures really are, he decided to take a leap of faith and drive his car over to bring home Jenna, his very first cow.

Jenna was born on a dairy farm with her twin brother. Since female Holstein calves with a twin brother typically have a high chance of being infertile, Jenna and her brother were spray painted and prepared for slaughter just days after their birth. Luckily, the dairy farmer's daughter, Jenna, persuaded her father to find homes for these three-day-old calves instead of taking them to be killed. Jenna's brother was taken to a different sanctuary before Ryan arrived in North Carolina, so Ryan took the one remaining calf wrapped in a blanket on the long drive home. Ryan named her Jenna after the dairy farmer's daughter who saved her life.

Since Jenna never had the opportunity to get to know her real mother, Ryan became the parental figure in Jenna's life. He provided her with all the hugs, scratches, and attention that a baby needs. He found that Jenna would follow him from window to window around the house until he came outside to play with her. Describing Jenna as a "1,000-pound puppy," Ryan says their favorite activity is to play chase. Jenna runs behind Ryan from tree

to tree. Jenna always lets Ryan win.

“From that moment forward, Jenna became my best buddy,” said Ryan. “I fed her three bottles a day for 6 months and slept with her in the barn many nights to make sure she never felt lonely. Without her mother cow to pass her immunities through her milk, Jenna ended up being sick a lot in the first few months she was with me. I worried about her constantly as she lay sad and sickly with her head in my lap, with frequent vet visits to help her pull through.”

Because of how much time Ryan and Jenna have spent with one another, Jenna believes herself to be human. When another cow was rescued to live with Jenna, she hid behind Ryan and acted as if she didn’t know what to do. Eventually, she came around to having other cow friends, but she still loves Ryan most.

(473 words)

(By Emma Taubenfeld from Reader’s Digest, Aug. 11, 2021)

Climb to the Sky!

There was one tree in Doug's backyard. Only one tree, but it was enough. It was the biggest tree Doug had ever seen. His dad called it a magnolia. Doug thought that was a pretty good word. It sounded strong. It sounded old. This tree was strong. This tree was old. Doug was young. He was not very strong. But he knew he could climb that tree. He waited until the weather was perfect: early autumn-crisp, but not cold. He wore a blue sweater and beat-up old shoes. His gloves were thick, to protect him from the bark. He was ready. "Wait here," he told his dog, Harvey. "I'll be back later." As Harvey watched, Doug leapt for the lowest branch. He nearly slipped, but held on. Using all his strength, he pulled himself up. He could not do a pull-up in gym class, but when it counted, he could lift himself. He continued slowly. Doug was careful. He did not want to fall and embarrass himself in front of his dog. He looked for a good handhold before letting go of the one he had. He watched his feet as they moved. He was in no hurry. He had all day. Halfway up the tree, Doug took a break. He did not feel tired but wanted to rest before he got exhausted. This is what mountain climbers did. Doug was not a mountain climber, but he wanted to be one someday. "Hello," he said to a passing ladybug. "Any advice for my final ascent?" The ladybug said nothing. Doug did not need her help. It was time to continue. He was just a few branches from the top when something terrible happened. He lifted his left leg and placed it onto the next branch. The wood was old but not strong. It split down the side and fell to the earth with a horrible crack. Doug was watching. He was prepared. As his left foot slipped, he squeezed tight with his arms. For a terrifying moment, he dangled in air. Breathing slowly, he swung his legs forward and found a foothold. He was secure again. "That's far enough for today," he said. "The summit can wait." He wrapped his legs around

the strongest branch he could see and leaned against the trunk. His heart slowed as he reached into his pocket and took out a book. It was time to do some reading. Doug had all afternoon.

(412 words)