Two 10-year-old girls

Will this dog find them before

A Race Against
Maddee is a search-and-rescue dog, trained to work in some of the most dangerous conditions on Earth. Above: Ali Ferry and Sammie Wartchow in 2012, revisiting the woods where they were lost.

By Lauren Tarshis with reporting by Allison Friedman

A Race Against Time

Two 10-year-old girls are lost in the woods.

it’s too late?
It is every kid’s nightmare—getting lost in the woods at night.

But for fourth-graders Sammie Wartchow and Ali Ferry and their families, the nightmare was about to become real.

It was 3:00 p.m. on a sunny Saturday in Issaquah, Washington, a small city surrounded by forests of towering trees. Ali and her mom had picked up Sammie for a sleepover. Ali thought it would be fun to start the playdate by showing Sammie a stream she had discovered earlier that day. The stream was just a short walk from the road, at the start of a trail leading into a vast forest. Like most kids in Issaquah, the girls had grown up exploring the woods. Ali’s mother didn’t think twice about letting them go off alone on their mini adventure. She dropped them off and said she’d pick them up in 30 minutes.

But when Mrs. Ferry returned, the girls were nowhere to be found.

She waited a few minutes and then walked down the trail, calling their names.

“Ali! Sammie!”

But the words were swallowed by the darkening woods.

Her panic rising, she shouted again and again. Time ticked by. The sun was setting, and rain was starting to fall.

The girls had vanished.

Ali’s parents called 911. They tried not to think about the bears and cougars that live in the woods, or even more terrifying possibilities. “Everything was running through my head, and nothing was positive,” says Sammie’s mother, Vicky.

Within hours, nearly 100 police officers and volunteers were combing through the dark, rain-soaked forest. Flashlights beamed like giant fireflies. A helicopter thwacked the air overhead. Police walkie-talkies crackled.

But the most expert searcher in the woods that night did not have a flashlight or a helicopter. All she had was her nose. The searcher was a dog named Maddee, a 3-year-old golden retriever. Maddee is a trained search-and-rescue (SAR) dog, the kind that is called in when a person is lost or trapped and must be found quickly. SAR dogs search in the wilderness and also in areas struck by natural disasters—buildings crumbled by earthquakes, neighborhoods flattened by tornadoes or hurricanes, mountainsides shattered by avalanches. A SAR dog can be more effective than 20 human searchers.

But could she find Sammie and Ali?

From left: During World War I, wearing a gas mask; in Iraq, with U.S. soldiers looking for explosives; in Haiti, searching through earthquake rubble; in the aftermath of an earthquake in Turkey in 2010
Extraordinary Powers

What make dogs such effective searchers is their extraordinary noses. In her new book, *Sniffer Dogs*, author Nancy Castaldo explains that a dog’s sense of smell is thousands of times stronger than our own. “A dog’s nose doesn’t just pick up the strongest scent in a room,” she writes, “Dogs smell every scent.”

Castaldo compares a dog’s ability to smell with a human’s sense of hearing. When you walked into school this morning, you heard dozens of different sounds—doors slamming, footsteps pounding, your best friend screaming your name, your teacher saying, “Quiet, please!”

But you likely smelled only the strongest scent, like the aroma of French toast sticks wafting from the cafeteria. If a dog had been with you, it would have smelled dozens and dozens of smells that you couldn’t.

Most amazingly, the dog would have detected the individual smell of each and every child and teacher. That’s because even if we’ve just scrubbed ourselves clean in the shower, we each emit a unique scent that a dog’s supersensitive nose can detect. The scent comes from microscopic bits of dried skin called rafts. We can’t see or smell them, but we shed millions of these rafts every day. They scatter all around us when we take a step, cling to our clothes when we take them off, and even drift in the water around us when we swim. This is what creates a scent trail that a trained search dog can follow.

Before Maddie started searching the woods that night, her trainer, Joanne Varney, brought her to Ali’s house. The family gave Varney one of Ali’s shirts and a blanket that Sammie had packed for the sleepover. Before she began her search, Maddie was given a good whiff of both...
so that she would know what scents she was searching for. Just as you can look at a picture of hundreds of people and pick out the face of your best friend, Maddee would be able to sift through the thousands of smells in the forest and pinpoint the scents of Ali and Sammie.

**Passing the Test**

All dogs have an extraordinary sense of smell, but not every dog can be trained to become a successful SAR canine. Trainers look for dogs that are smart, bold, and extremely energetic. Many are found in animal shelters. Very often, a dog whose bouncing-off-the-walls personality drove its original owners crazy can become a superstar SAR dog.

The key is training.

Varney says that training a SAR dog is not complicated. Search dogs are taught to follow a particular scent and signal to their owner when they find it. When they succeed, they are rewarded, just like a pet owner would reward a dog after it obeys a command to sit or fetch.

But the process is time-consuming—experts say it takes about 600 hours to train a SAR dog. Varney began training Maddee when she was a puppy, starting with simple *obedience* tricks and working up to more-complicated tasks. At 18 months, Maddee was ready to go on missions.

SAR dogs are a small and elite group in the U.S., and the best can work under extraordinarily difficult conditions. They climb ladders, scale towers of rubble, and dig through piles of snow. Some can even search in water. In the past decade, American SAR dogs have saved the lives of hundreds of people. After Hurricane Sandy hit the East Coast in 2012, SAR dogs helped find many elderly people who were trapped inside their homes without water or electricity. In 2010, following a devastating earthquake in Haiti, U.S. SAR dogs found people caught in the rubble, including a 3-year-old girl who had been trapped for five days.

**Nose to the Ground**

Ali and Sammie had been missing for five hours when Maddee arrived on the scene. “It was so overwhelming,” remembers Sammie’s mother. “Because there’s these two little girls that are lost in the woods, and one of them was mine.”

Frantic volunteers were shouting. The helicopter overhead made it impossible to hear. People were slipping and falling along the muddy trails. But Maddee was *unfazed*. “Right away she was ready to run,” Varney recalls.
Off she went, nose to the ground, zigzagging through the mud trying to pick up the right scents. She ran up and down hills, jumped over roots, and crossed two streams. Varney’s husband, Greg, was with her, and at first they tried to keep Maddee on her leash.

“But finally I let her go free on the trail,” says Varney.

They were heading up a hill. Two hours had passed, “and suddenly Maddee wanted to leave the trail and head downhill.”

The brush was very thick, and the only light Varney had was from the headlamps she and Greg wore. But she had a feeling that they were close.

“Ali! Sammie!” Varney called. At first it was hard to hear. And then came voices from the dark. “Over here! Over here!”

A few minutes later came Maddee’s barks. She had found them. They were curled up together—cold, wet, and scared, but unhurt.

Sammie, now 15, will never forget that night. “We had lost the trail and had been walking in circles,” she says. “Finally we just stopped and lay down under some trees.”

At one point they felt sure that a big animal was nearby. “We felt it looking at us,” Sammie says.

The hours crept by as the girls hoped someone would find them. Little did they imagine who that someone would be: Maddee.

Within an hour, the girls were back with their overjoyed families.

“When I saw my mom, I just burst out crying,” Sammie remembers.

The girls were grateful to everyone who had searched for them and eager to put the nightmare behind them.

As for Maddee, she was soon snug in her bed, awaiting her next mission.