

EagleEyes clicks with disabled

By [Laura Hancock](#)

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SPRINGVILLE — During the past four years of teaching wheelchair-bound autistic students and others who cannot communicate very well, Mindy Ruff has wondered whether she was really reaching them.

When she would explain historical events or talk about scientific phenomena, her students stared back, unable to ask questions or make comments.

"You don't know what they're thinking," Ruff said.

Ruff, a teacher at Nebo's Oakridge School for students with severe disabilities, said she lunged at the chance to use new technology called EagleEyes, which she hopes will help assess her students' communication and cognitive abilities.

Oakridge on Monday received two \$1,200 EagleEyes devices from the Opportunity Foundation of America. The Salt Lake-based foundation distributes them with Boston College, which developed the device and software.

The device is a box about the size of a VHS tape that's plugged into a computer. To make it work, students must wear electrodes on their faces.

Electricity generated when the eyes and head move — up, down, left or right — makes the cursor on the computer screen move accordingly.

Students begin using EagleEyes through games. Chasing and blowing up space aliens on the screen helps them master cause and effect, said Maureen Gates, the project director for the EagleEyes project at Boston College.

Many students, depending on their cognitive abilities, advance to programs that help them communicate better. In one program, students use their eyes to select such words as "ice cream" or "cauliflower" along with the words "I want."

Students who are able to master such tasks will begin to use the device for educational purposes. Some students will even use EagleEyes to surf the Internet for sites that have three-minute movies about topics ranging from math to U.S. history, Gates said.

EagleEyes was been fine-tuned over the past decade. It is now so precise that students only have to rest their eyes on an object or word for three-tenths of a second to select it — the equivalent to double-clicking with a mouse.

The software also can successfully distinguish between a random jerk or an intentional eye movement.

The Jordan Valley School and a special needs school in Scotland received the devices about six months ago. The Opportunity Foundation of America hopes to donate them to special schools across the United States, said Debbie Inkley, foundation executive director.

Oakridge principal Richard Kay was so determined to have the technology at his school that he promised to open his building to other special-needs teachers who want training on EagleEyes. Ruff also has been offered as a resource.

"We're going to try every child in this school — whether they have the physical disability or not," Kay said. He believes Oakridge's 34 students, who range in age from 7 to 21 years, could benefit from EagleEyes because it could supplement speech-therapy.

Students with severe disabilities have been using their eyes and head — sans computer — to communicate for decades. For instance, many are shown two pictures and must indicate which picture expresses their needs or desires.

In the Olivares family, the technology has made 12-year-old Cameron able to communicate better. Cameron attends Jordan Valley and has been using EagleEyes for months.

"At home, he's more clear," said his father, Rick Olivares. "He really makes it clear, 'This is good. This is bad. I don't like this,' through noise."

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