

## Virtual education

### Tiernan

#### Robot allows sick student to remain present in classroom

#### Maggie Gilroy

Binghamton Press & Sun-Bulletin USA TODAY NETWORK

After returning to Barb Durkot's third grade classroom from gym class one morning at Maine Memorial Elementary, students split off into separate reading groups.

"I want you to park right there. And when you get there, put your brakes on," Durkot said to student Tiernan Kriner.

Following Durkot's instructions, Tiernan wheeled over to his peers to discuss the book.

But he really wasn't there. At least not physically.

Instead, Tiernan participated in the discussion through a "telepresence" robot, an iPad and a Chromebook. Using this technology, he is able to move about his classroom and participate in classroom activities.

He can even talk to his classmates and teacher from home, too.

At just 8 years old, Tiernan has Fanconi anemia, an inherited genetic disease that can lead to bone marrow failure and cancer.

In early December, he will receive a bone marrow transplant with marrow cells donated by his 9-year-old brother, Brennan.

The recovery from the surgery will be long. And the disease, treatments and an upcoming surgery will keep him out of his classroom at Maine Memorial Elementary for weeks.

But this robot will allow him to stay on track with his studies, and even socialize with his friends. He is currently at home to prepare for the surgery and is already

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**Tiernan Kriner, 8, parks his telepresence robot at his desk at Maine Memorial Elementary. MAGGIE GILROY / BINGHAMTON PRESS & SUN-BULLETIN**



**Tiernan Kriner keeps score while his classmates at Maine Memorial Elementary play shuffle board. MAGGIE GILROY / STAFF PHOTO**

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**Libby Kriner**

Tiernan’s mother

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**Tiernan**

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putting the robot to good use.

The iPad is flanked by wheels that allow Tiernan to move around the classroom and he can interact with his peers through an app on the iPad.

At home, Tiernan can use the arrow keys on a Chromebook to navigate the robot through hallways and around desks. He is able to expand the robot if he would like to be taller and shrink it to be shorter.

A microphone and speaker allow him to talk to his teachers and classmates. As he wheels down the hall, many teachers stop to say wave and say “hello.”

He was even able to attend the school’s recent Grandparent’s Tea earlier in November.

Tiernan’s favorite part of the technology is “everything.”

“It’s cool,” he said.

He finds his ability to move his robot around to be the coolest aspect of the technology.

And his friends enjoy the robot, too.

“Hi Tiernan,” one student said as he wheeled alongside her on the way back from gym class.

Tiernan’s mother, Libby Kriner, said the school approached her a few weeks ago with the technology after she informed them he would need a bone marrow transplant.

“I was shocked, but so so happy that they would even think to do that for our son,” Libby said.

The robot is available to Kriner through Broome-Tioga BOCES. In the past, Broome-Tioga BOCES has used the technology as a way of allowing administrators to observe teachers from afar and give virtual tours of local schools.

But while the robot has been used by BOCES in the past, this is the first time it has been used at Maine Memorial Elementary.

“Instead of just a simple video feed, it’s now you’re controlling it,” said Rick Bray, an instructional technology specialist with Broome-Tioga BOCES. “You’re able to control those environments.”

The ability to control the robot’s movement gives Tiernan more power than just watching the students through a video camera.

“It’s been really awesome to watch the joy he has in it,” Bray said.

Libby hopes that the robot brings not only joy, but healing. While he will have a tutor when he is at Memorial Sloan Kettering Cancer Center for his surgery, the robot will help him use social skills and make him feel less homesick.

“For the healing process, it’s important for him to get up out of bed and do things and be active,” Libby said.

Brennan will even be able to pop in and say hello.

“He loves being able to get on there and see his friends and have a sense of control,” Libby said of Tiernan. “And wheeling around school I think is really fun for him. And everybody says hi to him and makes him feel really special.”

The Kriner family organized a bone marrow drive in September to help raise awareness for Fanconi anemia and to also add more people to the national bone marrow registry.

Even after surgery, Kriner is at a risk 700 times higher to develop certain cancers. The current average life span of a Fanconi anemia patient is about 30 years old, Libby said.

She has trouble finding the words to express how grateful she is for the school's accommodations.

"There's nothing we could do that could ever repay what they have done for our child," she said.