

A father-and-sons team has built several outdoor classrooms for Vermont students

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The 20-by-30-foot truss structure at the Turtle Island Children's Center in Montpelier. Photo courtesy of Greg Ryan

Nine outdoor classrooms designed specifically for the pandemic have been installed at schools in central Vermont, thanks to a Rochester family.



Greg Ryan

Dubbed the RyanTruss, each structure is basically a series of wooden trusses topped with a corrugated fiberglass roof. Trusses are the frames traditionally employed to support a roof.

After hearing about the need for outdoor classrooms from a teacher at the Stockbridge Central School, Greg Ryan designed a structure that would be relatively cheap and easy to assemble. Ryan, who is currently riding out the winter in New Mexico, has built tiny houses and unconventional buildings.

“I have been intrigued by how strong something could be while still being incredibly light,” said the 52-year-old builder and musician.

The first RyanTruss was installed at the home of Donna Gallant, a teacher and librarian at the Stockbridge school. It has a wooden deck, which the subsequent versions lack. Gallant told Lindy Stetson, principal of both the Stockbridge Central School and Rochester Elementary School, about the structure.

“We were trying to find the safest way for kids to be able to socialize outside of their classroom,” Stetson said. “So we had to find ways to make sure we could be outside in the elements.”

Initially, the schools in Rochester and Stockbridge bought tents at \$3,500 apiece to use as outdoor classrooms. But the tents couldn’t handle the wind or snow load.

“I knew these store-bought tents weren’t going to cut it,” said Ryan, who helped erect one of the tents. “Parts were breaking as we were putting it up.”

Ryan came up with a design with the help of his son Aidan, 26. (Another son, Casey, 33, helps with construction and installation.) They used standard two-by-sixes and two-by-fours for the frame. The translucent fiberglass roof is slippery, so snow slides off it. Price tag: \$8,500.

Greg and Aidan Ryan have played music together for about a dozen years. They once had an ensemble called They Might Be Gypsies that performed manouche jazz. The elder Ryan is also fond of a Romani mobile home known as a

vardo and has built two of them. Vardos have a skylight known as a mollycroft and Ryan incorporated the mollycroft concept in the RyanTruss by using two thin strips of clear fiberglass at the roof's peak.

The 20-by-30-foot truss structures are now installed at Stockbridge Central School, the Rochester Elementary School, the Mountain School at Winhall, the Neshobe Elementary School in Brandon and the Turtle Island Children's Center in Montpelier.

Rochester's outdoor education teacher Amy Braun is keen on her RyanTruss.

"It's just like a classroom but it's outside," Braun said recently, standing outside in 12-degree weather. "I have shelves with rulers and paper clips and magnifying glasses and staplers. I have a (wood) log that's got magic markers stuck into it for kids to grab and use. There's backpacks hanging up with little notebooks and pencils for when we take walks."

Braun, who has been teaching for more than 30 years in Rochester, takes pride in the fact that she's not "sitting behind a desk in a classroom on my backside." Still, Braun said mandating that kids have a mask on all day long inside the school building is taking a toll.











“Being able to come out and face the sun and take the mask off and take deep breaths is very, very good for the kids,” she said.

Fiona Rose Harrington, a sixth-grader at Rochester Elementary School, noted that the outdoor classroom “keeps us warm” but because the kids are outside social distancing, “we can just, like, chill.”

“I think it would be nice if all schools had this, so that (their students) could also be outside without their masks on,” Fiona said.

While the RyanTruss structures can provide some outdoor space, the limited structures can’t fully replace an indoor room.

None of the RyanTrusses come with walls, although the truss structures in Rochester and Montpelier have been buttressed by hanging fabrics and plywood, respectively. (The Montpelier structures have been nicknamed The Circus Tent and Baba Yaga’s Hut by the preschoolers at Turtle Island.)

Meanwhile, at the Neshobe Elementary School, one of the trusses lost its fiberglass roof to high winds, said Nancy Bird, administrator for the Otter Valley Unified Union School District’s after school program.

The Ryans assured the school that they will repair it, she said. Greg Ryan said the corrugated fiberglass the roofs are made from come with a 20-year warranty.

Still, the fiberglass roofs are a concern for Dave Sellers, the renowned Vermont architect based in Warren. Sellers said his experience has been that the fiberglass panels crack and deteriorate.

Although the schools didn’t require it, Ryan decided that it would be wise to have an extra set of eyes look over the design for the RyanTruss, so he contacted Cricket McCusker, a structural engineer with the Rochester engineering firm T.R. Fellows. At the suggestion of McCusker’s father, Thayer Richard Fellows, Ryan employed a piece of hardware

known as a split ring connector used in timber framing to reduce the likelihood that bolts would crush the wood supports used for the frame.

Whatever his concerns over the viability of the fiberglass roof are, Sellers said his hat was off to the Ryans for designing and getting the truss structures in place when they were needed. Sellers likes an idea the Ryans are currently mulling: providing a kit with hardware and a template for community volunteers to build a RyanTruss themselves.

“This is an example of the Vermont creativity,” Sellers said. “There’s more patents per capita in Vermont than in any other state. It’s just a hotbed of ingenuity. And this is a good example of that.”



WALTER D'ARCY RYAN



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GIRLS FROM
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CHILDREN BY
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THE
FRIEDERICYS'
FANCIFUL
FIGURES

A PORTRAIT OF
CORA MAE SANBORN
BY PATRICIA RYAN
BROOKS





The ingenuity in the Ryan family goes back several generations. Walter D'arcy Ryan, Greg Ryan's great, great uncle, was a contemporary of Thomas Edison who started the illumination department at General Electric and invented the Ryan-Lite, a much improved automobile headlight. Ryan's father, Ted, is a retired cabinet maker who once restored antique homes. Ted Ryan's parents were artists who illustrated children's books and designed greeting cards. His sister, Patricia Ryan Brooks, was an internationally known doll artist whose hand-carved wooden dolls are in collections around the world. Greg Ryan's older brother David built a hang glider at the age of 18 and later assembled an ultra-light airplane from parts. For a time he did fine woodworking on yacht interiors.

Greg Ryan himself was described as an eccentric genius by a neighbor. He has made stringed instruments from gourds, built a solar-powered recumbent tricycle and constructed a 700-square-foot yurt-inspired house with straw and clay walls. But Ryan has been adamant about not building for the rich.



Aidan Ryan and his son

“I’ve never been a good capitalist,” he said with a chuckle. “I’m just not wired that way.”

Aidan Ryan may be wired differently. The home-schooled Vermonter has been handling the business side of the RyanTruss operation as well as doing the construction and installation with his brother Casey. With a 2-year-old son of his own and another child due in the spring, Aidan Ryan is less inclined than his father to just give the plans for the RyanTruss away on the web. After he placed an online ad for the RyanTruss, he got some 40 calls from people in neighboring states interested in it. But he acknowledges that the family can’t keep up with demand.

“We are not super seriously pursuing more orders right now,” Aidan Ryan said. “That might happen in the future. We’re definitely interested in selling some plans and the possibility of doing workshops.”