



FOUR-YEAR-OLD Audra Giles of East Hampden receives an early Christmas present, a specially built standing frame, from four University of Maine mechanical engineering technology students:

(from left) Rick Fortier of Jay, Keith Hodgins of Brewer, David Godbout of Minot, now of Hampden, and Brian Briggs of Portland. The youngster suffers from cerebral palsy and spina bifida.

Engineering students' gift helps stricken child stand

ORONO — Four-year-old Audra Giles frowned determinedly, gripped the tabletop and stood as tall as she's ever stood before by herself while four young men, her parents and a physical therapist looked on apprehensively.

Then she smiled the smile by which so many know her, and the small audience gathered mirrored her excitement.

Audra, who suffers from cerebral palsy and spina bifida, was perched in a "standing frame" — a specially designed aluminum frame with a harness-like seat and removable tabletop just tall enough to support her small body.

It was an early Christmas present, not only for Audra, daughter of Lewis and Colleen Giles of East Hampden, but for four University of Maine mechanical engineering technology students who volunteered to design and build the standing frame for a child who has never known what it's like to stand without assistance.

It was a special gift of love.

"I can't imagine not being able to stand up and see things," said UM senior David Godbout of Minot, who lives with his family in Hampden. "It really made me appreciate my daughter, who's 2½. She is healthy and can run around. That's one of the reasons I got involved."

Audra has spasticity in her legs and lacks the strength to straighten

them, according to Pam Peck, a physical therapist at the Eastern Maine Medical Center where Audra attends a clinic. At the age of 4, Audra can pull herself up a chair leg or low table "only so far."

"What we were looking for was a lightweight, portable, adjustable stand that would change as she grew. It had to be something safe," Peck said. "The standing frame allows an increasing range of motion for her legs. It will allow her to be in an upright position on her own and to do desktop activity and play — things she's not able to do now."

"Developmentally and from an educational point of view, standing is important. It improves cognitive development," Peck said.

A month ago, Peck contacted Herb Crosby, UM associate professor of mechanical engineering technology, in the hopes such a standing frame could be custom-made for Audra. One mention of the project in Crosby's Mechanical Engineering Technology Design II class and four seniors volunteered — Godbout, Brian Briggs of Portland, Rick Fortier of Jay and Keith Hodgins of Brewer.

Armed with Audra's measurements and a detailed description of her needs from Peck, the four each drew up designs for the standing frame. Peck "told us what was

wrong with each and we refined it," Hodgins said.

With materials donated by Lane Supply Co. of Brewer, the students began constructing the one-of-a-kind frame.

Construction took them 50 hours, with more modifications expected as Audra begins to use it. The four agree it was worth it because it was a learning experience they will not forget.

"This seemed like a good project because there was someone in need," said Hodgins. "It was a good organizational project, finding time when and where the four of us could work together."

"It got out of the theory (of designing) and into the human factor," said Godbout. "Someone actually benefited from the principles we learned in school."

"It's the first school project we've done for a cause. All else has been homework for a grade. We worked hard knowing she was counting on us," Fortier said.

Final touches were put on the frame to present it to Audra on Friday, Dec. 19. Six days later, the smile of the 4-year-old would still be with them on Christmas Day.

"It is the spirit of the season, giving something not available by any other means," Hodgins said.

"Except maybe Santa Claus," said Fortier.