

Fifth-graders Use College-level Software to Unleash Their Creativity | CEHS

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Fifth-graders from Edith Bowen Laboratory School at Utah State University are taking on some grown-up engineering concepts in a unique new partnership between educators and industry.

Their experience is centered on Solid Edge computer aided drafting software from Siemens, a global engineering company. The students use it in the Young Educational Technology Lab, housed within the Emma Eccles Jones College of Education and Human Services. A third partner, Frame, is streaming the software.

The students meet in one of the YETC lab's classrooms, where they use three-dimensional imaging to create virtual objects that can be rotated and manipulated.

"We're providing them with the real industry-leading software," said Mike Brown, director of Academic Programmes in Mainstream Engineering at Siemens. "It's not a dumbed-down version, it's not educational software." The only difference is that files created on the academic software will not open in the commercial version. And it's free, not just to Edith Bowen's fifth-graders but to students of all ages, colleges and universities worldwide.

"It's an investment in our future and our customers' future and society's future," Brown said. Siemens is responding to a global shortage of engineers, hoping that access to Solid Edge can open a gateway to engineering for children everywhere. But even those who don't choose a career in engineering can still become more technologically literate through their experience with the software, he said.

It's a goal shared by Edith Bowen's principal, Dan Johnson. "The creativity, the critical thinking and decision making that can be developed in it, I think it can have tremendous impact on kids," he said. "We might capture the imagination of everyone, whether they're male or female."

Kendrick, one of the students, has enjoyed the challenge. "It's like we're a college student coming in here and doing what we just learned in our lectures."

To prove it, he made a 3-D model of a washing machine.

"It lets us let our imaginations just go wild, and it prepares us for when we grow up," said Olivia, another student.

Next to her, Macey was working on a chair, changing up the colors as she talked. "You can always add something to make it even cooler," she said.

Jan Farmer, their teacher, said seeing her students design, create and integrate math concepts has won her over. "I'm pro-CAD now," she said. She has asked her students to figure out the volume of the 3-D object they have created, helping them to integrate math into their studies and to give it some relevance.

"Everyone thought it was going to be hard, but it wasn't," Kendrick said.

Links

- Register to obtain Solid Edge [at the Siemens website](#).
- Educators can obtain the software [through the Siemens Solid Edge High School site](#).
- Resources, including tutorials written by teachers for other teachers, can be downloaded [from the Siemens educator resources site](#).

Thanks to Jan Farmer for providing the image for this article.