

Southview Middle School Gets a Grip on Design with Dimension 3D Printing

Was your car built before the turn of the new millennium? If so, chances are you're among millions of Americans who have fallen victim to a common problem: ill-fitting cup holders.

Peter Grimm, an industrial technology teacher at **Southview Middle School** in Edina, Minn., has challenged his eighth-grade pre-engineering students to find a solution for this messy problem. And the Dimension the uPrint™ Personal 3D Printer is helping students find creative answers.

Grimm first saw the educational power of 3D printing earlier in his career when he started a Minneapolis school's partnership with Project Lead the Way (PLTW). PLTW is a national program that provides curriculum and partnerships with the private sector to increase the quantity and quality of engineers and engineering technologists graduating from our educational system.

Weighing the Options

After transferring from Minneapolis to Edina schools, Grimm started the PLTW partnership at Southview and began investigating the purchase of a 3D printer to enhance the program. While teaching in Minneapolis, Grimm had several years of experience with printers from Dimension and a competitor. "The Dimension printer was just better suited for the educational environment," said Grimm. "The cost, ease of use, and durability of the printed models produced led me to choose a Dimension 3D Printer."

Generating Excitement with 3D

Grimm has seen the level of student momentum for the PLTW curriculum take off, and he believes this excitement can be attributed in large part to the addition of the Dimension 3D Printer. "uPrint has really helped bring kids into the engineering lab," Grimm says. "They're able to see their CAD drawings become three-dimensional working models. It quickly brings designs that only existed in the students' minds to life."

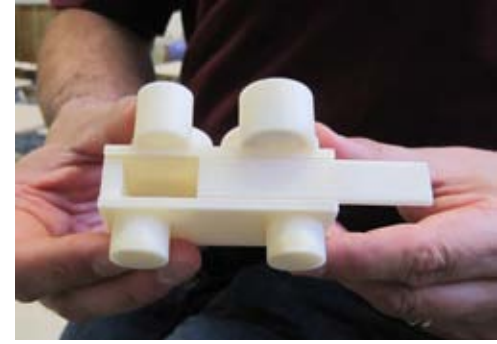
Edina School District places a high priority on "twentieth century literacy," which Grimm explains moved the district to require all 800 seventh and eighth grade students to enroll in Gateway To Technology (GTT), part of PLTW and the cutting-edge program that addresses the students' interests and energy, while incorporating national standards

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— Peter Grimm,
Industrial Technology Teacher,
Southview Middle School



in mathematics, science and technology. The uPrint has enhanced the student experience in this program Southview offers by allowing them to see their concepts come to life as physical models. Once they see their designs, they're able to re-work them through multiple iterations. Courses are split into Design & Modeling and Automation & Robots for seventh graders, and Flight & Space and Magic of Electrons for eighth graders.



This year, Grimm has challenged his seventh graders with creating solutions for the ill-fitting cup holder dilemma. His students embraced the project, competing to design one of the top models that would be printed using the uPrint.

uPrint's Mobility a Plus

While Grimm hopes to purchase a second 3D printer within the year, the school currently shares its uPrint with Valley View, another Edina middle school. "At around 120 pounds, Dimension's uPrint is easy for a few people to lift, which allows us to transport it easily between the two middle schools. A competitor's smallest model weighed nearly 80 pounds more."

Parents Get in on the Fun

Since introducing the uPrint to his students in last spring, Grimm has heard great feedback from parents.

"There are a number of engineers in this community. I think it's exciting for them to see their children get their hands on this kind of technology. uPrint is something that is not only helping my students better understand engineering, but it has elevated the excitement level in the classroom – and it has been a great promotional tool for our program," Grimm adds.

"We bring it to fundraisers and get lots of 'oohs' and 'ahhs' from potential donors. It also makes the rounds at teacher conferences. Keeping enrollment strong in design and engineering courses is always a consideration," says Grimm. "The uPrint helps a great deal in this regard and the enthusiasm it generates is priceless."

And it just might keep the coffee mug in your '97 Toyota Camry safe and sound...

An essential tool for everyone on the design team. Dimension 3D printing can help you quickly fine tune designs and cut weeks – even months – from your development schedule. Now you can test form, fit and function and explore as many design iterations as you like – over your network, right from your desktop.

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