

**NEWS / EDUCATION**

Stoughton Area School District

## Making it happen at FabLab Stoughton with Make48

Make48 event raised funds, profile for city

Scott De Laruelle Staff reporter

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FabLab Stoughton, located at Stoughton High School, hosted the PBS 48-hour invention series "Make48" on Aug. 12-14.  
Photo submitted

### FabLab Stoughton

FabLab Stoughton, located in Stoughton High School, opened to students in 2013 and today offers courses to students, as well as workshops for community members. It was the first public high school in Wisconsin and second in the nation to have a lab entirely dedicated to makers grades 9-12. The facility features equipment for all matters of making, including 3D printers, laser and vinyl cutters, electronics and woodworking.

For more information, visit [fablabstoughton.org](http://fablabstoughton.org).

Now that the competition is over, FabLab Stoughton can focus on using the momentum gained from hosting Make48 to keep building for the future.

Stoughton High School's Fab Lab hosted one of this year's national Make48 competitions Aug. 12-14. During this edition of the PBS 48-hour invention series, eight teams from the region had two days to design and create a prototype for one of the best sustainable companies in the country. A group of SHS students with significant FabLab experience helped the teams out, serving as "tool techs."

It was the first Make48 series to take place in a public high school FabLab, the first series to have an all-student Tool Tech team supporting the event, and also the first to be hosted by a relatively small city. FabLab advisor and event coordinator Mike Connor, who spent significant time and



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effort bringing the show to Stoughton, called the two-day event a “smashing success ... way beyond my wildest dreams for sure.”

“It was definitely a successful fun-raiser/fundraiser for FabLab, our Innovation Center, and our community,” he wrote the Hub in an email.

Lead sponsor TREK Bicycle dubbed the challenge of “Sustainable Mobility” and over the course of 48 hours, teams created their designs at FabLab Stoughton. The Fab Lab will now benefit from some of the “givebacks” from a variety of corporate sponsors that attended the event, such as the latest tools and equipment, which will be split between the lab and Innovation Center Stoughton Inc.

Stoughton Mayor Tim Swadley said hosting the Make48 competition brought some “positive synergy” to the community.

“New connections were made and local talent was utilized at the event,” wrote in an email to the Hub. “Make48 was a great learning experience for all participants, including myself. The event emphasized the value of our Fab Lab, as we move toward making the Stoughton Innovation Center a reality.”

Tech teacher Brad Seehafer said it was also a great environment for students to be exposed to, and an opportunity to showcase and share their skills and knowledge they’ve developed in SHS classes.

“The designs varied widely and required everything from 3D printing to welding to get a working model, but our students were up to the challenge,” he wrote the Hub in an email. “It was impressive to see our students leading the physical development of the prototypes that the teams designed (and) I was impressed that our students worked with the adult volunteers from industry, education, the sponsors and vendors to help the teams achieve their goals.”

Seehafer said having this type of chance to demonstrate to industry leaders over an extended time what the FabLab is about, what the high school is doing to prepare students for careers and what students are capable of, is “unique and outstanding.”

“For (students) to be exposed to and see all of the elements that go into the product development/ engineering process was beneficial,” he wrote. “I feel our students came away with a better understanding of the reality of bringing a product to life.”

Tales from the tech table

Stoughton High School provided five tool techs who helped the teams build their designs. Junior Piper Grant, who was a FabLab counselor during summer school, said he got involved because it sounded fun and interesting but he never expected it to be as “awesome and informative” as it was.

Grant ran the lab’s 3D printers and laser cutters to make components the teams designed for their prototypes, and said his favorite moment of the competition was actually during some down time when he checked out the X-ray machine brought in for the event.

“I watched how it worked and even learned the basics about how to use it,” he wrote the Hub in an email.

Senior Avery Rhinerson, who plans on attending trade school after graduation to be an electrician, served as a laser technician, working with 1/8th-inch plywood and clear acrylic sheet cutouts, and also helped as needed in the woodshop and welding room.

He said his favorite part of the event was being able to interact with the teams, as well as the professional Tool Techs brought in for their specialties from companies like Shopbot, Lumafield, and Stanley Black and Decker.

“My involvement with the FabLab so far has been all positive experiences and is one of the highlights of my life,” he wrote the Hub in an email.

Senior Austin Overton is a true Fab Lab veteran, having taken all of the FabLab courses he could over the last few years, “some of which I have taken multiple times,” and helped out with several volunteer days. During the competition, he kept busy as the laser cutter tool tech, including one team he spent a lot of time with trying to get their project to look how they wanted it to look, etching it into clear acrylic.

“It was so much fun to be around such creative and great people and to transfer their ideas into something they can hold,” he wrote the Hub in an email. “I learned from this experience to always think outside the box because sometimes the crazy ideas might work and be better than the other ideas. I also learned that to make something work, you have to keep at it for a while before it works.

“And the memories I made that weekend will stay with me for the rest of my life.”

## Innovation Center Stoughton seeks feedback

FabLab advisor Mike Connor, who also heads up Innovation Center Stoughton (ICS) said one of that group's future targets will be an "entrepreneurial incubator" that serves a wide variety of area start-up businesses and supports existing businesses and workforce development needs.

"We don't plan on duplicating the FabLab equipment per say, but if the need for rapid prototyping machinery is not available through our shared resource program, then we would step up and provide that equipment," he explained. "Our goal is to enhance the resources that already exist in and around our community."

Connor said the ICS board of directors will work in the next several months on their strategic plan, of which community feedback is a "critical part." People can contact him at [mike.connor@stoughton.k12.wi.us](mailto:mike.connor@stoughton.k12.wi.us), 608-698-9485 or leave a message at [innovationcenterstoughton.org](http://innovationcenterstoughton.org).