

Case Study













Badger High School PHabLAB Students can benefit from this greatly through developing innovative and entrepreneurial skills, collaboration, problemsolving, and other 21st century skills.

- Russ Tronsen, Principal

Scope of Project:

Develop a Fab Lab/Makerspace that allows for hands-on learning in a fun space with components such as 3D printers, laser engravers, desktop CNC's and a collaborative whiteboard; along with drawing software and curriculum programs. The Fab Lab/Makerspace is not only for the student's education, learning and job skills. It is also about becoming a part of the culture of the Badger community and allowing opportunities for the public to utilize the space.



Challenges:

Funding – Palmer Hamilton collaborated with Badger High School in Lake Geneva, WI. The goal was to design and develop an affordable ongoing sustainable fab lab. The Badger Team was very excited to partner with Palmer Hamilton.

It allowed them to gain confidence in a true long term partnership for student success.

Palmer Hamilton makes it easy for a school to plan, source and implement a PHabLAB from the ground up. They also provide the curriculum pieces that can be integrated in various content areas. The flexibility of the space allows for us to create collaborative areas on demand.

— Russ Tronsen, Principal





Badger High School PHabLAB





Results:

Turn-Key Services:

Palmer Hamilton is also great with support and seeking answers to questions we have.

Staff Training:

The staff who received training in the PHabLAB felt more comfortable with how the equipment in the PHabLAB will work with their curriculum. There were also a few staff members who were excited to use the PHabLAB for their own creations.

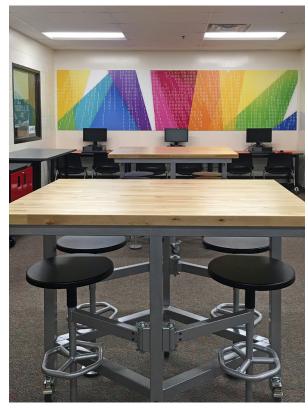
- Rachel Harmeling, Badger High School Media Specialist



Community:

Currently our PHabLAB is open during building events. We are developing our community access program to roll out in the 2019-20 school year. We are looking forward to having that access available.

- Russ Tronsen, Principal





Results:

The PHabLAB is available to the school community at large. It can be accessed simply by going to the Library/LMC. It is a space that invites collaboration where the focus is on ideas, on passion, and on sharing knowledge - and everyone is eager to share. It is managed by a staff member who has a passion for STEM learning. Innovation happens where passionate students are exposed to other passionate students and their ideas, processes, and expertise. Badger makes that possible because of spaces like its PHabLAB.

The PHabLAB at Badger High School has been a great addition for our student body. We have seen increased numbers of students accessing our Library Media Center with specific goals of using our PHabLAB. We have students who are excited to be trained and then share their expertise with their peers. We have staff that have accessed the PHabLAB and have enhanced their curriculum.

- Russ Tronsen, Principal



This semester we have begun an Independent Study course in the PHabLAB for an elective credit. Students apply for the course and are accepted based upon some minor qualifications (GPA, attendance), and then are assigned a class hour in the PHabLAB. These students are trained on



the equipment and assist students and staff with the equipment during those class hours. We just NC3 certified one student on the 3D printers and we're hoping to have four more by May.

Students are impressed with the space and equipment we have in the PHabLab. Now that they have had some time to explore the lab, they are requesting more equipment for their needs.

All parents who have visited the PHabLAB during Open Houses have appreciated the space for their children to learn and create.

- Rachel Harmeling, Badger High School Media Specialist

Partners:















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