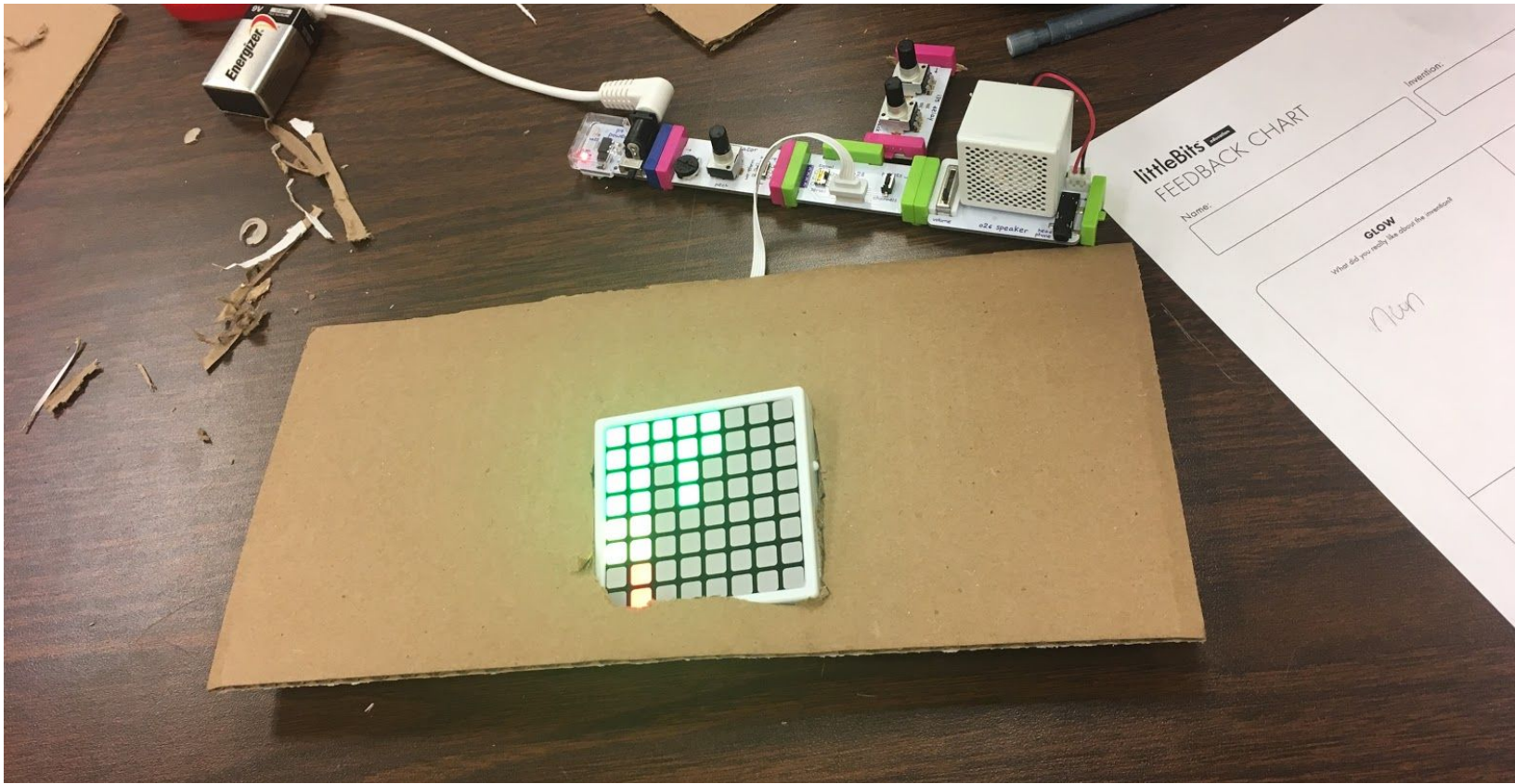




littleBits™ education

ONE TEACHER WHO DIDN'T TAKE STEAM FOR GRANTED

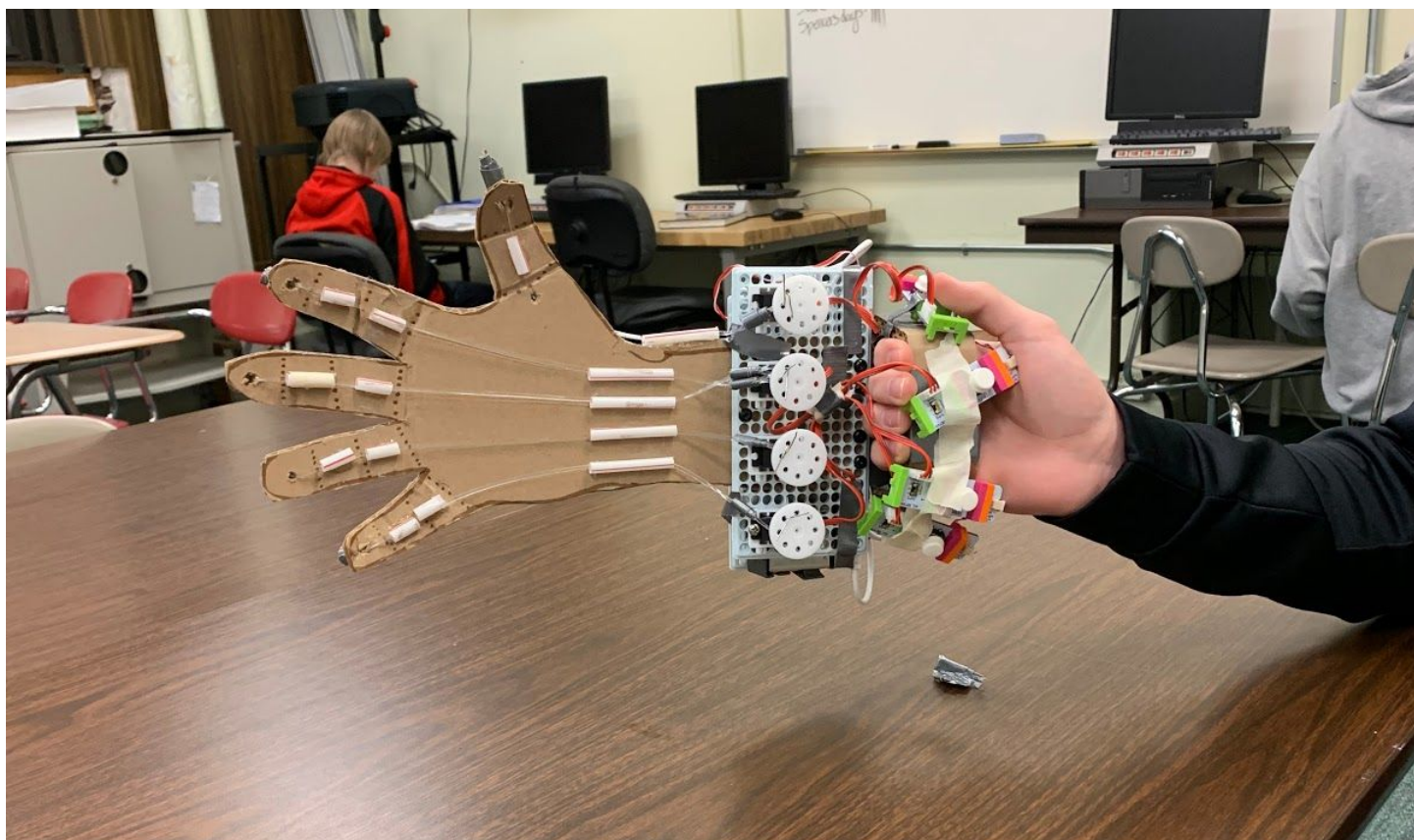
MCLEAN HIGH SCHOOL WINS GRANT, IMPROVES STUDENT OUTCOMES WITH LITTLEBITS

Table of Contents

3 [Looking for STEAM Funding](#)

5 [Prototyping with littleBits](#)

7 [Inspiring Students, Capturing the Imagination of Other Teachers](#)



In November 2018, Jasen Gibbens, a teacher at McLean High School in Terre Haute, Indiana, was awarded a \$5,000 school-wide grant from the Vigo County Education Foundation for a technology project entitled “littleBits for McLean.”

McLean High School is a unique alternative school that serves as a last-stop for students with behavioral problems who are no longer able to attend their home high school for any number of reasons. Because of that, some students have become resistant to traditional classroom curriculum and it is difficult for educators to capture -- and keep -- their attention.

Jasen, who started his career as an engineer for General Electric, became a teacher ten years ago. Since that time, his goal has been to provide students with the hands-on manipulatives that encourage creative problem solving and help them to reach their full potential.

Looking for STEAM Funding

Incorporating STEAM into the classroom, Jasen knew, would be an effective way to capture students' imagination and to give them a sense of autonomy and purpose.



But while STEAM enthusiasm among educators is skyrocketing, school and library budgets are tightening. This meant that Jasen had to keep new STEAM programs and resources on his wish list for longer than he'd like -- and learn how to be creative in looking for funding for his STEAM programs.

He started looking for grants and applied to several -- including the Vigo County Education Foundation grant, funded by Elanco. As a manufacturing teacher, he had collected a variety of tools for student use in his classes, from CNC routers to lasers. But he had his eye on something a bit bigger this time -- littleBits' Pro Library Kit.

Ideal for makerspaces, libraries, classrooms, and groups, Pro Library fosters self-guided invention or group collaboration through hands-on inventions and learning. The Pro Library is the largest collection of Bits you can get. It's designed to unleash creativity by encouraging students to create an invention, then add a new Bit and see what happens.

Jasen was awarded the grant and immediately brought littleBits into his classroom makerspace.

Prototyping with littleBits

Today, students from Jasen's manufacturing classes in grades 9 - 12 are able to do a lot more prototyping using littleBits. In fact, Jasen reports that the Bits have been a motivator for his students.



The littleBits Invention Cycle is an easy way for students to approach the engineering process. Each of the four phases -- create, remix, play, share -- is full of activities and questions that help students explore ideas and develop their inventions.

The phases work well in order, but the design process is always a little messy. A student's path through the Invention Cycle can be flexible, enabling them to self-direct and feel more autonomy in the learning process.

Each phase in the Invention Cycle represents a different way of thinking and making -- and sometimes it's good to mix them up. For example, students may want to share their work and gather feedback before they begin remixing their inventions. It can also be helpful for students to play with and evaluate a previously made invention before creating their own.

“There are so many possibilities of things you can teach with this. It’s mind-boggling. I told the kids there are about five million projects you can do with just these 334 Bits.”

Jasen Gibbens, *Manufacturing Teacher*

Inspiring Students, Capturing the Imagination of Other Teachers

According to Jasen, incorporation of littleBits into his classes has brought with it increased attention, engagement, and attendance among students.

In fact, enthusiasm for the magnetic building blocks is spreading through McLean High School.

For example, the art department wants to procure seven Avengers Hero Inventor Kits and explore creating 3D art projects with littleBits motors. Inspired by Jasen's success, staff at McLean High School has written three additional grant proposals this semester -- for both the art and science departments.



“What’s really cool is that we can give students the background necessary to succeed with littleBits first, and then cut them loose to do their own thing. They have so much fun, they don’t realize they are learning.”

Jasen Gibbens, *Manufacturing Teacher*