CASE STUDY

BOXLIGHT

Making 3D Printing Work in the Classroom

A small-town teacher used modern technology to spark interest in STEM for her students*

Challenge

Shelley Emslie, a 5th grade teacher with almost 30 years as an educator, was looking for a way to encourage her students to try different technologies as they headed into a life beyond the classroom. Living and working in a small rural town – Bigfork, Montana – she was determined to provide her students with all the necessary tools to help guide them to a bright future. Attending multiple tradeshows, Emslie was introduced to 3D printers and immediately thought of all the potential that they can bring to her small (two-stoplights) town. Working with a limited budget would be a challenge but she wanted to bring 3D printing to her classroom.

Key Solutions

After visiting multiple 3D printer booths and discussing different models of 3D printers with vendors, Emslie decided that Robo was the right fit for her school district. She reached out to Donor's Choose and was able to obtain a donation of Robo 3D printers for the Swan River School District.

Utilizing the Robo 3D curriculum, Emslie began aligning elements of 3D printing to NGSS and Common Core standards. Once she and the students saw that they could create something out of nothing, Emslie began incorporating elements of the design cycle through 3D lesson plans. The students started to learn how to use Tinkercad, a beginner 3D design software, which allowed them to create their own designs for specific lesson plans. They tested their designs and with each print that did not work, they went back to the design software to iterate until they had a successful print. From these experiences with her students, Emslie has learned new capabilities with the 3D printers. She initially started with only two Robo 3D printers but added two more because of the extensive use with this innovative technology with students.

EXPERIENCED BENEFITS

Incorporating 3D thinking into the classroom and letting students learn the design process at a young age.

" After I started printing, I could not believe the reactions from the kids. To be able to say, 'I don't have X - let's just print one' is totally mind blowing!"

- Shelley Emslie, 5th grade teacher

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Benefits

Emslie says, “The problem I solved with Robo is simplicity. Robo has made it possible for the average teacher, with no 3D printing experience, to be successful. With the education platform as a starter to 3D design and 3D printing lessons, I felt like I had great content to get me on the road to implementing 3D printing successfully. Opportunities for students in a rural school are often limited, and I viewed 3D printing as an invaluable experience to expose my learners to the future.”

“ The world is not 2D. We are equipping our students to compete, excel, and succeed in a 3D world. We use Robo 3D printers daily and they inspire creativity, critical thinking, and problem solving.”

*Reprinted from 2017

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The Robo 3D printer is one of the many STEM solutions in our MimioSTEM collection. From NGSS-aligned lessons through MyStemKits, including ready-to-print 3D models, STEAM design challenges, and virtual STEM kits to the MyBot robotics system, enhance STEM teaching and learning in any classroom environment with MimioSTEM.

Learn more about at **boxlight.com** or **866.972.1549**.