

Ideas to Action Grant 2018

McMillan Memorial Library

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In 2018 McMillan Memorial Library had the honor of being awarded a \$4500 Ideas to Action Grant by your agency. The premise was to develop a series of maker oriented kits that could be loaned out to local organizations in the same way library systems loan kits out to their member institutions.

We worked off of the S.T.E.A.M. learning acronym but made some tweaks in our case. S.T.E.A.M. stands for Science, Technology, Engineering, Art and Music (replacing Math). A group of educators and myself had already begun brainstorming even before the grant was received so development went quickly. There were however some bumps in the road. For all of the kits we wanted to have engaging kits that would draw kids in without having to be coerced by teachers or program leaders. We found this challenging for the engineering kits. In the end we settled on a collection of Erector Sets but worked very hard to have engaging activities tied to them.

As we started doing “soft” presentations to community members at organizations we almost immediately received feedback that several of our kits require easy access to computers which were not always readily available to our partners. Since we had already expended much of our grant monies on the kit materials we started looking around for further funding to augment. The Bell Family Charitable Trust added \$5000 to our efforts which not only allowed us to create a mobile computer lab but to also extend the number of kits we had available including a virtual reality kit with 5 pairs of standalone Oculus Go VR goggles. In the end we had the following kits:

Science: BreakOut EDU Classroom Set

Technology: Makeblock mBot Educational Robotics Kit

Oculus Go VR kit

Adafruit Circuit Playground Coding / Physical Computing Kits

Engineering: Meccano-Erector - Super Construction Set (5 sets in kit)

Engino STEM Kit (contains several set of Bridges and Structures and Levers)

Art: Mobile Stop Motion Lab

Music: Mobile Recording Studio w/ MIDI keyboard

After receiving our materials we worked to find containers for the pieces that would keep them protected as they moved around. In the end we went with an affordably priced

camera equipment case vendor. This gave us a serviceable transport solution but even an affordable level option cost more than we would like to spend on items that have no educational value.

Next in the process was development of our curriculum for the kits. This process is ongoing with multiple changes and updates already taking place. The feedback we received was that people liked having the developed curriculum to get started and possibly spark new ideas for future uses. The content was a blend of content created by other companies and organizations and materials that were developed by us from the ground up. For example we threw out our created content for the Circuit Playgrounds in favor of content created by Adafruit and Cartoon Network feature the Adventure Time characters.

There is still much work to do. Our later additions, like the Oculus Go kit, is still in need of further development. Looking back if there is an area I underestimated it would be judging the time needed to develop acceptable education materials, even with help; and sometimes because of it. Our goal was to create “sneaky learning” opportunities. Since many of the kits won’t be used in controlled settings like a school we need to have fun projects kids will be drawn to work on. To complicate things further we wanted broad appeal to both boys and girls which can still be a challenge with how entrenched gender stereotypes still are today.

Over all I am proud of how things have turned out. We will continue to develop and add to our offerings. The initial concept has now expanded to a special teachers (very broad in the definition) tech collection which will include one off items like Osmo kits, Sphero and SnapCircuits.