

EDUCATION

littleBits™

LITTLEBITS EDUCATION COMMUNITY CASE STUDY

PUBLIC LIBRARY MAKERSPACE

BY

Jessica Lamarre

TITLE

Children's Librarian

ORGANIZATION

Duxbury Free Library
Duxbury, MA

AGE LEVELS

4th grade +

LITTLEBITS PRODUCTS USED

Base and Deluxe Kits

DATE

October 2014

BIO: JESSICA LAMARRE



Jessica Lamarre has been a public children's librarian in Massachusetts for 8 years. She has a Masters from Simmons College as a School Librarian Media Specialist and a Bachelor of Arts in English from Northeastern University. She currently works at Duxbury Free Library.

EXPLAIN HOW YOU INCORPORATED LITTLEBITS INTO YOUR PROGRAM?

As part of our already established makerspace programming, we use littleBits to explore beginning circuitry with primary and middle grade students and incorporate them into our public marketing strategies. Last fall we implemented "Tinkering Tuesdays" which was a once a month after school program for grades 4 & 5 for one hour of science based exploration. We held 10 programs on a wide variety of topics, serving 58 students since January.

These littleBit Kits have also been shared with the Teen Department for their weekly DIY (Do-It-Yourself) Club, as well as becoming part of our summer reading "Mad Science Mondays" and Lego events, which served over 200 people.

For more hands-on after programming options, we have turned our gaming bookcart, which used to hold board games, into a Tinkering Cart with littleBits and other crafting/science toys that can be used at anytime. We love to provide open-ended opportunities to explore without librarian direction.

Our children's department has been adding littleBits into public marketing presentations as well. We used the littleBits to make a functioning LEGO windmill to advertise Tinkering Tuesdays' programs, as well as adding an interactive element to our summer reading "Fizz Boom Read" poster that we brought to our school presentations. Just this week we used littleBits to decorate the children's room for Halloween; adding motion and lights to paper decorations with the help of 4th and 5th grade students.

Our littleBits went on the road too. They were brought to the annual Massachusetts Library Association Conference this May and local workshops of the Youth Services Librarians around the South Shore. This provided librarians a chance to explore and learn with equipment not readily available to them.

"We love to provide open-ended opportunities to explore without librarian direction."



WHO WERE THE KEY PEOPLE IN YOUR ORGANIZATION THAT MADE THIS PROJECT POSSIBLE?

Jessica Lamarre, Children's Librarian
Ellen Snoeyenbos, Teen Librarian

Funding for the littleBits Kits was also made possible by the Harry C. and Mary Elizabeth Grafton Memorial Fund and the Friends of the Duxbury Free Library

WHAT WORKED WELL?

littleBits is a great introduction to circuitry without having to learn the skills of breadboarding or soldering. It can be a good gateway to understanding electricity for many age groups, not just those who lack science confidence or believe themselves to be "not that into science". The re-usability of littleBits also helps justify the initial cost. They are the gift that keeps on giving. littleBits is not just about science either, it appeals to wider audiences, like crafters. When we just did our recent Halloween decoration project, I did not receive as high attendance as usual so I just walked around the room and said "Who wants to help me make Halloween decorations?" and I immediately got 5 girls that jumped right in. It's important to find venues to empower girls and engage them in science.

A Students in the DIY club work together to prototype an invention.



B Creating electrified Halloween decorations.



WHAT WAS A CHALLENGE?

A challenge at first was getting the kids to brainstorm and focus on projects. I used to just give them the box of bits and leave it at that because that's the whole premise of tinkering. Now I give them more direction, like the physical Halloween paper decorations to work around or say we're all going to make flashlights and see the different ways everyone comes to the same conclusion. I also love the challenge cards that were posted on the littleBits community blog website.

Another challenge for us has been getting the littleBits to actually stay together for long periods of time. We need to invest in some shoes rather than so much masking tape!

WHAT HAS BEEN THE RESPONSE OF YOUR STUDENTS/COMMUNITY?

I love watching the kids come up to the desk when we put out our proud creations. They are always like "OH COOL!" They are even more excited when I tell them that it's easy and that anyone can do this, even me!

Our parents are always excited when they can engage students in something that is STEM based and fun outside the school environment. We're just continuing the education that they have learned in school. During our Halloween project, a student came up to me and said "We're learning about circuits in school right now" and I thought, wow great timing. We've worked with a lot of science based products this past year and hands down littleBits has been the most well received.



HOW WOULD YOU SUMMARIZE WHAT YOU'VE LEARNED IN IMPLEMENTING YOUR LITTLEBITS PROGRAM?

You never stop being a student which is why I love the phrase, "life long learning." I love making displays so adding electronics into it has sparked an interest in learning electronics for me. I can't believe my growth and confidence with electronics. I was one of those kids that wasn't really into science, but never saw many practical applications and then when I played with littleBits a light bulb went off and now here I am teaching and empowering kids and other librarians that they can do it too. I can go into an electronics store and recognize parts like the DC motor or explain how an inverter switch works because of this product. It's a great platform for everyone to learn and to find students who might be interested in crafting or LEGOs and saying, "Wouldn't it be cool if we could make it move?" and then I know I have them hooked too. It's all about the marketing!

WHAT ARE YOUR FUTURE PLANS FOR LITTLEBITS USE?

We are going to invest in more Bits. We can't wait for the Brick Adapter accessory and we'd love to get the Arduino module in the future! Many of the Halloween decoration students asked if we could do it again and Christmas is right around the corner.

