

**2015, April 3, 2015**  
**2nd Make It webinar**  
**Cohorts 2014**

Notes

**DeMary:** Have had a couple programs with the circuit boards and teens. Challenge is getting the teen person on board to work with teens. There is a good teen group to work with. Will followup with more training.

**East Bonner:** Added the arduinos to the mix. Kids are not expressing interest in using the arduinos. Morgan plans to develop a program just for teens. Did design challenge in Clark Fork similar to one done in the training. Kids enjoyed immensely! Now has a volunteer to help him. Gathering materials from the Friends group for a take apart session.

**Caldwell:** Began with the 3-D printer program. Very successful and lots of interest. Introduced to Tinker-Cad to allow design of models to be printed. Next, began demos on what you can do with an arduino and encouraging teens to start experimenting with it. Uploaded codes from arduino to robotics software. Challenges included having the manual dexterity to work with breadboards. Needed to spend a lot of time on components, basic understanding of circuits. Hope teens are interested in going further.

**Bear Lake:** Used snappy circuit with the knitting group. Recruited a volunteer who knows a lot about arduino. Take apart night during Teen Tech Week which was popular. Biggest challenge is finding a time convenient for both teens and library. Began a lego club- so successful started a second one. Took circuit boards to pre-school- so popular- especially with a 5 year old teaching the younger kids.

**Heritage:** Did a Maker night focusing on circuits. For Teen Tech Week did the design challenge and had teens at each lunch. Did brush bots. Big challenge is she cannot get arduino to upload on school computers. Will work with IT to figure it out.

**Marshall:** Teen Tech Week: LED shooting as part of Ender's Day party. Launched rockets with parachutes. Had a series of programs during Spring Break and had a lot of kids participating. Worked with resistors. Challenge in that the same kids do not participate in programs. Would like to have more basic programs to get kids started and involved. Tried to have a series of programs building up to using the arduino. Circuit boards, Breadboards, coding with code.org, arduino. After doing basic program, participants had good questions and varied the code. Plan to start a monthly arduino program. Adults as well as teens participated.

**Portneuf:** Shared lots of info with young adult librarian who has been using the technology. Amanda is planning more programs with younger children such as tying quilts. Weekly maker day planned for summer. Will do a take apart and use the pieces to make armor. 2014 cohort did not receive the circuit blocks, Erica will share info on purchasing the circuit blocks at a 25% discount.

**North Bingham:** Had a fun month! Lots of interest in the program. After Teen Tech Week did a survey asking teens what they are interested in. Older teens are interested in Makey Makey, arduinos.

Biggest challenges are very young children want to participate, and the activities are above them. Substituted the circuit blocks to allow them to participate at their level. First 3 days the teens participated in take aparts until the real programs were ready. Steam punk arts was popular. Had 3 different centers: Jewelry, art, building. Had wearable technology- was too simple for older kids, but they got to embellish with soldering! Loved the soldering. One of biggest issues was food. Needed to match food with the activity so the mess was minimized. Food brings kids in! Another challenge was parents joined and ate! Clean-up was a big issue, especially with take aparts. Kitchen is now the science lab. Kids love the activities and the library. <http://frugalfun4boys.com/2014/03/06/make-magnetic-slime/>

**Shoshone:** Learned that once circuit blocks are out, can never put them away again. Popular with all age groups. Alternate with the legos, but the legos are not as popular. Teen Tech did LED throwies and they are now all over town! Did homopolar motors project, most basic way to create an electric motor. Can make all shapes. Students learned patience in making little adjustments to the motors. Will share links to videos on Facebook. Arduinos are a challenge because it is hard to get tweens to sit still long enough to learn to use them. Good partnership with the school-32 kids and 5 adults! <http://www.instructables.com/id/How-to-make-a-Homopolar-motor-1/>

**Burley:** Circuit Blocks and Makey Makey piano are very popular. Created a battery train. Did during both Spring Break and Teen Tech week. Local scout troops are interested in participating. Children worked with Straws and Connectors. Compiling make it kits to circulate. Biggest challenge is small teen group so tweens are more attendees than teens. Working to get teens involved. Using the tools in outreach explaining about the role the library plays in the community beyond just books. Let Friend Group see how children enjoy Make It activities. This resulted in a \$500.00 donation. Purchased additional circuit blocks set. IT guy built 8 more battery packs to extend the use of circuit blocks- much cheaper than buying them. First time had the circuit blocks out, the boys went out and brought their friends in. Library staff needs to learn to use the tools and time is always a challenge. Still working on space issue.

**Payette:** Circuit blocks as stealth programs. Teen Tech Week was a learning experience to get teens into the library. Had a focus group with teens and included brush bots. Contacted elementary schools, 5 men who are interested in arduinos and trying to make them compatible with computers. Have space, but staffing for additional space is a challenge. Working towards using the arduinos. A lot of interest from the public, but challenge to facilitate from the library side.

**Centennial: Gena Marker:** We also did a couple of makeymakey events, one using play-doh with various games, and one using a big dance pad made from cardboard and tinfoil, and we played dance dance revolution with it. LABbies even got a teacher to dance! We also had several days where we made and raced brush bots.

We did a take apart, as well, and had super fun! Students who I never would have expected showed up and were really engaged.

We also did a make your own snacks and made gummies. One of the games we did with makey

makey is called 2048 (found by one of my LABbies who searched for "cool math games")  
We also did another program where students made their own bouncy balls (makershed kit) and rubberband bracelets. I've added some photos to the FB account but will add more.  
And we did a couple of days of circuits - and we had the circuit blocks out, as well as squishy circuits and snap circuits.

### **Next training is May 7-**

**8.** Working on arduino based projects and will include discussions on programs to implement. Cannot take the arduino on the plane so need an extra one for Morgan. Still working on materials and whether we have the finances to give to 2014 cohort. Feel free to bring laptops, but we will have several that can be used if technology is a challenge. Will try to send links to any needed software before the meeting. Will have homework out by mid-April.

Times will be similar to the February training.

Still deciding on which 3D printer to use in the September training. Welcome feedback about how the RepRap worked for the 2014 cohort.

Please post photos to Facebook. Erica will post for you if you send them to her.

### **Chat:**

**Clay:** Business cards on the motors are fun to Sharon, you can almost make them hover.

**Erica:** knitting and snap circuits!! Love it

**Amanda Bowden:** Do the 2014 cohorts get the block circuit things?

**Kath Ann Hendricks:** Marshall Library: Kathryn Poulter has at least one gentleman in her knitting group!

**Gena Marker:** I once grabbed teen boys in my class and got them knitting by having those hoop looms available, which made it easier for them to start. I ran into one of the boys a while back where he was selling his own knitted hats at a summer festival in Boise.

**Gena Marker:** Oh yes! Those tool kits have been invaluable - for cutting brush bots, taking apart stuff, etc.

**Gena Marker:** Ditto to Amy's challenges - I have to upload to FB from home, and have yet to be able to tackle Arduino.

**Shambry- DeMary:** The circuit blocks as a stealth program have been really successful for us as well.

**Sharon Kimber:** We have also been gathering items for a take apart day.

**Sue Walker:** Adult participants might become great volunteers!

**Gena Marker:** Our exploring computer science class is learning the basics of Arduino and I sat in on a class and tried to start building connections with students who don't normally come in for library programs.

**Morgan EBCL:** Oh that's brilliant! Love the armor idea

**Shambry - DeMary:** Yes please! I think we could use another set.

**Kath Ann Hendricks- Marshall Library:** We had a little Google Chat yesterday with Meridian mostly about our Maker Bus, but also about some of the kits and materials they have that have been popular. In particular a board game about coding... Turtle something?

**Clay:** Robot Turtles?

**Erica:** <http://www.robotturtles.com/>

**Kath Ann Hendricks- Marshall Library:** I believe so. I just ordered it from Amazon.

**Kath Ann Hendricks- Marshall Library:** Our older kids seemed to like working with and helping the younger ones.

**Erica:** What was that one with motors??

**Clay:** Homopolar

**Kath Ann Hendricks- Marshall Library:**<http://www.instructables.com/id/How-to-make-a-Homopolar-motor-1/>

**Kath Ann Hendricks- Marshall Library:** That sounds like something that will go well with an activity I'm doing for our summer reading activities with someone from ISU college of tech

**Sue Walker:** Reminder Send your Teen Tech Activity using the template shared earlier ASAP. Let me know if you have questions.

**Erica:** Meridian District Library (Nick) has created a fund game with Makey Makey- I will try and get the details and post

**Erica:** If you have not used straws and connectors - pretty inexpensive and FUN

**Erica:** [http://www.amazon.com/Straws-Connectors-705-Piece-Set/dp/B0015344GM/ref=sr\\_1\\_3?s=toys-and-games&ie=UTF8&qid=1428083097&sr=1-3&keywords=straws+%26+connectors](http://www.amazon.com/Straws-Connectors-705-Piece-Set/dp/B0015344GM/ref=sr_1_3?s=toys-and-games&ie=UTF8&qid=1428083097&sr=1-3&keywords=straws+%26+connectors)

**Kath Ann Hendricks- Marshall Library:** My husband created more battery packs- he's an electrician. It isn't very hard.

**Erica:** Yes, sometimes we get in our own way...understandable. We all have limited time.

**Jamie Bair:** Julie Ill come and do an ARDUINO program for you! :D

**Kath Ann Hendricks- Marshall Library:** I liked the alligator clips that came with the kit, except one quit working. They are easier to manipulate than the ones that come with the electronic kits.

**Kath Ann Hendricks- Marshall Library:** Warning... if you take an Arduino home you might get addicted... especially if you type code from a book!

**Erica:** Payette- you have to see their pictures on FB creating their space. Wonderful!

**Clay:** Those alligator clips are great for practicing your soldering or even having an activity Kath Ann, Just buy a box of small washers and solder them to the ends of the clips.

**Kath Ann Hendricks- Marshall Library:** ok, thanks, Clay!

**Erica:** Great idea Clay - and it really makes them easier to use.

**Abraham:** what are brush bots again?

**Erica:** <http://www.makershed.com/products/brushbots>

**Erica:** Begging for programming!! Yeah!

**Erica:** Staffing is always a challenge. How about those volunteers? They will be a great help!

**Gena Marker:** Yesterday LABbies came up with the idea for our next maker program - make your own musical instruments! I have no idea how that will look but I love that they're coming up with original ideas.

**Morgan EBCL:** We're planning an interactive stuffed monster project with the Flora to merge our embroidery and programming.

**Kaylene Christensen:** <http://frugalfun4boys.com/2014/03/06/make-magnetic-slime/>

**Erica:** mobile cart to keep the take apart stuff so it rolls away??

**Kath Ann Hendricks- Marshall Library:** I have a program planned in conjunction with National Poetry month that I'm calling Electronic Blackout poetry. It will involve doing a blackout poem and creating a border of a circuit with copper foil tape, and LED and coin cell battery. Got the idea from High/Low tech

**Gena Marker:** yeah, take apart was really messy and required cleanup after -- and now what to do with all the pieces that are stacked in my office? to be decided later, I guess

**Clay:** <https://www.youtube.com/watch?v=Yu4375T1jro> was the inspiration for the motors.

**Kaylene Christensen:** we used a lot of the take apart elements for our SteamPunk art. Just put the parts out and the kids were very creative. Posted lots of pictures on the facebook.

**Clay:** I will bring my spare Morgan.

**Gena Marker:** Morgan I will bring one of my kits

**Morgan EBCL:** Thank you!

**Gena Marker:** So...the whole kit needs to come with us? Wearable stuff, too?

**Kaylene Christensen:** Is the final report on the teen tech website?

**Sue Walker:** We will share the URL to this later so you can see links and ideas shared.